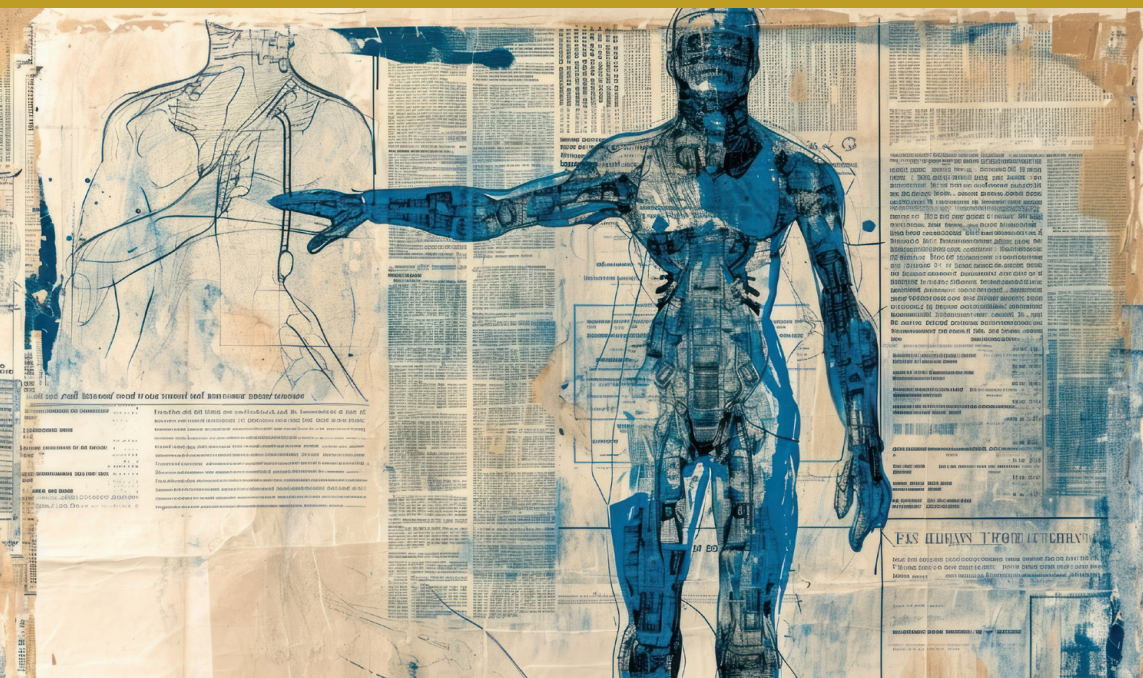


# Unfinished Business

Thoughts on the Past, Present, Future,  
and Nurturing of *Homo Scribes*



Charles Bazerman



UNFINISHED BUSINESS:  
THOUGHTS ON THE PAST,  
PRESENT, FUTURE,  
AND NURTURING OF  
*HOMO SCRIBENS*

## PRACTICES & POSSIBILITIES

Series Editors: Aimee McClure, Kelly Ritter, Aleashia Walton, and Jagadish Paudel

Consulting Editor: Mike Palmquist

The Practices & Possibilities Series addresses the full range of practices within the field of Writing Studies, including teaching, learning, research, and theory. From Richard E. Young's taxonomy of "small genres" to Patricia Freitag Ericsson's edited collection on sexual harassment in the academy to Jessie Borgman and Casey McArdle's considerations of teaching online, the books in this series explore issues and ideas of interest to writers, teachers, researchers, and theorists who share an interest in improving existing practices and exploring new possibilities. The series includes both original and republished books. Works in the series are organized topically.

The WAC Clearinghouse and University Press of Colorado are collaborating so that these books will be widely available through free digital distribution and low-cost print editions. The publishers and the series editors are committed to the principle that knowledge should freely circulate and have embraced the use of technology to support open access to scholarly work.

### OTHER BOOKS IN THE SERIES

E. Shelley Reid, *Rethinking Your Writing: Rhetoric for Reflective Writers* (2024)

Asao B. Inoue and Kristin DeMint Bailey (Eds.), *Narratives of Joy and Failure in Antiracist Assessment: Exploring Collaborative Writing Assessments* (2024)

Asao B. Inoue, *Crippling Labor-Based Grading for More Equity in Literacy Courses* (2023)

Jessie Borgman and Casey McArdle (Eds.), *PARS in Charge: Resources and Strategies for Online Writing Program Leaders* (2023)

Douglas Hesse and Laura Julier (Eds.), *Nonfiction, the Teaching of Writing, and the Influence of Richard Lloyd-Jones* (2023)

Linda Adler-Kassner and Elizabeth Wardle, *Writing Expertise: A Research-Based Approach to Writing and Learning Across Disciplines* (2022)

Michael J. Faris, Courtney S. Danforth, and Kyle D. Stedman (Eds.), *Amplifying Soundwriting Pedagogies: Integrating Sound into Rhetoric and Writing* (2022)

Crystal VanKooten and Victor Del Hierro (Eds.), *Methods and Methodologies for Research in Digital Writing and Rhetoric: Centering Positionality in Computers and Writing Scholarship, Volumes 1 and 2* (2022)

Heather M. Falconer, *Masking Inequality with Good Intentions: Systemic Bias, Counterspaces, and Discourse Acquisition in STEM Education* (2022)

UNFINISHED BUSINESS:  
THOUGHTS ON THE PAST,  
PRESENT, FUTURE,  
AND NURTURING OF  
*HOMO SCRIBENS*

By Charles Bazerman

The WAC Clearinghouse  
[wac.colostate.edu](http://wac.colostate.edu)  
Fort Collins, Colorado

University Press of Colorado  
[upcolorado.com](http://upcolorado.com)  
Denver, Colorado

The WAC Clearinghouse, Fort Collins, Colorado 80523

University Press of Colorado, Denver, Colorado 80202

© 2024 by Charles Bazerman. This work is released under a Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International license.

ISBN 978-1-64215-234-0 (PDF) | 978-1-64215-235-7 (ePub) | 978-1-64642-686-7 (pbk.)

DOI 10.37514/PRA-B.2024.2340

Produced in the United States of America

Library of Congress Cataloging-in-Publication Data

Names: Bazerman, Charles, author.

Title: Unfinished business : thoughts on the past, present, future, and nurturing of homo scribens / by Charles Bazerman.

Description: Fort Collins, Colorado : The WAC Clearinghouse; University Press of Colorado, 2024.

| Series: Practices & possibilities | Includes bibliographical references.

Identifiers: LCCN 2024028927 (print) | LCCN 2024028928 (ebook) | ISBN 9781646426867

(paperback) | ISBN 9781642152340 (adobe pdf) | ISBN 9781642152357 (epub)

Subjects: LCSH: Written communication. | Rhetoric. | Discourse analysis.

Classification: LCC P211 .B396 2024 (print) | LCC P211 (ebook) | DDC 302.2/244--dc23/eng/20240627

LC record available at <https://lccn.loc.gov/2024028927>

LC ebook record available at <https://lccn.loc.gov/2024028928>

Copyeditor: Karen Peirce

Designer: Mike Palmquist

Cover Image: "AI Cyborg Man." Rawpixel. Licensed.

Series Editors: Aimee McClure, Kelly Ritter, Aleashia Walton, and Jagdish Paudel

Consulting Editor: Mike Palmquist

The WAC Clearinghouse supports teachers of writing across the disciplines. Hosted by Colorado State University, it brings together scholarly journals and book series as well as resources for teachers who use writing in their courses. This book is available in digital formats for free download at [wac.colostate.edu](http://wac.colostate.edu).

Founded in 1965, the University Press of Colorado is a nonprofit cooperative publishing enterprise supported, in part, by Adams State University, Colorado State University, Fort Lewis College, Metropolitan State University of Denver, University of Alaska Fairbanks, University of Colorado, University of Denver, University of Northern Colorado, University of Wyoming, Utah State University, and Western Colorado University. For more information, visit [upcolorado.com](http://upcolorado.com).

**Citation Information:** Bazerman, Charles. (2024). *Unfinished Business: Thoughts on the Past, Present, Future, and Nurturing of Homo Scribens*. The WAC Clearinghouse; University Press of Colorado. <https://doi.org/1010.37514/PER-B.2024.2340>

**Land Acknowledgment.** The Colorado State University Land Acknowledgment can be found at [landacknowledgment.colostate.edu](http://landacknowledgment.colostate.edu).

# Contents

|   |            |
|---|------------|
| Introduction .....  | 3          |
| <b>SECTION I. HOW EVOLUTION PRODUCED WRITING HUMANS AND HOW WRITING HUMANS REMADE THEIR WORLD .....</b>                                       | <b>7</b>   |
| Chapter 1. The Peculiar Emergence of <i>Homo Scribens</i> .....   | 11         |
| Chapter 2. Communication Within and Beyond the Skin Barrier .....   | 21         |
| Chapter 3. Letters and the Social Grounding of Differentiated Genres .....  | 45         |
| Chapter 4. The Writing of Social Organization and the Literate Situating of Cognition: Extending Goody's Social Implications of Writing ..... | 59         |
| Chapter 5. Revisiting the Early Uses of Writing in Society Building: Cuneiform Culture and the Chinese Imperium .....                         | 83         |
| <b>SECTION 2. WRITING AND KNOWLEDGE .....</b>   | <b>95</b>  |
| Chapter 6. Local and Distant Knowledges, Local and Distant Minds .....  | 97         |
| Chapter 7. What Literate Societies See: The Methodical Gaze of Genres .....   | 105        |
| Chapter 8. Making the World Scientifically Thinkable: Inscribing Experience Methodically and Its Cognitive Consequences .....                 | 115        |
| Chapter 9. The Loneliness of the Long-Distance Writer: The Growing, Unsatisfiable Hunger of Connection .....                                  | 125        |
| <b>SECTION 3. NURTURING <i>HOMO SCRIBENS</i>: PUZZLES OF WRITING INSTRUCTION .....</b>  | <b>143</b> |
| Chapter 10. Writers Use Language, but the Teaching of Writing Requires More than the Teaching of Language .....                               | 145        |
| Chapter 11. The Value of Empirically Researching a Practical Art .....  | 157        |
| Chapter 12. A? Developmental? Path? To? Text? Quality? .....  | 177        |
| Chapter 13. What Does a Model Model? And for Whom? .....  | 183        |
| <b>SECTION 4. THE ETHICS AND VALUES OF WRITING .....</b>  | <b>217</b> |
| Chapter 14. Equity Means Having Full Voice in the Conversation .....  | 219        |
| Chapter 15. Schooling for Life, All Lives: Opportunity, Dilemma, Challenge, Critical Thought .....  | 231        |

Chapter 16. Paying the Rent: Linguaging Particularity and Novelty . . . . . 245

Chapter 17. Reproduction, Critique, Expression, and Cooperation: The  
Writer’s Dance in an Intertextual World . . . . . 253

Chapter 18. The Ethical Poetry of Academic Writing . . . . . 265

**SECTION 5. GUESSES AT UNKNOWN FUTURES . . . . . 277**

Chapter 19. Looking Backwards Towards the Future . . . . . 279



UNFINISHED BUSINESS:  
THOUGHTS ON THE PAST,  
PRESENT, FUTURE,  
AND NURTURING OF  
*HOMO SCRIBENS*



# Introduction

The essays in this volume revisit some of the questions that have obsessed me over the years and that continue to haunt me even as I approach my eighth decade; thus, unfinished business. To me they seem puzzles that will remain for writing studies long after I am gone. So, this, too, is unfinished business. While I am still able, however, I want to put the pieces I see on the table, for others to fiddle with. Although the chapters appear as distinct essays, I think they begin to sketch a picture of what it means to write, how writing has emerged in human worlds, how we might understand our writing classrooms and their ethical implications, and where writing may go in the future. Writing itself is unfinished business.

Almost half of these chapters are previously unpublished, either freshly written for this volume (Chapters 1, 2, 6, 9, 19) or transformed from recent conference presentations (Chapters 7, 8, 10). Some have been published in places not usually seen as part of writing studies (Chapters 12, 13, 14, 16, 17, 18) or only in Spanish translation (Chapter 15). Some, though published and accessible, nonetheless fill in some of the connections among the other essays (Chapters 3, 4, 5, 11). Together, I hope they present how I see writing and its instruction these days. None are the last word, and I rely on some speculative leaps. Yet I hope they intrigue some researchers to pursue questions, seek evidence, or await more definitive knowledge from researchers in other disciplines.

The questions addressed here range from the most fundamental ideas about humans as writers and writing as constituting modern society to the most practical issues of curriculum and teaching. The answers to some may someday become clearer as data are gathered or as the future reveals what will happen. Other questions are less empirical and more about our values and commitments as writing instructors. But they all relate in some way to the purposes, means, skills, situations, and development of writers—and our actions as instructors. In ways more distant or immediate, they all bear on what we do on Mondays.

Although we experience our classes in real time, and we interact with students in the moment, there are long histories that define our academic circumstances as well as the motives for writing in society and how humans came to be the kinds of creatures who could invent writing. All these histories give shape to our teaching and writing challenges in the current moment. These histories also reveal who we become as we develop into our socio-literate environment. Writing, although only a recent invention, reaches deeply into ourselves, becoming part of our cognitive, affective, and social development, along with our engagement with the world around us.

## Organization of the Book

The five sections of this book present, I hope, a coherent narrative of writing as central to the great evolutionary experiment of humans and of how we can assist

new generations in carrying that experiment forward. The first section places *Homo sapiens'* capacity to write within the biological and cultural evolutionary arc. The opening chapters consider how the human capacities to use language and then to invent writing emerged from the endowments of our biological ancestors but then changed the conditions and potentials of our lives. The emergence of *Homo scribens* has expanded our social connectedness, socially shared knowledge, and range of social action. These changes, however, have placed ever more significant and challenging demands on the capacity to write. It may seem a long distance from earliest protocells to white-collar professionals communicating from their desktops with colleagues in globally distributed networks, but it is an imaginable distance. Or at least I try to imagine it in the chapters of this first section.

The second section focuses on how writing has extended and transformed our knowledge with major consequences for us as societies and individuals. Writing extends our ability to know what others know and how they have come to know it. Writing allows us to know more about ourselves by enabling us to compare and apply what others have learned. Writing facilitates forming collective concepts and collective canons of methods, evaluation, and criticism. Writing facilitates forming and organizing collective systems of knowledge production, sorting through collective knowledge, and taking actions on the basis of shared knowledge. Writing even transforms what kinds of things are knowable, reportable, and usefully shareable. But tensions among and within different systems of knowing emerge into communal disputes and struggles about which knowledge is accurate and relevant. These tensions also give rise to dilemmas and problems for individuals living in worlds with multiple knowledge systems.

The third section considers how we go about teaching this increasingly important skill that gives people voice in the literate world. Writing has become essential for people to assert their presence and interests within the many complex literate systems that constrain, guide, and provide opportunities in our world. So, teaching writing and fostering writing has become ever more demanding. Our research into writing's challenges and uses has also transformed our teaching practices as we understand more fully and deeply all that is entailed in writing. That research also challenges commonly held educational ideas that have informed teaching, curricula, and assessments.

The fourth section reflects on the values and ethical concerns that pervade the practice and teaching of writing. Foremost, the ability to write with force and meaning is one of the most inequitably distributed resources in modern society, achieved by only a small percentage of even the most highly educated. In mass education, the teaching of writing is often an educational afterthought, taking a second place in literacy to reading. In elite education, however, writing is often granted a central role for those who are likely to wield power in societies. So, the teaching of writing has major ethical implications. As well, writers form and enact ethical relationships with readers and with the prior writers one draws on

and responds to. The social relations enacted through writing have major ethical responsibilities that we do well to understand and live up to if writing is to live up to its promise.

The final section speculates about where writing and writing instruction may go in the rapidly changing future. Predicting the future is a fool's game, but since writing technologies, distribution, forms, and instruction have been changing so rapidly in the last few decades, writing instructors are repeatedly asked to opine about where writing is headed. Based on the experiences and perspectives of a long career in writing studies as sketched out in this book, these are my guesses. They are of course bound to be mostly wrong. An unfinished business can't expect to be right.

## Acknowledgments

In a number of chapters I draw on resources not common to contemporary writing studies, and in those cases the citations are drawn from other fields and may be unfamiliar to those working in writing studies. Through discussing the findings and ideas from these other fields, I hope to show their relevance to writing studies and bring such work into our field. Some chapters are more fully grounded in writing studies and will have more familiar references. A number of the writing studies topics I have explored in previous essays, which I cite; for a fuller presentation of the writing studies sources relevant to those topics, I refer you to those previous essays.

Over a career of exchanges with colleagues, I have amassed so many debts I cannot even begin to remember them. Decades of conversations with colleagues and reading their work have merged into my thinking in ways I can no longer sort out or attribute, unless a specific citation reminds me. Many people from other times and places whose work I have read have found a place in my mind. Working with international colleagues has opened my mind to different ways of looking at writing, and communications with colleagues from different disciplines have given me a glimpse into the literatures and knowledges and perspectives of their fields. Writing students I have interacted with and observed have given me much to think about and much sense of what works and is important in writing. My graduate students have shared ideas with me and given me the opportunity to talk through what I have been thinking. Many have now become colleagues, fellow researchers, and thinkers.

But a few people stand out in my crowded memory. I have had the opportunity to meet and be influenced by some giants of their fields: Michael Cole, J. V. Cunningham, Yrjö Engeström, John Gumperz, Luiz Antonio Marcuschi, Robert King Merton, Dorothy Smith. I owe much to good friends I have made in writing studies and elsewhere: Natalia Avila, Fred Baumann, Carol Berkenkotter, Deborah Brandt, Paula Carlino, Jessica Early, Montserrat Castelló, René De los Santos, Ryan Dippre, Christiane Donahue, Olga Dysthe, Steve Graham, Britt-Louise

## 6 Introduction

Gunnarsson, Paul Hernadi, Eugene Holman, Greg Kelly, Shreedhar Lohani, Karen Lunsford, Josh Kuntzman, Sue McLeod, Carolyn Miller, John Mohr, Desiree Motta-Roth, Elizabeth Narvaez, Federico Navarro, Joanne Neff, Lylith Ormsby, Mike Palmquist, Marty Pearlman, Paul Prior, Paul Rogers, David Russell, Mary Lourdes Silva. And, as always, I have deep gratitude for the companionship and love through these many years of my partner Shirley Geok-lin Lim.

# Section I. How Evolution Produced Writing Humans and How Writing Humans Remade Their World

The teaching of writing takes for granted the ideas that humans are capable of writing and that our students have already learned much and are capable of much more. We take for granted that writing will help students engage with knowledge. We take for granted that their intellects, self-understanding, and spirits will gain from learning to write. We take for granted that particular social roles require writing and that students will benefit by being able to write appropriately to enter those roles. We take for granted that teachers also can write. In sum, we take for granted our time and place in society and the role of writing within it.

When we walk into our writing classrooms, we and our students are engaged in an activity done by no other animal, writing. Marilyn Cooper aptly titled her 2019 book on the teaching of writing *The Animal Who Writes*. What does being a writing animal mean? How did evolution wind up that we should do this? How has writing evolved and how has society evolved since its recent invention, just five thousand years ago? What is it that people need or want to learn about writing to facilitate their lives in this moment of human history and society? Why do our students write and what can motivate them to persist in the hard work of learning to write throughout their lives? These fundamental questions can help us think more deeply about the capacity we are nurturing.

This first section of this collection pursues some fundamental puzzles that my years of teaching writing have left me wondering about: How odd is it that humans write and what does it say about the nature of humans that we do it? What are the consequences of this odd practice for our way of life? How has writing not only changed our lives and minds, but how has it transformed the conditions in which we develop and act in ways that increase the demand for writing? Some animals and even plants communicate transiently in the moment, though without the full affordances, inventions, and flexibility of human spoken language. But the enduring and far-traveling inscriptions of writing seem to be uniquely human, even though today writing absorbs much of the attention and energy of many people throughout the world and has become infrastructural for the organization of society and contemporary life. As a relatively recent invention, writing relies on the preexisting human genetic, cultural, and social endowments that have made the invention possible, even though humans didn't write for much of their existence and even though these endowments have evolved from the capabilities of other life forms.

The opening chapters in this section explore how animals evolved to enable humans to invent writing. How does the way writing emerged reflect and rely on

our prior capacities? Only in the last two decades has the work of evolutionary biologists, neurologists, and primatologists given us robust hints to speculate about these issues. The latter chapters of this section consider how writing has developed in conjunction with social changes. What changes in human life supported the invention and elaboration of writing? How have the affordances of writing changed our way of life, both as social creatures and as individuals? Much of my writing over the years has dug backwards into that history, at first into the formation of scientific writing in recent centuries, and then, relying on the work of others, back through the five millennia of writing, although the sources to draw on were limited in number and focus, mostly from anthropology, archeology, and history.

The chapters here, accordingly, sketch out this murky picture, though no doubt in coming years more details and corrections will become available to offer a more accurate view. Chapter 1, “The Peculiar Emergence of *Homo Scribens*” considers the evolution of information available to life forms, starting with the chemistry of the cell, which is then encoded in the genome. The interaction of the organism and the environment in more advanced life forms embeds more information, which increases with the evolution of sense organs and more developed neurological systems. The processing of increased real-time information gives rise to consciousness that reflects on the being’s state and experiences, including awareness of the actions and knowledge states of other creatures. Among humans the products of that consciousness are socially shared through cultures and language in order to impact the consciousness of other individuals.

The second chapter, “Communication Within and Beyond the Skin Barrier,” takes up the puzzle of how writing is both an internal psychological function and an external social function. Like the previous chapter, this one delves into developments in neuroscience and evolutionary biology to examine writing (and language more generally) as part of a communicative continuum, from internal neurological processes to socially shared language to affect the neurological organization of others. How can the brain and neurological systems be organized so as to produce a consciousness that engages in creative social interaction? How is consciousness transformed through social interaction? How can we nurture the minds of our students to enter more deeply and fully into social interaction through the development of their writing?

The third chapter, “Letters and the Social Grounding of Differentiated Genres,” considers how the recognizable social spaces of human face-to-face communication become transformed into recognizable spaces of textual interaction through the typifications of genre, which in turn mediate extended forms of social organization. As the individual interacts with the written world, how can the reader make social sense of a limited set of symbols, of markings on a paper that seem to exist out of time and place? Yet the meaning only makes sense when it is located in the times and places of social interactions, just as much as speech is.

The fourth chapter, “The Writing of Social Organization and the Literate Situating of Cognition: Extending Goody’s Social Implications of Writing,” pursues



how writing and its genres reorganize social and psychological life. Building on Jack Goody's examination of the social consequences of writing, it provides a framework for considering how the organization of society develops hand in hand with the organization of writing forms that enable new social systems.

The final chapter in this section, "Revisiting the Early Uses of Writing in Society Building: Cuneiform Culture and the Chinese Imperium," shows how the social processes fostered by writing play out in actual historical circumstances by looking at some of the major changes enabled by writing in the ancient Middle East and early China. These early transformations point toward the complexities of modern cultures and social institutions, including governance, the challenges of coordinating large numbers of people under the rule of law, and the growth of various forms of competing knowledge.

Together these chapters help us locate the particular role and function of writing within our society and for the development of our students. They also give us a framework for thinking about what we are trying to accomplish and how we are trying to accomplish it as writers and with our students since we all are these unusual social creatures, *Homo scribens*.

## Reference

Cooper, M. (2019). *The animal who writes*. University of Pittsburgh Press.



# Chapter I. The Peculiar Emergence of *Homo Scribens*

Writing is an odd behavior, done by no other life form on this planet, as far as we know. Most behaviors or responses of living organisms are directly traceable to immediate life needs—such as finding or gathering sustenance, seeking oxygen, protecting integrity of the organism or its territory, fleeing danger, hunting, or finding and attracting mates. Even elaborate communications or displays, such as among birds, seem to be related to mating or territory protection. Bonding behaviors, as in caring for young or in ape mutual grooming, can be attributed to continuation of the species, mutual protection, feeding, dominance recognition, and other needs. But only humans spend long hours inscribing words on media which may be shared or even kept private—and spend many years learning how to do this. Often the texts produced seem to be for amusement, imagination, emotional engagement, or solving abstract conceptual puzzles. If the path from these behaviors back to needs can be traced, as I believe they can, nonetheless the path is often long, complex, circuitous, and nonobvious.

Yet such writing and reading behaviors use our evolved capacities as humans, derived from prior forms of life and expressed in the hundred or more millennia of human life before the emergence of writing. In particular, writing engages our biological inheritances of sociality and consciousness that long preexisted writing, just as it typically engages our eyes, limbs, and fingers (although over the last century or so we have been inventing alternative input and reception means). Reading and writing are social behaviors that facilitate social interaction, sharing of meaning, and coordination of action. This sociality of literacy expands the communicativeness of spoken language from which it initially grew, to facilitate communication over time and space, expanded cultural memory and institutional records, and critical inspection of each other's words, among other things (Goody, 1986). Reading and writing are also intensely private psychological activities, playing out in the minds or consciousness of individuals in both production and reception. Writers' thoughts and feelings prompt the words they share, and readers must mentally reconstruct the meanings, thoughts, and feelings of writers from the inscribed marks. As in speech, thoughts and feelings of speakers are directed to affect the thoughts and feelings of recipients, but in writing the immediacy of the interaction fades, so the meaning resides more fully in the words without the gestures or expressions or other aspects of social presence. In contemporary reading and writing practices carried out in semiprivacy there may be little to notice behaviorally beyond people making marks or looking at inscribed objects, holding them, turning pages, and the like. Yet internally within readers and writers, complex neural activities are engaged in forming, recognizing, or responding to those marks. These internal meaning-making activities

occasionally become visible in facial expressions, outbursts of laughter or tears, or even body posture (Bazerman, 2013).

Writing expands consciousness by externalizing it, allowing us to examine our inscribed thoughts (Goody, 1977, 1987). Reading gives us access to the extended observations, thoughts, and imaginations of others even as we may learn to examine them critically and reconcile them with what others have written and what we may think. By engaging with what others write, we can come to enter more fully into others' perceptions, knowledge, and ways of thinking, coming to see them as different than our own, perhaps then to try to communicate in response across that distance. Speaking socializes human consciousness, and then literacy draws human consciousness into an even more extensive social space.

While spoken language fosters social arrangements among people who meet face-to-face, writing fosters more extensive and complex social arrangements, differentiated by organizations, institutions, and common interests rather than temporal and geographical locality (Bazerman, 2006; Goody, 1986). This has many consequences for the understanding of audiences. The credibility of the author, for example, may rely more on social and institutional identities, evidence, and other "objective" representations available to a wider group, rather than the personal knowledge and trust of one's interlocutor common in spoken language (Eisenstein, 1979). Similarity of thought, shared abstractions, or reliance on similar influential texts can also foster trust among dispersed peoples. Participating in the same geographically dispersed organization or institution and acting within defined organizational roles, as well, facilitate mutual reliance on each other's written words (Bazerman, 1988). Further, the audience's exposure through writing to a greater range of experiences, views, and knowledge of others can expand its members' consciousness as they become more accepting of difference of perspectives; knowledge of such an occurrence might lead authors to cast their thoughts to be intelligible and perhaps acceptable across differences.

Literacy's intertwining of the intensely personal experience of consciousness with the intense sociality of communicative humans, extending the potentials of spoken language, has created behaviors and ways of life radically different from those of any other life form, and has made cultural evolution a major theme in human life, yet literacy rests on the prior evolution of life forms that has produced consciousness and sociality. Consciousness, however it may be defined by different researchers, has been found to exist in many animals (Damasio, 2010, 2018, 2021). As well, sociality, communication, coordination, signaling, even using sounds to do so are not uniquely human, but rather exist in varying ways throughout the animal kingdom, and even in the plant kingdom (Wohlleben, 2016). While some of the linkages and mechanisms of this biological evolution remain speculative, some strong hypotheses have emerged in recent years drawing on recent research, and I will review some of them below, considering their implications for the emergence of writing. Even if future research will falsify details or even the larger sweeps of these hypotheses, something similar to them will

most assuredly emerge, with perhaps even more applicability to understanding how and why humans write and how we can expand human capacity to do so.

Evolutionary research has grown both in detail and scope since the publication of Charles Darwin's *On the Origin of Species* in 1859, *The Descent of Man* in 1871, and *The Expression of the Emotions in Man and Animals* in 1872. Despite Darwin holding a number of beliefs conventional to his time about race, sex, disability, and civilized behavior that have not worn well in the intervening years, the idea that humans have evolved from and bear many characteristics of other animals has of course been robustly confirmed and elaborated. A more recent overview of evolution from the simplest microorganism to the more complex was proposed by Maynard Smith and Eörs Szathmáry (1995a, 1995b). In an even more recent rearticulation, Szathmáry (2015) identified seven evolutionary transitions, from protocells to societies with natural language, most notably humans (though some other complex animals in their communications are controversially considered to be able to use aspects of natural language—see Herbert S. Terrace et al., 1979, on one side and Sue Savage-Rumbaugh et al., 2009, and Denise L. Herzing et al., 2012, on the other). Szathmáry's (2015) first four transitions (protocells, prokaryotic cells, eukaryotic cells, and plastids) have to do with the development of genetic inheritance systems, where information passed from one generation to the next is entirely within the genetic code. In these organisms there is no post-genetic learning that elaborates or transforms the genetic information either in the individual or in the group. With the fifth transition to multicellularity, however, responses to the environment may embody learning across generations, leading to organism changes that may affect the genome. The sixth transition Szathmáry identified as Eusocial animal societies, which are marked by social signaling that can lead to learning by the individual and society. The last transition to societies with natural language supports the aggregation of knowledge within and across generations. According to Szathmáry,

It was language, with its unlimited hereditary potential, that opened up the possibility of open-ended cumulative cultural evolution, also specific to humans. Cooperation among relatives does exist in humans [as in many animals that raise their young], but it significantly goes beyond. Shared interest can elicit extensive cooperation among unrelated individuals. (p. 10109)

Cultural learning is not directly encoded in the genome and is only inheritable by external transmission. Writing's invention elaborated, accelerated, and amplified the potential of spoken language for cultural learning and transmission and thus cultural evolution. Writing is continuous with the ideas of both inheritance and transmission of information responsive to the environment. Information is shared across generations inside and outside the genome. Information becomes communal property among different non-familial individuals, each with their

somewhat different genomes but able to cooperate with each other and to share information and knowledge among them.

Neuroscientist Antonio Damasio (1999, 2010, 2018, 2021) has investigated the evolutionary path of sensing and response embodied in neural evolution that has led to the formation of consciousness. Damasio has noted that though the simplest one-celled creatures lack distinct neural cells, they do sense changes within the cell, some of which are induced by external conditions that impinge upon the cell. These sensed conditions then trigger chemical responses to return to homeostasis, or equilibrium. Other researchers have also pointed to anticipatory or predictive actions based on prior experience, called allostasis, also with the aim of maintaining homeostasis (Sterling, 2020). As Damasio has outlined, as organisms become more complex and multi-cellular, they develop neural cells that transmit sensed information across cells within the body and in turn trigger bodily responses. In some animals these neural cells aggregate to form a brain that becomes a center for information and maps the state of the body outside the brain (that is, neural sensory inputs are associated with neural brain receptors). These brain mappings of bodily states can then transmit signals to trigger responses in other parts of the body, although some sensed departures from homeostasis and resultant responses may stay within the cell or localized in non-brain parts of the body. Within the brain, signals of bodily states are interpreted as emotions; that is, embodied sensations about the state of the body result in embodied responses or movements. The promising “predictive processing” approach towards studying brain functioning highlights the brain’s role in interpreting lower level neurological information in order to direct current action (for a technical presentation of this approach see Clark, 2013; for a technical review of evidence see Walsh, 2020; and for a popular presentation see Clark, 2023).

In a further evolutionary development, sense organs gain information about the external environment (such as through sight, sound, taste, odor, and touch); these sense organs also send their information to the brain to be mapped and interpreted (that is, each sensory neuron corresponds to a receptive brain neuron to create a brain map of the sensory input, which then connects with another set of neurons that identifies the sensory input with a perceived object, such as a barking dog or a speeding car) (Man et al., 2015). This information about the external environment is mapped within the brain and connected with the map information of the body’s state, again leading to bodily response.

While some bodily states and bodily responses may remain involuntary and outside of awareness, the state of the brain (itself a bodily organ) can also become mapped along with the responses triggered throughout the body, providing the organism awareness of its neural system and the embodied emotions in the form of feelings. Damasio (1999, 2010) hypothesized that recognition of this neural map as belonging to the organism’s self is the origin of consciousness. This kind of consciousness exists in many animals and makes possible calculation and choices informed through feelings so as to return to homeostasis.

Recognition of this mapped consciousness allows evaluation of feelings and calculation of which feelings should be attended to and how they might be responded to. The selection and prioritizing of feelings to be responded to can be considered a kind of reasoning.

This identification of consciousness with the awareness and monitoring of brain functioning gives consciousness a bodily neurobiological function similar to neurobiological functions at lower levels, such as the monitoring and regulation of digestion or heartbeat. The monitoring and regulation of the brain itself allows for reflective activity and choice making with respect to those brain activities. It also places the brain in control of those choices, using those very neurological tools of awareness, adding another layer of neurological control. Consciousness as so conceived also has consequences for communal reflection and choice making once the organisms are able to communicate some of those neurological contents, as language makes possible. Through conversation, speaking creatures can comment on each other's spoken thoughts and potentially influence each other. Further, through language, multiple participants can compare, weigh, and make choices about thoughts to regulate communal behavior (such as in the way Michael Tomasello has suggested as discussed later in this chapter). Writing further extends the geographic and temporal range of communal reasoning and communal influence on the thoughts of the individual.

Some bodily reactions, however, remain outside of consciousness, with the sensed difficulties and reactions even remaining at the cellular or regional level outside the brain (think of the autoimmune system's reaction to infectious agents), while other bodily actions, though monitored and reacted to by the brain, are typically not consciously attended to, unless suffering extreme abnormality (think of normal operations of the heartbeat or lungs). At the same time, information from the external world, monitored and perceived through sense organs, also is mapped, thus providing information about how to respond to the external world. This ability to monitor sensory input from the environment can evoke feelings about the surroundings, so as to make choices of response. This meeting of internal and external sensations also provides resources to deal with some of the difficulties in internal states, such as connecting, for example, sensed hunger with the sight of edible berries or potential prey.

The complex internal processing of information from both inside and outside the skin barrier also points to the complexity of what happens neurologically as we write (or for that matter in reading as we make meaning and internal sense of the words inscribed by others.) In writing, our gists or impulses to write may start out in a deeply embodied way, driven by emotional pressures or internal states—whether arising from unresolved feelings that lead us to try to make sense of our experiences in trauma writing (Pennebaker & Chung, 2007) or to put in order our view of what is occurring in the world, or driven by external demands that nonetheless mobilize our neural systems, such as the need to complete a report to maintain our jobs and establish corporate success to provide the means

of life in a modern urban world. Emotions, then, are underneath and pervasive in our cognitively demanding tasks, but emotions also pervade our monitoring, mapping, choice making, and connecting of information from many parts of our neurological system, as coordinated through our higher level cognitive maps that monitor and guide our writing processes (see Tatiana V. Akhutina, 2003, for possible mechanisms of inner speech emerging into public language). Inversely, the more deeply we read, the more we reconnect the localized linguistic and semantic processes with the full suite of cognitive and affective resources throughout the neurological system, which includes what we learn through our senses and from symbolic communication with others. There is still much to learn about this, but no doubt the picture will show that both reading and writing engage large parts of the brain and other parts of the body. How else could reading make our hearts race; or lead us to burst out laughing; or provide us internal senses of pleasure, fear, or anxiety; or give us the satisfied sense of understanding?

Damasio (2010) speculated about the role of language and consciousness in forming culture, but because his research and data all are situated in neural processes in the individual organism, his discussion of socially produced culture and its impact on consciousness is limited. Tomasello's (2001, 2010, 2019) extensive comparisons of the behavior of young humans with chimps and other great apes, however, give us strong insights into how biology intersects with sociality, culture, and language. Tomasello and his colleagues (2005) have found that although humans and simians are similar in many aspects of intelligence, there are great differences in their sociality, with large consequences for their thinking and culture. As they noted, although both apes and humans are aware of the knowledge and state of mind of their fellow creatures and have some ability to communicate desires and bodily states, they have great differences in their ability to collaborate and develop shared attention and collective intentionality. As a consequence, humans have collaboratively formed distinctive cultures in different regions and in different social groups, in contrast to ape cultures that vary only in small details from locale to locale.

A key element in shared attention and collective intentionality is shared eye gaze that infant humans form shortly after birth with caregivers and then other adults, and ultimately with peers. This shared eye gaze supports shared attention, the formation of language, shared information, collective intentionality, social norms, and states of mind (Tomasello, 2019). Humans' biologically evolved visible eye whites surrounding pupils (even more pronounced in young children) support this shared eye gaze. Among chimps and apes, intersubjectivity and mutual attention are limited to dyads and cooperative projects seem limited to those imposed by dominance systems. Among human children, however, group identity, shared projects, empathetic understanding of peers, and formation and enforcement of group norms seem to arise spontaneously, using language's richer set of tools to share perceptions of the world and each other, to assert mutual obligations, and to negotiate cooperative enterprises.



Although schooling and learning of literacy are beyond the scope of Tomasello's inquiries, which end with children of six or seven years, it is not difficult for us to see how reading and writing create more extensive opportunities for shared attention, meaning, and action through enduring and transportable visual signs. Literacy, further, supports the formation and transmission of knowledge, negotiation, and enforcement of communal agreements and norms as well as the ability to form, affiliate, and act within larger groups over time and space. Writing, additionally, extends language's capacity for sharing feeling, imagination, ideas, concepts, and thinking through extended statements that are open to critical examination, circulation, and retention among more organized groupings of interlocutors. Consequences follow for our perception and knowledge of the world and each other along with transformed ways of life. Most fundamentally, speech mediates our relation to the material world and each other through symbols, which gain robustness, quasi-stability, elaboration, and circulation through inscription.

When they came together under the right conditions, human consciousness and sociality produced the remarkable and ever evolving invention of literacy, which continually transforms our consciousness and societies, bringing into being new ways of living within evolving cultures. What those right conditions for the development of literacy might be is little known, though the three major historical examples of the Middle East, China, and Mesoamerica suggest that agriculture and sedentary ways of life seemed to give rise to record keeping, knowledge of the seasons with climate cycles, and the need for communication at a distance as governance and power become centralized and dominance displays were extended over greater domains. These factors were accompanied by extension of group norms, ideology, and affiliation within centralized settlements and their hinterlands. From these early roots, culture and society continued to evolve, with literacy forming the communicative infrastructure of many of the emergent forms and institutions of social organization (as are considered in later chapters in this volume).

These cultural changes as far as we know have not required nor brought about any biological changes within the genome. Rather, the information is all encoded among people in their communication, which then changes the conditions for each human's postpartum development. The complexity of the postpartum information needed to survive and thrive in modern society as transmitted through texts has driven the growth and evolution of the cultural institution of schools, which are centrally about engaging students in reading and writing about the various domains of inscribed human knowledge, whether religious or secular. Schooling's organized apprenticeship in literate knowledge may now last sixteen years or longer in developed countries, bringing young people from early childhood into adulthood in their twenties when they are prepared to enter into economically advanced work cultures. Only at that point, perhaps after a quarter or a third of their expected lifespan, are people presumed to have sufficient

knowledge, socialization, and modes of thinking to be able to navigate the complex symbolic landscape of modern knowledge, information society, and cultures in order to participate in more advanced social roles.

This odd form of life we humans have developed through our biological and cultural inheritances has relied on our consciousness and sociality to invent technologies of language and inscription. These symbolic means have allowed us to aggregate large amounts of information to investigate and manage our place in the world collaboratively. Through such means we have come to dominate other life forms and hold the fate of the planet in our hands. This odd literate form of life increases the pace of the world's transformation in directions that are hard to predict with clarity. Many perils and problems face human societies in the near term, with uncertainty about whether we will develop the knowledge, cooperations, and sociality to address our long-term perils successfully. If we do, much will be mediated by texts of knowledge, governance, commerce, and ideology, and we will enter into new ways of life within evolving cultures. If we do not, much of our troubles will be exacerbated by our texts of ideology, commerce, insufficient knowledge, failed cooperation, and failed governance. Perhaps this biological evolutionary experiment of creatures who speak and are capable of inventing writing is doomed, as we are too clever by half for our own good, to be replaced by other creatures with capacities better suited for survival. If that is the case, we humans would have had a spectacularly complex, if brief, run on this planet.

## References

- Akhutina, T. V. (2003). The role of inner speech in the construction of an utterance. *Journal of Russian & East European Psychology*, 41(3–4), 49–74. <https://doi.org/10.2753/RPO1061-040541030449>
- Bazerman, C. (1988). *Shaping written knowledge: The genre and activity of the experimental article in science*. University of Wisconsin Press.
- Bazerman, C. (2006). The writing of social organization and the literate situating of cognition: Extending Goody's social implications of writing. In D. R. Olson & M. Cole (Eds.), *Technology, literacy and the evolution of society: Implications of the work of Jack Goody* (pp. 215–240). Lawrence Erlbaum Associates. <https://doi.org/10.4324/9780203759752>
- Bazerman, C. (2013). *A theory of literate action: Literate action volume 2*. The WAC Clearinghouse; Parlor Press. <https://doi.org/10.37514/PER-B.2013.4791>
- Clark, A. (2013). Whatever next? Predictive brains, situated agents, and the future of cognitive science. *Behavioral and Brain Sciences*, 36(3), 181–204. <https://doi.org/10.1017/S0140525X12000477>
- Clark, A. (2023). *The experience machine: How our minds predict and shape reality*. Pantheon Books.
- Damasio, A. (1999). *The feeling of what happens: Body and emotion in the making of consciousness*. Harcourt.

- Damasio, A. (2010). *Self comes to mind: Constructing the conscious brain*. Pantheon Books.
- Damasio, A. (2018). *The strange order of things: Life, feeling, and the making of cultures*. Pantheon Books.
- Damasio, A. (2021). *Feeling and knowing: Making minds conscious*. Pantheon Books.
- Darwin, C. (1859). *On the origin of species by means of natural selection, or the preservation of favoured races in the struggle for life*. John Murray.
- Darwin, C. (1871). *The descent of man, and selection in relation to sex*. John Murray.
- Darwin, C. (1872). *The expression of the emotions in man and animals*. John Murray.
- Eisenstein, E. L. (1979). *The printing press as an agent of change: Communications and cultural transformations in early modern Europe (Vols. 1 & 2)*. Cambridge University Press. <https://doi.org/10.1017/CBO9781107049963>
- Goody, J. (1977). *The domestication of the savage mind*. Cambridge University Press.
- Goody, J. (1986). *The logic of writing and the organisation of society*. Cambridge University Press. <https://doi.org/10.1017/CBO9780511621598>
- Goody, J. (1987). *The interface between the written and the oral*. Cambridge University Press.
- Herzing, D. L., Delfour, F., & Pack, A. A. (2012). Responses of human-habituated wild Atlantic spotted dolphins to play behaviors using a two-way human/dolphin interface. *International Journal of Comparative Psychology*, 25(2), 137–165. <https://doi.org/10.46867/ijcp.2012.25.02.02>
- Man, K., Damasio, A., Meyer, K., & Kaplan, J. T. (2015). Convergent and invariant object representations for sight, sound, and touch. *Human Brain Mapping*, 36(9), 3629–3640. <https://doi.org/10.1002/hbm.22867>
- Maynard Smith, J., & Szathmáry, E. (1995a). *The major transitions in evolution*. W. H. Freeman and Company.
- Maynard Smith, J., & Szathmáry, E. (1995b). *The origins of life*. Oxford University Press.
- Pennebaker, J. W., & Chung, C. K. (2007). Expressive writing, emotional upheavals, and health. In H. S. Friedman & R. C. Silver (Eds.), *Foundations of health psychology* (pp. 263–284). Oxford University Press. <https://doi.org/10.1093/oso/9780195139594.003.0011>
- Savage-Rumbaugh, S., Rumbaugh, D., & Fields, W. M. (2009). Empirical Kanzi: The ape language controversy revisited. *Skeptic*, 15(1), 25–33.
- Sterling, P. (2020). *What is health? Allostasis and the evolution of human design*. MIT Press.
- Szathmáry, E. (2015). Toward major evolutionary transitions theory 2.0. *PNAS*, 112(33), 10104–10111. <https://doi.org/10.1073/pnas.1421398112>
- Terrace, H. S., Petitto, L. A., Sanders, R. J., & Bever, T. G. (1979). Can an ape create a sentence? *Science*, 206(4421), 891–902. <https://doi.org/10.1126/science.504995>
- Tomasello, M. (2001). *Cultural origins of human cognition*. Harvard University Press.
- Tomasello, M. (2010). *Origins of human communication*. MIT Press.
- Tomasello, M. (2019). *Becoming human: A theory of ontogeny*. Harvard University Press.
- Tomasello, M., Carpenter, M., Call, J., Behne, T., & Moll, H. (2005). Understanding and sharing intentions: The origins of cultural cognition. *Behavioral and Brain Sciences*, 28(5), 675–691. <https://doi.org/10.1017/S0140525X05000129>

Walsh, K. S., McGovern, D. P., Clark, A., & O'Connell, R. G. (2020). Evaluating the neurophysiological evidence for predictive processing as a model of perception. *Annals of the New York Academy of Sciences*, 1464(1), 242–268. <https://doi.org/10.1111/nyas.14321>

Wohlleben, P., (with Flannery, T., & Simard, S.). (2016). *The hidden life of trees: What they feel, how they communicate—discoveries from a secret world* (J. Billingham, Trans.). Greystone Books.

## Chapter 2. Communication Within and Beyond the Skin Barrier

For me it is a bit too late to start new research projects, yet I still get excited about the possibilities of new ways of understanding literacy suggested by recent neurological research and theory.<sup>1</sup> So in this chapter I am putting out a few thoughts (not even hypotheses) in case anyone sees enough promise and has the resources to pursue them. What I consider specifically in relation to reading and writing may apply in different ways to all forms of human thinking, feeling, and activity, because these suggestions draw on general accounts of human neural organization and activity. Nonetheless, since reading and writing are among some of the more difficult and engaging things humans do and because they are so central to modern life, it may be of special benefit to consider their implications.

Chief among the implications of this line of neurological investigation is that writing capacities might develop differently among different individuals and groups of people within their differing material, cultural, and social circumstances and within their particular experiences. People come to write different things in different ways, having different thoughts to express and different kinds of representations to contribute to communal discussions and projects. To any observer of writing and writers, these differences are self-evidently true, but most psychological, neurological, or sociological accounts of writing do not provide much discussion of the mechanisms by which these differences develop and are expressed. Understanding the nature and development of our neurological systems within their material, social, and semiotic environments may give us clues as to how we as teachers might effectively foster the fuller development of our students as writers and readers. Thus, while these models arise from the needs of neuroscientists to make sense of data, they also have the potential to be useful for writers to make sense of their experiences and to guide their self-management as well as for teachers who might gain from understanding how their students are developing. This potential alignment of models among different groups suggests the robustness of the models as being useful for and consistent with multiple kinds of experiences and evidences (Bazerman, 2018).

The newer accounts of neurological development that seem most promising and consistent with the experiences of writers contrast with the modular versions of cognition and consciousness that have dominated cognitive science until recently. These modular views continue to have great sway in language and writing

---

1. I would like to thank a reading group of Michael Cole, Maria Falikman, Georg Theiner, Chris Drain, and Tim Djibilaev who helped guide me through current literature in neuroscience and brain development while correcting some of my misunderstandings. The speculations here are, of course, my own fault.

studies, perhaps because they have been quite useful in understanding some of the lower-level literacy processes, such as visual letter processing and alphabetic letter correspondences to phonology as well as related disorders such as dyslexia (as presented for general readers in Stanislas Dehaene, 2009, and Maryanne Wolf, 2007). These earlier modular views consider cognitive activity and the related behaviors as being produced by single-purpose calculative feedback systems largely following the cybernetic logic of computer programming systems. These modular systems are treated as static and stable across humans, except for malformations, damage, or other specific deviations from their ideal configuration. As such they are essentially inborn in humans and are genetically inherited in much the same form across the species. As such they do not require or even imply development based on experience, learning, or instruction, except in very limited ways, such as identifying the particular phonology of a language or the sign forms used to transcribe meanings. In language studies such a special-use modular approach is associated most radically and influentially with Noam Chomsky (1959). Such accounts, sometimes characterized by their adherents as the Swiss Army Knife model of the brain (Tooby & Cosmides, 1992), rely on radical and fortuitous leaps in evolution to explain new capacities. As such, the Swiss Army Knife model of the brain does not solve substantial evolutionary puzzles about how capacities come about, nor does it align well with emerging neurological data (Anderson, 2014). In language development studies, Elizabeth Bates (e.g., 1994) has been particularly trenchant in her critique of modularity.

More recent approaches to neurological evolution, however, rely on the reuse and redeployment of prior capacities for multiple purposes and in alliance with each other, with added reflective layers to expand capacities. They are more realistic in biological and evolutionary terms, seem to be more consistent with brain development data, and seem to provide richer accounts of advanced meaning-making skills in literacy activities. Even the most well-known popularizers of the application of modular research for lower-level reading processes have in their more recent works been more cognizant of upper-level processes where brain complexity, plasticity, and interconnectivity appear to be of greater importance (Dehaene, 2020; Wolf, 2018).

## Newer Models, Literacy Development, and Higher Literacy Skills

These newer accounts of neural development are not passive models used only to design and explain experiments, but rather they consider how neural networks arise within each individual's ontogenetic development, responsive to concrete needs, interests, and desires as they arise within the ongoing and changing situations of life to meet practical and often unanticipated challenges. That is, they describe neural networks, the consequent organization of consciousness, and the human expression of conscious thought through language, including through the

historically recent development of writing, as arising in the course of things as organisms go about their lives in their physical and social environments.

These current theories and data about neural organization offer mechanisms for Vygotskian kinds of internalization, suggesting pathways for how advanced creatures' insides can come to coordinate and align with their material and social situations and then become externalized in actions and behaviors to contribute to the unfolding of situations. Humans, in particular, add language and other complex semiotic means to those internalization and externalization processes to transform internalized ways of thinking, uniting spontaneous and scientific thinking as individuals contribute to and transform the sociosemiosphere (Akhutina, 2003; Bazerman, 2012; Vygotsky, 1978, Chapter 1).

These newer models also suggest possibilities for the richness and variety of writing, texts, and text interpretation that we witness in our world, where people write different things, are drawn to different things in each other's texts, and interpret those texts differently to find different meanings. Over time and multiple experiences these differences result in people developing different ways of thinking and making sense of the world they confront in part through their different pathways of reading and writing. While recognizing the importance of biology, evolution, and genetic inheritance, these new lines of thinking avoid undue reliance on biological determinism. Rather they help us understand the individuation of thought and action of people responding to their immediate circumstances and cultural influences, including the institutions, practices, and organizations that advance reading and writing—such as schools, publishing industries, or scriptural religions. People's engagement with their physical, social, and semiotic environments can leave their mark on individuals' neural development and thus the thought within the self. These neural theories recognize the importance of individual development, experience, education, and access to means of life as they may be differentially and inequitably distributed within economic, social, and cultural structures as they evolve across history and regions.<sup>2</sup> Education, experience, individual development, culture, and social institutions play a much smaller role in modular theories of the brain, as they see human thought and action as more determined by human genetic inheritance.

## The Neurological Problem of Literacy and the Brain

What happens on the inside as we communicate with the outside world through language, particularly written language? What are the psychoneurological consequences of having read others and of having written ourselves?

Readers and writers use their brains, we hope. As well they use a lot more of their nervous systems while reading and writing. They smile, laugh, twitch, tap

---

2. From the early years of writing studies Ann Berthoff (e.g. 1978, 1981), following Lev Vygotsky and Charles Sanders Peirce, insisted on the individuality of meaning making.

their fingers, shake their knees, stare upward into space, or focus their eyes on the page. They get headaches or exhilarating chemicals rush through them; thoughts and memories tumble through their head; they picture events and places that they may then try to describe; or their brains feel blocked up. They get exhausted, get excited, feel unsure, feel morose and depressed, or criticize what they have just read or done.

So, even though writing communicates, accomplishes social actions, attends to its audience (even if that audience is the self), and uses languages and inscribed signs that historically emerged within cultures, it is the individual in the moment who works hard internally, overcomes emotional and cognitive challenges, and thoughtfully solves problems of what their reading means or of what words to choose and how to arrange them. Even in collaborative composing or interpreting, each person makes individual contributions, initiated in their thoughts and feelings. Each person does different tasks, proposes different alternatives, critiques and adjudicates each other's choices, and coordinates with co-authors or co-readers.

## The Interpersonal, Internal Magic of Writing

From early on I had been interested in how we accomplished the remarkable processes of literacy, one mind speaking to another through words inscribed on paper—symbols only. Writers use language, of course, but writing does not even directly represent things, actions, events, or ideas in the way spoken language does. Writing (at least in alphabetic or syllabic languages) only transcribes the sounds that words make, as Vygotsky pointed out long ago (1978, p. 106). That transcription of sounds, further, is only approximate and often ambiguous—especially in English.

Those sound transcriptions interpretable as recognizable word meanings are composed into complex narratives and lines of reasoning to which the reader must give life. The writer chooses words with aspirations of meaning, but the reader only understands the meaning they can reconstruct from those few clues of transcribed sounds, drawing on their own experiences and impulses to arrive at meanings. Reading itself is a kind of performance, sometimes a halting performance of little children in early grades. But with maturity, reading can take on a depth of eloquence and understanding. Think of the power of meaning at a poetry reading, or a song recital, or as actors bring a script alive in a theater (in collaboration with a director and a backstage team). In modern times, reading is typically performed silently, internally, as the meanings of texts come alive in the minds of readers, whether they are reading a captivating novel or an analytical economic report that compels action. Words take on only as much meaning as the reader can or is willing to construct from the marks on the page or screen. Those meanings can be shared and argued over, whether in a court or a literature course, but more often as not they remain only internal performances from which the readers ingest what they will.



So how do we perform this magic of words? It has helped me to think of the text as being like a music score that has no sound but that can suggest sounds to those who know how to read and perform music. Even correctly produced notes are not yet music unless the performer can interpret those sounds as music—finding the gists, the interests, the motions, the emotions, the instrumental tone colors that make the performed notes come alive and expressive to engage and move the listener. Sometimes, remarkably, an accomplished musician can imagine what the music might sound like from the score alone, but we currently expect every reader of texts to perform the magic of meaning in their heads. Such a performance of meaning must require lots of neural activity that relies on what is already within the reader's neural organization, excited in the moment by the sight of the marks on the page. The greater the excitement of the neural activity, the more of the reader's mind is engaged and drawn into reconstructing the text's meaning. The excitement can even be critical as the reader composes a counter-text, bringing to bear even more cognitive and emotional resources.

An effective writer, in turn, needs to anticipate the reader's state of mind to suggest to them the meanings the writer wants the reader to perform and to keep the reader on the path of reconstructing and inhabiting that meaning. In a sense the writer attempts to create a frame of mind within a text and tries to keep the reader within it. Yet each of these minds are separated by the people's skins, so there is no direct access from one neural system to another. Thus, while it may seem minds are tightly aligned through words, actually they are only approximately connected, following each person's imaginations of what the words signify in the contexted moments of writing and reading. The interpretation of meaning and contexts, and thus how words are connected to the neural communications within each body, is heir to each individual's aggregate experiences over the years during which neural systems develop. The social and linguistic processes of alignment over words are weak and incomplete compared to the rich material specificity, spontaneity, and rapidity of fresh connections within internal neural processing. Though socially imposed coercions and conformity may attempt greater alignment, those pressures themselves add internal resistances or acquiescences that flavor internal interpretations.

## Clues Towards Understanding Internal Processes

Over the years, as I have tried to make sense of how people use the social forms of language (particularly writing) to guide their internal understandings and thought (which in turn would have consequence for their material and linguistic actions), my speculations were inspired by Vygotskian theory, introspection, informal observations, and evidence from people's productions (see for examples Charles Bazerman, 1988, 2009, 2012, 2017; Bazerman et al., 2013, 2104; and Valentina Fahler and Bazerman, 2019). While I looked to psychology for clues, I could find only a few hints in neurological research that seemed to me to illuminate

writing processes. I was, however, intrigued by neural net learning (with biological studies going back at least to the work of Donald O. Hebb, 1949) as biologically more plausible and more matching my experience than cybernetic models that were being applied to writing processes at the time. I was particularly attracted to the idea that perceptions of situations and composing choices, whether choices about tasks, text forms, phrasing, or words, were based on weightings developed through previous experiences and choices. If the writer learned to be attentive to internal perception and feelings about alternatives, one could make choices that were creative, spontaneous, and most likely to succeed. This seemed to reflect better the experience of writers than the cybernetic models of writing processes that were assumed in writing research in the latter decades of the 20th century. While some neuroscientists were working out some of the basic architecture and processes of neural networks, however, their data and findings remained far from the complex skills of writing, and even of language. During this same period, socially focused studies of writing largely remained separate from the individuals participating in the social activities, in order to study the forms of texts and activity structures through which individuals participated. I contributed to this social orientation, but I never lost my interest in the individuals producing those forms and participating in the activities.

The discovery of mirror neurons in the mid-90's (for example Vittorio Gallese et al., 1996; Giacomo Rizzolatti and Laila Craighero, 2004; Rizzolatti et al., 1999) suggested we could emulate the feelings of things we witnessed, such as our adrenalin pumping as we watch a horse race or a football play, or wincing when we witness a painful collision. This to me suggested a mechanism that could account for our common experiences such that reading others' words could make us laugh or bring us to tears or fill us with anxiety and fear. I was already predisposed to the idea that reading might be a form of internal performance of the meanings of words provided by the author. Mirror neurons now seemed to provide a means for us to empathize with characters' events, situation, and feelings. We not only play out the events of their lives, we to some degree can feel their pain or joy along with them and feel deflated or terror when something untoward happens to them. Less personally, narrative forms of reading also depend on us seeing through the author's eyes, responses, and reasoning. Even scientific articles depend on us being able to imagine experiments or other forms of data gathering and reasoning through the consequences of the data, as presented by the author. This helped me think about how when we write we try to evoke thoughts, feelings, visions, states of the world, and so on, to facilitate the reader coming to see the world through our eyes. One mind speaks to another to create and transmit a cognitive meaning, an affect, an environment, a vision of some part of the world, a memory, or an imagined memory.

Research in trauma writing (see James W. Pennebaker, 1997, and Pennebaker and Cindy K. Chung, 2007) gave another window into how writing could impact our emotional states, memories, and organization of experience—even impacting

our autoimmune system, blood cell counts, or blood pressure. The findings in this area reminded me of the insights of Adam Smith (1795) over two centuries ago in his “History of Astronomy” where he compared the psychological panic soldiers feel when they no longer understand what is happening on the battlefield to the disorder scientists feel when their data no longer make sense to them. He noted that both soldiers and scientists are calmed when they can settle on a persuasive story that seems to make sense of the experience, whether or not that story can later be confirmed as an absolute truth (even if such a thing could exist).

## Recent Neurological Accounts that Can Help Us Make Sense of Writers’ Internal Processes

In recent decades neural research has finally started to suggest some of the physical processes that may tell us more about how we read and write and what reading and writing does to us over time to influence our ways of thinking, perceiving, and acting in the world. These accounts of the mind and brain are tentative with a number of competing and even contradictory versions. Some of these inevitably will be rejected, others may be transformed, and others perhaps may remain viable. Some may even get strong confirming evidence. In total, however, they do transform our ideas about who we are as writing humans, what it is to write, how we write, and how we touch others through our writing. In a sense they reveal the story of how we move beyond the complex internal reasoning of separate individuals with only limited forms of cooperation and mutual alignment (as we might see in birds and mammals, including great apes) to the more complex forms of shared social knowledge, reasoning, and cooperative action we see in humans. These recent accounts make possible for us to conceive how people can engage with, produce, collaboratively construct, interpret, and further develop written statements, which in turn facilitate the complex and varied forms of social organization and activity in which writing has taken such an important place. In fact, writing has been one of the major vehicles through which the complexity of modern social life has been developed, negotiated, participated in, and evolved—and continues to evolve. Writing goes between individuals, goes deeply within each individual, creates the semiosphere which each individual grows up into, and transforms the semiosphere for life going forward.

The currently popular metaphor of the hive mind has some merit to it, based on the collective reasoning of social creatures such as bees and ants in gathering information and forming actions that wouldn’t be possible by any one individual. But the hive minds of previous creatures have been limited by their means of communication. The exponential growth of human communicative means has brought about ever more integrated and extensive hive minds—despite conflicts, competitions, misunderstandings, or breakdowns. Talk initially advanced human knowing, thinking, and acting together, but in recent millennia writing has facilitated the negotiation of meaning, the coherence and standards of reasoning, the

spread of knowledge, and the extension of action through time and space (for examples, see Goody, 1986; Bazerman, 1999, 2006; and Brandt, 2001, 2015).

Much of the prior work on the mind and language has taken as a given the difference between mind and body (or at least suspended consideration the relation of these two approaches) and further viewed language largely as part of mind, except for the mechanics of voice production and sound reception. Recent work that goes down to the level of tracing neurons and their activation, however, puts the mind-body question back on the table—requiring us to think about how mind and body are connected and how it cannot be otherwise. That is, mind must arise out of the bodily means we have available, and those bodily means have evolved from other creatures. Unless we take mind and thought to be some ethereal activity not connected to our neural processes (as admittedly many throughout history have done), then every thought (including whatever words we choose to transcribe) must be produced by the materiality in which we exist and somehow play out on the physical, neurobiological stage.

## Homeostasis and Allostasis

The models proposed by both Antonio Damasio (1999, 2010, 2018, 2021) and Michael Tomasello (2001, 2010, 2019, 2022) discussed in the previous chapter see homeostasis, or the return to states of equilibrium, as the driving force of individual and group processes in all organisms, including humans, but recently others have augmented this with the concept of allostasis.<sup>3</sup> Allostasis is contemplation and action in anticipation of future changes of the organism or environment that might disrupt homeostasis. This may mean avoiding perceived possible threats to homeostasis or even conceiving a better state providing greater equilibrium or homeostasis in the future (Sterling 2020; Sterling & Eyer, 1988). For example, the autoimmune system in humans and other animals creates antibodies based on contact with previous threats; these antibodies anticipate future threats, so as to rapidly counteract any invading infectants.

Damasio (1999, 2010) has further seen consciousness as arising from neurological monitoring and regulation of the state of the brain and neurological system, just as the neurological system monitors and regulates other bodily states and actions, such as heartbeats, movement of limbs, and signals from the senses. Consciousness, existing among many of the more complex animals, has the additional quality of the organism noticing that monitoring of brain and neurological states, and being aware of it as one's own. The development of consciousness brings allostasis to a new level, as individuals can consciously imagine future threats and avoid them. For example, more than a few animals intentionally build nests high in the trees or other secure locations to avoid nighttime attacks by predators.

---

3. I would like to thank David Russell for introducing me to the concept of allostasis and directing me to central readings on it.

Human language, however, facilitates communication of these conscious mental contents to others for them to react to, to reflect upon, and to affect their own consciousness. This recognition and exchange of thoughts facilitates communal reasoning and decision making about current needs and allostatically about future threats and possibilities. Human language, for example, facilitates communal work in planning and constructing shelters that avoid multiple threats and increase comfort, far exceeding the capacities of other nest-building animals. Such shelter construction can then lead to architectural planning, construction industries, materials sciences, building codes, projections of costs, among others—all of which allow us to rest securely at night and be comfortable and productive during the day. To this we may add the role of science fiction to help us imagine conditions, needs, and living arrangements as well as avoid undesirable ways of life.

The emergence of group norms and commitments, as Tomasello (2019) has found in young children, but not in chimps, may start as immediate verbal responses to perceived injustices but may transform into more generalized guidelines for equitable behavior with allostatic consequences. Empathic anticipation of future responses of those who might be treated inequitably drive the production of norms of fair behavior and social accountability. Communication through language makes possible the negotiation of cultural expectations to make for group harmony in ways that seem to be beyond the capacity of great apes, although they seem to be as intelligent as humans until the communal consequences of language take hold. We can even see embodied empathic response to perceived disequilibrium when people describe seeing someone violate group norms as making them feel sick, causing their stomach to churn, and being filled with disgust, even if they themselves are not directly threatened by the behavior. That is, the threatened future group disequilibrium posed by violation of norms even effects bodily homeostasis.

The social sphere of group norms elaborates in more enduring adult institutions and written codes (such as scriptural religious prescriptions, or governmental laws, or local office procedures). We can even see advances of communal knowledge and sciences as social allostatic projects to avoid future problems as well as to create better conditions for the harmonious and comfortable continuation of life. Creating better and more persuasive accounts of the world also mitigates the disordered feelings and panic that come from not understanding where one is and what is happening around one, as Smith (1795) described long ago.

## Need for an Account of Internalization and Development

As Charles Fernyhough (2005) pointed out, despite Tomasello's detailed picture of sociogenesis of human norms and the role of empathy in communication, he has not yet elaborated an account of ontogenesis through the internalization of group norms communicated through language, although he does at times

mention Vygotsky's concept of internalization. Of course, as a primatologist, Tomasello is concerned with observed behavior; neural formation is not his domain, nor his data. He only imputes internal knowledge and states of mind by observing behavior, such as eye-gaze, interactions with others, or responses to experimental tasks. The consequence of this focus, however, was revealed in his recent book on agency (Tomasello, 2022), where he only considered mechanisms of agency in their fully developed form. He did, nonetheless, through experiments give accounts of the development of the ability to recognize and empathize with the state of knowledge and expectation of others, which leads to self-regulation in order to conform to norms of equitability. This finding, however, does not explain how group expectations then become personal expectations to guide self-understanding and choice making in self-regulation, nor does it explain why self-regulation varies within individuals' distinct lines of personal development. Neither has he provided a way to understand how individuals may become more deeply embedded participants (or more alienated outliers) as they mature into and through adulthood. Of course, his research ended with children of about six or seven years old, where communal self-understanding is just developing. At that age, individuality and complexity of consciousness may not yet be as much in evidence, nor may the consequences of the development of group norms for the internal organization of individual's neurological systems and consciousness. As Vygotsky famously asserted in his first intervention in psychology in 1925 (2000), consciousness transforms our simpler spontaneous reactions, and psychology needs to attend to the ways consciousness can stand between stimulus and response.

## Neural Reuse and Neurological Coalitions

Recent accounts of post-partum situational brain activation and development can help elucidate the roles and mechanisms of consciousness in mediating between stimulus and response. Damasio (1999, 2010) got us part of the way there by suggesting a mechanism for the formation of consciousness in the monitoring of brain activity, which potentially allows the organism to control brain operations and thereby to control other actions guided by the brain as they rise to consciousness (Tomasello in his 2022 book hypothesized similar mechanisms based on cybernetic control reasoning). But Damasio has not yet inquired into the formation of the specific contents of consciousness, let alone how consciousness might recognize and be influenced by communications, particularly through language. Such an influence, though, would make possible enlisting the individual into collective modes of attention, thought, and collaborative action.

Michael L. Anderson, in his 2014 book *Beyond Phrenology*, drew on other recent approaches to neural development, both evolutionary and ontogenetic, to propose a new set of research questions for neurological science. His research agenda grew out of what he saw as an emerging consensus about the dynamic

action orientation of our neurological system that reuses prior existing elements to carry out new tasks in the moment. Thus, the brain is best understood in its responses to challenges rather than as a static system at rest. Neural reuse means that neural elements that may have evolved for one purpose may be repurposed in coordination with other neural elements to carry out new functions. Each neural element as it adds to its functions can contribute to multiple coalitions. Each coalition is activated and strengthens when functionally used within the organism's environment, and thus the neural system is not fully pre-wired genetically, but rather emerges post-conception and then post-partum as the need arises for new coalitions, which Anderson called "Transitionally Assembled Local Neural Subsystems (TALoNS)" (p. 94). New alliances are constantly forged as needed by situated brain activations, relying on neural plasticity and strengthened by habitual use and myelination. Some evolutionarily advantageous alliances may become genetically preferred, but even that evolution is gradual and relies on the forging of new functional neural elements situated within activity.

This work suggests to me that new functions (like the use and interpretation of language, and then with writing, the association of visual cues or signs with language) rely and depend on earlier systems, such as those that process visual and aural attention by sensing and interpreting light and sound. Some of these sensory inputs are interpreted as intentional meaningful signs from others. In early ontogenetic development many of these signs will be associated with caregiving functions of providing food and comfort, coordinating with caregivers, and forming joint attention to monitor and interact with the environment and so on, in the manner suggested by Tomasello (2001, 2010, 2019). These social functions increase as the child matures and its life experiences expand. Even more the inputs we get from others through language themselves influence our interpretation of events, environments, and situations inside and outside our bodies, and thus are incorporated into our neural system. This process then leads us to align with the communal understandings embodied in our language and social relations within which language is used, while still maintaining variation of individual sets of experiences and interpretations which have left their marks on our separate neural systems.

The addition of literacy to language includes more information from greater time, spatial, and social distance that we might have to evaluate and select among. Literacy adds greater choices of affiliation, coordination, and participation with a greater range of groups, organizations, or social activities. Literacy also facilitates formulations and evaluations of more complex kinds of evidence and arguments. All these communicative interactions facilitated by socially received language can be internalized into the organization of our neural systems and change our vision of ourselves, our world, our communities, how we relate to them, and how we participate within them.

The peer commentary (Badcock et al., 2016; D'Souza & Karmiloff-Smith, 2016; Guida et al., 2016; Kaplan & Craver, 2016; McCaffrey & Machery, 2016; Parkinson

& Wheatley, 2016; Pasqualotto, 2016; Perlovsky, 2016; Pessoa, 2016; Pezullo, 2016; Shine et al., 2016; Silberstein, 2016; Stanley & De Brigard, 2016; Wang & Bargh, 2016) to Anderson's (2016a) précis of his 2014 book in the journal *Behavioral and Brain Sciences* and his further response (Anderson, 2016b) suggest how research has aggregated around these approaches. Almost all the peer responses accepted as a given some version of neural reuse and widespread brain response to complex situations and tasks requiring complex thinking, such as literacy. The range of neurofunctional accounts in these responses fell on a spectrum at one end of heavy reliance on genetically determined neural elements and fixed systems of alliances among them and at the other end of heavy reliance on emergent structures (neuroplasticity) that see almost all systems as idiosyncratically developed from individual experience, though almost all accounts include some combination of the two. Anderson sees the whole range of comments as fitting within his proposed research program.

Another important aspect of Anderson's (2016a) account is that "Organisms are perception seeking, not passive recipients of environmental stimulation" (p. 6). This means brains are more usefully studied when activated, not when at rest. This also means that we should not think of the brain or memory as creating a neutral image or record of reality. Rather the brain constructs what it needs to know in the moment for the purposes at hand. For sense organs, that means they hear, feel, see, smell, and taste what the organism needs to hear, feel, see, smell, and taste for its homeostatic or allostatic benefit—filtered for salience by the neurological interpretation systems. This action based on needs would also be true both for how we listen to each other and for how we read each other's words through our own needs-based and needs-elaborated interpretive systems. This is consistent both in what I found in studying how physicists read (Bazerman, 1985) and how scientists position their work intertextually within the prior publications of their fields (Bazerman, 1993). Similarly, we would be motivated in what we say and write by our perceived needs to communicate. This needs-based motivation has many implications for epistemology as well as for how we earn our livings and meet our daily needs. Literacy has also created many cooperative social domains, which themselves have transformed how we see the world, how we perceive our needs, and what information we believe would be useful to us, whether in journalism and governance, arts and entertainments, religions and philosophies, finances and law, or sciences and humanities.

One final element of neural development Anderson (2014, 2016a) pointed to is that environments tend to be inherited along with genetics. This means there tends to be a match between genetic endowments and challenges presented by the environment. This also means that each new generation typically has to solve similar problems and thus will tend to develop in similar directions even if the solutions are not determined by genetics. Thus, tropical rodents need to solve problems of staying cool, avoiding threats, and finding sustenance from their ecosystem while arctic rodents must solve problems of staying warm, confronting different sets of threats,



and finding different sources of sustenance in their ecosystem. These adaptations may become genetically preferred, but not necessarily so.

Humans, however, are born into complex environments of language users along with the other environments they inherit. Humans have inhabited diverse natural environments on much of the planet and have reconstructed the physical environment in many different ways. Knowledge passed on through human language conveys information about how to survive and thrive within the particular environment inhabited by parent and child. But language also creates another level of environment that the child needs to learn to navigate in forming social relations with surrounding humans. This *built symbolic environment* requires much puzzle solving that consumes much of the attention of all young humans throughout their formative years, which in recent centuries has extended to include increasing years of schooling and enculturation into different activity worlds that require expanded and purpose-specific uses of language. Even more than other animals that use audible signals, humans need to learn to identify and distinguish among different sounds from their own species, attribute useful meanings to those sounds, and then produce meaningful sounds for others as part of collaborative survival.

With literacy people must associate words with visual signs of word sounds of their languages and dialects (at least in alphabetic and syllabic transcription systems), and of the social activity systems and knowledges that are significant for their lives. The semiosphere each person experiences also evolves rapidly, not only as language changes across generations but also as new spheres of activity, attention, and organization form and transform. In turn the inventions and expansions of each individual and generation contribute to further the rapid change. Additionally, written statements can expand in length, complexity, and potential coherence so that high degrees of expertise are needed to find one's way through legal codes or scientific literatures. This changing semiotic environment challenges neural development in different groups and succeeding cohorts.

While the physical environments humans inhabit have varied as they have migrated and continue to migrate across the planet, the built environment changes even more rapidly from generation to generation. The built symbolic environment changes even more rapidly. Communal and individual cognitive development changes from generation to generation, even within one's lifespan, whether through immigration, education shifts, economic and commercial changes, or changing activities appropriate to different ages. We even now have increasing differentiations of social expectations across different life epochs with more distinct worlds of infancy, childhood, adolescence, college life, young adulthood, maturity, retirees, and elderly. In the last two centuries changing technologies have further sped up changes in our semiotic environment. Semiotic environments change ever more complexly and rapidly, requiring greater flexibility in human cognition and neural response than in any other creature. That is, we are constantly making and remaking our semiotic environment, even as we are

learning to find our way in our perceptions of its changing landscape. Very little of language and literacy use can be pre-wired genetically but rather must be constructed during our lifetimes out of our dispositions, needs, and orientations within our perceptions of our social circumstances and opportunities, drawing on the collected information and skills gathered in previous activities, as encoded in neural and brain chemistry, electrical circuits, and other structural elements, as deployed and recomposed in the moment.

I should mention one other component of Anderson's (2014, 2016a) account, though its implications for literacy seem obscure to me beyond a few speculations. He cited evidence that brain activity is not just controlled by neurons that connect dendritically with each other and send electrical signals, but that chemicals that affect brain activity are also released across the brain. Anderson was not certain of the effect and mechanisms of this chemical wash. Its impact for processing of reading and writing is even more obscure, but it further suggests that the brain system is not fully determined by local processing mechanisms as the modular view would have one believe. This chemical wash may also have something to do with mood and/or emotions in writing, as they might be consistent with more ambient sensations that might accompany writing, facilitate writing, and/or signal certain attitudes or kinds of engagement in writing. For example, one might feel excited, energized, attentive, and focused when thoughts come together, moving one to start writing. Or after finishing some writing one might feel exhausted, depressed, or otherwise dysphoric. But, of course, these are just guesses.

## Consequences for Writing Development

If anything like Anderson's (2014, 2016a) account turns out to be viable, it would have many consequences for literacy development and for the way reading and writing may enlist large parts of the neurological system and brain elements. Complexes of feelings, experiences, memories, sensations, or knowledge may contribute to the developing meanings and help us settle on words to convey them, just as many of our complexes of feelings and thought would enter into the reconstruction of meaning prompted by words from others. These connections would be enacted neurologically and consequently would leave their mark on the neural system. As well, reading and writing may excite and connect neural pathways resulting in bodily activity, whether laughing or tapping fingers or shaking legs—or moving one's fingers unthinkingly on the keyboard to transcribe thoughts emerging in words.

Since the neural dendritic connections and myelinated aggregations are a result of a lifetime of firings in response to moment-by-moment situations, experiences, and challenges, these will affect the resources and processes we bring to bear on any new act of reading or writing, just as on any thought or action we take. As well, these neurological networks of meaning built over a lifetime might

define what we are moved to say and how we say it. As a result, the organization of our thoughts and brain may be associated with this ill-defined thing we call voice—that is, some amalgam of the things we have to say and the way we go about saying them. Our preferred word choices, phrases, and syntactic patterns, as well as strategies of analysis and thought, may reflect habituated patterns recorded in neural connections and myelinations as well as emotional moods triggered by some formulations.

These habituated patterns may just come to feel right for us and thus would impact our evaluation of word choices, narrative organization, and social and emotional stance—what we might call personal taste. Further, when we come across authors who find ways of expressing their thoughts and feelings that attract us, it may have something to do with how their expressions resonate with and fulfill emerging connections within us.<sup>4</sup> Such authors seem to think like us, seem to have similar interests, seem to express similar thoughts, perhaps with enough difference to be interesting, but not so much as to sound wrong. We may come to imitate them or be influenced by them in their themes or their modes of expression without conscious awareness, although in some cases we may form conscious affiliation and enthusiasm. In either case, these influences become ever more habituated within us through our engagement, even as they may mix with the influences of other authors.

As we become more experienced writers, these elements of influence become ever more integrated with other impulses arising from elsewhere in our experience. Patterns of style, interests, topics, and knowledge become habituated through increased robustness of the neural alliances we most use, so we tend to think, write and express our thoughts in ever more habituated circuits, further strengthening neural alliances. Nonetheless, we can try out new things and add new ways of working and expressing, but these new ways may require some intentional effort and perhaps strong social support from others to overcome unfamiliarity. These novelties also may not be as durable in their effects as longer standing patterns.

Another major implication of Anderson's (2014, 2016a) approach to understanding our neural system is that writing may participate in alliance with many other parts of our cognition, affect, and imagination within our neural system (as well as be connected to our somatic state and actions). It suggests, for example, that our reading and writing may draw on many other aspects of our lived experience and actions that have left their traces in our neurological capacities. Reading and writing can in turn change our perceptions of the world around us, our internal processes, and our actions as it connects or aggregates experiences, feelings, and knowledge in the words and conceptual terms we use to describe them. It suggests as well that our confusing or conflicted or anxious feelings can be affected

---

4. This personal resonance with internal audience sense is what Aristotle (2007) might have called *enthymematic*.

and placed in more acceptable order through our words, which then may impact the chemistry of our emotions, anxieties, and even autoimmune system, as we see in the therapeutic effect of trauma writing (Pennebaker, 1997; Pennebaker & Chung, 2007). As well, our reading of the experiences and literary expressions of others can reach deeply into our feelings or provide us virtual experiences that reconfigure our experiences and expectations. While writing and reading may draw together many different parts of our feelings, sensations, knowledge, identity, and affiliation impulses, they may also reflect or engage our troubled or dysphoric internal states and relations to the world and people around us. In short, writing and reading are whole body and wholly situated responses.

Reading and writing at the same time may create a counterworld for us to distance ourselves from immediacy, as we lose attention to those immediately around us to connect to distant others in fictional or nonfictional worlds and endeavors. These alternative worlds may bring us closer to what we believe is true or important in the world, or they may resonate better with our feelings, or may seem more desirable. Even as we engage in these less proximate worlds, all our emotions, sensations, experiences, and developed neural connections (what some call the connectome, for example Olaf Sporns et al., 2005) are potentially at play and become potential meaning resources. That is, we may be internally responding to things long ago, far away, imagined, abstracted, or persuasive.

The more we understand what is going on with us, the more we can notice introspectively and the better we can accept these processes as natural so we can accommodate and manage them rather than fighting them. If we do not resist the ways our minds, moods, and feelings work, we may engage more fully with literacy processes. In fact, instead of waiting for the muse to grab ahold of us (that is, for inner impulses to overwhelm us), we may be able to notice when the muse starts to stir within us and even invite it through meditative practices, creating conducive work spaces, or finding other ways of opening our minds to what we are impelled to say. By the muse, I mean something like the mind starting to assemble itself into a frame or alliance where impulses, ideas, thoughts, and words emerge. A familiar piece of writing advice that recognizes this importance of finding the right frame of mind is to leave off a day's writing with an easy next task to do that will allow one to get back into the complex effort of what one is working on, assembling that frame of mind or sets of alliances. There is even a common metaphor for this—parking downhill. Conversely, for some kinds of writing closely attached to current circumstances, the right frame of mind may come not from meditative removal but from being surrounded by the physical and textual immediacies of the situation, such as sitting at one's desk in the office, surrounded by project documents and colleagues preparing their contributions to the project.

Similarly, aware of the needs of readers to adopt the right frame of mind, writers typically organize the sections of a book or chapters and the openings of the next to facilitate readers leaving off at one point and then reentering at a

later time, reassembling mentally the gist of the work to know how to interpret or make sense of the next section. As writers, we seek to influence or touch the minds of our readers—the radical fundamental individual differences of interpretation, meaning, and engagement—that our words must mediate. We want to show the readers things, move them to see and feel, to get our meanings, to reconstruct meanings that are close to what we intend but are also important to them. The more we can understand the limited but powerful means we have to communicate, the more we may have an effect.

## Consequences for Literacy Education

Understanding internal writing and reading processes can also help us as teachers to support the development of reading and writing of others. Teachers have long been keen observers of their students and have already adopted many of the ideas suggested in this section as they have attempted to connect with and motivate students, making writing important parts of their lives. Accordingly, many of the approaches, techniques, and practices that follow may seem familiar to experienced teachers. Yet it is useful to consider their total impact and some underlying causes that have made them good pedagogic ideas.

The most obvious implication, known by almost every teacher, is that motivation is key to engaging students in learning practices. The approaches presented here recognize that literacy capacities are only engaged in activities that people perceive as beneficial to their way of being. Moreover, the more meaningful these activities are and the more attached they are to students' perceived needs and desires—in other words, the more fully motivated the activities are—the more problem solving will occur in extracting and making meaning and the deeper the engagement for students is. Deeper engagement brings with it greater learning, creativity, and expression. Further, the thinking involved in literacy tasks accumulates over multiple tasks to develop and strengthen neurological alliances and resources. Insofar as tasks bring together similar clusters of cognitive, sensory, and affective elements, the pathways for these kinds of reading and writing become habituated and strengthened.

Yet there are dangers in too much similarity across too many activities over too long a time, as the tasks may become so normalized and specialized that they don't present much challenge to stretch learning or to produce high levels of engagement and creativity. Further, familiar seeming tasks may restrict the range of resources readers and writers may bring to their tasks. Students may benefit from being asked to draw on different kinds of thinking, feeling, sensation, perception, and analysis to broaden the repertoires they can draw on. From an early age we ought to be strengthening the connection between writing and all our senses as well as all aspects of cognition, emotions, cultural and societal knowledge, and action developing within the learner. Writing that describes all the senses—all we see, feel, hear, smell, and taste—and then organizes those sensations may help

build robust alliances among the elements that process words and the senses as well as analytical categorization and sequencing. Similarly, descriptions of bodily actions and sensations may have unanticipated benefits. More deeply, within our emotions, trauma writing and reading about others' difficult experiences, as they become age appropriate or situationally needed, can help individuals bring some satisfactory order to troubling experiences and feelings. Trauma writing may also prevent elements of the mind being compartmentalized, isolated, or suppressed, which restricts the ability to build a variety of neuronal alliances. By practicing trauma writing, then, in all forms of writing one may be able to draw on one's feelings, memories, and meaning impulses more freely.

Along these same lines of building connections among thoughts, sentiments, feelings, experiences, and writing are various meditative activities completed before reading or writing to open up access to connections. These might include writing about dreams, writing imaginatively, playing, even free writing. Reading and writing about relations with others, social observations, observations of the world (including more disciplined observations through experiments and data gathering), or related prior knowledge all draw expanded attention and thinking into writing and help give meaning and order to those things experienced and attended to in writing.

It is also useful to connect writing and reading with action, including participation in socially organized activities, whether family, community, organizations, or eventually professions and careers. Planning and reflecting for oneself—whether analyzing sports, making schedules or to do lists, or reflecting on goals, experiences, affiliations, or identities—can also help establish a sense of who one is and what stance to take in communications with others. Of course, I am listing far too many possibilities for writing here, but the point is early writing should not be limited to just a small number of types or domains. As people mature and identify what is important to their lives, the connections already made between those important themes and literacy can be practiced and strengthened, not only to teach the appropriate forms but to engage and build the kinds of neural alliances that will integrate literacy practices with significant aspects of emerging selves and the building of meaning in lives.

Perhaps most fundamental is not to fight against the modes and practices of expression and interests already developed by the time we meet students, especially in secondary and higher education. The students' processes, practices, and expressive habits are already likely to be embedded in their neurological organization through their years of development and schooling. We can add to their repertoires, open up new vistas and resources, redirect their strengths towards new directions and opportunities. Rarely can we disassemble what is there and already connected, and even if we could, the price would be high. Growth comes from building on existing strengths.

Yet we must recognize that many forms of writing and their associated kinds of thinking are likely not to become introduced or meaningful to students until later

in their development. Academic forms of argument are likely to appear strange and unnatural if they are introduced before students have discovered the force of personal expression. Writing in business and organizational settings is likely not to be meaningful until students actually begin to enter the workplace and experience nonschool settings. Narrative story telling is often the earliest, easiest, and most comfortable mode for reading and writing, and it is often appropriately at the center of early literacy education. But relying exclusively on narrative can also be a trap, as it becomes so habituated that it can be hard for people to read and write in other forms if alternatives are introduced too late. Providing a good mix of text types in age-appropriate ways, supplementing narration with more informative, conceptual, argumentative, evidence-based, or transactional text types can provide the ground for later development. The motive should be to keep expanding and integrating repertoires, to engage students in the reception and production of texts that will become more central to their lives through their years.

Expanding the reading and writing repertoire at an early age can also impact the kinds of spontaneous thoughts students may want to express and the modes of expression that will occur to them as appropriate. As thoughts begin to emerge in a variety of forms, students' interests and expressive engagement will open more opportunities for more varied development and social connection. The techniques discussed earlier of recognizing and engaging the muse and developing voice are equally important for students as they discover what is important for them to communicate, to whom, and how. While teachers can and should provide opportunities for students to recognize and act on their muses, their impulses coming from within that will connect them to those on the other side of the skin barrier, those muses need to be seeded with the beginning resources that might excite lines of meaning, expression, and growth that might not otherwise emerge if no pathways are provided for them.

## Coda

I started this set of speculations by saying that recent developments in neuroscience seem to be resonating better with my experiences as a writer and teacher than earlier psychological models of writing processes. It should not be all that surprising that I end by saying that many of the implications of these more recent accounts and research for writing and teaching of writing are consistent with practices and observations familiar to the field I have been immersed in. I admit to circularity in this reasoning. I pursue the approaches that seem consistent with my experiences and lo and behold these approaches confirm the observations and practices from my experience. Yet if science and experience mesh, the ideas gain a kind of plausibility. And such meshing also gives us a way forward to think about our experiences in a more consistent, evidence-based, scientific way, to make us more confident and precise in our observations and practices. This certainly seems a more promising way to go than to either fight against or ignore the sciences that claim to be

finding out about the very neurobiological mechanisms that enable us to be writing creatures. On the other hand, if the mechanisms claimed to be found by scientific investigation turn out to be at odds with our experiences and practices, one side or another or both will have a lot of explaining to do.

## References

- Akhutina, T. V. (2003). The role of inner speech in the construction of an utterance. *Journal of Russian & East European Psychology*, 41(3–4), 49–74. <https://doi.org/10.2753/RPO1061-040541030449>
- Anderson, M. L. (2014). *After phrenology: Neural reuse and the interactive brain*. MIT Press. <https://doi.org/10.7551/mitpress/10111.001.0001>
- Anderson, M. L. (2016a). Précis of *After phrenology: Neural reuse and the interactive brain*. *Behavioral and Brain Sciences*, 39, Article e120. <https://doi.org/10.1017/S0140525X15000631>
- Anderson, M. L. (2016b). Reply to reviewers: Reuse, embodied interactivity, and the emerging paradigm shift in the human neurosciences. *Behavioral and Brain Sciences*, 39, Article e135. <https://doi.org/10.1017/S0140525X15001703>
- Aristotle (2007). *On rhetoric: A theory of civic discourse* (2nd ed., G. Kennedy, Trans.). Oxford University Press.
- Badcock, P. B., Ploeger, A., & Allen, N. B. (2016). After phrenology: Time for a paradigm shift in cognitive science. *Behavioral and Brain Sciences*, 39, Article e121. <https://doi.org/10.1017/S0140525X15001557>
- Bates, E. (1994). Modularity, domain specificity and the development of language. *Discussions in Neuroscience*, 10(1&2), 136–149.
- Bazerman, C. (1985). Physicists reading physics: Schema-laden purposes and purpose-laden schema. *Written Communication*, 2(1), 3–23. <https://doi.org/10.1177/0741088385002001001>
- Bazerman, C. (1988). *Shaping written knowledge: The genre and activity of the experimental article in science*. Madison: University of Wisconsin Press.
- Bazerman, C. (1993). Intertextual self-fashioning: Gould and Lewontin's representations of the literature. In J. Selzer (Ed.), *Understanding scientific prose* (pp. 20–41). University of Wisconsin Press.
- Bazerman, C. (1999). *The languages of Edison's light*. MIT Press.
- Bazerman, C. (2006). The writing of social organization and the literate situating of cognition: Extending Goody's social implications of writing. In D. R. Olson & M. Cole (Eds.), *Technology, literacy, and the evolution of society: Implications of the work of Jack Goody* (pp. 215–240). Psychology Press.
- Bazerman, C. (2009). Genre and cognitive development: Beyond writing to learn. In C. Bazerman, A. Bonini, & D. Figueiredo (Eds.), *Genre in a changing world* (pp. 283–298). The WAC Clearinghouse; Parlor Press. <https://doi.org/10.37514/PER-B.2009.2324.2.14>
- Bazerman, C. (2012). Writing with concepts: Communal, internalized, and externalized. *Mind, Culture, and Activity*, 19(3), 259–272. <https://doi.org/10.1080/10749039.2012.688231>



- Bazerman, C. (2017). The psychology of writing situated within social action: An empirical and theoretical program. In P. Portanova, J. M. Rifenburg, & D. Roen (Eds.), *Contemporary perspectives on cognition and writing* (pp. 21–38). The WAC Clearinghouse; University Press of Colorado. <https://doi.org/10.37514/PER-B.2017.0032.2.01>
- Bazerman, C. (2018). What does a model model? And for whom? *Educational Psychologist*, 53(4), 301–318. <https://doi.org/10.1080/00461520.2018.1496022>
- Bazerman, C., Simon, K., Ewing, P., & Pieng, P. (2013). Domain-specific cognitive development through written genres in a teacher education program. *Pragmatics & Cognition*, 21(3), 530–551. <https://doi.org/10.1075/pc.21.3.07baz>
- Bazerman, C., Simon, K., & Pieng, P. (2014). Writing about reading to advance thinking: A study in situated cognitive development. In P. Klein, P. Boscolo, L. Kirkpatrick, & C. Gelati (Eds.), *Writing as a learning activity* (pp. 249–276). Brill. [https://doi.org/10.1163/9789004265011\\_012](https://doi.org/10.1163/9789004265011_012)
- Berthoff, A. E. (1978). *Forming, thinking, writing: The composing imagination*. Hayden Book Company.
- Berthoff, A. E. (1981). *The making of meaning: Metaphors, models, and maxims for writing teachers*. Boynton/Cook.
- Brandt, D. (2001). *Literacy in American lives*. Cambridge University Press. <https://doi.org/10.1017/CBO9780511810237>
- Brandt, D. (2015). *The rise of writing: Redefining mass literacy*. Cambridge University Press. <https://doi.org/10.1017/CBO9781316106372>
- Chomsky, N. (1959). A review of B. F. Skinner's *Verbal behavior*. *Language*, 35(1), 26–58. <https://doi.org/10.2307/411334>
- Damasio, A. (1999). *The feeling of what happens: Body and emotion in the making of consciousness*. Harvest.
- Damasio, A. (2010). *Self comes to mind: Constructing the conscious brain*. Pantheon Books.
- Damasio, A. (2018). *The strange order of things: Life, feeling, and the making of cultures*. Pantheon Books.
- Damasio, A. (2021). *Feeling and knowing: Making minds conscious*. Pantheon Books.
- Dehaene, S. (2009). *Reading in the brain: The new science of how we read*. Penguin.
- Dehaene, S. (2020). *How we learn: Why brains learn better than any machine . . . for now*. Viking.
- D'Souza, D., & Karmiloff-Smith, A. (2016). Why a developmental perspective is critical for understanding human cognition. *Behavioral and Brain Sciences*, 39, Article e122. <https://doi.org/10.1017/S0140525X15001569>
- Fahler, V., & Bazerman, C. (2019). Data power in writing: Assigning data analysis in a general education linguistics course to change ideologies of language. *Across the Disciplines*, 16(4), 4–26. <https://doi.org/10.37514/ATD-J.2019.16.4.18>
- Fernyhough, C. (2005). What is internalised? Dialogic cognitive representations and the mediated mind. *Behavioral and Brain Sciences*, 28(5), 698–699. <https://doi.org/10.1017/S0140525X05300124>
- Gallese, V., Fadiga, L., Fogassi, L., & Rizzolatti, G. (1996). Action recognition in the premotor cortex. *Brain*, 119(2), 593–609. <https://doi.org/10.1093/brain/119.2.593>

- Goody, J. (1986). *The logic of writing and the organisation of society*. Cambridge University Press. <https://doi.org/10.1017/CBO9780511621598>
- Guida, A., Campitelli, G., & Gobet, F. (2016). Becoming an expert: Ontogeny of expertise as an example of neural reuse. *Behavioral and Brain Sciences*, 39, Article e123. <https://doi.org/10.1017/S0140525X15001570>
- Hebb, D. O. (1949). *The organization of behavior: A neuropsychological theory*. John Wiley & Sons.
- Kaplan, D. M., & Craver, C. F. (2016). A registration problem for functional fingerprinting. *Behavioral and Brain Sciences*, 39, Article e124. <https://doi.org/10.1017/S0140525X15001582>
- McCaffrey, J. B., & Machery, E. (2016). The reification objection to bottom-up cognitive ontology revision. *Behavioral and Brain Sciences*, 39, Article e125. <https://doi.org/10.1017/S0140525X15001594>
- Parkinson, C., & Wheatley, T. (2016). Reason for optimism: How a shifting focus on neural population codes is moving cognitive neuroscience beyond phrenology. *Behavioral and Brain Sciences*, 39, Article e126. <https://doi.org/10.1017/S0140525X15001600>
- Pasqualotto, A. (2016). Multisensory integration substantiates distributed and overlapping neural networks. *Behavioral and Brain Sciences*, 39, Article e127. <https://doi.org/10.1017/S0140525X15001612>
- Pennebaker, J. W. (1997). Writing about emotional experiences as a therapeutic process. *Psychological Science*, 8(3), 162–166. <https://doi.org/10.1111/j.1467-9280.1997.tb00403.x>
- Pennebaker, J. W., & Chung, C. K. (2007). Expressive writing, emotional upheavals, and health. In H. S. Friedman & R. C. Silver (Eds.), *Foundations of health psychology* (pp. 263–284). Oxford University Press. <https://doi.org/10.1093/oso/9780195139594.003.0011>
- Perlovsky, L. (2016). Scientific intuitions about the mind are wrong, misled by consciousness. *Behavioral and Brain Sciences*, 39, Article e128. <https://doi.org/10.1017/S0140525X15001624>
- Pessoa, L. (2016). Beyond disjoint brain networks: Overlapping networks for cognition and emotion. *Behavioral and Brain Sciences*, 39, Article e129. <https://doi.org/10.1017/S0140525X15001636>
- Pezullo, G. (2016). Toward mechanistic models of action-oriented and detached cognition. *Behavioral and Brain Sciences*, 39, Article e130. <https://doi.org/10.1017/S0140525X15001648>
- Rizzolatti, G., & Craighero, L. (2004). The mirror-neuron system. *Annual Review of Neuroscience*, 27, 169–192. <https://doi.org/10.1146/annurev.neuro.27.070203.144230>
- Rizzolatti, G., Fadiga, L., Fogassi, L., & Gallese, V. (1999). Resonance behaviors and mirror neurons. *Archives Italiennes de Biologie*, 137(2/3), 85–100. <https://www.architalbiol.org/index.php/aib/article/view/13785/532>
- Shine, J. M., Eisenberg, I., & Poldrack, R. A. (2016). Computational specificity in the human brain. *Behavioral and Brain Sciences*, 39, Article e131. <https://doi.org/10.1017/S0140525X1500165X>
- Silberstein, M. (2016). The implications of neural reuse for the future of both cognitive neuroscience and folk psychology. *Behavioral and Brain Sciences*, 39, Article e132. <https://doi.org/10.1017/S0140525X15001661>

- Smith, A. (1795). History of astronomy. In J. Black & J. Hutton (Eds.), *Essays on philosophical subjects by the late Adam Smith, LL.D, fellow of the Royal Societies of London and Edinburgh, to which is prefixed, an account of the life and writings of the author, by Dugald Stewart, FRSE* (pp. 3–93). T. Cadell Jun. and W. Davies (successors to Mr. Cadell). <https://hdl.handle.net/2027/nyp.33433082515010>
- Sporns, O., Tononi, G., & Kotter, R. (2005). The human connectome: A structural description of the human brain. *PLoS Computational Biology*, 1(4), Article e42. <https://doi.org/10.1371/journal.pcbi.0010042>
- Stanley, M. L., & De Brigard, F. (2016). Modularity in network neuroscience and neural reuse. *Behavioral and Brain Sciences*, 39, Article e133. <https://doi.org/10.1017/S0140525X15001673>
- Sterling, P. (2020). *What is health? Allostasis and the evolution of human design*. MIT Press.
- Sterling, P., & Eyer, J. (1988). Allostasis: A new paradigm to explain arousal pathology. In S. Fisher & J. Reason (Eds.), *Handbook of life stress, cognition and health* (pp. 629–649). John Wiley & Sons.
- Tomasello, M. (2001). *Cultural origins of human cognition*. Harvard University Press.
- Tomasello, M. (2010). *Origins of human communication*. MIT Press.
- Tomasello, M. (2019). *Becoming human: A theory of ontogeny*. Harvard University Press.
- Tomasello, M. (2022). *The evolution of agency: Behavioral organization from lizards to humans*. MIT Press.
- Tooby J., & Cosmides L. (1992). The psychological foundations of culture. In J. H. Barkow, L. Cosmides, & J. Tooby (Eds.), *The adapted mind: Evolutionary psychology and the generation of culture* (pp. 19–136). Oxford University Press. <https://doi.org/10.1093/oso/9780195060232.003.0002>
- Vygotsky, L. S. (1978). *Mind in society: Development of higher psychological processes* (M. Cole, V. John-Steiner, S. Scribner, & E. Souberman, Eds.). Harvard University Press. <https://doi.org/10.2307/j.ctvjf9vz4>
- Vygotsky, L. S. (2000). *Consciousness as a problem in the psychology of behavior*. Vygotsky Internet Archive. <http://www.marxists.org/archive/vygotsky/works/1925/consciousness.htm> (Reprinted from “Consciousness as a problem in the psychology of behavior,” in *Undiscovered Vygotsky: Etudes on the pre-history of cultural-historical psychology*, pp. 251–281, by N. Veresov, Trans., 1999, Peter Lang. Original work published 1925)
- Wang, Y., & Bargh, J. A. (2016). Neural reuse leads to associative connections between concrete (physical) and abstract (social) concepts and motives. *Behavioral and Brain Sciences*, 39, Article e134. <https://doi.org/10.1017/S0140525X15001685>
- Wolf, M. (2007). *Proust and the squid: The story and science of the reading brain*. Harper Perennial.
- Wolf, M. (2018). *Reader, come home: The reading brain in a digital world*. Harper.



## Chapter 3. Letters and the Social Grounding of Differentiated Genres

Several times in my research over the years, I have noticed letters playing a role in the emergence of distinctive genres: the early scientific article emerging from the correspondence of Hans Oldenburg, the first editor of the *Philosophic Transactions of the Royal Society*; the patent, originally known as letters patent; stockholders' reports evolving from letters to stockholders; and internal corporate reporting and record forms regularizing internal corporate correspondence.<sup>1</sup>

I was not the first to notice any of these; however, in putting the four cases together, it struck me that these may be part of a more general pattern. As I pursued the thought that letters might have a special role in genre formation, many other examples of genres with strong connections to correspondence came to my attention, including newspapers and other periodicals, financial instruments such as bills of exchange and letters of credit, books of the New Testament, papal encyclicals, and novels. The letter, in its directness of communication between two parties within a specific relationship in specific circumstances (all of which could be commented on directly), seemed to provide a flexible medium out of which many functions, relationships, and institutional practices might develop—making new uses socially intelligible at the same time as allowing the form of the communication to develop in new directions.

This essay is a preliminary attempt to develop this speculation; however, it is little more than a speculation inviting further research into a wide-ranging subject that presents several difficulties. While the histories of various domains of literate practice have each been the subject of scholarship, only a few have undergone formal genre analysis, and few have been carefully examined with respect to the relationship to letters. Further, the story of each domain is complex and extensive, involving many countries, influences, and events. Finally, the earliest documents that might show the strongest influence of letters are not extant or readily available. Nonetheless, the sketchy and scattered evidence I have found in the secondary literature suggests that letters may have a pervasive and important influence in the formation of genres.

### Where do genres come from?

The current panoply of genres in modern life relies on writers and readers

---

1. This chapter originally appeared as “Letters and the Social Grounding of Differentiated Genres,” by C. Bazerman, 2000, in *Letter Writing as a Social Practice*, edited by D. Barton & N. Hall, pp. 15–30, John Benjamins Publishing, (<https://doi.org/10.1075/swll.9.02baz>). Copyright 2000 by John Benjamins Publishing. Reprinted with permission.

having complex social and institutional knowledge of the activities that genres mediate. Interpreting even the most ordinary junk mail solicitation for a credit card requires an understanding among other things of the postal system, folded paper envelopes, advertising and direct mailing, promised inducements, the modern bank and credit card system, modern application forms, store credit card transactions, monthly statements, internal record keeping, check payments, and competition among various credit providers. Genres help us navigate the complex worlds of written communication and symbolic activity because in recognizing a text type we recognize many things about the institutional and social setting, the activities being proposed, the roles available to writer and reader, the motives, ideas, ideology, and expected content of the document, and where this all might fit in our life (Bazerman, 1997; Berkenkotter & Huckin, 1995; Freedman & Medway, 1994).

But how did we even begin to imagine these genres that seem so removed from the immediacy of face-to-face talk? How did we get to this point where our daily activities are embedded in complex communicative systems that we must to some degree be familiar with in order to purchase the basics of life? How did we create these spaces of social interaction and communication so far removed from immediate face-to-face meeting?

Certainly in the early periods of literacy we had nothing like the proliferation of genres we have now. Who, sitting in the city of Uruk in the fertile crescent, could imagine a referee's report on a submission to a scientific journal? Where did the first genres of the written world come from, and how did they elaborate into the profusion we must make sense of in our lives?

Some early written genres arose directly from highly visible and well-known genres of spoken public performance, such as the epic, the communal history recited on ritual occasions, the myth, the ode, the choral performance and the drama, the speech, and lesser genres such as folktale, riddle, or joke. Transcriptions can serve as memorials for witnessed events or imaginative recreations for those who have seen similar events. The text then evokes the entire social trappings that encased the oral performance—whether the holiday gathering of citizens at the Athenian amphitheater for a poetic/dramatic competition, the sacramental gatherings at the temple in Jerusalem, or the evening story-telling to beguile children. The written text can also script reenactment of the original performance or new performances modeled on originals.<sup>2</sup> As new texts become created solely for private reading, they modify the social arrangements of their transmission but still draw on an established sense of the textual transaction. Much of what we now count as literature has its roots in such transformations of oral performances.

Similar, but a bit more exclusive and complex, are the transcription of oral discussion about knowledge and belief—as represented in the Talmud and the Platonic dialogues. Such documents carry to some extent the representation of

---

2. For a study of how oral performatives are transcribed in constitutive texts see Brenda Danet (1997).

the social interaction that generated or inspired them and are often reprised within local circumstances that reenact and extend the interaction they transcribe—as Talmud is studied within study groups, where the central text and written commentary trigger new discussions (see Jonathan Boyarin, 1989), or as Platonic dialogues continue to serve as the matter for undergraduate classroom discussion. Even reading such texts in private can draw one imaginatively into the represented dialectic, unless the reader is reading from some well-defined alternative perspective.

Some genres rise out of more ordinary, daily speech acts, such as counting and recalling (which, according to Denise Schmandt-Besserat (1986), provided the very origins of writing, as memorial tokens came to be transformed into clay impressions of those tokens, and then simply inscriptions in clay). This may be a personal recounting or within a small group to fix the terms of ownership or transfer. Presumably the individuals using memory tokens would also remember the specific local occasion, circumstances, purposes, and transactions of the recording. Some of our modern difficulty in interpreting early markings is that we do not have direct evidence of the circumstances and use of the marks within the circumstances.

## Early Letters

The spoken commands of those in authority also were early transformed into recognizable written genres of orders, laws, codes, and proclamations, extending rule over widespread domains and periods of time, with consequences for increased accountability to abstract principles. However, even though everyone might recognize the commanding words of authority, it is difficult to know whether any particular set of commands had current legitimate authority and whether that authority, particularly at a great distance, had sufficient power and means to monitor and enforce the commands.

For such reasons in the ancient Near East and Greece, early written commands along with other military, administrative, or political business of the state were cast in the form of letters (White, 1982). Letters provided identification of author and audience, and in the earliest period were delivered by personal messenger of the authoritative person, who was said to carry the very presence or projection (*parousia*) of the sender. The apparent social drama was further enhanced as the written message was read aloud by the messenger, who might also have a second spoken message which could not be entrusted to writing. Thus the procedures of delivery of these early letters visibly enacted the social relationships that were carried out at a distance through the medium of the letter (Stirewalt, 1993, p. 5). Even when letters were no longer recited by the messenger, the goal of projecting one's presence through the writing remained (Doty, 1973, p. 12).

From these formal and official beginnings, letters came to include expressions of personal concern and then personal messages (Stowers, 1986). Such maintaining and extending of social bonds moved the relationships enacted in letters beyond

the formal and official to the personal. Personal familiar letters soon became common among all classes in the Hellenic and Roman worlds. What little attention classical rhetorical theorists did give to letters were to these personal letters, with emphasis on how letters, to be written in the style of speaking, extended the personal bond between friends and associates (Malherbe, 1988). While theorists attended only to the bonds of friendship, personal letters became a flexible means of carrying out many kinds of business and other transactions (for examples see John Lee White, 1986). Among the range of business and administrative letters were letters of petition (White, 1972) and recommendation (Kim, 1972). Fictional letters served as amusing exercises in schools and as adult entertainment; the subjects of these letters ranged from moral romances to erotica. Letters to the gods, letters to the dead, and letter prayers suggest the flexibility of the letter form to establish and elaborate communicative situations (Doty, 1973; Stirewalt, 1993, pp. 20–25).

Two kinds of letters came to be treated as scholarly documents in schools and personal libraries. First were letters on technical or professional themes, including philosophy, rhetoric, divination, mathematics and medicine. The letters of Aristotle, for example, were collected. Second were more extended letter-essays which served in the place of complete treatises—perhaps serving as a sketch or substitute for never-completed works. The letter format gave local social context and meaning into these forays into extended abstraction (Stirewalt, 1993, pp. 15–19).

In the wide-ranging uses of letters in the classical world we can see how the letter, once invented to mediate the distance between two parties, provides an open-ended transactional space that can be specified, defined, and regularized in many different ways. The communication between two known parties with an existing and known set of relationships and ongoing transactions are directly brought to mind to writer and reader through the salutation, signature, and content of the letter. Moreover, letters can and often do explicitly describe and comment on the relationship between the parties and the nature of the current transaction. As more subjects and transactions find their recognizable way into the letter, the genre itself expands and specializes, so that distinctive kinds of letters become recognizable and treated differently. People recognize increasing varieties of transactions can be accomplished at a distance through letters and will have models to follow for those kinds of transactions. As the historical scholarship has revealed, these varieties of letters became strongly typified in organization and in formulaic phrasing. In turn, transactions and organization can be extended over greater distances and the social bonds between individuals can be reinforced and even created through indirect relations with third parties (as through letters of reference).

## Letters in the Early Christian Church

The richness and multiplicity of ancient letter writing practices made letters a powerful communicative force within the early Christian church. Almost all of the books of the New Testament outside the gospels are in the form of letters,



originally between specific parties or small groups and then made available for all who share in the community of the messages. These letters pursue many activities—including narratives of remarkable events, proselytizing messages, prayers, consolations, moral teachings, praises of the faithful, warnings against deceivers, philosophic thoughts, prophecies, and directives for church organization. These letters are regularly framed in forms of fellowship that reaffirm bonds of communality and faith, giving a personal cast of fellowship to the wide range of activities carried out in the New Testament.

In the early church letters were an important vehicle in maintaining the fellowship of the church over distances. Early travelers would carry letters from their bishops, introducing and making them welcome as communicants but also reaffirming the bonds of communion among bishops. Encyclical letters also circulated information about schisms and lists of which clergy remained “in communion.” As the church organization developed in the late Roman and Medieval periods these apostolic and pastoral letters would circulate doctrinal rulings, decisions of episcopal synods, along with other temporal and political matters. As the hierarchy of the church became established, papal letters on both general and specific matters became of increasing importance and became distinguished into specific kinds still in use today, including papal constitutions, bulls, briefs, encyclicals, rescripts, decrees, and personal autographs (Fremantle, 1956, pp. 23–25).

As the church expanded across distance, uniting many people, letters became important in holding the bureaucracy together and maintaining the bonds of communality (Constable, 1976). To train clerics in what was now becoming the major medium of doctrine and administration, a specialized branch of rhetoric developed known as the *ars dictaminis* (Camargo, 1991). This art of letter writing emphasized the salutation, identifying and giving respect to the social roles and statuses of the sender and receiver, and placing both within institutionalized social relations. Further, letter writers were advised to build the bond of good will with the recipient by invoking sentiment and obligation and to explicitly narrate the situation which presented the need for the letter and the recipient’s hoped for cooperation (Murphy, 1971).

The *ars dictaminis* provided the basis for expanding commercial and governmental correspondence during the early renaissance. Bologna, the center of *ars dictaminis* in the twelfth and thirteenth centuries, was simultaneously the center of the new *ars notaria*, which in the 14th century was to displace the *ars dictaminis* in importance. The *ars notaria*, concerned with proper form of legal and commercial documents, was closely tied to the professions of notary and secretary and deeply involved in law and commerce (Murphy, 1974, pp. 263–265).

## Letters and Legal Documents

The link between letters and legal documents can be seen in some of the functions letters served. Among the letters of the medieval church bureaucracy were

grants from monasteries, contractual arrangements, deeds of transfer, grants of immunities and privileges, gifts, mutual obligations, and other documents establishing some enduring administrative arrangement. Such letters would be kept to establish one's legal right when needed, so in a sense these letters were written as much for the unknown third party "to whom it may concern" as for the original recipients (Murphy, 1974, pp. 200–202; Perelman, 1991, p. 99).

I have not examined such early legal documents to determine the extent to which they had the full trappings of letters and how they might have differed from various genres of correspondence,<sup>3</sup> but it is worth pointing out that even such a document of general legal meaning as the Magna Charta, written in 1215, follows the principles of letter writing by beginning with a salutation that defines social positions and seeks good will: "John, by the grace of God, king of England, lord of Ireland, duke of Normandy and Aquitaine, count of Anjou, to the archbishops, bishops, abbots, earls, barons, justiciars, foresters, sherriffs, reeves, servants, and all bailiffs and his faithful people greeting" (Cheyney, 1896, p. 6). Then the document narratively begins by recounting what he has granted, before switching into normative claims of "shall have" and "shall not."

A later royal document I have at hand is the Letters Patent granted by King Henry VII to John Cabot license to explore and colonize new lands, dated March 5th in the eleventh year of his reign (1495), reprinted in *Hakluyt's Voyages*. Not only is it called a letter, but it has an address and salutation: "Henry by the Grace of God, king of England and France, and lord of Ireland, to all whom these presents shall come, Greeting" (Hakluyt, 1887/1907). The body, containing the specifics of the royal license, is framed as a direct message: "be it known that we have given and granted. . ." The document ends with his witness (or signature). To this day some contracts, grants, and other legal documents in Britain and America may still contain such residual epistolary formulae.

Even when patents were restricted from all grants of royal privilege to limited protection for inventions, the process was still transacted by letters and letter-like documents. The first extant application for a patent in the United States is a 1790 personal letter from William Pollard to Secretaries Jefferson and Howe and Attorney General Randolph requesting a patent for a spinning machine (United States Patent Office, 1980). The first extant grant, from 1791, is an official looking diploma cast in the form of a letter addressed "To all to whom to these Presents shall come, Greeting" and signed by both the President and the Attorney General (United States Patent Office, 1980).

Until the middle of this century in the United States, the chief patent documents maintained the format of a letter. The letter of specification within the application gradually came to stand for the patent, again maintaining the format of a letter to whom it may concern, signed by the applicant and witnesses, but further endorsed

---

3. For a catalogue of the genres of government documents and records of medieval England and their relation to letters see Michael T. Clanchy, 1979.

by the patent office and granted a patent number. Only in recent years have letter trappings been removed from the specification, though the patent is still legally surrounded by extensive correspondence, known as the file wrapper.

The letter of petition as a means for the individual to express personal interests to authorities extends back to the classical world (Kim, 1972) and was a regular instrument for the expression of discontent and protest in the Middle Ages and after. King George's unresponsiveness to petitions is one of the core complaints of the American Declaration of Independence.

As discontents increased, letters regularly were used to spread the rebellious attitude and perspective, to share information about outrages, and to organize acts of rebellion. Such was the case in the peasant rebellions in England in 1381 (Justice, 1994). Again, in the period leading up to the American Revolution, letters travelling between Committees of Correspondence provided the vehicle for increasing rebellious sentiment and organization. In both these examples, letters preceded the appearance of more overt public documents such as broadsides, manifestoes, and seditious pamphlets.

## Letters and Financial Documents

Letters not only provided the medium for development of major genres of law, government, and politics, but also the various instruments of money and credit that mediate the modern system of banking and finance. Beginning in the 12th century in the city-states of northern Italy, including Bologna, financial instruments developed to serve the needs of growing commercial trade. The most important of documents invented at this time, generally seen as the source of all other monetary instruments, was the bill of exchange. In these bills one party acknowledged to another the receipt of a sum to be repaid at a fixed date, usually at another city. By the middle of the 13th century bills of exchange had to be certified by a notary (Groseclose, 1976, p. 93). Although I have not seen the documents themselves, they seem to be a form of business correspondence. One history of Venetian banking called the system of bill of exchanges a "network of regional and international debits and credits, held together with constant letter writing" (Lane & Mueller, 1985, p. 73).

Monetary and credit instruments, for their credibility and credit-ability, depended upon people believing in increasingly abstracted symbolic markers of value, removed from objects of concrete value and from personal trust of known individuals who act as guarantors of value. Personal letter and letter-like communications among individuals can serve as transitional roles in establishing the value as reliable. Further, trusted institutions such as banks and governments can issue and guarantee written and printed instruments of value for general circulation.

Giro banking, again established in Northern Italy during this period, was based on the direct transfer of funds from a bank account of one client to the

account of another, upon instruction of the first client. It is hard to imagine that letters authorizing such transfers would not be a regular part of the process, and it is easy to imagine such letters of transfer being implicated in the rise of checking. Documents drawn against giro accounts apparently served as an early form of paper money. In England the first paper money established as legal tender in 1665 was in the form of “an order to the Teller of the Receipt of the Exchequer to pay such and such a person so much money out of the fund arising from this or that Parliamentary supply” (Groseclose, 1976, p. 117). The name alone of the letter of credit itself suggests the closeness of the link to correspondence, although I have not been able to find substantial information about its history.

The greatest experiment in paper money, or notes, developed in the North American colonies due to a lack of gold and silver coin. Massachusetts was the first to issue notes in 1690, and other colonies followed suit in following decades (Groseclose, 1976, p. 119; Hickcox, 1866/1969, pp. 5–6; Phillips, 1865/1969). The typical form of such notes has some of trappings of the letter; for example, the first notes issued by the Colony of New York in 1709 are dated at the top and are signed at the bottom by one or several government officials. The text reads,

This indented bill of . . . Shillings due from the colony of New York to the Possessor thereof, shall be, in Value equal to Money; and shall be accordingly accepted by the treasurer of this Colony, for the time being in all publick Payment; and for any Fund at any Time, in the Treasury . . . [dated, by order of] (Hickcox, 1866/1969, pp. 5–6)

The direct order to the treasurer has been transformed into a normative description that “the treasurer will accept,” thereby allowing the document to be addressed to the unidentified users rather than the government official. This transformation may explain some of the loss of trappings of the direct letter. To this day the U.S. Dollar contains some residual and transformed elements of the letter in the signature and the normative description “This note is legal tender for all debts, public and private” which serves as promise to the user and order to the recipient. British notes are also signed and “promise to pay the bearer the sum of. . .”

## Letters and the Origins of Newspapers, Scientific Journals, and the Novel

The introduction of printing multiplied copies of texts for extended and ultimately unknown audiences. The letter in several instances appears to have served as a transitional form to allow genres to emerge with some sense of defined communicative task with some moorings of social relationship. At least three major types of writing that flourished in print culture seem to have some connection with letter correspondence: Newspapers, scientific journals, and the novel.

The oral and written sources of the newspaper seem multiple, including word of mouth and ballads, Roman and Italian daily reports, and Renaissance broadsides and occasional pamphlets. Even as early as the latter half of the 15th century, professional correspondents gathered around the Inns of Court to write newsletters for the gentry in the provinces (Andrews 1968; Bourne 1887; Raymond, 1996, p. 5). The Fugger family in Europe also had a chain of correspondents to provide commercial news (Sommerville, 1996, p. 19). Inspired by some earlier continental examples, in England by the 1620s Corantos appeared regularly. The reports regularly referred to correspondence as a source of the information, as in “We understand by Letters . . .” and “They write from . . .” (Sommerville, 1996, p. 25). The editors, most notoriously Gainsford, adopted a personal style directly addressing the readers (Sommerville, 1996, pp. 25–26).

In January 1643 with England in full rebellion, the need for news was great. Two additional forms of news periodicals appeared—the *Mercuries*, drawing on the reputation of the first continental periodical, and *Intelligencers*, drawing the title from private newsletters of the sort prepared at the Inns of Court, suggesting confidential and secret information. Some of these newsletters themselves were gathered and printed in newsbooks, such as Samuel Pecke’s *The Heads of Several Proceedings in this Present Parliament*, which ran for three months (Sommerville, 1996, pp. 35–36).

While I cannot here begin to trace out the complex history of the forms of journalistic writing, I want to point out that trappings of letters still remain in the journalism industry, as reporters posted in distant cities and countries are still referred to correspondents, even on television news. Further, the byline remains to identify noteworthy acts of correspondence. Remnants of personal correspondence style remain particularly in those publications that affect antiquarian elegance, such as the *New Yorker* which still publishes lengthy reports with titles such as “Letter from . . .” and maintains an informal letter style for the “Talk of the Town” column.

Non-news periodical publication is generally traced back to the earliest scientific journals, the short-lived *Journal des Scavans* and the enduring *Philosophical Transactions of the Royal Society*, both first appearing in 1665 (Hall, 1965; Hall & Hall, 1965–1986). In the mid-17th century an active correspondence had developed among natural philosophers to share their investigations. The *Philosophical Transactions* grew out of this letter correspondence. German born Hans Oldenburg in the latter part of the 1650s, after having taken up residence in Britain, began correspondence with prominent men of learning, ranging of Massah ben Israel and John Milton to Robert Boyle and John Hartlib. The correspondence with natural philosophers soon overtook Oldenburg’s other interests. Although he himself had little background in natural philosophy and did not add new findings or theories, he passed about information between others. As a result of this active correspondence in 1662 he became the secretary of the recently formed Royal Society. In this role his correspondence increased further and in 1665 he

used his correspondence as the material for a new journal, the *Philosophical Transactions of the Royal Society*.

The earliest issues of this journal were largely in the form of a summary of his correspondence along with the meetings of the Royal Society, as though Oldenburg were corresponding with the readers, passing on all he has found from a variety of sources. Soon, however, he started to quote at length from his correspondents, and the articles appear directly in the form of letters to the Royal Society. Thus Isaac Newton's famous 1672 article on "A New Theory of Light and Colors" appears in letter form, which letter had been previously read to a meeting of the Royal Society. A controversy broke out over this theory, generating letters among numerous correspondents, whom Newton regularly answered. Much of this correspondence, written for the journal audience, was published over the next five years in the *Philosophical Transactions* (Bazerman, 1988).

Letters in the *Philosophical Transactions* increasingly oriented towards the readership of the journal as its primary audience, rather than the nominal recipients of the letters. In this process of reorientation, a tension developed between the assertiveness, didactiveness, and disputatiousness of public argument and the gentility, politeness, and goodwill of personal correspondence among gentleman (Atkinson, 1999; Shapin, 1994). It took well over a century for the articles to drop vestiges of the letter format and adopt the abstract argumentative tone and focus of scientific articles. Letters still retain several important roles in scientific publication both for direct response to previous articles and as a forum for less formal, more rapid publication of important results. Indeed, the need for brief and rapid sharing of new results has led to letter journals, like *Physical Review Letters* (Blakeslee, 1994).

In addition to many scientific journals proliferating from the early model of the *Philosophical Transactions*, a variety of literary and intellectual journals were born in the 18th century (Graham, 1926/1972), and from them proliferated the popular journals of the 19th century.

The origins of the novel are complex and under continuing critical scrutiny (see for examples J. Paul Hunter, 1990, and Michael McKeon, 1987). It is clear, however, that the epistolary novel was one of the first forms of extended prose fiction written for print. It is further clear that the epistolary novel grew immediately out of several traditions of letter writing and letter writing manuals, including the print collections of actual letters. The tradition of literary letters went back to the Roman exemplars of Pliny and Cicero and continued most notably by the eighth-century monk Alcuin and the 14th-century poet Petrarch; such letters had been collected and widely disseminated long before Gutenberg. In England, some families chronicled their lives and times in letters that projected the particulars and personality of the correspondents; two extensive collections are those of the Stonor family (1290–1483) and the Paston family (1424–1526). Additionally, fictional letters in the classical world, including some by Ovid, served for both education and amusement. Finally, letter writing manuals and love letter collections began being published in the 16th century, often presenting fictional exemplary

letters, ranging from the amusing to the didactic. Nicholas Breton's *Poste with a Packet of Mad Letters* (1603) gained particular popularity (Singer, 1963).

## Letters and Corporate, Commercial Documents

While there were no doubt many more genres in which letters had a formative role, I will jump ahead to two examples of late 19th-century commerce where the growth of corporate enterprises was creating the need for new forms of extended communication among people who may have been personal strangers but were in some structured relation to each other. First is the Letter to Stockholders. At least in the United States the latter part of the 19th century witnessed the growth of large corporations, triggered by transportation and communication technologies that created national markets. Transportation and communication companies were in fact some of the first large enterprises. These endeavors needed capital, which they obtained through the sale of equities. With such dispersed ownership, unable to witness the daily operations of the company or to inspect the books, the management needed means to report to and reassure the investors about the value of their investment. While I have not examined a wide range of early stock reports, nor do I have any detailed picture of their development as a form, the examples I have seen from the early 1880s for the Edison Electric Light Company, the Edison Electric Illuminating Company of New York, and the Edison Company for Isolated Lighting are all in the form of letters from the Board of Trustees to the stockholders, signed by the President of the respective company. After the first couple of years, a short financial statement was added. To this day, although the annual stock report of major companies is now likely to be a thick, glossy book with figures tables, photographs, and many sections, a letter to the stockholders from the company president and/or the Chair of the Board usually appears near the beginning to convey the overall condition of the company to the stockholders.

Similarly, within the daily operations of the rapidly expanding companies there were increasing needs for internal and external communication at a distance. At first the business letter carried out the necessary communications. The increased need for efficiency in keeping records and files generated by the expanding correspondence led to the development of printed forms, memos, reports, circulars, and other genres. This went hand in hand with the development of office technology such as typewriters, stencil duplicating machines, carbon paper, and the filing cabinet (Yates, 1989). That is, the business letter proliferated into new genres which became part of daily operations and part of permanent company records. The regularization of the documents and paper flows also served to regulate the work of new classes of white-collar workers (see also Olivier Zunz, 1990).

In examining the Edison papers several times I came across this process of genre formation in action, suggesting how the flexibility, personal judgment, and bonds of personal trust were weakened as paper work became increasingly organized around restricted genres controlled by pre-printed forms (Bazerman,

1999). One example stands out in its clarity. In 1884 Alfred O. Tate went on a canvassing trip to Michigan and Canada, searching for central power station sites. He regularly reported back to Charles Batchelor, one of Edison's closest and most trusted partners, concerning information about the agents contracted and the towns in which they were considering developing central stations. For the first ten days he wrote personal letters, often of two pages that mixed legal and business reports with personal judgments and other personal matters. He typically used the stationery of the hotel he was staying at. However, about two weeks into the process he began using pre-printed forms (identified as form 6) that had Edison company information, specific places for the contractual legal information and background information on the locally contracted agent, and a residual space for "Remarks." By being regularized in a form, these letters became more of legal and business documents directed towards a company file. Immediately upon adopting these forms Tate's comments became more limited in scope and length and his reporting task narrowed. On the other hand, the company was assured uniformity of information and regularity of filing procedures.

Because the sociality of texts is often a matter of implicit social understanding embedded in our recognition of genres that shape communicative activity, reading and writing have regularly been mistaken as autonomous processes of pure form and meaning, separate from social circumstances, relationships, and actions. Letters, compared to other genres, may appear humble, because they are so overtly tied to particular social relations of particular writers and readers, but that only means they reveal to us so clearly and explicitly the sociality that is part of all writing—they give the game away so easily. But that may be the very reason that letters have been so instrumental in the formation of more specialized and less self-interpreting genres. Letters have helped us find the addresses of many obscure and remarkable places for literate meetings and have helped us figure out what we would do and say once we got there.

## References

- Andrews, A. (1968). *The history of British journalism from the foundation of the newspaper press in England, to the repeal of the Stamp Act in 1855, with sketches of press celebrities* (Vols. 1–2). Haskell House. (Original work published 1859 by Richard Bentley)
- Atkinson, D. (1999). *Scientific discourse in sociohistorical context: The philosophical transactions of the Royal Society of London, 1675–1975*. Lawrence Erlbaum Associates. <https://doi.org/10.4324/9781410601704>
- Bazerman, C. (1988). *Shaping written knowledge: The genre and activity of the experimental article in science*. University of Wisconsin Press.
- Bazerman, C. (1997). The life of genre, the life in the classroom. In W. Bishop & H. Ostrom (Eds.), *Genres of writing: Issues, arguments, alternatives* (pp. 19–26). Boynton Cook.



- Bazerman, C. (1999). *The languages of Edison's light*. MIT Press.
- Blerkenkotter, C., & Huckin, T. N. (1995). *Genre knowledge in disciplinary communication: Cognition/culture/power*. Lawrence Erlbaum Associates. <https://doi.org/10.4324/9781315538747>
- Blakeslee, A. M. (1994). The rhetorical construction of novelty: Presenting claims in a letters forum. *Science, technology, and human values*, 19(1), 88–100. <https://doi.org/10.1177/016224399401900106>
- Bourne, H. R. F. (1887). *English newspapers: Chapters in the history of journalism* (Vols. 1–2). Chatto & Windus.
- Boyarin, J. (1989). Voices around the text: The ethnography of reading at Mesivta Tifereth Jerusalem. *Cultural Anthropology*, 4(4) 399–421. <https://doi.org/10.1525/can.1989.4.4.02a00050>
- Camargo, M. (1991). *Ars dictaminis, ars dictandi*. Brepols.
- Cheyney, E. P. (Trans.). (1897). The Great Charter: Granted by King John, June 15, A.D. 1215. *Translations and reprints from the original sources of European history*, 1(6), 1–16.
- Clanchy, M. T. (1979). *From memory to written record: England 1066–1307*. Harvard University Press.
- Constable, G. (1976). *Letters and letter collections*. Brepols.
- Danet, B. (1997). Speech, writing and performativity: an evolutionary view of the history of constitutive ritual. In B.-L. Gunnarsson, P. Linell, & B. Nordberg (Eds.), *The construction of professional discourse* (pp. 13–41). Longman.
- Doty, W. G. (1973). *Letters in primitive Christianity*. Fortress Press.
- Freedman, A., & Medway, P. (Eds.). (1994). *Genre and the new rhetoric*. Taylor & Francis. <https://doi.org/10.4324/9780203393277>
- Fremantle, A. (Ed.). (with Weigel, G.). (1956). *The Papal encyclicals in their historical context*. G. P. Putnam's Sons.
- Graham, W. (1972). *The beginnings of English literary periodicals: A study of periodical literature, 1665–1715*. Octagon. (Original work published 1926 by Oxford University Press)
- Groseclose, E. (1976). *Money and man: A survey of monetary experience* (4th ed.). University of Oklahoma Press.
- Hakluyt, R. (1907). The principal navigations, voyages, traffiques and discoveries of the English nation: Made by sea or overland to the remote and farthest distant quarters of the earth at any time within the compasse of these 1600 yeares. In E. Rhys (Ed.), *Haklyut's voyages* (Vol. 5). J. M. Dent & Company. (Reprinted from *The principal navigations, voyages, traffiques and discoveries of the English nation*, 1887, E. & G. Goldsmid)
- Hall, A. R., & Hall, M. B. (Eds. & Trans.). (1965–1986). *The correspondence of Henry Oldenburg* (Vols. 1–13). University of Wisconsin Press; Mansell; Taylor & Francis.
- Hall, M. B. (1965). Oldenburg and the art of scientific communication. *British Journal for the History of Science*, 2(4) 277–290. <https://doi.org/10.1017/S0007087400002454>
- Hickcox, J. H. (1969). *History of the bills of credit or paper money issued by New York, from 1709 to 1789: With a description of the bills, and catalogue of the various issues*. Burt Franklin. (Original work published 1866 by J. H. Hickcox & Company)

- Hunter, J. P. (1990). *Before novels: The cultural contexts of eighteenth century English fiction*. W. W. Norton & Company.
- Justice, S. (1994). *Writing and rebellion: England in 1381*. University of California Press.
- Kim, C.-H. (1972). *Form and structure of the familiar Greek letter of introduction*. Society of Biblical Literature.
- Lane, F. C., & Mueller, R. C. (1985). *Money and banking in Medieval and Renaissance Venice* (Vol. 1). Johns Hopkins University Press. <https://doi.org/10.1353/book.72157>
- Malherbe, A. J. (1988). *Ancient epistolary theorists*. Scholars Press.
- McKeon, M. (1987). *The origins of the English novel, 1600–1740*. Johns Hopkins University Press.
- Murphy, J. J. (Ed.). (1971). *Three medieval rhetorical arts*. University of California Press.
- Murphy, J. J. (1974). *Rhetoric in the middle ages: A history of rhetorical theory from Saint Augustine to the Renaissance*. University of California Press.
- Perelman, L. (1991). The medieval art of letter writing: Rhetoric as institutional expression. In C. Bazerman & J. Paradis (Eds.), *Textual dynamics of the professions: Historical and contemporary studies of writing in professional communities* (pp. 97–119). University of Wisconsin Press.
- Phillips, H. (1969). *Historical sketches of the paper currency of the American colonies, prior to the adoption of the Federal Constitution* (Vols. 1–2). Burt Franklin. (Original work published 1865 by W. Elliot Woodward)
- Raymond, J. (1996). *The invention of the newspaper: English newsbooks, 1641–1649*. Clarendon Press.
- Schmandt-Besserat, D. (1986). The origins of writing: An archaeologist's perspective. *Written Communication*, 3(1), 31–45. <https://doi.org/10.1177/0741088386003001003>
- Shapin S. (1994). *A social history of truth: Civility and science in seventeenth-century England*. University of Chicago Press.
- Singer, G. F. (1963). *The epistolary novel: Its origin, development, decline, and residuary influence*. Russell & Russell.
- Sommerville, C. J. (1996). *The news revolution in England: Cultural dynamics of daily information*. Oxford University Press. <https://doi.org/10.1093/oso/9780195106671.001.0001>
- Stirewalt, M. L. (1993). *Studies in ancient Greek epistolography*. Scholars Press.
- Stowers, S. K. (1986). *Letter writing in Greco-Roman antiquity*. The Westminster Press.
- United States Patent Office. (1980). *Early unnumbered patents, 1790–1836: Index and guide to the microfilm version*. Research Publications.
- White, J. L. (1972). *The form and structure of the official petition: A study in Greek epistolography*. Society of Biblical Literature.
- White, J. L. (Ed.). (1982). Studies in ancient letter writing. *Semeia*, 22.
- White, J. L. (1986). *Light from ancient letters*. Fortress Press.
- Yates, J. (1989). *Control through communication: The rise of system in American management*. Johns Hopkins University Press. <https://doi.org/10.56021/9780801837579>
- Zunz, O. (1990). *Making America corporate, 1870–1920*. University of Chicago Press.

## Chapter 4. The Writing of Social Organization and the Literate Situating of Cognition: Extending Goody's Social Implications of Writing

Writing is a means of communicating between people across time and space.<sup>1</sup> Writing can serve to mutually orient attention, align thoughts, coordinate actions, and transact business among people who are not physically copresent as well as among those who are. These social accomplishments depend on the text inducing appropriate meanings in the minds of the receivers, so literacy activates psychological mechanisms by which we make meaning and align ourselves to the communications of others. These psychological operations activated by literate practices may induce pleasures in themselves and evoke attention to our own inner processes of feeling and thought, such that we may find reading and thinking to be ends in themselves. Nonetheless, reading and writing are deeply social processes, connecting people's thoughts, perceptions, experiences, and projects into wider collectivities of organized action and belief.

The scholarship on the consequences of literacy that Jack Goody helped initiate over forty years ago reminds us that these inscription and interpretation practices affected the people who engaged in literate practices, that there was more to literacy than was to be found in the text. Goody as anthropologist was aware that cultural practice affects the development of individuals and their forms of thinking as well as the communal life and so was willing to contribute to the discussion of the cognitive consequences of literacy. But he never forgot the important social and cultural consequences of literacy. His account of how literacy has influenced the organization of society provides the starting point for understanding the complexity of modern social life and how it is maintained and evolves through literate practices. Such a social account of literacy as I will develop in this essay helps us understand the kinds of meanings produced in the course of our social and cultural life and how those meanings foster activity within and between social groups. Further such an account suggests how forms of literate participation shape our attention and thought in ways even more profound than first proposed concerning the cognitive consequences of literacy.

---

1. This chapter originally appeared as "The Writing of Social Organization and the Literate Situating of Cognition: Extending Goody's Social Implications of Writing," by C. Bazerman, 2006, in *Technology, Literacy, and the Evolution of Society: Implications of the Work of Jack Goody*, edited by D. R. Olson & M. Cole, pp. 215–240, Psychology Press. Copyright 2006 by L. Erlbaum Associates. Reprinted by permission of Taylor & Francis Group and published under a CC-BY-NC-ND License (<http://creativecommons.org/licenses/by-nc-nd/4.0>).

Because we live in a social world pervaded by literate practice transacted in semiprivacy, it is understandable that early inquiry into consequences of literacy focused on cognition. Although reading and writing can be group activities with high degrees of interaction, contemporary forms of literate practice are carried out insulated from people immediately around us in order to attend to the words of people distant in time and space. Reading and writing consequently are closely linked to the contents of our minds, and we are likely to view the greatest effects of literacy to be psychological. We associate the historical growth of literacy with the cultural growth of interiority and individuality of conscience and consciousness. Moreover, because texts may travel in time and space, far from the heat of face-to-face interaction, we tend to attribute the changes literacy brings to our minds as cognitive, even though we are ready to recognize some texts as quintessential statements of passion. Further, because written communication takes such a different form than spoken communication, inscribing a visual and often enduring medium rather than transiently reorganizing air to momentarily catch the attention of another, we are rightly fascinated by the affordances of the medium and the processes by which we interact with it. Finally, because of our concern for literacy instruction, we rightly worry about how each person interacts with text through writing and reading.

The development of literate, educated individuals with extensive interiority is itself a sociocultural development which in turn creates new social formations and communal ways of life—whether in monasteries comprised of individuals living in the aura of the same book, in bureaucracies where individual work is regulated by textualized procedures and directed toward creating documentary records for future action, or in universities which bring together in dialogue people of varied, extensive reading. Though written words move minds, minds move people, and people move in the social and material worlds. Changes in our communicative lives have consequences for our lives in the worlds, and these changes, rather than the changes inside our minds was the central interest explored by Goody in his germinal 1963 essay with Ian Watt, “The Consequences of Literacy.” This essay discussed how literacy affects such social and cultural issues as collective memory, communal self-image, political participation, complexity of cultural knowledge and available cultural repertoire, division of labor, complexity of institutions, and social differentiation and stratification. The various essays collected by Goody in the follow-up volume *Literacy in Traditional Societies* (1968) also examine the particular sociocultural formations within which literacy takes its unique shape.

## Remembering the Social

After the more cognitive book *The Domestication of the Savage Mind* (1977), Goody rearticulated and expanded an analysis of the social and cultural implications of literacy in *The Logic of Writing and the Organization of Society* (1986). In this book he synthesized archeological data of early literate societies with ethnographic studies of recently literate societies to delineate literacy-based

transformations in economics, religion, law, and government. In each domain he saw literacy supporting class stratification, extended reach of institutions, and change in the self-conscious definition of the institutional entities and their practices. These changes are not determinative—they do not happen in all cases, nor do they always work out in the same ways. Further these four domains do not stand fully apart and distinct. In different societies the relation between the church, the economy, law, and government work out differently, with alliances, combinations, dominations of different orders and flavors. Nor are these major institutional domains comprehensive; for example, Goody did not examine separately the later developing systems of scholarship, knowledge maintenance, and knowledge production that grew out of collections of documents in the domains he did examine. Nor did he examine the later systems of secular cultural production that grow out of both public sphere and commercial interests.

Some of the social consequences Goody identified may be seen as direct changes enabled immediately by writing—such as the facilitation of common sets of beliefs to be held constant over time and across distance, or the stabilization and extension of legal regimes based on a written legal code, or the generalization of moral principles abstracted beyond local judgments in local conditions, or the ability to collect records. These consequences, however, soon ramify in complex ways. Bureaucracies develop to maintain the records and to exercise the monitoring powers afforded by the records. Religions form using the text as a center of identity, ritual, schooling, and proselytization. Reform and heretical movements form on the bases of dialectically written countertexts. To provide for participation in bureaucracy, economy, or religious hierarchy, schools then begin to take a special place within the community, with consequences for family life and the development of the young. These new institutions, particularly with the introduction of schooling, depending on how they play out, may become vehicles of social mobility or the reproduction of class advantage. These changes follow increasingly different paths of cultural creativity and differentiation. The complexities of history breed the particularities of each way of life in constantly changing and differentiating societies. But each evolving way of life incorporates an infrastructure based on literacy. That literate infrastructure provides, I believe, the greatest implication of the social story Goody told. The scholar's task then is not to find the universal social consequences of literacy but to understand how each society has elaborated a way of life on the matrix of literacy, with the consequence that each participant in the society to some degree participates in the particularized literate systems, whether or not they themselves read or write.

## An Example of Socioculturally Located Literate Practices and Sensibilities

Niko Besnier's 1995 study *Literacy, Emotion and Authority: Reading and Writing on a Polynesian Atoll* described the literate practices that emerged in the last century

and a half as an oral society came in colonial contact with Western literate forms of religion, economy, and governance. The forms of literacy the islanders of Nukulaelae developed reflected the local interests, motives, and affiliations of the inhabitants at the same time as accommodating to imposed orders. The new forms of literate life reorganized the islanders' intragroup relations as well as with surrounding communities with those who had left the island in search of employment. Literacy became such an essential part of the cultural life that by Besnier's report, all the inhabitants of Nukulaelae were literate—a remarkable 100 percent. This universality of literacy attests to the fact that one cannot live as part of the contemporary community without participating through reading and writing. Yet the forms of reading and writing were limited, mostly to Bible reading, sermon preparation and delivery, and letter-writing with overseas community members.

As Besnier (1995) described it, the local genre of letter writing drew on traditional preliterate community values, traditional leave-taking emotionality, as well as Christian themes of charity to remind the off-islanders emotionally of their bonds to those at home and the obligation to provide material support and goods, placing great obligations on the off-islanders who worked hard with limited earnings. Similarly, the practices of sermon writing were local re-interpretations of traditional island oratorical genres with Western sermonizing genres, as evolved within local cultural struggle within the community and with Western proselytizing mediated through missionaries recruited from different Pacific island communities. In both cases the forms were local and particular, serving the immediate needs of islanders and part of the evolution of the personalities, affect, and social roles of islanders. But they were also located within much larger systems of literate religions, economy and governance, reshaped in local form. These are just the kinds of transformations of societies, cultures, and people that Goody identified as the consequences of literacy.

Remarkably, however, Besnier (1995) positioned his work as theoretically opposed to Goody's. Besnier attributed to Goody an autonomous view of literacy as a form of technological determinism, something which Goody denied from the beginning. But I think the larger misunderstanding is that Besnier so focused on the local agency and the formation of locally-constructed sensibilities that he missed the larger structural importance of the history and institutions that he included in the admirable ethnographic completeness of the account. These islanders made their own lives and their forms of subjectivities, but not in the conditions of their own making, to paraphrase Anthony Giddens (1984) paraphrasing Karl Marx (1963). That is the import of Goody's history of the historical role of literacy in shaping the social institutions.

In such examples we see the indirect psychological, cognitive consequences of literacy through the restructuring of the cultural and social environment within which each person experiences, thinks, and acts with available cultural tools and socially available responses. In Besnier's (1995) account, one of the key mechanisms for the structuring of messages and action within cultural forms was genre.

Both primary genres of local writing that Besnier studied—letters and sermons—mixed Western and local elements of expression, action, and role. Both also drew on Western and local genres. These recognized forms of social communication provided hybrid spaces that allowed local action within reproduced elements of social structure and organization of action. They were a means by which society was reproduced and changed simultaneously by new individual acts drawing on culturally available communicative opportunities, much in the way suggested by structuralist sociologists, such as Giddens (1984), and by phenomenological sociologists, such as Alfred Schutz and his students (Bergmann, 1993; Bergmann & Luckmann, 1995; Schutz & Luckmann, 1973). The role of genres in structuring social situations, relations, and actions has been a major theme of genre theory, as I discuss later.

The particular cultural communicative opportunities of these genres as described by Besnier (1995) were particularly made possible by literacy. Letters and preparatory inscription of an intended speech and its use in guiding future sermons were in a very direct sense made possible by writing. While paler equivalents may have been accomplished in societies without literacy by sending brief messages along with travelers in the hope that they would meet the desired receiver and would remember something like the intended message or by mental rehearsal of planned speeches,<sup>2</sup> writing made such activities more convenient, elaborate, reliable, and frequent. It was not just the particular textual forms that emerged with writing; it was the entire set of cultural and social circumstances that surrounded the communications that had writing built into them. The letters were located in systems of commerce, property, immigration, cash economies, wage labor, scheduled ship traffic, and a thousand other literately supported systems that made possible and desirable just such a particular use of letters by these participants at the same time. The sermons sat within histories of scriptural religion and missionary activities to spread the book and to set up bureaucratic systems of governance. They further sat within the Western tradition of published sermons imported onto the atoll as well as the traditions of clerical training bodily carried by the missionary preachers. Complex politics among British missionaries, Samoan missionaries, and the inhabitants of Nukulaelae further influenced the particular hierarchical structures on the island and the particular sermon writing and delivery practices on the island.

## Agent, Agency and the Influence of Literacy

The example of Nukulaelae suggests that literacy's influence on social interaction (as well as attention and thought) is pervasive but does not operate in a direct and determined causal way. Rather literacy is part of the stuff out of which a way of life

---

2. Rhetoric's interest in memory has its origin in the need to be able to remember prepared topics for delivery.

is made—it is an essential element of the experiences and acts of individuals, but it is not the cause of them. Literate action is always a situated choice by people in particular circumstances. But the use of literacy within the action facilitates some developments and makes less likely others. Literacy does not determine a fixed path of consequences, not just because events are complexly multicausal, but because the uses of literacy depend on agentive, strategic choices of actors. Can we say wood causes or implies a chair, or the chair is the consequence of cutting and carving tools, or a tradition of design, or an interstate system of commerce that encourages the production of manufactured goods, or the cultural patterns that encourages eating at a table, or well-turned matched sets of furniture in rooms designated for dining as a sign of affluence and taste? Of course not. But each contributes to the particular chairs in my dining room. But also required are the actions of many people to harvest the wood, make the tools and use them to cut and carve the wood, design and construct the chair, invest in the factories, organize the front office, merchandise and sell, move that chair, and so on. These actions may be carried out in purely typical ways but which nonetheless require intention and commitment; other actions may involve innovations or adaptations to local situations that will have consequences for changes in chairs, their costs, and distribution. The wood or the saw haven't caused any of this, but it couldn't have happened without some material of construction and means of manufacture.

Thus in looking at how people may have used literacy in social interaction and in organizing and structuring ongoing activities and institutions we need not attribute the agency to literacy itself. The agency remains with the human actors who developed and carry out life activities using literacy, even if there were unforeseen consequences to their choices, with literacy fostering something different than what they anticipated. Literacy is a constitutive part of a matrix of complex cultural and social formations of modern society where we respond to institutions, beliefs, and groups of people located far from our daily life and that encompass far more people than you can shake a stick at, as the old saying goes.

## Genre: Giving Shape to Literate Interactions

To understand how new literacy-based social structures created new literacy-saturated situations calling for literate forms of action, let us return to the issue of genre. A group of theorists and researchers largely based in rhetoric and composition studies has elaborated an extended genre theory that explains why genres would take a central visible role in contemporary society. This group, following the lead of Carolyn R. Miller (1984), has combined genre theory with Schutz's ideas of typification in the production of the everyday life world.<sup>3</sup> The

---

3. For a review of the literature on genre studies in this tradition, see David Russell (1997). More recent collections within this approach include ones edited by Richard Coe and colleagues (2002) and by Charles Bazerman & Russell (2003).



recognizable genres of a society provide an available repertoire of forms, actions, and motives. The forms are ways of seeing what acts are available that are appropriate to the moment as you see it—what you can do, what you might want to do. For example, you may perceive a moment in a disagreement as offering possibilities of either a rejoinder or an apology. Your motives, goals, plans will take shape within those two constructions of potential action. You would not even consider appropriate filing a legal brief—and if somehow you found a motive and means to pursue that path, that would radically change the nature of the situation and your counterpart's set of genred options. Such a theory of genre, consistent with that of V. N. Volosinov (1973), differs from most other theories of genre in focusing on the positive force of the utterance enacted within generic form more than the limitations, regulations, or textual features. Accordingly, this theory also emphasizes the strategic agency of the user of the genre, attempting to carry forward his or her interests through one of the recognizably appropriate forms of response. Both utterer and auditor draw on their experiences of kinds of utterances to make sense of the situation and typify the moment and response. The personal archive or repertoire can be drawn on, evaluated, reshaped, recomposed for both utterer and auditor in light of their perspectives and interests, but the degree of congruence between the genres invoked in production and reception determine the degree of congruence of the mutual understandings of situation and utterance. This is why the development of a socially shared repertoire of situations, forms, actions, and motives—embodied in genres—is essential for high degrees of mutual understanding, coordination, and cooperation—even as part of creating opposed or differentiated positions.

Although genre is important for the organization and interpretation of face-to-face talk, the rich and complex embodied signaling of mutual intelligibility or lack thereof and the constant unfolding of interchange by which the situations evolve provide real-time guideposts for constant adjustment of sense-making and adjustment of future utterance. In written language the writer-reader relationship is much more tenuous and uncertain.<sup>4</sup> Messages rather than arising in recognizable physical surroundings come from a distance, stripped of some of the embodied context that provides orientation clues. In the earliest days of letter writing, a messenger bearing the identity of the king carried the letter, and the message was delivered with some ceremony to reproduce the royal presence. Now most texts sit in among other texts or with few external orientation clues. The reader and writer need the genre to create a communicative meeting place legible from the very form and content of the text. Further, once that place is recognizably presented, readers may easily lose their place if the text starts doing

---

4. This thinness of situational markings in written texts led some in the first generation of writing scholars of consequence to call written texts as contextless. Rather I claim that removal from an immediate set of circumstances requires special kinds of textual work by writers and readers to establish the communicative situation.

something different. Thus, the push to remain within genre and use it for positive effect in writing is much greater than in face-to-face interaction, where footing may be changed rapidly and subtly and the success of the change can be monitored in real time.

Even when communicated in familiar genres, writing is in some ways more fragile than face-to-face interaction. Written communication is easily disrupted through loss of attention, imposition of alternative unintended frames, multiple proliferation of alternative meanings, or the construction of hostile, unsympathetic counter texts. Even sympathetic extended interpretation can lead to proliferating meaning, especially as motivated by different interests—both cognitive and material. Thus, interpretive professions, such as law, philosophy, theology, or literary studies, rarely lead to definitive meanings except through some hierarchical ruling, such as in the courts or a supreme religious body.

These frailties of written communication create an even heavier burden on genres to define the situation and align participants to congruent roles, such that they can reach some degree of coordinated sense. This is especially true in fields where there is much at stake or bureaucratic consistency is required. Thus well-worn, well-typified language is used in legal contracts, police reports, and similar documents, where the only novel portions are the particulars of the case. Similarly, highly structured questionnaires are used to direct and constrain the gathering of bureaucratic information. Also in situations where attention is likely to be distracted or peripheral, information is presented in easily recognizable forms with redundant information and text organization devices, as in news stories. Every additional degree of novelty requires higher degrees of attention and alignment from the audience as well as introducing possibilities for divergent sense-making. The divergence in sense-making of any text often does not surface as socially recognizable disagreement because few opportunities arise to compare or make accountable different readings of a text, except for situations specifically structured for that purpose, such as reading comprehension exams, classroom discussions of the interpretation of a text, or courtroom disputes over the applicability of specific laws to the case at hand. But even in most classrooms or monitoring of job performance, references to text meaning often are so broad-stroke as to not uncover focused differences of interpretation. To avoid difficulties that might come from interpretation, students and employees often stick closely to the authoritative words of textbooks, company documents, teachers, or supervisors. Sticking close to the received word encourages shallower readings that do not get one into deeper waters by wondering what the words might actually mean.

## The Abstraction of Situations and Situated Actions

Despite the difficulties of interpreting texts from a distance, today we have many highly specialized forms of communication that are embedded in specialized practices, beliefs, knowledge, and stances of particular social formations.

Academic disciplines and subdisciplines, such as rational choice economics; professions and subprofessions, such as patent law; bureaucracies, such as social services; religious and philosophic communities, such as Christian existentialists; and participants in elite cultural activities, such as postmodern poetry can orient toward and make sense of texts that are unfamiliar and opaque to those outside of those social groupings. Ability to understand the genres of these fields—including the kinds of roles and stances one adopts, interpretive procedures, forms of contention, and uses to be made of the texts—is the result of substantial enculturation and apprenticeship that make these odd and particular forms of communication familiar, meaningful, and intelligible in detail and nuance.

These texts no longer are situated in familiar forms of face-to-face interaction but rather create new meeting places that are embedded in a world of literate interchange. Taxpayers communicate with their government in some abstracted space of machine enhanced accountancy. In most cases the tax form is “read” by a machine, with only a few samples ever coming to the attention of a human reader or what is called an auditor. In reading and writing philosophy, the professional philosopher joins in the great conversations of philosophy in an imagined place situated above and beyond any seminar room free from real time, but still respecting the chronology of authorship.<sup>5</sup> Of course this discussion uses skills honed in classrooms and is rehearsed in numerous seminars but acknowledges contributions rise beyond those face-to-face locales to become part of the discussion in the literature.

But when literacy began five thousand or so years ago, the only places that were recognizable were the actual places of face-to-face communication. A number of written genres originated as transcriptions or reproductions or reenactments or transformations or preparatory scripts for recognizable public events—such as recitations of odes and epics, or dramatic performances, or philosophic dialogs, or commands of the king. Or they were records of the counting house, to be contained within the accounting and record keeping practice of the church or royalty or rich. Texts at first were often used for memory purposes, so that the original person could reconstruct the meaning, intent, and situational purposes behind the inscriptions. But another means of making writing socially intelligible is for it to take on the voice of direct address while providing all the situational information necessary for the scene, relationship, and occasion to be reconstructed by the reader. This is the form of a letter, headed by a date and place of origin, specifying an addressee who is directly spoken to (typically in the second person), and undersigned by the speaker. The letter is then taken to be in the voice and name of the undersigned who is often represented in the first person. Even when a king’s letter is drafted by an advisor and read aloud by a nuncio, the voice of the king remains. The body of the letter typically narrates the specific situation that occasions the correspondence and often refers to the current well-being or activities

---

5. See Cheryl Geisler, 1994.

of both correspondents. Further greetings, closings, internal compliments and personal statements and other devices build good will between the parties. This establishing of social roles and the building of good will so as to reinforce the relationship necessary for the commission of the business of the letter was a particular concern of the medieval guides for letter writing, the *ars dictaminis*, even though social relations were already embedded within hierarchies of church and state (Murphy, 1971; Perelman, 1991). From letters' overt representations of social situations, relationships, and actions, more abstracted forms of interaction gradually emerged that take place only in the world of written communication. Letters have had a role in the formation of military and governmental directives and reports, philosophic treatises, church doctrinal documents, business and bureaucratic records, organizational communication, newspapers, scientific journals, financial reports to stockholders, contracts and deeds, and many other kinds of documents (Bazerman, 2000).

## The Emergence of Abstracted Meaning Systems: The Case of Financial Instruments

The most striking example of specialized genres emerging from letters is the emergence of financial instruments, including checks and paper currency. These documents still bear residual markings of letters, including date, signature, and some message to the bearer or a financial agency. Financial instruments had their origin in communications from wealthy folk who had deposited holdings with bankers for those specific bankers to release or transfer precious to particular parties. Bonds, letters of credits, promissory notes, loans, and eventually redeemable currency became abstracted from these specific forms of correspondence that depended on personal trust of all the parties concerned. Eventually banks and then governments would issue paper to make up for a lack of circulating metal with promises that those certificates would be redeemed. In the last century trust in the general solvency of governments replaced specific promises of redemption. Increasingly the currency has been abstracted to electronic storage of digits in accounts, which we take to be meaningful and valuable, as long as we retain trust in the solvency of the government which backs the currency—which is no longer tied to gold or notes.

This case is striking not only because of the extreme reduction and transformation over less than a thousand years of a rather concrete and particular genred communication into an abstract meaning that has only the slightest inscriptive trace, to which we attribute great meaning. But the case is also striking in that the meaning we attribute to these inscriptions depends on an increasingly complex social system, consisting of many institutions. Governments, banks, interbank transfer agencies, national monetary policy boards, accountancy professions, laws, police, courts, bond markets, credit card companies, electronic technology companies, and a host of other socially organized activities are part of the

maintenance and operations of our financial system. All these socially organized systems must operate sufficiently reliably so that I can trust that my bank account will record my holdings and will maintain its value—just so that I can earn and spend my limited resources. Every other person and organization with whom I make financial transactions locally and internationally must also have similar trust in those systems, so that we can carry out our exchanges. Not only that, there are many other kinds of documents upon which these systems are built and which are the life-blood of the flow of information by which they work. The statement of my account, though important to me, is one of the most marginal of documents in these systems. Such systems range from commercial law and files of contracts to economic data gathered through questionnaires, processed through many reports and analyses to wind up with statements of federal monetary policy (Smart, 1993, 2000). Each of the systems and subsystems has its own flow of a set of genres which constitute its work (for example, see Amy J. Devitt, (1991), on tax accounting). The sets of documents are systematically organized with temporal and intertextual relations with each other and in relation to the activities and roles of the various socially organized participants (Bazerman, 1994). In the contemporary professionalized financial world, moreover, there are philosophic, political, and economic literatures that provide rationales, means of conceptualizing, and theorized methods of calculation for the management of the complex system of international economies and monetary policy.<sup>6</sup>

These documents are said to bear information. To successfully use information in the modern world one needs to know which documents bear the information one seeks. This suggests another underlying component of the textual systems. Information is created by inscription. And inscription of specific types only takes place in certain forms in certain documents and is stored for retrieval in other particular documents. For example, my salary gets reported in a few primary documentary systems. One set is internal to my university's budget and financing office, consisting largely of what are called the books, but also several subsidiary communications that have to do with particular adjustments, summer salary, change of health plans, etc. Another set of documents are the communications between employer and employee, such as hiring letters and notices of pay increase. Since I am in a merit-based promotion system, current and proposed salaries are also represented in the documents surrounding academic evaluation and merit reviews. Another place where salary appears is in the transfer to my bank accounts, and another is in reports to the state and national tax systems. Each of the taxing agencies have complex sets of documents for the calculating, recording, and processing of my taxes—which then generates another set of correspondence between myself and the taxing authorities. The salary as a piece of

---

6. See Deirdre N. McCloskey (1985) for analysis of the typical discourses of economics and Bazerman (1993b) for analysis of an important moment in the founding of the ideology and conceptual basis of the modern financial and economic world.

information resides in particular documents in these systems. The numbers of course must be coordinated, otherwise someone will discover their accounts run short. However, the numbers and event concepts are not the same, as my bank receives only my net salary minus various health tax and other deductions. The government receives several different numbers, such as gross income and net taxable income. The academic evaluation system as well as the pension system only communicate with the base salary, without extra payments such as summer pay or administrative stipends. The information, however, exists only in the documents of the system, and I need to know which document to retrieve, in order to compare with any particular number in any of the other documents used by different systems. Following Mikhail M. Bakhtin (1981), we can in fact identify the particular chronotopes of each document in terms of the kinds of information each holds and each manipulates or tells a particular kind of story about. Bakhtin developed the idea of chronotope in relation to literary texts, where each kind of story typically takes place in a certain time and place, with certain kinds of objects, and certain kinds of characters and activities. But such typicality of objects, agents, setting and actions is equally true of any kind of document. Fill-in forms are highly explicit about this, with the institutional general categories specified in the printed parts that then direct the person responding to fill in particulars, to create a certain kind of task-specific self-representation. The general categories and particulars in an application for college admission are quite distinctive from those on a loan application, and we would be quite surprised or even shocked to find some of the questions on one misplaced on the other. Even in a newspaper we know the kinds of particulars, kinds of stories and actors and settings that would appear on page one, on the sports pages, and on the entertainment pages, and we would find it strange to find a description of an interview with an actor about a new movie in the news section, just as we would find it strange to see a head of state's speech to the United Nations on the sports page, or battlefield reports in the entertainment section.

## Scientific Meaning and the Emergence of the Scientific Literature and Community

What is true so strikingly of the meanings of the financial information we have created is also true of most of the activities of modernity. For example, the experimental article in science was born in the early epistolary exchanges among mid-17th-century natural philosophers (Bazerman, 1988, chapter 3). This combined with another emergent form of scientific communication, when Henry Oldenburg, secretary of the Royal Society and center of a correspondence network, read from his correspondence at Society meetings. These reports of correspondence formed the basis of the *Philosophical Transactions of the Royal Society of London*, first published in 1665. The earliest issues of this journal were descriptions and excerpts of his correspondence, but soon the pages were filled with the

full text of letters composed directly for general distribution. Within a few years the articles dropped the trappings of letters as well as the appearance of addressing a meeting of the Royal Society; articles instead became freestanding communications to the readers, contexted only by their appearance in the journal. Once the scientific article was recognized as being of its own type, it rapidly developed features that spoke to the rhetorical argumentative dynamics of the new social formation—meeting only in the literature. By 1800 the experimental article had many of the recognizable features of modern scientific article.

A particularly interesting example of this transition from letter to scientific article is Isaac Newton's letter sent to Oldenburg and the Royal Society describing his new theory of light and colors (Bazerman, 1988, chapter 4). When this was read to a meeting of the society on 8 February 1672, it met with general approbation and was published in the February 19 issue of the *Philosophical Transactions*. Robert Hooke, however, took a copy of the letter home and wrote a reply, which he read to the February 15 meeting of the society. Other criticisms arrived by letter and were published in the *Transactions*. Newton began answering all the objections in the journal. A controversy broke out in the pages of the journal that lasted four years and comprised almost twenty articles. In the course of this exchange Newton developed a new style of mathematical argument that was to be highly influential for the future of the scientific article.

Simultaneous with the emergence of the format, contents, and style of the experimental article, the scientific community developed roles, values, activities, and intellectual orientations organized around the production and reception of such articles. As the genre began to take its modern form, a readership had emerged that looked to the journals for the advance of knowledge. This audience read critically against their own knowledge, and attempted to fit the latest findings into what they knew. They could actively respond by writing letters back or articles presenting contrary evidence. The readers also knew about experiments and were performing them more on their own. Around the production and dissemination of such knowledge a new profession had grown, often supported in educational institutions or other places of higher learning. These same professionals who also produced their own research took on roles of editors and referees, as well as critical readers and consumers. The role conflicts that emerged in their multiple complex roles led to several characteristic values and social organizational features of modern science. These conflict mediating mechanisms include the differentiation between professional and amateur audiences; the retreat of the experiment to private laboratory rather than public demonstration; scientific specialization; and the commitment to the advancement of knowledge over personal gain (Bazerman, 1988, chap. 5; Merton, 1973). Journal science describes more than just a means of communication; it indicates people who share significant beliefs, orientations, and commitments to this system of knowledge making, distribution, and use. The natural philosophers' commitment had been abstracted from regular attendance at meetings to a scientific production of an

evolving literature, or rather in each person's mental projection of a dynamic discussion in the literature (Bazerman, 1988, chap. 8). One of the last major elements of modern scientific publication to come into place was the explicit intertextuality of reviews of the literature and citation practices. These intertextual practices placed the discussion within published findings of the accumulated experience of all scientists no matter what time or place they lived in (Bazerman, 1991). This literature was to become increasingly structured around dominant theories (Bazerman, 1988, chap. 8). Even critiques that wished to take fundamentally different theory positions had to characterize and reframe current theory in order to create a new place to meet their audience (Bazerman, 1993a).

These newly emerged scientists developed specialized means, stances, sites, and organizations of interaction and thought. They became socialized into arcane communities with specialized practices and long apprenticeships that excluded others who didn't communicate and act according to the standards of the field. Nonetheless, in these transformations of the community and individuals, neither the individual nor the group loses agency. Rather the socialization provides them the tools of agency to become powerful and authoritative actors on a highly specialized social stage of the scientific literature. They are the ones that have the right to speak and the means to speak forcefully, so as to project new views into the virtual world of the literature and to thereby transform the knowledge produced by the fields and the very standards, organizations, procedures, and commitments of their fields. As well, their authority within scientific communications can lend authority in other areas of communication that grant respect to science and scientists.

### An Agent: Thomas Edison

Power aggregates in these socially organized literate systems. Particularly, those who have the authority and means to communicate within such systems have access to power, as Goody (1986) pointed out in his analyses of the power and social mobility that flowed to the emergent scribal elites in the church, law, and state. However, this power is not an abstraction but only exists in its specific exercise in specific projects. These literate systems are means of doing things through influencing others who are somehow tied to or beholden to these literate systems. Only through the active use of the systems through active production, reception, and use of particular texts is the social power of literacy realized. However, that agency may take many forms given the great variety of literate activity systems, their different configurations and evolutions, the different resources available to each particular agent who is differentially located in each system and has different access to resources of other systems, the different objectives and goals to be achieved in each case, and the inventiveness of each agent in pursuing communicative goals.

The communicative work that Thomas Edison and his colleagues did in multiple social systems to bring electric light and central power into being makes this



case striking (Bazerman, 1999). In order to gain cooperation of people in multiple social spheres—financial, technical, scientific, legal, governmental, and organizational—Edison had to communicate within many highly elaborated literate activity systems. But each system was configured differently, and Edison had different resources and aims in dealing with each. Patent law had stabilized almost half a century before Edison began working on incandescent lighting, so that he had to work with his patent agents to file patent applications in standard formats for examination in a well-developed system of the patent office with highly typified criteria, procedures for appeal, and litigation. Nonetheless, he and his agents strategically framed his patents, as all savvy applicants do, to give the broadest and most secure protection to the emergent work he was protecting. To enforce these patents, he and his lawyers contended within the well-structured and document laden world of the courts. On the other hand, at the time of Edison's work, newspapers were undergoing rapid change and growth as a consequence of new print and paper technologies, urbanization, transportation, and telegraphy. Edison's career developed in the midst of these changes, so he was able to understand the power of the press and the means to get it; in particular he early saw the advantage of the new forms of human-interest story and quickly figured out how to be a good interview subject to gain publicity for his projects. He also identified moments when favorable press reports were so valuable as to warrant well-placed bribes. In the forefront of changing invention from an individual to a group activity at his Menlo Park labs, he transformed the personal discovery notebook into a mechanism for coordinating the work of his team. In each of these areas and others he needed different kinds of communicative work to establish presence, meaning, and value for his proposed technology so that it would gain the necessary support and cooperation of the various groups upon which it depended. Then as the material technology emerged, he needed people to attribute favorable meanings and value so as to firmly plant the technology in the daily life world. Only through complex accommodations and strategic actions within the many communicative systems could Edison become the powerful actor, the powerful agent of change and social reorganization that he became.

## The Information Age as a Literate Phenomenon

Today much of our sense of literacy's influence on life has been displaced onto the concept of information, which is said to surround us, rather than the texts, documents, files, and other inscriptions in which information is recorded, stored, and made accessible. The term *information* seems to decontextualize information and make it an abstract substance apart from particular human uses and motives. But because information is produced within particular kinds of documents, it is imbedded within the ideology of those genres (Beebe, 1994; Volosinov, 1973), even though we may forget the genres and the activity systems that give rise to it. Because information is produced and stored in literate systems of social activity

and is then accessed from its inscribed storage for specific uses, it carries with it the motives of its collection, preservation, and dissemination, upon which are superscribed the aims and motives of the new activities it is accessed for and enlisted within, as new sets of calculations. To understand what information is, how we use it, how we compare and calculate, and how we come to conclusions about it, is to understand much about how we think today

The examples of financial information I have already discussed exhibit how one common kind of information people use is quite concretely embedded within activity systems. Reports of prices of transactions exist only on the basis of existing markets, with their genres of bidding, offering, and coming to terms. But these prices only become available information of the kind we read about in the newspaper if the market has a bureaucracy of recording and reporting exchanges, turning them into information. Further, dissemination of the information requires genred media of tickertapes, financial news pages, television screen-bottom crawls, or brokerage webpages. Typified documents make the information accessible to those with a stake in the market and provide the means and material of calculative thought. Whenever one uses a market-determined price, one invokes the whole ideological weight of the market system which produced that information and enters into the regimes of calculation facilitated by the documents designed as part of the systems of use. For such reasons, the introduction of electronic spreadsheets that facilitated certain kinds of displays and calculations brought about major changes in many realms of financial action. The statement that the right to emit into the atmosphere a ton of carbon pollutants is now trading for a certain number of dollars is only informative because of recent laws that define rights to pollute and create the transferability of those rights, thereby setting the conditions for a market, which is then formed. I may object to pollution being commodified, any person or organization being granted a right to pollute, even more to that right being transferable, and worst of all a profit being made from the trade; nonetheless, my invocation of the current market price invokes the existence of that entire system. It takes a second set of communicative acts to then wash my hands of the ideology and social understandings and institutions I have just invoked.

## Informationalizing the Environment

Perhaps the commodification of pollution was a likely outcome within our modern world, where monetary value determined in markets is the ultimate form of communication. As Adam Smith proposed, market value has become the least common denominator of information for social exchange, such that all social systems are under pressure to translate their values and motives into financial terms in pursuit of individual ends (Bazerman, 1993b). But at least another element was necessary for this particular commodification and market to occur. The environment also had to be turned into various kinds of information. For many centuries

information had been collected on the atmosphere, weather, and even toxic substances for various purposes, but the concept of the environment as something to be monitored because it was at threat really emerged only in the last half century. In the United States the concept of environmental information grew out of activist concern fostered both by Rachel Carson's (1962) polemic on the effect of DDT and other pesticides and by the anti-nuclear testing movement, which identified public information on nuclear fallout as necessary for citizens to counter the government monopoly on confidential military information. The concept of scientifically based public information for the protection of citizen interests carried with it a number of ideological assumptions that framed the gathering, presentation, and interpretation of the information (Bazerman, 2001). As alarm over the harmful effects of pollution and the degradation of the environment increased there came a more general call, not just by activists, to gather information about the environment so that decisions could be made on it. These calls took their most forceful shape in congressional hearings and associated documents and crystallized into laws calling for the production of environmental impact statements. This new genre and associated genres of monitoring the state of nature funded new research and gave shape to forms of reporting (Bazerman et al., 2003). In some cases new scientific specialties arose with new research methods to carry out new tasks with different theoretical grounding (Bazerman & De los Santos, 2005). Among the new methods was complex modeling of the atmosphere, enabling predictions about greenhouse gases and global warming. Large literatures emerged on this subject within which new tools of inscription and calculation arose in the form of computerized programs. These programs further increased the need for specific kinds of information as input to the calculation and resulted in new kinds of output information reported in scientific circles as well as in newspapers, political forums, legislatures, international diplomacy, and world conferences attempting to negotiate mitigations of the worst consequences projected by these calculations.

Many industries saw these calculations and the proposed remedies arising out of the several activity systems directed toward the monitoring and protecting of a threatened environment as having negative impact on their own forms of accounting and calculation to serve the goals of their economic financial activity systems. Those industrial forms of calculation had few means, places, or genres in which to inscribe the effect of climate change, except in the form of casualty loss from extreme weather events that might impact some industries. Such casualty losses, however, would be insured and would turn up primarily as insurance cost. Further the measures suggested to mitigate the global warming often had anticipatable accountable increases in the cost of doing business. One industry, however, is differently structured in its accounting, as it bears the burden of extreme weather and natural disasters—the insurance industry. Natural disasters, extreme events, and loss of property to rising sea levels are inscribed in their systems as major costs in payouts. The profitability and viability of insurance companies depends on complex forms of actuarial calculations and risk assessments based on

data gathered in various historical reports and supplemented by other inscrip-tional and calculative methods of projecting future conditions. By the early 1990s some insurers, especially in Europe, examining their own payouts recorded in their books and reading the press accounts of concern for global warming as well as the scientific models projecting, began to become concerned that global warming would have heavy impact on their industry (Mollin, 1993). Some insurers, particularly the large reinsurers, such as the Munich Reinsurance Company, that served the industry by offsetting risks incurred by separate insurers, became so concerned as to hire their own meteorologists and climatologists to prepare internal reports (Mills, 1998). Each of the kinds of collected data, development of procedures for calculation and modeling, presentation and transmittal of find-ings, determination of effects, and recommendations are realized in particular genres of documents with associated activities, roles, and other socially organiz-ing concomitants. Further the translation and recalculation of the environmental conclusions and projections into the systems of economic calculation of risk imply whole new sets of documents and organizational structures.

Of course, all this might be seen just as talking about the weather that we can sense without words by walking outside. But the inscription and aggregation of particular forms of data and the development of calculative and reporting genres, as well as all the other action genres that create the large institutions of science, environmentalism, governments, and finances as well as the insurance industry—all that is built on literacy and the invention of complex forms of literate interaction and literacy-based activity systems.

These inventions of genres and forms of socially organized activities that rely on them, the data inscribed within them, and the calculations and conclusions and recommendations made on the bases of what is inscribed, elaborated, and thought through in documentary spaces are unanticipated, unusual, and complex in ramifications. Contingency, exigency, and creativity lead to the emergence of constantly evolving literate social systems and the documents that represent the inscribed meanings that coordinate and contend the relationships and activities. These literate social systems through the agency of humans come off the page into the formations of the social world and the material actions that form our relationship to the material world. These documents aid in the negotiation, planning, and construction of the built material environment and themselves form a built symbolic environment that shapes our understanding and approach to almost all aspects of daily life in the contemporary literate world. But there is nothing deter-minative in exactly how we have used literacy in relating to each other and to the world. It is not implicit within the earliest use of counting tokens to keep track of livestock that an insurance industry five millennia later in the 18th century would meet the needs of expanding capitalism by using new tools of mathematics to develop particular forms of record keeping and actuarial calculations to determine risks and insurance rates. Nor is it a necessary consequence that two centuries later, once insurance had become a major international industry, an environmental

movement emerged that would encourage new forms of science that would then provide calculations that would explain changes in disaster payouts and would predict future increased risks. But out of such agency of many individuals and organizations we grow the changing literate environment, the intertextuality, which we use to orient to life in the 21st century.

## Each World Has Its Limits: Rethinking Restriction

Goody (1968) was right to point out there are differences in the ways different societies and cultures use literacy and the kinds of organizations and actions they build out of the integument of literate interaction. While the term “restricted literacy” implies far too simple a dichotomy between two classes of societies, one of which is defamed, it does open up the question of how the individuals and groups have found different uses for literacy. Some societies have found uses for literacy primarily within scriptural religions and few other places of life, and at some moments it has served interests of some powerful people to put obstacles in the way of other individuals who want to gain the power of literacy or want to apply it to other domains. But so too in the political and economic realms individuals and groups have sought to restrict the access of others or the reconfiguration of literacies that would shift power to other activities, groups, and individuals. Further, the typifications necessary to make written communication intelligible, particularly at a distance, encourage people to reproduce genres and behaviors that constitute the literate order. It takes acts of invention and creativity, tempered by intelligible extension, to find new ways and uses for literacy. Such creativity is incited by some perceived exigency that would motivate individuals to discover new ways to communicate to people on different matters and to foster different sorts of actions. Such exigencies constantly appear in human life, as each person and group attempts to respond to their ever-changing conditions of life—using, reconfiguring, and extending the particular set of cultural resources available in their world. Thus each culture will appear particular in its set of literate resources and practices and each will develop on novel lines in their uses of literacy. Every literate community does some things in some ways and not other things in other ways. As one looks to the history, distribution, and variation of literate practices, one finds remarkable diversity, striking inventiveness, and unanticipated conjunctions and alliances. At the same time, texts are portable and textual practices are constantly moving from one cultural context to others. Even then, the uptake, interpretation, and use may be different in the new sociocultural environment. So as in all cultural practice there is both dissemination and difference.

But to notice unanticipated difference is not to say that the uses of literacy are random and unsystematic. The operations of literacy tend towards systematicity because of the need for intelligibility at a distance. By understanding that systematicity, we can make sense of the varied literate configurations found in the world, how they emerge, how they are sustained, and how they evolve or collapse.

## The World We Live in Gets Our Attention: Rethinking Cognitive Consequences

Understanding the social consequences of literacy may also help us move beyond an impasse that occurred in the cognitive consequences of literacy inquiry. Once Silvia Scribner and Michael Cole (1981) forcefully established that the consequences were variable based on social, institutional, and historical factors, cognitive consequences of literacy became recognized as particular and situated rather than general. This left cognitive studies of literacy only to look at individual situated cases. But if there is order to society, and that order has something to do with what has been done with literacy, perhaps the orderliness of literate practices and the way they enter into social structure can provide ways to sociologically characterize the orderliness of each literate situation and thus begin to find order within the variety of literate situations. To understand the consequences of a commercially used literacy, we can go about understanding the ordered history and organization of a society's commerce and how it has built literate activity into its agreements, negotiations, conflicts, resolutions, record keeping, assignment of value, and distribution of property. If such structures are built on literacy, not only will they use literacy, but those uses will be consistent with, or symbiotically developed with, what we have discovered we can make literacy do.

Even more, since literacy does travel between minds and is a means for one mind to influence or orient the attention and operations of another, then the social organization will have cognitive components that are particularly related to the forms of social relation that are part of the literate way of life. That is, the social embodies meaning—particularly the more durable and widely travelling meanings evoked by literate artifacts.<sup>7</sup> And those meanings, in order to gain congruency among readers, must be those kinds that can be conveyed by literacy and cast into the forms which literacy offers. The mechanisms of meaning are also socially effective mechanisms. In order to understand the cognitive consequences of literacy we need to look at the social consequences, but in order to understand the social, we need to look at how texts can come to be meaningful to different people and thus must look at the cognitive. Ultimately, we will find that the cognitive consequences are more about the new meaning systems and activity that occupy our minds than they are just about the character of work with symbols. Coordinately, society is more affected by the systems of meanings it is saturated with through literate formations than it is just by the initial monopolies one or another class may have had on literacy. Whether one form of inscription is more efficient or more easily learned than another (the asserted alphabetic advantage) may be less consequential in its cognitive consequences than if a society has developed a large bureaucracy, literary culture, philosophic tradition, technology,

---

7. John W. Mohr (1994) was a sociologist who looked at the social order through the structured social meanings represented by institutional texts.

commerce, and educational system using whatever form of inscription it has historically developed. It is those things that people will think about and which will be cognitively and affectively consequential for them.

## The Literate Accomplishment and the Built Symbolic Environment

Over the last five thousand years we have created new ways of life, new forms of social organization, new structures of commerce, new ways of knowing, new ways of growing up. Children of the forest since prehistory have learned to find their way in the natural environment they grow up in; as well they learn to find their way in the social environment of the people around them and in the symbolic environment created in their dialogue with others and the artifacts of the culture.<sup>8</sup> But now children not only must learn to find their ways in the built environment of the cities, suburbs, farms, and schools, they must learn to find their ways in the built symbolic environment of books, media, signs on the walls. And this built symbolic environment is inextricable from the extended social world they must come to understand. Full participation in many of the social domains of the modern world require high levels of literacy skills as well as extensive knowledge relevant to that domain transmitted through literacy. The world we know, think about, act within is saturated by and structured upon the texts that travel from place to place and have some durability over the years. The built symbolic world upon which we have elaborated new social meanings and relationships and which is the object of our thought and attention as we try to live our lives within it—in that we find the consequences of literacy.

## References

- Bakhtin, M. M. (1981). *The dialogic imagination: Four essays* (M. Holquist, Ed.; C. Emerson & M. Holquist, Trans.). University of Texas Press.
- Bazerman, C. (1988). *Shaping written knowledge: The genre and activity of the experimental article in science*. University of Wisconsin Press.
- Bazerman, C. (1991). How natural philosophers can cooperate: The literary technology of coordinated investigation in Joseph Priestley's *History and Present State of Electricity* (1767). In C. Bazerman & J. Paradis (Eds.), *Textual dynamics of the professions: Historical and contemporary studies of writing in professional communities* (pp. 13–44). University of Wisconsin Press.
- Bazerman, C. (1993a) Intertextual self-fashioning: Gould and Lewontin's representations of the literature. In J. Selzer (Ed.), *Understanding scientific prose* (pp. 20–41). University of Wisconsin Press.

---

8. David R. Olson (1994) has explored some of the challenges that people face as readers in navigating the world of texts.

- Bazerman, C. (1993b). Money talks: The rhetorical project of the *Wealth of Nations*. In W. Henderson, T. Dudley-Evans, & R. Backhouse (Eds.), *Economics and language* (pp. 173–199). Routledge.
- Bazerman, C. (1994). Systems of genres and the enactment of social intentions. In A. Freedman & P. Medway (Eds.), *Genre and the new rhetoric* (pp. 79–101). Taylor & Francis.
- Bazerman, C. (1999). *Languages of Edison's light*. MIT Press.
- Bazerman, C. (2000). Letters and the social grounding of differentiated genres. In D. Barton & N. Hall (Eds.), *Letter writing as a social practice* (pp. 15–30). John Benjamins. <https://doi.org/10.1075/swll.9.02baz>
- Bazerman, C. (2001). Nuclear information: One rhetorical moment in the construction of the information age. *Written Communication*, 18(3), 259–295. <https://doi.org/10.1177/0741088301018003002>
- Bazerman, C., & De los Santos, R. A. (2005). Measuring incommensurability: Are toxicology and ecotoxicology blind to what the other sees? In R. A. Harris (Ed.), *Rhetoric and Incommensurability* (pp. 424–463). Parlor Press.
- Bazerman, C., Little, J., & Chavkin, T. (2003). The production of information for genred activity spaces: Informational motives and consequences of the environmental impact statement. *Written Communication*, 20(4), 455–477. <https://doi.org/10.1177/0741088303260375>
- Bazerman, C., & Russell, D. (Eds.). (2003). *Writing selves/writing societies: Research from activity perspectives*. The WAC Clearinghouse; Mind, Culture, and Activity. <https://doi.org/10.37514/PER-B.2003.2317>
- Beebe, T. O. (1994). *The ideology of genre: A comparative study of generic instability*. Pennsylvania State University Press.
- Bergmann, J. R. (1993). *Discreet indiscretions: The social organization of gossip* (J. Bednarz, Jr., Trans.). Aldine de Gruyter.
- Bergmann, J. R., & Luckmann, T. (1995). Reconstructive genres of everyday communication. In U. M. Quasthoff (Ed.), *Aspects of oral communication* (pp. 289–304). DeGruyter. <https://doi.org/10.1515/9783110879032.289>
- Besnier, N. (1995). *Literacy, emotion, and authority: Reading and writing on a Polynesian atoll*. Cambridge University Press. <https://doi.org/10.1017/CBO9780511519864>
- Carson, R. (1962). *Silent spring*. Houghton Mifflin.
- Coe, R., Lingard, L., & Teslenko, T. (Eds.). (2002). *The rhetoric and ideology of genre: Strategies for stability and change*. Hampton Press.
- Devitt, A. J. (1991). Intertextuality in tax accounting: Generic, referential, and functional. In C. Bazerman & J. Paradis (Eds.), *Textual dynamics of the professions: Historical and contemporary studies of writing in professional communities* (pp. 336–357). University of Wisconsin Press.
- Geisler, C. (1994). *Academic literacy and the nature of expertise: Reading, writing, and knowing in academic philosophy*. Lawrence Erlbaum Associates. <https://doi.org/10.4324/9780203812174>
- Giddens, A. (1984). *The constitution of society: Outline of the theory of structuration*. University of California Press.



- Goody, J. (Ed.). (1968). *Literacy in traditional societies*. Cambridge University Press.
- Goody, J. (1977). *The domestication of the savage mind*. Cambridge University Press.
- Goody, J. (1986). *The logic of writing and the organization of society*. Cambridge University Press. <https://doi.org/10.1017/CBO9780511621598>
- Goody, J., & Watt, I. (1963). The consequences of literacy. *Comparative Studies in Society and History*, 5(3), 304–345. <https://doi.org/10.1017/S0010417500001730>
- Marx, K. (1963). *The eighteenth Brumaire of Louis Bonaparte*. International Publishers.
- McCloskey, D. N. (1985). *The rhetoric of economics*. University of Wisconsin Press.
- Merton, R. K. (1973). *The sociology of science: Theoretical and empirical investigations* (N. W. Storer, Ed.). University of Chicago Press.
- Miller, C. R. (1984). Genre as social action. *Quarterly Journal of Speech*, 70(2), 151–167. <https://doi.org/10.1080/00335638409383686>
- Mills, E. (1998). The coming storm: Global warming and risk management. *Risk Management*, 4(5), 20–25.
- Mohr, J. W. (1994). Soldiers, mothers, tramps and others: Discourse roles in the 1907 New York City charity directory. *Poetics*, 22(4), 327–357. [https://doi.org/10.1016/0304-422X\(94\)90013-2](https://doi.org/10.1016/0304-422X(94)90013-2)
- Mollin, H. (1993). Will global warming cool off weather underwriting? *Risk Management*, 40(3), 28–35.
- Murphy, J. J. (Ed.). (1971). *Three medieval rhetorical arts*. University of California Press.
- Olson, D. R. (1994). *The world on paper: The conceptual and cognitive implications of writing and reading*. Cambridge University Press.
- Perelman, L. (1991). The medieval art of letter writing: Rhetoric as institutional expression. In C. Bazerman & J. Paradis (Eds.), *Textual dynamics of the professions: Historical and contemporary studies of writing in professional communities* (pp. 97–119). University of Wisconsin Press.
- Russell, D. R. (1997). Writing and genre in higher education and workplaces: A review of studies that use cultural-historical activity theory. *Mind, Culture, and Activity*, 4(4), 224–237. [https://doi.org/10.1207/s15327884mca0404\\_2](https://doi.org/10.1207/s15327884mca0404_2)
- Schutz, A., & Luckmann, T. (1973). *The structures of the life-world* (Vol. 1). Northwestern University Press.
- Smart, G. (1993). Genre as community invention: A central bank's response to its executives' expectations as readers. In R. Spilka (Ed.), *Writing in the workplace: New research perspectives* (pp. 124–140). Southern Illinois University Press.
- Smart, G. (2000). Reinventing expertise: Experienced writers in the workplace encounter a new genre. In P. Dias & A. Paré (Eds.), *Transitions: Writing in academic and workplace settings* (pp. 223–252). Hampton Press.
- Scribner, S., & Cole, M. (1981). *The psychology of literacy*. Harvard University Press.
- Volosinov, V. N. (1973). *Marxism and the philosophy of language* (L. Matejka & I. R. Titunik, Trans.). Harvard University Press.



# Chapter 5. Revisiting the Early Uses of Writing in Society Building: Cuneiform Culture and the Chinese Imperium

The history of writing is usually told as a history of material or symbolic technologies.<sup>1</sup> Histories of writing tools from clay and stylus or chisel and stone through paper, printing press, keyboards, pixels, and hand-held devices have been matched by histories of iconographic and alphabetic scripts. But what these devices and signs have been used for, whom they communicate among, for what purposes, and with what messages is an even more fascinating and rich story. These stories though are more difficult to tell because the early evidence is sparse and the later evidence is massive and complex.

Writing is infrastructural for modern society, taking central mediating roles in the many institutions, organizations, knowledge systems, cultural affiliations, and other social networks through which we build our environment, plan our futures, conceive our pasts, and live our lives. Elizabeth Eisenstein's (1979) *Printing Press as an Agent of Social Change* and Jack Goody's (1986) *The Logic of Writing and the Organization of Society* offered monumental first steps in revealing the extent and detail of this infrastructural role, but they left much to be done. In this chapter I will rely on three more recent volumes that describe the emerging literate societies in Mesopotamia and China: Karen Radner and Eleanor Robson's (2011) *The Oxford Handbook of Cuneiform Culture*; Haicheng Wang's (2014) *Writing and the Ancient State*; and Anthony J. Barbieri-Low and Robin D. S. Yates' (2015) *Law, State and Society in Early Imperial China*. But still our ability to grasp the fullness of the infrastructural character and consequences of writing remains at the early stages.

While some artifacts from the early years of literacy remain, they tend to be those inscribed on only the most enduring media, such as stones, clay, incised bones, or metals. These artifacts often were intended to endure, as ceremonial memorials, sacred commitments, laws, or the like. From these we can impute some public functions and institutional memory. Ordinary messages of everyday life, however, were written on plentiful, mostly degradable media, like leaves or bamboo strips, so we have few artifacts nor traces of their social circulation. Only when the common medium was clay, which could be sun-dried

---

1. This chapter originally appeared as "Revisiting the Early Uses of Writing in Society Building: Cuneiform Culture and the Chinese Imperium [Una vuelta a los primeros usos de la escritura en la construcción de la sociedad: La cultura cuneiforme y el imperio Chino]," by C. Bazerman, 2022, *Literatura y Linguística*, 46, pp. 61–76 (<https://ediciones.ucsh.cl/index.php/lyl/article/view/3156/2739>). Copyright 2022 by Revista Literatura y Linguística under a CC BY-NC-ND License (<http://creativecommons.org/licenses/by-nc-nd/4.0>).

or baked, as in Mesopotamia, do we have extensive archives (though even here clay was often reused, favoring the preservation of some messages over others). As well, only when the cheap medium was enduring clay, as far we know, did the first extensive bureaucratic archives develop. Yet even here we are often in doubt as to who made which collections for what purposes. Even when we have textual artifacts, we have limited clues as to who wrote and read documents, for what purposes, and with what meanings. Some are totally opaque except for their residue—such as the fragments from Mohenjo-Daro in the Indus valley originally uncovered in 1877.

Writing and documents do not exist in vacuums but are part of vibrant unfolding communications, an emergent built symbolic environment to which they contribute. These emergent symbolic landscapes change people's relation to the material world and to the people they live among and communicate with. Only as networks of documents emerge and contexts are intelligible do we have evidence of the social functions of writing, for the evidence is carried within the documents and their relation.

The early research and theory of the consequences of literacy (associated with Walter J. Ong, 1982; Eric A. Havelock, 1982; and Goody, 1977) focused on the impact of literacy on the individual and individual thought. But consequences went beyond individual thought in how writing could extend communications with others over time and space and could enlist others collaboratively in endeavors. Memories could be aggregated, argued over, and stabilized in lists that persist over time and spread over space. This might start with genealogies and king lists that established legitimacy, but it could also regulate and record property and contracts. It could establish consistent rules of law and governance and memorialize treaties. Writing could negotiate and stabilize social relations and could establish shared knowledge and belief systems. It could coordinate action and exchange over large distances and among large groups of people. It could also amass power to those who could control this new technology. These are the kinds of social consequences of writing that Goody alone among the first generation of literacy researchers examined in detail.

## Early Evidence of Writing

Some early archeological evidence of written symbol use come from various parts of the world, such as the symbols found on artifacts in Jaihu, China dating back to the seventh millennium BCE, the Vinca symbols found in modern day Serbia dating to the sixth millennium BCE, or the symbols from the Indus Valley in India dating back to the fourth millennium BCE. But none of these has been definitively established as a writing system let alone deciphered, let alone clearly associated with social and communicative uses.

Modern writing systems all seem to have evolved come from a few sources: Cuneiform emerged in Sumer in the Mesopotamian basin initially in the late

fourth and early third millennium BCE. There is some question whether the near simultaneous rise of Egyptian hieroglyphics was an independent development or a case of cultural diffusion and imitation. Cuneiform, nonetheless, evolved to consonantal alphabetic systems around the year 2000 BCE in the Sinai peninsula.

The Development of Chinese systems (starting perhaps around 1200 BCE, though some see a connection to the earlier Jaihu symbols) seems more surely to be independent.

The third independent line of writing development in Mesoamerica, dates back to the first millennium BCE. These scripts now exist only as heritage literacies, though some of the related spoken languages are still in use. We do, however, have sufficient examples and contexts to understand at least some of the uses, interactions, and meanings accomplished through these documents.

Although we lack much contextual information about the social situations, relations, and actions early documents mediated, we can infer some part of the interactions they were part of because genres in typifying communicative forms also helped typify the situations, participants, and interactions. That is, using a genre invokes a kind of situation it fits into, a kind of communication appropriate to that situation, and the kinds of social roles and interactions that comprise the situation (Miller, 1984).

## Cuneiform Writing and Scribal Culture

The earliest literate society developed around the first symbolic inventions of writing technologies in the Sumerian basin in the fourth and fifth millennia BCE. The earliest material technologies (shaped, marked, and baked clay) needed for literacy had been in place for perhaps 30,000 years, but only in the fifth and fourth Millennia BCE did they lead to the practice of inscribing records of agricultural goods in clay tablets using a stylus, according to Denise Schmandt-Besserat (1996). The earliest social purposes for these inscriptions cannot be corroborated by other evidence, nor who the parties involved were, but contracts, wealth counting, taxation, wills, or other forms of property management soon were soon elaborated and readily recognizable in the documentary record.

Archeological evidence further indicates that by 3000 BCE (Englund, 2011) a profession of scribes had emerged, working either from personal homes or houses of tablets. Tasks for writing and the kinds of messages proliferated, often with clearly identified authors, audiences, and social functions. Much of our evidence of these more elaborated uses and extended roles for scribes and other literates comes from the later more stabilized periods of cuneiform culture of the second and first millennia BCE when there were well-established scribal professions and court structures using literacy.

One interesting paradox of this early history of literate society was that writing historically arose in a fairly settled agricultural society, in accounting of agricultural goods (see Robert K. Englund, 2011, and Schmandt-Besserat, 1996), even

though literacy was soon to make possible greater communication at a distance, mobility of messages, and more fluid societies. The settled agricultural society facilitated the rise of an elite freed from labor on the land and able to control the produce of agricultural labor from metropolitan centers. The systems of record keeping and financial transactions in a surplus economy, the importance of astronomical records for agriculture, the formation of leisured classes who could support scribal cultures—all these arose within settlements but established socio-communicative networks that could extend beyond the local. Accounting was facilitated by stabilized measures of produce, records of land surveying and deeds of ownership, census records, taxation rolls, and other forms of enumeration (Chambon, 2011). These mechanisms supported the growing urbanization and the control of remote agricultural regions from the urban center as well as subordination of secondary urban centers. Laws, directives, orders, records, and reports facilitated centralized control while reassuring those at the periphery that they were being treated equitably and with knowledge of their situation.

The stabilizing of economic conditions and the ability to draw funds from the local for the use of the center supported the development of a literate administrative class serving hierarchical rulership. The rise of an urbanized society over time shifted primary uses of literacy from agricultural purposes towards administrative communication and cultural, medical, scientific, and prognostic knowledge. Coordinately the cuneiform cosmic order began paying more attention to ideologies associated with the urban world and diminished the importance of agriculture (Wiggerman, 2011).

Further, the scribal class took on increasing ranges of functions and became stewards of various knowledges and practices. These included magic, exorcism, and religion (Schwemer, 2011); divination and reading of omens (Koch, 2011); medicine (Böck, 2011); and astronomy and calendars (Rochberg, 2011; Steele, 2011). Scribes collected libraries and archives to document official transactions and to develop references for their personal uses (Robson, 2011), engaged in historical synthesis of prior knowledge of professions (De Breucker, 2011), developed literary letter writing (Vulliet, 2011), and composed dirges, laments, and prayers for the kings (Löhnert, 2011; Tanret, 2011). In their poetic and other literary genres they developed representations of the self, including some degrees of awareness of agency, freedom, death, and history (Foster, 2011; van Koppen, 2011), even while they kept thematic focus on the praise and projection of royal power and ideal kingship (Brisch, 2011; Waerzeggers, 2011).

Even more, scribes became central in carrying out administrative functions. Professional judges go back at least as far back as 19th century BCE (Demaré-Lafont, 2011) and Hammurabi's laws date from the 18th cent BCE (von Dassow, 2011). While trials and arbitration were usually oral, judgments could be recorded and documents could be used as evidence, though they needed oral corroboration of their veracity (Demaré-Lafont, 2011). Royal decisions were inscribed in documents and advisors provided written advice in correspondence (Radner, 2011).

Scribal training, carried out in the houses of masters or in tablet house, included basic legal training, as evidenced by student texts practicing legal words and formulae of legal contracts along with documents prescribing the qualities of judges. The value of writing for administration made education valuable for royalty (Zamazalová, 2011). Scholarliness was viewed as a virtue and a qualification for at least some kings (Frahm, 2011). Religious institutions also required administrative, bureaucratic, and practical documents even before the required sacred or theological texts (Jursa, 2011).

While the primary powers of writing and literacy remained within the scribal classes or those who employed them, some other classes of people developed specific literacy knowledge functional for their lives, such as using a selection of signs for commerce or technical domains like divination and medicine (Veldhuis, 2011).

In sum, literacy facilitated the centralization, elaboration, and control of multiple dimensions of society, which in turn became dependent upon literacy and saturated with ideas and practices derived from literacy and its consequences. Extensive networks of literates were then required to carry out multiple, increasingly specialized tasks, distributed across different components of society. Literates gained power, wealth, and status within these emerging systems. Competing states within the region and individuals engaged in commercial practices that extended across jurisdictions further complicated the picture.

## The Literate Construction and Regulation of the Imperial State in China

We have less continuity of records of the uses of writing in early China, probably because everyday communication was on perishable wood or bamboo slips, woven together by thread, as indicated by a few remaining artifacts. We do have, however, painted pottery dating from at least the 13th century BCE (Wang, 2014, p. 41) and inscribed shells and bones used for divination from the 12th century BC (Wang, 2014, p. 41). The oracle bones and shell inscriptions imply other documents and records probably on more perishable media. In particular oracle bone inscriptions identify royal names and some genealogical information which are consistent with later king lists from the first century BCE which refer back to at least 1200 BCE. The divination inscriptions found in Anyang also imply bookkeeping through detailed references to exact numbers of troops, prisoners, spoils of war, purchases, property, sacrifices, and other countable items (Wang, 2014, p. 182). Divination records going back to the Anyang also provide indications of court and non-court scribal schools (Wang, 2014, pp. 275–279). There are no extant bureaucratic texts prior to 5th century BCE, but the material accomplishments of the Erlitou and Erligan archeological sites (both in modern Henan province) dating from the second millennium BCE imply a high degree of bureaucratic organization according to Wang. From later periods there is evidence of primers, curricula, and other school materials from the fourth century BCE through the early centuries of the new millennium (Wang, 2014, p. 280).

We do, however, have elaborate surviving documents once literacy is well established under the Qin (221-207 BCE) and the subsequent Han (202 BCE - 9 CE) dynasties, when empire spread and consolidated, uniting the region under a common hierarchical system (Barbieri-Low & Yates, 2015). By then writing had become a means of organizing and controlling society. While in the ancient Mideast, multiple competing power centers contested and disrupted projection of power, changed the languages, and posed problems of shifting allegiance and compliance, the Chinese empire, for millennia, was able to achieve systematic control over China, through various dynastic changes. China's coherent unified state was built on a standardized written language, written regulation, documentation, monitoring, and administration by literates. These literates were in turn held accountable through systems of literate regulation, documentation, and review by a hierarchical state constantly enforcing coherence and unity, often through draconian punishments and highly restrictive laws.

When we finally get a fuller documentary record, we see a highly elaborated imperial system regulated, controlled, and monitored through literacy and administered by bureaucrats trained as scribes and specializing in making and inspecting documents. For the next section I will rely on the translation and interpretation by Barbieri-Low and Yates (2015) of two legal documents found in a tomb in Zhangjia-shan (in modern Hubei province). *The Statutes and Ordinances of the Second Year* (datable to 186 BCE) and the *Book of Submitted Doubtful Cases* (from about the same date) are from the early Han dynasty (206 BCE-8CE) but incorporate laws dating back to the Qin Dynasty (246 BCE-207 BCE). By the Qin period there were clearly defined administrative levels starting with the household and sub-ward within the village, which were accountable to judicial personnel, with scribes and scribe directors below the assistant magistrates, and magistrates. These were then accountable at the county level to the County Magistrate, Governor, and County Commandants, up to ultimately the imperial level and the emperor (Barbieri-Low & Yates, 2015, pp. 111-134.) Each had distinct (pp. 120-127) responsibilities for administering the laws rationalized and regulated through further laws concerning the administration of laws with penalties for errors, failures of administration, or malfeasance (pp. 111, 167-170). Each was responsible for preparing written reports of their actions involving crimes and impoundment of property (pp. 113, 146, 171-178), which were to be reviewed at superordinate levels. There were salary grades assigned to each level and excellent performance in each level provided opportunities for career advancement to higher levels (pp. 225-227).

The procedures for initiating, overseeing, and reporting criminal inquests and decisions required documentation and review from the very beginning of a case, creating a documentary file for documentary review. The judicial process started with denunciation, usually written up to be presented to court (Barbieri-Low & Yates, 2015, p. 137). These denunciations in addition to being for assault, robbery, and murder, could include crimes of impiety filed by those who were not appropriately respected according to Confucian standards, such as children who were not



obedient to parents, wives not obedient to parents-in-law or slaves to their masters—thus enforcing a hierarchically controlled society down to the family and household level. Accusation had to be written in precise documentary format, including narration of the crime, description and status of accused, narration of investigation, and description of the accuser (p. 139). It was also customary to include disclaimers against pressure from above to bring the case, thereby making the legal officer accountable for objectivity, integrity, and fair-mindedness within the judicial system. People who made improper denunciations and officers who improperly accepted or acted on such improper denunciations were liable to strict penalties (pp. 140–141). This accountability led at times to preemptive self-denunciations (p. 142). Warrants for arrest also needed to be documented, following specified formats (p. 143). Search and arrest procedures were regulated in the law, as well as conditions for pursuit into neighboring jurisdictions and extradition (p. 144). Once the accused was detained, the detention also required documentation (p. 146). Written notification of a trial led to sealing and provisional impoundment of property, which was then fully described and evaluated in anticipation of either return or sale (pp. 148–149). Inquests, investigations, and interrogations also required specified documentation (pp. 151–160).

Adjudication and appeals were then matters of evaluating the written records of interviews, reports of examination of physical evidence by police, and other legal documents. Trials were contestations of contending records rather than of contending witnesses (Barbieri-Low & Yates, 2015, 161–162). Reliance on the documentary record made preparation of accurate and legally just documents particularly sensitive. Denouncers, witnesses, and even interpreters were also held to strict legal account. As Barbieri-Low and Yates commented, “Even a scribe or copyist who unintentionally dropped a single graph could be heavily fined if his omission led to harmful consequences . . .” (p. 161). Once a verdict was reached on the documentary record, sentencing was specified according to written law. Mistakes in sentencing could incur severe penalties.

Doubtful cases were then sent to higher authorities along with any evaluation of malfeasance of lower magistrates. This judicial review was again through the documentary record. *The Book of Submitted Doubtful Cases* set out precedents and procedures for such reviews (Barbieri-Low & Yates, 2015, pp. 163 ff.).

According to Barbieri-Low and Yates (2015),

the real purpose of the Qin and Han laws was to serve as both the idealized blueprint for the construction of the engine of the state and the instruction manual for officials to operate its intricate and interrelated mechanisms. As such the law made possible the projection of state power into all levels of society, ideally down to the family level and onto its individual components, the bodies of individuals. (p. 210)

This legal system served to control many aspects of society beyond simple criminal action, including public order, legal procedure, state finance and economic

activity, bureaucratic activity and information, ideology and belief, labor, family, social status system, and military forces (Barbieri-Low & Yates, 2015, pp. 210–211).

Such a hierarchical system of monitoring and controlling people to keep them within the bounds of law required knowing who people were and where they were. Within the technologies of the time, that meant people needed to remain within their home jurisdiction. Abscondence, or leaving one's residential jurisdiction, was a major form of resistance to the system (Barbieri-Low & Yates, 2015, pp. 216–217). Abscondence was a means of vanishing from the documentary control system which defined legal identity and accountability. Abscondence was widely practiced, however, and consequently was made a major crime.

We can also see how maintaining this system required the education of a large number of highly literate scribes, legal functionaries, magistrates, and other legal and administrative officers. The development of the imperial exam system and the controlled systems for education can be seen as directly following from the need for educating and evaluating bureaucrats for this massive bureaucracy. The state control of the uses of printing technology centuries later can further be seen as a result of the continuing centrality of literacy to state control of all aspects of life (Bazerman & Rogers, 2008).

## Literacy and the Social Order

In the cases of both ancient Mesopotamia and China we see the growth and extension of legal control over wider domains, with attendant administrative and judicial bureaucracies. We also see the regularization and growth of economic and financial systems, along with land ownership, property, and wealth concentrated in hierarchically privileged and powerful classes, directly or indirectly reliant on literacy. Ideology, beliefs, knowledge, and values also become articulated, spread, maintained, and even enforced through literate means, including religious and artistic social formations. The social need for literates to carry out and administer these legal, governmental, economic, and belief systems fostered educational systems and social systems of knowledge production. Access and success within these educational systems were entwined with the class and power structures of societies. Those without power in these systems were nonetheless monitored, controlled, and even held to their geographic locale within them.

These early examples have the starkness and simplicity of recently emerged systems. Today the systems are more complex and varied—and less visible in part because they are so naturalized into our way of life and in part because technology has enabled less intrusive means of collection and aggregation of data. Yet modern systems no less rely on literacy for the distribution of power, influence, voice, and status while shaping the directions and limits of our imaginations and ambitions. We continue to write our social world into being and in so doing write into being the possibilities for ourselves. This is what we study when we study writing. And this is what we teach when we teach writing.

## References

- Barbieri-Low, A. J., & Yates, R. D. S. (2015). *Law, state, and society in early Imperial China: A study with critical edition and translation of the legal texts from Zhangjiashan Tomb no. 247* (Vols. 1-2). Brill. <https://doi.org/10.1163/9789004300538>
- Bazerman, C., & Rogers P. (2008). Writing and secular knowledge outside modern European institutions. In C. Bazerman (Ed.), *Handbook of research on writing: History, society, school, individual, text* (pp. 143–156). Lawrence Erlbaum Associates.
- Böck, B. (2011). Sourcing, organizing, and administering medicinal ingredients. In K. Radner & E. Robson (Eds.), *The Oxford handbook of cuneiform culture* (pp. 690–705). Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780199557301.013.0032>
- Brisch, N. (2011). Changing images of kingship in Sumerian literature. In K. Radner & E. Robson (Eds.), *The Oxford handbook of cuneiform culture* (pp. 706–724). Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780199557301.013.0033>
- Chambon, G. (2011). Numeracy and metrology. In K. Radner & E. Robson (Eds.), *The Oxford handbook of cuneiform culture* (pp. 51–67). Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780199557301.013.0003>
- De Breucker, G. (2011). Berossos between tradition and innovation. In K. Radner & E. Robson (Eds.), *The Oxford handbook of cuneiform culture* (pp. 637–657). Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780199557301.013.0030>
- Demâre-Lafont, S. (2011). Judicial decision-making: Judges and arbitrators. In K. Radner & E. Robson (Eds.), *The Oxford handbook of cuneiform culture* (pp. 334–357). Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780199557301.013.0016>
- Eisenstein, E. L. (1979). *The printing press as an agent of change: Communications and cultural transformations in early modern Europe* (Vols. 1 & 2). Cambridge University Press. <https://doi.org/10.1017/CBO9781107049963>
- Englund, R. K. (2011). Accounting in proto-cuneiform. In K. Radner & E. Robson (Eds.), *The Oxford handbook of cuneiform culture* (pp. 32–50). Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780199557301.013.0002>
- Foster, B. R. (2011). The person in Mesopotamian thought. In K. Radner & E. Robson (Eds.), *The Oxford handbook of cuneiform culture* (pp. 117–139). Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780199557301.013.0006>
- Frahm, E. (2011). Keeping company with men of learning: The king as scholar. In K. Radner & E. Robson (Eds.), *The Oxford handbook of cuneiform culture* (pp. 508–532). Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780199557301.013.0024>
- Goody, J. (1977). *The domestication of the savage mind*. Cambridge University Press.
- Goody, J. (1986). *The logic of writing and the organization of society*. Cambridge University Press. <https://doi.org/10.1017/CBO9780511621598>

- Havelock, E. A. (1982). *The literate revolution in Greece and its cultural consequences*. Princeton University Press.
- Jursa, M. (2011). Cuneiform writing in Neo-Babylonian temple communities. In K. Radner & E. Robson (Eds.), *The Oxford handbook of cuneiform culture* (pp. 184–204). Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780199557301.013.0009>
- Koch, U. S. (2011). Sheep and sky: Systems of divinatory interpretation. In K. Radner & E. Robson (Eds.), *The Oxford handbook of cuneiform culture* (pp. 446–469). Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780199557301.013.0021>
- Löhnert, A. (2011). Manipulating the gods: Lamenting in context. K. Radner & E. Robson (Eds.), *The Oxford handbook of cuneiform culture* (pp. 402–417). Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780199557301.013.0019>
- Miller, C. R. (1984). Genre as social action. *Quarterly Journal of Speech*, 70(2), 151–167. <https://doi.org/10.1080/00335638409383686>
- Ong, W. J. (1982). *Orality and literacy: The technologizing of the word*. Routledge.
- Radner, K. (2011). Royal decision-making: Kings, magnates, and scholars. In K. Radner & E. Robson (Eds.), *The Oxford handbook of cuneiform culture* (pp. 358–379). Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780199557301.013.0017>
- Radner, K., & Robson, E. (Eds.). (2011). *The Oxford handbook of cuneiform culture*. Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780199557301.001.0001>
- Robson, E. (2011). The production and dissemination of scholarly knowledge. In K. Radner & E. Robson (Eds.), *The Oxford handbook of cuneiform culture* (pp. 557–576). Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780199557301.013.0026>
- Rochberg, F. (2011). Observing and describing the world through divination and astronomy. In K. Radner & E. Robson (Eds.), *The Oxford handbook of cuneiform culture* (pp. 618–636). Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780199557301.013.0029>
- Schmandt-Besserat, D. (1996). *How writing came about*. University of Texas Press.
- Schwemer, D. (2011). Magic rituals: Conceptualization and performance. In K. Radner & E. Robson (Eds.), *The Oxford handbook of cuneiform culture* (pp. 418–446). Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780199557301.013.0020>
- Steele, J. M. (2011). Making sense of time: Observational and theoretical calendars. In K. Radner & E. Robson (Eds.), *The Oxford handbook of cuneiform culture* (pp. 470–485). Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780199557301.013.0022>
- Tanret, M. (2011). Learned, rich, famous, and unhappy: Ur-Utu of Sippur. In K. Radner & E. Robson (Eds.), *The Oxford handbook of cuneiform culture* (pp. 270–287). Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780199557301.013.0013>
- van Koppen, F. (2011). The scribe of the flood story and his circle. In K. Radner & E. Robson (Eds.), *The Oxford handbook of cuneiform culture* (pp. 140–166). Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780199557301.013.0007>
- Veldhuis, N. (2011). Levels of literacy. In K. Radner & E. Robson (Eds.), *The Oxford handbook of cuneiform culture* (pp. 68–89). Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780199557301.013.0004>

- von Dassow, E. (2011). Freedom in ancient Near Eastern societies. In K. Radner & E. Robson (Eds.), *The Oxford handbook of cuneiform culture* (pp. 205–224). Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780199557301.013.0010>
- Vulliet, F. H. (2011). Letters as correspondence, letters as literature. In K. Radner & E. Robson (Eds.), *The Oxford handbook of cuneiform culture* (pp. 486–507). Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780199557301.013.0023>
- Waerzeggers, C. (2011). The pious king: Royal patronage of temples. In K. Radner & E. Robson (Eds.), *The Oxford handbook of cuneiform culture* (pp. 725–751). Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780199557301.013.0034>
- Wang, H. (2014). *Writing and the ancient state: Early China in comparative perspective*. Cambridge University Press. <https://doi.org/10.1017/CBO9781139235709>
- Wiggerman, F. A. M. (2011). Agriculture as civilization: Sages, farmers, and barbarians. In K. Radner & E. Robson (Eds.), *The Oxford handbook of cuneiform culture* (pp. 663–689). Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780199557301.013.0031>
- Zamazalová, S. (2011). The education of Neo-Assyrian princes. In K. Radner & E. Robson (Eds.), *The Oxford handbook of cuneiform culture* (pp. 313–330) Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780199557301.013.0015>



## Section 2. Writing and Knowledge

The inspectability, durability, and transportability of writing has led to widespread collaboration in the production, evaluation, and distribution of knowledge. Writing has also fostered institutions and other forms of social organization that produce and rely on knowledge. Writing as well has formed readily accessible and socially shareable external memory in reference books, archives, files, libraries, digitized searchable collections, and the internet. Textbooks and collections form the canonized material of schooling. Writing has consequently become almost synonymous with the production, availability, and access to knowledge.

The canons of investigation and reporting for written genres in disciplines and other fields that rely on knowledge have directed what information we gather about the world and the form in which we know it. These specialized organs of inscribed knowledge are as particular and narrow as our physical sense organs that collect light or sound only in certain frequencies and from certain directions. How we inscribe knowledge has been refined by methodological writing that evaluates our collection of experience, the design of instruments, and form of data. The differing canons of arguments in academic and nonacademic fields consequently shape the kinds of analysis and theories that elaborate the meaning of the inscribed experience.

What is inscribed, shared, and recorded forms the basis for the workings of law and governance, political and activist organizations, journalism and publishing, corporations and finance, health and medicine, religions and belief communities, arts organizations, education, and many other fields of activity. While individual experience may be idiosyncratic, written knowledge creates the basis for shared social understandings, perceptions, action, and coordination. Writing offers means for regulations and agreements that guide organized activities. The chapters of this second section, “Writing and Knowledge,” consider the consequences of the emergence and distribution of written knowledge for our current organization and experience of life.

The first chapter in this section, “Local and Distant Knowledges, Local and Distant Minds,” considers the tensions and challenges that individuals and organizations face as they receive and participate in knowledge networks that extend beyond the local. The more extensive and varied the knowledge networks one finds meaning and value in, the greater the tensions with the local conventional beliefs and knowledge. People know different things and think different thoughts depending on the communicative networks they are part of. Even more, some institutions, such as religions, schools, hospitals, sciences, or international corporations, bring distant knowledges into local settings, fostering tensions with local visions of the world. Maintaining a knowledge-rich society and avoiding authoritarian regimes of official knowledge present ongoing and increasing challenges in an ever-more cosmopolitan world.

The second chapter, “What Literate Societies See: The Methodical Gaze of Genres,” considers how methods of interacting with and recording the world arise within specific social groups pursuing their interests. Any society comes to know the world through those methods of experiencing, recording, and reasoning about the world, as pursued by the different social groups within the society. The aggregate of these methods makes possible the knowledge circulating in the society, but the differences among the kinds and methods of knowledge of different groups within a society can create differences and conflicts, as different groups of people know different things in different ways.

The third chapter in this section, “Making the World Scientifically Thinkable: Inscribing Experience Methodically and Its Cognitive Consequences,” specifically addresses how internal and external processes come together in knowledge production. Internal neurological processes of perception, sensation, and motivated action are influenced and directed by the semiotic environment. The methods we use for collecting, selecting, and aggregating data are saturated by semiosis and provide the semiotic data and concepts by which we can think as individuals and epistemic communes.

The final chapter of this section, “The Loneliness of the Long-Distance Writer: The Growing, Unsatisfiable Hunger of Connection,” examines the personal consequences of the proliferation and differentiation of knowledge as individuals are able to learn from writers from different times and societies. While for some the presence of these potentials can foster self-conscious adherence to limited perspectives; for others it opens possibilities of greater individuation of knowledge, meanings, and point of view. This individuation of perspective, however, can further distance individuals from those immediately around them.



## Chapter 6. Local and Distant Knowledges, Local and Distant Minds

Consider a reader lost within a book written by an author from another country and centuries ago. The reader isn't paying much attention to the people and situations in the here and now and may not even recognize when someone at their shoulder is trying to get their attention. Where is the mind of the reader? In the there and then? Or in some virtual place hovering above here/there, now/then? A person writing may be even more focused somewhere else, harder to call back to the here and now, and more irritated at the summons.

The natural tendency of humans, like most animals, is to attend to the world immediately surrounding them—to find food and water, to see threats in the immediate environment, to find opportunities for increased survival and comfort, to connect with one's family and tribe, to form relationships and bonds. The extended period of human childhood, furthermore, provides a long time for our brains and neural systems to attune to our social and natural environments, making it possible for humans to survive and thrive under varied conditions with extended senses of our time and place.

When humans began to communicate with others of the species through language, we increased our sharing of information, our ability to coordinate and plan, and our transmission of cultural practices, heritage knowledge, and beliefs. Becoming informed about what was seen, heard, and felt by others made us more knowledgeable about threats and opportunities; our ability to collaborate and empathize with each other also attuned us to those around us. Such knowledge helped our tribe's hunting and gathering, agriculture, and provision of protective, comfortable shelter. Loyalties, trust, and leadership were granted to those who could put this knowledge together, calculate choices, and guide us through our local world. We came to respect the traditions, knowledge, wisdom, and histories passed down to us from our elders, and we attempted to apply them to the world we experienced daily.

Human intelligence evolved in our material and social worlds with special attention to the people around us—their knowledge, their moods, and our relations with them. In so doing, humans refined local tasks and practices, created local arts, and excelled in locally prized activities. This use of our intelligence, perceptions, and senses helped us gain the most from our circumstances. We may, however, have been dubious about those who spoke other languages, had different traditions and practices, or had different leadership and trust networks.

### Literacy Expands Not Only Communicative Reach but Also Social Tensions

Literacy opened new pathways for human development, supplementing our local

attention and neural development with information and relations from a distance, enriching what we can bring to our local circumstances and communities. Writing initially strengthened, extended, and codified local practices and connections. Keeping track of crops, sealing transactions and promises, recording local rules and tribute obligations, maintaining community histories, praising the greatness of leaders, keeping alive the memory and wisdom of forbears—all these drew us further into our communities, even as we were able to extend the vision and coherence of the communities, economic activities, and beliefs to larger regions (Goody, 1986). From this perspective writing seemed to create some tensions within local worlds, as class, wealth, and power differences might have been heightened because writers and literates had greater access to information, records, knowledge, and communication with others. Literates wielded more of the power of connection, control of wealth, and understanding of rules and other social regulation. People in power, if they themselves did not read or write, became dependent on the skills of those that did. Others at the periphery of power and wealth typically came to respect the power wielded by literates. While these developments may have exacerbated existing power and wealth differences in societies, they did not necessarily produce differences of knowledge and belief. In fact, they tended to consolidate current structures, relations, power, and wealth as well as to hold cultures, practices, and beliefs constant. Texts could pass down with little change from generation to generation, with fewer changes than within an oral tradition that transformed with every retelling. The understanding of the ancients, or divinities, embodied in the founding works of society, gained special authority.

The increased ability to communicate with other societies, however, could also create tensions within a society by making available knowledge, beliefs, and practices from other societies while fostering bonds with people whom one has never met. Communication at a distance could differentiate the perspectives, knowledge, commitments, interests, and affiliation of those having such cosmopolitan experiences from those whose knowledge and experience remained only local. Cosmopolitans, consequently, might be seen to be corrupted, subverted, seduced, misled, or otherwise separated from the community's perspectives, values, and interests to align with the interests or points of views of untrustworthy strangers.

Communication with other groups about their knowledges, ways, experiences, histories, and conditions of their lives brought possibilities for comparison, the questioning of taken for granted assumptions, and the seeing of things in new ways (Eisenstein, 1979). Knowledges of animals, geology, climate and seasons, diseases, medications, resources, and other material conditions in other places provided more complete and fundamental understanding of the world we live in. Written works as well could aggregate, evaluate, synthesize, and solve puzzles based on more information, data, and clues. Extended written discourses could seek more rigorous coherence and logic within and across texts. In short, literacy brought knowledge and intellectual power of understanding, making literates even more valuable to those willing to listen to their extended knowledge.

So the wealthy and powerful were caught in a dilemma. They needed more of these literate-trained people to administer their wealth and power. They also benefited from what these literates learned, knew, and innovated—yet that knowledge and change challenged the existing order sanctified in the ancient texts and oral traditions. Even if literacy was held tightly within the families of elites, tensions of knowledge could arise, but often the powerful needed to recruit and train people of other classes and conditions to assist with the proliferating tasks literacy turned out to be good for.

## Institutions of Literacy as Flashpoints

Schools, houses of the learned, and libraries were particular sites of these tensions from early times, with the tensions growing from generation to generation. At one extreme, scribes and teachers could be trained entirely within a community and never travel beyond it, unaware of developments, cultures, and experiences outside their community. Even today some communities insist that teachers and librarians come from within the community, are trained without leaving the community, share local values, and offer only an approved traditional canon, or even just one authoritative book (with perhaps associated elaborating texts) which is taken to embody all of knowledge and wisdom for the community. Yet commonly teachers and librarians seek knowledge from outside and read nonlocal books, periodicals, or now digital media. They often are trained at some distance from their community to which they may return with new skills and knowledges. The people who train them are typically even more cosmopolitan and draw on skills, ideas, and knowledge that come from a great distance. Often it has been necessary, and even advantageous, to draw teachers and librarians from outside the community and trained at distant institutions with access to different knowledges. From ancient times, educational centers have been associated with libraries, collections, experts, and even researchers. The great library of ancient Alexandria was attached to schools and scholars inquiring into nature, medicine, history, and the human arts. It also was the place where scholars steeped themselves in prior knowledge to write works that would inform future generations of the educated. So it is not surprising that tensions between communities and schools with their associated libraries have continuously arisen, as schools can be perceived as diverging from community values and certitudes, thereby corrupting the young.

Even within closed religious communities, divergent voices disputed conflicting interpretations of canonical texts. Factions within such learned communities often invited knowledge from outside and collected books from elsewhere, as in the libraries of Constantinople, the House of Wisdom in Baghdad, and the Jesuitical centers around the world. We should also not forget that with the tools of literacy young people could express their curiosity about the world and question the views of elders by seeking texts from afar, even if some of them were to later return to community orthodoxies.

Centralizing institutions seeking uniformity of belief and loyalty have repeatedly sought to limit the texts available through censorship and control of the means of text reproduction, especially with the advent of the printing press. China was able for some centuries to restrict uses of the printing press to state purposes; the Roman Catholic church has attempted to censor books since the Middle Ages; England and some other countries were able to impose prior censorship through licensing; other states made ownership of certain books criminal; currently many countries to varying degrees restrict what can appear on the internet, and book banning is reemerging in the United States. Nonetheless, the written word eventually seems to find a way to reach its readers. Control of curricula, restrictions on teachers, professions of faith, or suspicious monitoring by community school boards continue to be rearguard actions against the portability of ideas and knowledge that comes with writing, printing, and more recent technologies of sharing texts.

The differentiation of knowledge, attention, and conceptualization continued to expand in the wake of literacy with factionalism, struggles between forms of orthodoxies, and battles of the books between ancients and moderns. Furthermore, writing gave rise to different communities of interest and different forms of social organization. Finances, law, medicine, astronomy, agriculture, architecture, and many other domains formed networks relying on and advancing specialized knowledge and perspectives inscribed in texts. Legal systems engaged many people including police, legislators, judges, lawyers, clerks, and ordinary citizens. Financial knowledge engaged institutions, banks, insurance companies, investment organizations, and governments, each with their own internal records, complex of employees, relations with related institutions, and relations with client citizens. Businesses and corporations each formed their own ecosystems of knowledge and texts, which embodied and elaborated institutions, practices, circuits of communication, roles, and records—all dependent on the infrastructure of writing. Even within each of these worlds, people in different roles or different departments represented in their texts different parts of the world, even though they had to coordinate with other people and groups within the organization and related organizations.

Social systems concerning governance, law, church, and finance grew early and rapidly, creating many documents inscribing their newly collected data as well as their internally generated records. Schools grew to provide literate people to serve the needs of the systems but at first did not produce much in the way of new knowledge beyond their internal administrative data. Instead, they largely reproduced the significations and knowledge of the institutions they served. Students for government service in ancient Mesopotamia, for example, learned writing by copying the government tax and census rolls. In religious institutions the sacred texts formed the core of literacy education. However, over time, schools became associated with new learning and thought and with inquiring into the nature of the world and human life, with Plato's Academy and Aristotle's Lyceum being early examples.

In the Christian West, however, education became dominated by the Church, which sought to reproduce traditional knowledges and canons of texts. In China education was equally conservative, dominated by governmental administrative careers dependent on the Confucian canon. Independent research, however, began to emerge during the European Renaissance, often driven by practical needs of military, engineering, navigation, economic exploitation of colonies, and so on. Curiosity about the natural world and its wonders also grew through exploration and early colonial activities. In the late 18th century, after some delay, higher education started to be more influenced by research and the production of knowledge, culminating in the research university which has come to dominate education.

Throughout the nineteenth and twentieth centuries, research universities fostered specialization of knowledge and the emergence of disciplines and departments along with proliferation of specialized subjects of study, degrees, faculty, and academic societies. People in different research fields came to know different things and develop different views of what was interesting and important in life. Even within specialization, differentiation of views and inquiries was encouraged as part of developing new knowledge, publishing new information, and exploring new ideas. Contention over points of view was expected as part of the process of encouraging potential knowledge and sorting out what was reliable through disciplinary debate. Within these specialized areas, however, methods became central issues of concern, as they controlled the production of evidence for new claims that could not be dismissed within these specialized communities. These specialized methods of gathering information about the world and the unusual information gathered through them made their knowledge even more “uncommon.” These highly specialized ways of gathering information about the world and reasoning from them would then permeate other levels of education through curricula and textbooks, as the various school subjects would look to the knowledge produced by research institutions and universities as authoritative sources for what they taught. This can increase even further the tensions between schools and the local communities they serve, as schools can appear “corrupted by elites” when they adopt curricular directions influenced by higher education.

As a consequence, universities increasingly have become flashpoints of the tensions between local commonsense values and unusual cosmopolitan values arising from specialized literate cultures. Yet all literate domains of society which collect and rely on specialized knowledge can raise tensions with local communities as well as with each other—whether governmental, corporate, financial, academic, religious, philosophical, cultural, or otherwise socially distinct.

## The Messiness of the Fragmentation of Knowledge

Each world of textual affiliation can become associated with distinct knowledge, interests, values, and views of the world as they became removed from the common sense of immediate, local experience. The “uncommon sense” fostered

within these groups may be seen by others as unusual, weird, perhaps idiosyncratic, and to be treated with suspicion, even if the uncommon sense offers obvious benefits, such as the ability to predict climate disasters or cure diseases. Also, each distinct group with all its subvariants can foster individuals who are likely to see much of the world in different ways and perhaps see their specialized perspective as the single most important way to see things, whether it is the production and economic viability of particular energy sources, the biology of ecosystems, the analysis and remediation of historical wrongs, the maintenance of religious communities, or the aggregation of political power. These people all may exist within the same geographic and political jurisdiction with each other and with others who are guided by the most local of concerns. Divisions, differences, and tensions may proliferate on any issue where the concerns of these groups meet. While I or any other person may have preferences and evaluations of those with another view, there is no a priori reason why any one person or group should or could dominate the direction of our shared social life.

So what are we to make of this fragmentation? And what are we to do about it? We cannot wish it away, nor would we want to rid ourselves of all the knowledge and benefits that have come with our proliferating literacy, knowledge, and thought. Nor can or ought we declare that one perspective is more worthy than another and ought to govern decision making in conflicts.

There seems to be little choice but to accept the messiness and challenges of choice making and providing forums for the conflicting interests (in both senses of curiosities and advantages) to work through compromises and agreements. Each seeks to gain its best advantage to advance as much of its interests or agenda as it can by whatever means it has at hand in whatever social forum it has access to. In ways both predictable and unpredictable, the institutions we have created for our mutual government have been and continue to be skewed to give more influence to some groups than others. Most of these interests, would if they could, rule authoritatively (and even authoritarily) to pursue their vision of how to make the world better and pursue the interests it sees as most important—whether religious purity, unconstrained capitalist investment, social justice, full employment, environmental protection, engineering design, or information technology. The best we as a society can do, seems to me, is to keep the playing field as fair as possible and support forums where clashing interests can make their best cases about the way the world is and how to make the best of it. In short, democratic deliberation under rule of law or some representative version of it seems to be the only way to avoid the tyranny of any perspective, no matter how appealing that vision may appear. It is also the only way we can factor in the multitudes of knowledges and forms of human affiliation and organization that have evolved in the literate world. Such democratic contention is painful, messy, frustrating, irritating, and often deeply disappointing, but it keeps the questions and decisions in front of us. The health of democratic institutions depends on keeping one perspective from gaining dominant power, no matter how benign

or necessary it seems at the moment. History teaches us that such arrangements don't remain benign for long, and even the most high-minded interests can rapidly deteriorate to private advantages and the oppression of others committed to other visions of knowledge and affiliation.

## References

- Eisenstein, E. L. (1979). *The printing press as an agent of change: Communications and cultural transformations in early modern Europe (Vols. 1 & 2)*. Cambridge University Press. <https://doi.org/10.1017/CBO9781107049963>
- Goody, J. (1986). *The logic of writing and the organization of society*. Cambridge University Press. <https://doi.org/10.1017/CBO9780511621598>





## Chapter 7. What Literate Societies See: The Methodical Gaze of Genres

Much of our knowledge of the world is developed and shared through human-created and circulated texts.<sup>1</sup> Once a claim of knowledge enters into circulation, it can move from one text to another, one genre to another, one activity system to another, one group of people to another. Texts beget texts, as representations of the world are repeated, contended, reasoned about, modified, or used. Just as our nervous systems have sense organs that bring us specific kinds of information of the world beyond our skin to modify our internal neural activity and to guide our actions, so do our literate activity systems have portals that bring information from beyond the boundaries of circulating words to modify communal reasoning and actions. These literate sense portals are our methods of observing, recording, and reporting that result in the representations in texts.

These methods may be entirely personal, private, and idiosyncratic, or they may incorporate all the devices human communities have developed to extend, refine, and make more reliable our sensory knowledge and personal suppositions. Sometimes these methods are spontaneous and unreflective, relying only on our daily practices of life, with all the obscuring vagaries of memory, biases, interest, or momentary rhetorical advantage. But some genres and activity systems hold us to higher levels of accountability for how we experience the world and represent that experience in texts. Academic and scientific research, engineering, financial markets, governments, courts, and other professional forums discuss, reflect upon, and regulate ways of gathering facts and evidence for their specialized forms of reasoning in their appropriate genres. Such discussions of method are called methodology. Even spiritual disciplines have means of sorting out true visions from false to be shared among the faithful. These methods, situated within particular activity systems and their cultures, constrain and direct the contents of genres and thus what social knowledge gets shared in what form. They also influence how texts in different genres are produced and received. Ultimately, these methods determine the value of those genres for solving human problems and improving human life. Ludwik Fleck (1935/1979) might call these domain specific methods *thought styles of thought collectives*.

### Literacy and the Circulation of Representations

Prior to literacy, knowledge could travel orally, through imitation, or through

---

1. An earlier version of this chapter was presented as *Escribir a través del currículum: Experiencias, perspectivas y desafíos para la enseñanza y la investigación*, by C. Bazerman, at the SIGET (Simpósio Internacional de Gêneros Textual) conference in Cordoba, Argentina, September 16-18, 2019.

artifacts, but such knowledge was limited and typically transient. With writing, knowledge could be elaborated at length, organized, sorted through for consistency, and reasoned about. Documents could travel widely and last through generations. Valued texts such as sacred documents or writings by notably sagacious people might be copied many times. Collections of prized texts could be made available in libraries or to the faithful in religious houses. After the invention of the printing press, its introduction in the West, and especially after cheap paper and industrial scale printing, texts proliferated and traveled widely. Science, journalism, and commercial publishers grew. In recent decades digital publication and the internet have intensified this process. Some now think of knowledge as only what is in texts, and children are introduced to knowledge in many subjects through school textbooks, which dominate education into early university years. As youths advance in their educations they are now typically taught the skills of library research along with documenting sources through proper quotation and citation. Critical thinkers, such as Jacques Derrida (1967/1978) and Michel Foucault (1966/1994), have, in fact, skeptically argued that these circulated words are self-contained human constructions, bearing little relation to the material world. They see us interpellated and imbricated in discourses, tyrannized by ideological regimes of knowledge that bear no special truth value or any particular relation to the world. Certainly, words are made and circulated by humans and no stones or animals or planets are materially embedded in texts, where only their representations stand in for them. What makes any representation more accurate, truthful, realistic than any other? Anyone could dream something and find words to represent that dream; their visions could then enter into the textual world of representations. Different sacred books have different accounts of the origins of the world or the utterances of the gods or miraculous events. People transcribe visions and state strongly felt internal convictions in texts. People even create fictions that they believe are to their personal advantage and circulate them. All these are methods by which people have and do make claims about the world. Some of these methods are even expected in certain genres, such as prophetic visions, ancient origin stories, fictions, or sales pitches.

Representations that enter into our communication system take on a linguistic life of their own, and writing can extend their reach over time and space. We still have people combing the Egyptian *Book of the Dead* for truths about the universe and the powers that rule it. Of more recent origins, political scandals based in disinformation manufactured in one country can circulate and be taken as consequential truths in the politics of another. Once representations of the way things are become circulated, they may persist for a long time in many places, long beyond when oral rumors might fade.

Of course, not all representations are misguided, let alone malign. In fact, the ability to represent things is an evolutionary advantage of humans, as we are able to share the location of food sources or the presence of predators, even if they are out of sight. We can share our hidden pains and sort out our experience. We can

collaborate on learning about the world and how to make it more habitable for us. That is, we are not limited to just what we as individuals can find out through our individual experience nor to the few things that can be communicated by bee dances or bird calls. We have a rich and ever-expanding means of representation and reasoning, so we can know far more of the world than we can “shake a stick at,” as the saying aptly goes. Moreover, writing magnified our memories, how much we could know, and reasoning; Eric A. Havelock (1963, 1982) for example, finds the origins of philosophy in writing. Printing with the expansion of numbers of texts available to more people further transformed our knowledge (as documented by Elizabeth Eisenstein, 1979). This sharing of our representations of the world brings many consequences for being able to compare, respond to, reason about, and evaluate different representations. The internet has only intensified this potential sharing, whether through viral videos of misdeeds, or communally constructed encyclopedias, or immediate access to regional newspapers from all countries. Yet the same internet also fosters the rapid spread of conspiracy theories that never seem to vanish, no matter how discredited by fact-checking websites.

## The Methods That Produce Representations

So the problem is to sort out the representations we want to give credence to and those that we want to consider incorrect, questionable, or just temporary and transitional. Which representations can we trust to give us reliable representations of the way things are? The typical educational methods for evaluating credibility are variations of considering the source. This might lead us to question whether something comes from a well-documented, credible source or is just randomly circulated on the internet or even deliberately planted as misinformation by a malign source. In this intertextual way we consider the relative trustworthiness of different news or publication sources as well as their interests (in both the sense of what and why they want to find something out and in the sense of what kind of advantage they may hope to reap).

Underlying the source credibility issue are the methods by which these sources bring the experienced world into the world of texts. When we evaluate the credibility of sources, we are ultimately asking what the means are by which they (or their sources) collected and represented the information they present as facts. How can we be assured that we ought to rely on their methods? Do they reveal enough of their methods for us to evaluate how they went about encountering and recording the world? Are they as individuals or organizations to be relied on to carry out those methods they purport to have used? Methods have evolved and proliferated over history and from domain to domain and are often under contention at any one moment in any one field of endeavor, so it is no easy task to sort through them. Within organized fields of inquiry there may be some accountability. Open consideration of methods researchers use can allow us to track the

history of methods and the current methodological debates. A number of contemporary fields even have journals devoted to ongoing discussions of methodology. Representations that arise from “black-boxed” methods in such fields are typically viewed as suspicious and not to be relied on. On the other hand, many representations come from domains with less transparency, such as health and fitness studies or legislative policy.

No single method exists which we can uniformly, universally, and enduringly rely on. Even what people may call the scientific method has no single definition and dissolves under scrutiny into many variations, exceptions, and historical changes. Each domain has some contentious and evolving set of practices and expectations—always up for debate, expansion, exclusions. Questioning the reliability of method in the philosophy of science is tied to what is called the demarcation problem; that is, demarcating science from nonscience (see for example Massimo Pigliucci, 2013). The demarcation problem has yet to be resolved after endless discussion. There is no guarantee, similarly, that journalists can get at unchanging truths of events by following the right ethical guidelines, if one could even determine precisely what those guidelines were at the moment and how they applied to the situation. Accountants can follow the current regulations policed by their professional organization and the courts in relation to specific kinds of organizations and situations reported on, but these regulations change and do not get at the foundational realities of the entities reported on but only account for the requirements of current regulations using contemporary means. In any domain, any new reporting device or experimental method, new kind of corporate arrangement, change in laws, public perception of scandals, new informational technology, and so on can bring new things to be reported on to light or provide new ways of gaining and reporting information.

### “The best obtainable version of the truth”

Bob Woodward and Carl Bernstein, the *Washington Post* reporters known for breaking the Watergate story, have come up with the elegant phrase which they often repeat: “the best obtainable version of the truth” (for example, see Jennifer Calfas, 2017). I have heard of no better or more accurate encapsulation of epistemology. That lovely phrase captures the desire to know, current professional standards, the limits of current methods of collection, and what is in any situation able to be collected and reported. Nothing is absolute and unchanging nor fully knowable, and even the means of representation can change, but that should not stop us from trying to get the current “best obtainable version of the truth.”

At one level this querying of the best obtainable version would direct us to look into the methodological discussions of each field. What are its procedures and what kinds of pressures and questions push them to expand, evolve, restrict, or seek new means of experience? How do they evaluate methods as credible ways of encountering the world, inscribing the encounters, and reasoning about

representations? And how do they adjudicate critiques of methods and assertions of new possible methods?

Presentations of research are often accompanied by explicit narratives about how data were collected and recorded. Most scientific and social scientific academic research include explicit statements of the methods used for the studies reported. Sometimes these narratives are presented elsewhere as background. The U.S. Bureau of Labor Statistics, for example, provides a webpage that contains detailed specification of the sources of its data, including critiques of its methods and alternatives (see [https://www.bls.gov/cps/cps\\_htgm.htm#where](https://www.bls.gov/cps/cps_htgm.htm#where)). Sometimes such expectations are implicit in organizational or professional standards that may appear in an entirely separate and generalized form, such as the rules for evidence in court and the due diligence obligations of lawyers, stated in bar requirements and disbarment criteria. Whenever methods are questioned, organizations and individuals are pressured to become more explicit. A recent example of increasing explicitness under pressure of public questioning I have noted is that some newspapers have started to insert in stories an explicit statement of the newspaper's procedures for using and authenticating information provided by anonymous sources or leaked documents.

If methods are left opaque or obscure, the representations and the consequent reasoning or analyses become less credible and more open to critique with no means of answering back or arguing for the novelty of methods they rely on. In domains such as social media or political speeches, it is not always clear where these representations come from and how they were achieved, so methodological reasoning is often impossible or even overtly resisted—even without malign intent but just sensed as a breach of trust or respect. For some, reading a representation somewhere on the internet is adequate warrant for passing it on.

## What Our Methods Miss

At a more fundamental level, questioning what counts as the best current obtainable version of the truth leads us to ask what each field actually sees in the world through its procedures, even at the field's best and most professional. Fields and individual participants collect data in relation to their interests through methods that satisfy those interests—meaning both fundamental curiosities and overt economic or power advantages. It is the legal and professional interest of the courts and all its officers to surface the relevant evidence in a case to determine criminality or liability according to the rules of evidence, and all parties can be held accountable in theory to pursuing that end. But also court officers' professional employment, reputation, and authority depend on others perceiving how they are carrying out those professional interests. Similarly, the work of scientists is to find out facts of nature or society and then reason about those facts using the current credible methods, but of course their credibility, employment, grants, and publication may also influence how they pursue that curiosity.

These interests also limit an individual's or a field's focus. Psychologists pursue questions of psychology and gather psychological data using current psychological methods; further, their employability or success will likely be evaluated on their ability to do so. Neuroscientists, while equally interested in the workings of minds as psychologists, may pursue their interests through very different means. Sociologists or economists might study the same events that psychologists or neuroscientists examine but through entirely different sets of interests, questions, and methods, leading to the collection and inscription of different data in different formats. Physicists studying electromagnetic phenomena in the humanly visible spectrum will have entirely different interests and collect different data with different questions. Moreover, those physicists will pursue their interests differently than those studying high energy radiation, or even radiation just outside the humanly visible part of the spectrum, not to speak of physicists studying gravitational forces or other phenomena. It is also worth noting that interests of fields evolve over time in relation to the problems that the fields address, which accordingly affect the methods by which they go about their work of inscribing the world.

We can think of these differences between fields as similar to the different sense organs of different creatures perceiving different ranges of light or sounds with different resolution or having different sensitivity to chemical traces in the air. Disciplinary methods are as particular in what they collect as sense organs, which are also attuned to the survival interests of the creature. If there is no sense organ sensitive to a particular experience or the sense organ is not pointed in the right direction, no information is collected. Humans do not have eyes on their backs, nor do they have any magnetic sensors (though some birds and sea creatures do). Only a few particular types of data are collected, and they create certain kinds of maps of certain phenomena. Sense organs never collect the full object or phenomenon in itself, only the traces of which fall within the interests and methods of the collector. New phenomena fall into human view only when we realize there may be something we might be interested in and about which we can develop some method or device to collect some relevant and informative trace. A lot potentially can lie between and underneath the cracks of our sensors which may be closer to the substance of the object under scrutiny. We are not even likely to be aware of something's existence until we find ways of seeing it. The world of microorganisms was not even imaginable until microscopes allowed microorganisms to swim into view. Then their appearance was first met with incredulity and shock.

While recognition of the limitation of our knowledge may fill us with humility, it can also direct us to what we are missing. It can also lead us to reflect on what we have been interested in and why as well as how those interests direct what we know. Certain domains offer highly elaborated methods upon which people place much credibility and upon which many of our institutions rest; these domains reflect the interests we have as societies and individuals. To determine these domains, we only have to see how many documents are produced with what kinds of methods and what kinds of representations. It would be of no surprise,

for example, that in modern capitalist economies financial data have proliferated within governments, corporations, and financial institutions and that many people are employed in the reporting, collection, and analysis of that data—particularly when markets or government regulations are involved, creating interest in a higher level of scrutiny.

Also, we should not be surprised that people follow data trails of greatest ease and convenience. It is not surprising that for people in language studies the advent of printing and the greater availability of documents led to lexicography, that invention of phonetic alphabets led to a boom in the study of phonology and spoken language forms, that recording technologies made the study of interaction more possible, and that most recently the availability of massive amounts of digital productions on the internet have fostered digital communication studies. Literally our eyes are opened wider by the large amounts of new data now readily available. How can we use these sources of data to get a more complete picture than what appears to us on their surface?

One of the easier things to collect are human-made products for other humans to consume; they are already mostly packaged in forms that can be sensed by humans with implied interpretive frames. Spoken language reports of things seen by others could be understood and their veracity questioned and checked long before writing. On the other hand, microorganisms, distant galaxies, and high energy particles preceded human beings and did perfectly well without human attention; humans, however, had to do a lot of inventive work to bring them into human view. Even today only a small number of specialists actually go about collecting hard-to-collect data using expensive and exotic equipment. The rest of us know only generalizations about these things presented secondhand through the circulation of simplified representations.

Yet there is also a contrary effect that makes the most familiar harder to study credibly. In fields studying human institutions, artifacts, and interactions, common sense makes it difficult to establish rigorous methods for gathering data or providing authoritative representations of what things are. Results of methodologically considered investigations are likely to be met with skepticism or even ignored. Many people believe they are experts on language, money and budgets, movies, or schools. Common sense experience in practice seems to be a persuasive rule of thumb. That common sense is often likely to consist of what people experienced and their interpretations of their experiences filtered through the typical use of artifacts and language, including gross institutional measures, like school grades, net financial worth, or government inflation figures.

In whatever way you may evaluate the particular different methods for recording the conditions of our natural and social lives, the knowledge budget in the aggregate of our society is determined by the methods carried out by different groups of people to create their representations. Some people know some parts of that knowledge and some people know other parts, and what some people know may conflict with what other people know, depending on their interests and the

interests of the groups and institutions they affiliate with. Yet because documents can circulate beyond the bounds of the social formations that give rise to them and can persist in time, the representations within the available documents provide the totality of what it is currently available to know. What appears in documents and databases is what our society sees and pays attention to with varying degrees of fuzziness or rigor. These representations and the methods that produce them form the knowledge to guide our lives, solve our problems, and engage with our economies, institutions, and policies. In their differences these representations also form the flash points of social and epistemic conflict.

## Expanding Our View and Recognizing the Limits of Our Knowledge

So what are the implications of this line of reasoning? First and most immediately we might look for the conceivable unknowns: what we need to know as a society that exceeds the immediately perceived interests of any particular group collecting them, as far as we are able to imagine. What is missing and what are methods that would bring the unknown into view? The last seventy years or so concerning the environment is a case in point. Even considering the environment as a conceptual entity was a step forward in conceiving what we might be interested in knowing about the consequences of changing environmental conditions. Researchers then started to look for statistical impacts of various suspected pollutants and carcinogens rather than discrete cases of poisonings or illnesses. Seeking causal chains for the impacts of environmental degradation then led to measuring such things as eggshell thickness or then later the environmental impact of construction on ecosystems. As our ideas about pollutants and environmental degradation expanded, climate change became a matter of concern requiring new data collection and modes of analysis as well as looking back to historical data collected for different interests. As humanity started to understand how complex environmental issues were, we collected, inscribed, and reasoned about more kinds of data and started to connect disparate phenomena and in fact started to regulate across domains, such as how auto manufacture and sales became associated with emissions, energy costs, and greenhouse gases. New products and new auto designs driven by regulation in turn created new kinds of phenomena to measure. The measures we created were not just self-fulfilling prophecies but also self-fulfilling realities as our world became visible in more dimensions and human art created new products and arrangements along with new methods of measurement and inscription.

Secondly, we might consider how our previous interests led to regimes of knowledge that have shaped and constricted our view of phenomena. In a historically deep example, the organization of human learning into schools and the needs of selection and employment in social tasks led to testing tasks and grades, even though human learning is an internally individualized developmental



phenomenon rather than an externally comparative performance under particular conditions. Yet we find it difficult to escape the sorting and measurement of tests to return to the fuller experiential phenomenon of learning and development. School grades and GPA (grade point average) are major factors now in social lives, school outcomes, further educational opportunities, and employment decisions. These measures are also deeply integrated into our funding and policy decision processes as well as research that attempts to account for school success. Harder to gather are more individually focused outcomes as well as personal process issues. These are less studied and find little place in measures of institutional success. Similarly, the artifices of property, systems of ownership, evaluation of property in money, financial systems, and property law have made money itself a universal reality for all those who live within money economies.

Thirdly, we might treat our current knowledge with humility, aware that new methods may show us new dimensions of phenomena or even new phenomena, that methods are only partial even in the aggregate, and that the substance of social and natural realities exceeds the bounds of any measure or observations or interrogations we may make of them. Some new dimensions of phenomena or new phenomena may be observable and able to be represented if we could only imagine what they were. Others might become more visible and imaginable when and if new methods become available to help us see them or if our interests change to make them important to know. But perhaps the substantial reality of new dimensions of phenomena or new phenomena may never be captured fully by data, no matter how comprehensive. Will the substantial reality of human experience and consciousness be known except in the lived lives of persons, no matter how much we may measure, observe, interview, and model neural, perceptual, psychological, biological, health, social, economic, climatic, and all other processes of life? Even with all the novels and works of art that try to capture or engage lived experience, will we ever come close to knowing what a person thinks and feels? For that matter, would we ever gain the full reality of the life of any mammal, even if we can fully predict its behaviors?

Without methods and the representations they produce we would be more ignorant of the world. Nor without the explicit accounting of our methods would we be able to evaluate how reliable the picture is of the world they produce. Methods are artfully produced by artful human beings and help us live richer and better-informed lives, sharing knowledge in texts that have become part of our daily lives. The quality of our knowledge depends on these texts, and the quality of the texts depends on the artful qualities of the representations presented in them along with the artful way we reason about them. Quality of knowledge consists of what texts record along with how well the texts record it. What are the arts of knowledge we want to develop and represent in order to make sense of our lives, guide our decisions, and define our priorities? What is it we as a society want to see and pay attention to? And what are the realities that are beyond our grasp of comprehensive, reliable, recorded representations?

Contemplating the consequences of our methods of knowing the world and life can perhaps help us move incrementally into richer understandings of what we need to know, what is in our interests to know, and what knowledge can lead us to more satisfying lives. We may never know what we truly cannot know, nor can we jump out of our skins to see everything all at once in its essence and connection. Yet we can come to widen and enrich our views. We can learn to not attend so much to the representations that may not serve our best interests or the interests of the planet with all its beings. And we can better prepare our students to appreciate, explore, and make choices about the kinds of representations they create and they rely on from others.

## References

- Calfas, J. (2017, April 30). Read the advice Bob Woodward and Carl Bernstein Gave at the White House Correspondents' Dinner. *Time*. <https://time.com/4760743/white-house-correspondents-dinner-woodward-bernstein-speech-2017/>
- Derrida, J. (1978). *Writing and difference* (A. Bass, Trans.). University of Chicago Press. (Original work published 1967)
- Eisenstein, E. L. (1979). *The printing press as an agent of change: Communications and cultural transformations in early modern Europe (Vols. 1 & 2)*. Cambridge University Press. <https://doi.org/10.1017/CBO9781107049963>
- Foucault, M. (1994). *The order of things: An archaeology of the human sciences* (A. Sheridan, Trans.). Vintage Press. (Original work published 1966)
- Fleck, L. (1979). *Genesis and development of a scientific fact* (T. J. Trenn & R. K. Merton, Ed., F. Bradley & T. J. Trenn, Trans.). University of Chicago Press. (Original work published 1935)
- Havelock, E. A. (1963). *Preface to Plato*. Harvard University Press.
- Havelock, E. A. (1982). *The literate revolution in Greece and its cultural consequences*. Princeton University Press.
- Pigliucci, M. (2013) The demarcation problem: A (belated) response to Laudan. In M. Pigliucci & M. Boudry (Eds.), *Philosophy of pseudoscience: Reconsidering the demarcation problem* (pp. 9–28). University of Chicago Press. <https://doi.org/10.7208/chicago/9780226051826.003.0002>

# Chapter 8. Making the World Scientifically Thinkable: Inscribing Experience Methodically and Its Cognitive Consequences

We experience through our senses often without words, numbers, or other semiotic representation or calculation.<sup>1</sup> To share our experiences, however, we use the limited channel of words and other semiotic relations, reducing what we sense and feel to the words and symbols available to us, within the context of the communicative moment, the people we communicate with, and our purposes. For our experiences, however, to be thought about more extensively, precisely, and reflectively—and particularly more scientifically—those experiences (including those gathered through measuring devices) must be inscribed in some semiotic way. This is equally the case for data created at a distance, from other people's experience, from instrumentation or other sources beyond our five senses. Thus, the transformation of experience, our own and others, into data, through methods we and our scientific communities consider appropriate, is an essential component of scientific thought, providing the evidentiary grist for our reasoning and potential contributions. Whatever the complex neurological happenings that occur within our skins and brains, when solving scientific problems, our internal processes depend on inscribed semiotic representations of external objects. The production of these semiotic inscriptions is further constrained and directed by the means of collection and inscription, as reflected on by methodological discussions. I explore these processes and implications for scientific thought through several examples in the following paragraphs.

## Communicative Fundamentals Inside and Outside the Skin Barrier

I am going to start off by being really basic, but I hope you will see the payoff in specific research issues by the time I am done. A core issue in understanding the relationship between language and the mind is the intertwined difference between the two distinct communicative systems on either side of the skin barrier. What we experience through our senses (that is, our sense organs) is then processed and responded to through our complex neural system, often without words, numbers, or other semiotic means.

---

1. An earlier version of this chapter was presented at the GEWISS conference, Vienna, Austria, September 10–15, 2023.

We can, however, report and share our observations, experiences, and sensations with others, using the words, numbers, and other semiotic means available to us within the context of the communicative moment, including who we are speaking with and for what purposes. Nonetheless, those signs are formulated through our internal neural system that directs our communicative organs (such as speech organs or fingers on a keyboard), and the signs are interpreted by others through their internal neurological processes.

What we (and our interlocutors) sense and then form into symbols, accordingly, activates additional or different processes internally than unsymbolized sense experiences, though internally they may be connected in some way. Words (learned from others) may direct our perceptions, thinking, and actions. Further, internally, at least some words may be consciously perceivable in subvocalized or nonvocalized ways. Words and other signs, however, may become transformed as they enter more deeply into less conscious parts of our neural system and attach to traces of other experiences, though these subterranean processes and the neural encodings are unclear. I personally find much merit in Lev Vygotsky's (1986) approach to internalization.

When we want to report or share our thoughts, perceptions, and experiences, neural impulses must then engage with the socially shared systems of words and other signs to be transmitted to others for them to interpret and attach meaning to. Vygotsky and his followers considered this as a process of externalization, though their proposals for this externalization process are less well developed than proposals for internalization (Bazerman, 2012). Oral speech production may be extremely rapid with only the briefest of conscious forethought and may even seem spontaneous with only subconscious formulating processes at play. For writing, however, these externalization processes may be more salient and reportable—because writing often has an extended semiprivate production process which affords greater reflection, conscious choice making, emendation, and drafting. Similarly, reading affords a slow process of interpretation, reexamination, and reflection, though in practice to a lesser extent than writing, because so much of reading becomes automated in childhood and processed subconsciously as people develop reading skills. We read many things rapidly without conscious problem-solving.

In contrast to most other texts which may rely heavily on individual subjective sense and emotional impulse, scientific and other scholarly writing is strongly accountable to the data initially gathered about the world by the researcher or colleagues. All data, whether qualitative or quantitative, whether observed directly or read from the digital output of a mechanical device, are already presented in some kind of symbolic form, even though subjective impressions, hunches, and intuitions may direct the researcher to examine certain data sources and use methods that will provide systematic evidence of those unarticulated impulses. As the title of Lisa Gitelman's (2013) edited collection announces: *Raw Data is an Oxymoron*. Further, the researcher, through prior training and reading in

the field's literature, will be experiencing the world and data through concepts, categories, and ideas previously developed within the scholarly area, even if the impulse is to contest some current ways of conceptualizing phenomena and theories. Of course, as the researcher attempts to make sense of the data and create potential contributions to the scholarly/scientific field, the data may enter into the subconscious/unconscious ponderings of the scholar and be transformed into some internal neurological form not recognizable in public semiotic means.

## Some Examples of Thought With Semiosis In and Semiosis Out

I am here not going to discuss the social processes by which such semiotic contributions enter into scholarly discussions, evaluations, and applications nor consequently the way data becomes evidence in academic arguments. I do that elsewhere. Here I am only framing the internal processes by the phrase “semiosis in and semiosis out” in order to point out the consequentiality of the semiosis for the problems being worked on inside the skin barrier with the goal of producing some kind of semiotic output for the scholarly discussion. I am going to give a couple of examples: first from others, then my own research, and finally my own experience. These may help make clearer what I am talking about.

First is a classic account from Bruno Latour and Steve Woolgar's (1979) *Laboratory Life* which portrayed a laboratory essentially as a factory that turns living mice into scientific papers with data and scientific arguments. Along the way, the mice are labelled and undergo controlled conditions and experiences before being sacrificed. Then their brains are harvested, centrifuged, and undergo chromatography, with components labelled, measured, and put in charts and tables. Those charts and tables then go to the front office where scientists make sense of the data and write papers to be sent out to journals. Latour and Woolgar called this a process of forgetting about the materiality of real mice in order to produce inscriptions—materiality in and semiotics out. Nonetheless, the labelling, maze running, animal sacrificing, brain extraction, centrifuges, chromatography tests, measurements, tables, analysis, and article drafting embody long histories of literature, argument over methods and findings, codification of knowledge, establishing concepts, etc. So semiosis is all around, into which specific materiality is introduced and experimented on and data is collected and analyzed about. The intentional, purposive inscription is part of a focused remembering (framed by prior inscriptions) of what is to be reasoned about and added to the semiotic universe. Semiosis in, materiality added, and semiosis out.

My next example, based on my own research (Bazerman, 1984), is from the notebooks and drafts of Arthur Holly Compton. The notebooks and drafts show how important data were for him and how carefully he thought about how they were produced. He was trying to confirm a shift, which he had presented in an earlier and well-known paper, from a classic electrodynamic explanation to a quantum

theory account of what was to become known as the Compton effect. The later article being developed in the notes and drafts I studied used the newly invented cloud chamber, whereby individual particle movements were made visible by condensation trails which were then photographed for measurement and analysis.

In his notebooks and drafts Compton grappled with the difficulty that he was not able to see the particles nor measure their energies directly; he could only see photographs of condensation trails and measure their angles of deflection after collision events (as cited in Bazerman, 1984). After eliminating some trial runs, he eliminated 19 of the remaining 33 plates, leaving only 14 to be measured and analyzed. The notebooks indicated that his criterion for selection was whether the photographs produced clear and distinct tracks that were not too crowded for measurement. That is, the images of the condensation trails inscribed on photographic plates were evaluated particularly from the perspective of whether they could be accurately measured and turned from graphic data into numerical. When he calculated corrections for distortion in the photographic recording, he was careful to offer specific justification and measurements for the calculation—that is he retained the integrity of the fourteen plates while factoring in distorting factors on the photographic equipment. Further, when Compton wrote up his analysis using words, he made a number of types of corrections to precisely characterize the data and their relation to the theoretical explanation. One of the most interesting characterizations was clarifying whether at each point he was referring to photographic images (visualized through instrumental means), tracks (measured), particles (imputed), or quanta (hypothesized).

In these and other aspects of Compton's emergent statement, I found him holding himself accountable to his collected data and the conditions of their collection at the same time as characterizing the kinds of calculation and reasoning used at each point in his argument. Here the imputed real-world objects (the particles and energy quanta) were not directly perceivable by him but only accessible by experimental devices and instrumentation, so he had only semiotic data to work with—the signs of things unseen. His thinking was entirely semiosis in and semiosis out, though interposing materiality from an experiment. The experimental results, however, are only seen through signs. Yet he was very careful to provide the best semiotic representation of the data that he could. Of course, this synopsis doesn't actually get at what went on in Compton's neurological processing inside the skin barrier, but it does reflect his orientation in producing the work and dealing with the emerging representations of the article.

More recently I did three studies of undergraduate students working with data to see how the collection or analysis of the data would affect their reasoning. In a study of mechanical engineers engaged in a final year team project, which required a series of interim reports culminating in a final report, my co-author and I found that the students collected data from different sources for each report, directed by the requirements of each (Bazerman & Self, 2017). The first report called for a general search of the literature on the problem the students proposed

to solve. Then, reporting on a site visit required them to observe a clinic and interview clinic workers and its clients to determine needs and capabilities. A specific design proposal then relied on information about materials and alternative devices available in a variety of technical sources. A report on fabricating a prototype and laboratory testing followed; the final report included field testing. The data the students collected at each point helped them to solve each level of problem according to project requirements and move on to the next step. The data and analysis of each step then became embedded as a kind of textual boiler plate in consequent reports, which meant the data and analysis had become a stabilized and taken for granted part of their thinking, as they then solved subsequent problems. So again, while we did not have access what went on inside the neural system of each student, we could track the semiotic elements that went into their reasoning and calculations, which then served as assumptions for the next iteration of collection and reasoning represented in the next report.

Another study involved three fourth-year political science students doing honors research projects. The study found that the greater experience and understanding students had of research methods and methodology, the greater flexibility and control they had in being able to design their research and the greater understanding they had of the character and meaning of the data they were able to collect (Bazerman, 2019). Consequently, the students' understanding of methodology and application of method affected the quality of their final papers. All spent a lot of time thinking about their problems, but those with greater methodological sophistication did so far more productively than others. They were able to formulate and think through problems inside the skin barrier (as they confirmed in interviews) and then externalize solutions in the final semiotic object of the research thesis.

A third study involved linguistics students in an undergraduate sociolinguistics course and found that students working with data changed their perceptions and orientations towards language they encountered in their consequent assignments and in their daily life (Fahler & Bazerman, 2019). This changed orientation towards language influenced the students' perception of others and their relations with them.

In all these five examples, experience of the world and its materiality was mediated through the semiotic means by which the world was represented. At some points in these examples we can see the semiotic means providing grist for internal processing, and in all cases we can see the semiotic means directing, limiting, and transforming what could be shared, sedimenting experience and materiality in the terms made available by semiotic resources.

## Getting Inside With Some Personal Examples

I end with three introspective anecdotes of my experience as a younger academic writer, which permit me a bit to report introspectively and autobiographically on

what happens inside the skin barrier, as framed by the semiotic situation. I have strong memories of these remarkable events, though filtered through time and personal bias. They each indicate how highly salient internal experiences involving neurocognitive processes can be set up and enabled by semiosis in and can result in creative semiosis out.

First, thirty-five years ago, I started working on a book to follow on *Shaping Written Knowledge* (Bazerman, 1988), which was to be about the discursive history leading to our modern understanding of electricity. In that earlier book and other writings, I had been developing a set of concepts about genre and activity systems, drawing on multidisciplinary literature I had been reading in interaction with the materials I had been researching. For the new book I had already written a few chapters about earlier moments in the history of electricity. My plan for the new book was to have a last chapter devoted to Thomas Edison's central light and power. I had read about Edison and the emergence of his system, but I had not yet looked at any of the primary Edison documents. My first morning at the Edison archives, after examining the finder volume, I requested a folder of letters Edison received in the days immediately following a newspaper interview where he announced that he had solved the problem of incandescent lighting, although he really hadn't. Nonetheless, many people took him at his word and they began to write to him. All of them wrote in standard letter format with ordinary personal information and requests. They were just letters. I started taking analytical notes as I read them, and I almost immediately saw in each letter the edge of a documentary activity system that motivated the writers and defined their request—and in a sense the framework within which they placed their hopes on the charismatic Edison. For some it was the political system of local governance, for others it was technical expertise and the hope of employment, for some it was equity investment opportunity, and for a widow on a fixed income it was a threat to her holdings in gas stocks.

Within an hour a vision emerged within me of the book that was to become *The Languages of Edison's Light* (Bazerman, 1999). Over lunch I excitedly started to outline the book, which was to guide my thought, attention, imagination, and examination of documents for the next ten years. This vision guided my dreams and lesser moments of inspiration, as well as drove determination and persistence through ten years of often tedious work. We could say that this was just another example that fortune and inspiration come to the prepared mind—but if we dig deeper into it, we can see the theories, information, and inquiry impulses that informed my perceptions of those ordinary looking letters in front of me. I had been articulating these ideas and describing the data in publications, speeches, and private notes for years. Consequently, the activity systems I saw in those letters led me to examine other files that would flesh out the thoughts and become grist for analysis and evidence. Semiosis in—lots of semiosis in. A book of semiosis out, and in the middle a lot of neurological events—emotional, cognitive, calculative—along with the examination of a lot of data, most in the



semiotic form of the Edison papers, though I did visit his worksites and examine some of his devices.

A few years before that, after I had done some genre histories and other studies of scientific writing, I took to heart some criticisms made by historians that I needed to look at how specific actors and events shaped history. So I started to look at the role of individuals in the founding of the Royal Society and its journal, *Philosophical Transactions*. On a trip to London, I visited the archives of the Royal Society, and I started to see the roles of members transforming and proliferating as institutional changes occurred and as submissions to the journals started to undergo regularized reviewing procedures. At the same time, I was reading sociological theory about roles and role conflicts. I began putting these parts together for a promised lecture on the effect of journal publication on the emerging social structure of science. As I began thinking about the multiple roles early scientists took on around early journals—society members, audiences, writers, reviewers, editors, colleagues, recipients of reviews, I began seeing how role conflicts emerged. When I put this together with Robert K. Merton's (1973) norms of science, the pieces started to click into place as I saw how the norms of science were acting as ways to mediate the new conflicting roles that were emerging around journal publication and emerging scientific organizations. Realizations started to fall in place over a number of days, perhaps a week, mostly as I did a daily swim. I had a series of light bulbs going off in my head every day as the parts made sense. When I got home, I started writing notes to myself and drafting parts of a chapter, setting myself up for new insights the next day. So it was a remarkable neurocognitive experience, phenomenologically memorable. But it was set up by lots of semiosis in, including a lot of language data (after all, my data were all documents) but also theoretical and conceptual data from prior studies. The emotionally charged events going on in my head as pieces clicked into place evoked language fragments from the theories I was reading, but also surprised expressions of insight: "Oh, this fits with that..." "Oh, that's why..." Further, there was the immediate exigency of the upcoming lecture accompanied by the desire to tell a story that might be more respected by historians while showing genre theory was a kind of institutional history that influenced social relations. This talk was to be incorporated into *Shaping Written Knowledge*. Again, semiosis in, semiosis out, with lots of neurocognitive sense making and problem solving in the middle, some of which was surfacing in semiotic form as I became more conscious of what I was feeling internally. Underneath that all, I was having lots of geometric imagery in mind and lots of dreams about making or missing train and plane connections, as I often have when writing.

Finally, here is perhaps the most striking of my writing experiences. During my undergraduate years, I had carried from my troubled family life a lot of personally unresolved and poorly articulated (and at that time some totally unarticulated) problems, experienced at unconscious, semiconscious, and affective levels. I was using my undergraduate papers, particularly in humanities subjects, as ways of trying to figure out many things about my life, even while overtly

addressing the assignments and material of the courses. This process of undergraduates using assignments for self-articulation and personal problem solving has been noted by a number of scholars for many years now—perhaps most aptly here in Anne J. Herrington and Martha Curtis’s (2000) *Persons in Process*. The most memorable of those experiences I recognized as remarkable at the time, but I only partly understood its meaning and personal importance then. In my third year of university in the fall of 1965 I was taking a world drama course from an inspiring young teacher of dramatic literature, Scott McMillin. After a series of assigned papers throughout the term that required interpreting various individual plays, our final assignment was to choose a four-play season for a repertoire company and provide a rationale for bringing those plays together. This essay produced many important insights for my personal self-understanding and direction, perhaps even being a turning point in a crisis, but the paper itself did not reach beyond a discussion of the plays. What is most significant here is the psychological phenomenological process I went through in writing this paper. Here is how I described it in my writing autobiography:

I remember the process of writing this paper as almost in a trance. I became exhausted after writing each part, falling asleep in the middle of the day, waking only for meals and writing another paragraph or two, then immediately falling back into sleep for more hours, then dragging myself up, writing a bit more, then falling back into sleep. This went on for several days, as though I were in a deep and exhausting meditation, floating in and out of a dream, but a dream so drugged I had no memory except the impulse to take the next step of the journey. This was the kind of experience vatic priests must have had when they felt the words come from elsewhere but channeled through them, knocking them down, knocking them out.

...

I awoke from the dream with a new direction and new sense of self. Twenty years later James Pennebaker was to start the research that led him to understand the powerful effect of trauma writing, which he was eventually to attribute in part to allowing the writer to confront distressing events by building a coherent story one could live with (see Pennebaker & Chung, 2007). Around 2000 when a graduate student introduced me to Pennebaker’s work establishing that trauma writing could even improve our immune system, blood counts, health outcomes and other biological markers, I immediately recognized from my experiences the implication that writing could reach down into the core organization of ourselves and anxiety systems, and

thus could influence the way we perceived and responded to the world around us. This paper for an undergraduate course brought together a deep and comprehensive story about the world and my life which I had been struggling with since high school. It crystallized an important reorganization in my life. (Bazerman, 2023, pp. 88–89.)

So this was a case of only partly articulated experience and much subconscious and emotional experience in, but it was also a case of a lot of semiosis in as well in the form of the readings from the course and the professor's lectures as well as all the other things I had been reading and writing in those years. And there was semiosis out, too, in the form of the paper, but that paper articulated ideas I had never said before in ways I had not previously done. I wrote things that were surprising to me and that I did not fully understand at the time nor their import for me, though I knew the argument I was making about the plays and characters and how I structured the argument. But in the personal middle, in the internal processing of the impulses that formed in the writing, I was aware of only some of the parts and had no idea where some of the insights and formulations were coming from. I felt in such a drugged trance that although I could maintain the assigned structure of the four-play sequence with introductory statements and final conclusory-sounding statements and could follow through the evidence of the play scripts, there was a deeper force of meaning being worked out, a force that kept exhausting me and throwing me back into drugged sleep—but also compelling me to wake enough to write a few more paragraphs. The paper worked for the course with the teacher making extremely positive and to me moving comments, but I don't know that he had any inkling of how personally important this paper was to me or the moving force of his approving comments. Recently I looked at his published writings across his life, and they always stayed closely to the analysis of the texts and history of drama he was exploring, never even articulating the theoretical underpinnings of the argument, let alone their personal import or the potential meaning for him in understanding his life or the role of dramatic art in it. He seemed to me to be somehow communicating in the way I learned to do for his course, in a way that invited deep reflection on my part through the analysis of semiotic objects.

What occurs within the skin barrier is extremely important but baffling for writing, worthy of investigating. But in doing so, it is important to consider both the experiential and semiotic input that creates the problems, resources, motives, and persistent force that will eventuate in the production of documents. For scholarly and scientific knowledge, the shared disciplinary semiosis on both the front and back end, including the semiotic form by which new data is introduced, is especially important, even as we keep in mind that somehow, perhaps always, there is something more personal that directs one's attention to the world, inspires perception of problems, and drives the internal processing that will eventuate in the written statement that enters into a communal space of knowledge production.

## References

- Bazerman, C. (1984). The writing of scientific non-fiction: Contexts, choices and constraints. *Pre/Text*, 5(1), 39–74.
- Bazerman, C. (1988). *Shaping written knowledge: The genre and activity of the experimental article in science*. University of Wisconsin Press.
- Bazerman, C. (1999). *The languages of Edison's light*. MIT Press.
- Bazerman, C. (2012). Writing with concepts: Communal, internalized, and externalized. *Mind, Culture, and Activity*, 19(3), 259–272. <https://doi.org/10.1080/10749039.2012.688231>
- Bazerman, C. (2019). Inscribing the world into knowledge: Data and evidence in disciplinary academic writing. In C. Bazerman, B. Y. G. Pinzón, D. Russell, P. Rogers, L. B. Peña, E. Narváez, P. Carlino, M. Castelló, & M. Tapia-Ladino (Eds.), *Conocer la escritura: Investigación más allá de las fronteras [Knowing writing: Writing research across borders]* (pp. 279–294). Editorial Pontificia Universidad Javeriana; The WAC Clearinghouse. <https://doi.org/10.37514/INT-B.2019.0421.2.13>
- Bazerman, C. (2023). *How I became the kind of writer I became: An experiment in autoethnography*. The WAC Clearinghouse; University Press of Colorado. <https://doi.org/10.37514/PER-B.2023.1886>
- Bazerman, C., & Self, B. (2017) Writing the world to build the world, iteratively: Inscribing data and projecting new materialities in an engineering design project. In R. K. Durst, G. E. Newell, & J. D. Marshall (Eds.), *English language arts research and teaching: Revisiting and extending Arthur Applebee's contributions* (pp. 91–106). Routledge.
- Fahler, V., & Bazerman, C. (2019). Data power in writing: Assigning data analysis in a general education linguistics course to change ideologies of language. *Across the Disciplines*, 16(4), 4–26. <https://doi.org/10.37514/ATD-J.2019.16.4.18>
- Gitelman, L. (Ed.). (2013). *"Raw data" is an oxymoron*. MIT Press. <https://doi.org/10.7551/mitpress/9302.001.0001>
- Herrington, A. J., & Curtis, M. (2000). *Persons in process: Four stories of writing and personal development in college*. National Council of Teachers of English.
- Latour, B., & Woolgar, S. (1979). *Laboratory life: The social construction of scientific facts*. Sage.
- Merton, R. K. (1973). *The sociology of science: Theoretical and empirical investigations* (N. W. Storer, Ed.). University of Chicago Press.
- Pennebaker, J. W., & Chung, C. K. (2007). Expressive writing, emotional upheavals, and health. In H. S. Friedman & R. C. Silver (Eds.), *Foundations of health psychology* (pp. 263–284). Oxford University Press. <https://doi.org/10.1093/oso/9780195139594.003.0011>
- Vygotsky, L. (1986). *Thought and language* (A. Kozulin, Ed.). MIT Press.

# Chapter 9. The Loneliness of the Long-Distance Writer: The Growing, Unsatisfiable Hunger of Connection

The human capacity for language has extended our capacities for communicating with others to share knowledge, perceptions, observations, and thoughts as well as to cooperate or contend with each other in complex intentional ways. The contents of the signs we create to symbolically communicate with others, in turn, can guide our own actions and self-understanding, in effect reorganizing our internal neurological system. Written language has extended these capacities far beyond our immediately observable worlds and beyond the people in sound range. The creation of written language has marked an important juncture in the transformation of ourselves as sociocultural creatures. The technologies of the recent centuries and most recent years have further offered transformative possibilities of who we are.

As I have experienced writing, each of the developments in communicating beyond ourselves has created a dependence on those connections and extensions for emotional, psychological, and practical sense-making as well as for gaining social information and cultural knowledge, cooperating with others, becoming parts of collectives, and taking action. This dependence and enrichment made me and perhaps others hungry for these connections and feel the want of them, creating the need to share internal experiences and observations while also finding points of intersection with others. Yet while these developments hold out the hope of finding more connection and common ground with others, language, especially written language, also creates the potential for greater individuation, difference, and challenge in sharing observations, knowledge, motives, and inner sensations. The need for common sense-making and collaboration pushes some of us writing humans further into sociocultural communication and the arts and crafts of using our symbols, as we find we have more differences to overcome. Both personal emotional comfort and the success of our collective depend on our communicative effectiveness. This has the paradoxical effect for some of increasing the potential for loneliness among the people most immediately around us as we draw on more distant sources while decreasing the opportunity to engage in immediate dialog and personal bonding with some of those writers who most influence us. To unpack the human hunger for connection, however, we need to travel back to the formation of life and follow some of the psychological implications of our biological and cultural evolution.

## Sensation in Simple Life

Biological evolution has created exquisite devices for monitoring and adjusting internal states of all life, from single cell algae and protozoa to complex, large

brained mammals with extensive networks of nerve cells throughout their body and massive aggregations in the brain. In Antonio Damasio's accounts (1999, 2010, 2018, 2021) threats to organismic well-being, or homeostasis, are intelligently sensed and responded to through various chemical and haptic mechanisms that run throughout creatures small and large, although there may be no self-conscious awareness of them. These mechanisms sense imbalances and needs to take action rectifying the identified problems.

Though they may not have the neural means to be aware of it, it is a hard life for simpler organisms, consisting perhaps of only one or a few cells. They are dependent on what they can sense on their own to act to maintain life without any need for feelings. The biochemical processes that sense imbalances and respond to them happen out of sight and without the need of minds to notice, monitor, and act. Some organisms, like hydra, starfish, or jellyfish, have nerve cells, but the information from them is not aggregated in anything like a brain. Without a central neural system, they have no ability to represent or find patterns in what they sense. Without even what we might call feelings or emotions, they adjust internal states and external actions, though they have little control over their external conditions except to float or wander into more environmentally friendly and nutrient rich locales. As individuals, they are on their own, though populations may thrive and multiply in more favorable conditions.

## Learning to Feel

As nerve cells become aggregated in more evolved animals, some of the sensed disruptions to homeostasis can be felt—that is, can evoke feelings, such as of discomfort, hunger, pain, or pleasure—which then evoke organismic attention and action. Thirst helps organisms to seek liquid and tiredness to seek rest. These feelings about things sensed can be monitored and thought about through formation of images where these nerve cells are aggregated, as in the brain. Noticing where in the body pain comes from requires some internal neurological mapping of the parts of the body. Neural aggregation of information can create patterned images of states of internal being and of sensed external conditions. Specialized sensory organisms of sight, hearing, touch, smell, and taste detect heat, moisture, threats to the cell structure, presence of nutrients, and other useful survival information. Organisms thus are able to monitor their environments to help them navigate, locate sustenance, and avoid dangers. These external sensors also feed the information they collect into the internal monitoring and control systems to allow the organism to adjust. This added internal and external information and the ability to process it with greater coherence improves the organism's relation to the environment. It may not even be aware of some of its adjustments to the environment nor its choices or choice making processes, as Damasio (1999, 2010) would note, or as would Michael Tomasello (2022) in his recent work on the evolution of agency. Nor would there be any expectation of working with others, or

even reflective understanding of the possibility, nor even neural mechanisms to gain and process such information—for all the images would be of the organism's own state and immediate conditions. Some might call this the freedom of the self-contained self, communicating and regulating the self as an individual within the walls of the organism with extensive information about internal conditions and the external world collected through sense organs. All this information is transmitted within the neural system in the full richness with which it is collected. To put this in terms of more complex animals, we can call this communication within the skin barrier, transmitted and processed internally through the neural system.

## The Emergence of Consciousness and Learning to Communicate With Other Organisms

This communication and choice making internally does not necessarily require monitoring or self-awareness of the process. Damasio (1999, 2010, 2018, 2021) has seen the origins of consciousness, particularly in the organism's monitoring of its own feelings, thinking, and actions and its identifying these as belonging to that organism itself, as central to the formation of consciousness, which then allows for a recognition of its own interests, intentional choice making, and planning. This understanding of consciousness then lays the ground for understanding other creatures as also having a consciousness which can be influenced by one's actions. Exactly where in evolutionary history consciousness appears and which creatures we might currently attribute some degree of consciousness in Damasio's sense is unclear, but any foraging, predatory, or hunting behavior implies a degree of consciousness (for example, a spider's strategic location of a web), as would any behavior that would intentionally attempt to influence others of one's species (for example, a mating display or a cry for others to engage in a hunt) or of another species (such as puffing one's size to appear frightening, or hiding to avoid being captured and eaten).

Life gets a bit easier, though more complex and more constrained, as organisms develop possibilities to communicate with one another, whether by symbiotic sharing of chemicals or other resources (as with trees' mycorrhizal networks), the emission of chemicals that affect one's neighbors (as with ant pheromones) or affect other species (as flower smells attract pollinators or skunk smells chase away predators), tactile behavior (mammalian nuzzling or fighting), or noticing of each other's behavior (as bird formations arise by visual alignment with neighboring birds, or animals attempt to evade seen or heard predators), or by sounds externalizing feelings (as in danger calls of many mammals). Some of these communications are of feelings evoking similar or contrasting feelings in others (cries of danger or delight), while others may indicate intentions, capacities, or actions (such as mating calls or sounds to scare opponents). Some do not seem to require any conscious awareness of a feeling self or elective agency, but others involve

choice making, planning, and agency, which would imply a sense of one's self, thoughts, and actions—and thus, in Damasio's terms, consciousness.

Even without language or symbolic communication, the information shared, whether for cooperation or contention, allows the organism to influence the behaviors of other organisms, often with high degrees of mutual influence and planned action, as possibly with beavers constructing dams. Presenting information allows signaling or even misleading of others of capabilities, intentions, or actions, whether by planned means or evolutionary adaptation. Through gaining information from beyond the skin barrier, organisms learn friends and enemies, then learn to work with them, avoid them, or mislead them—or to capture and eat them. Even notoriously loner creatures such as wolves become social creatures in this sense of gaining information from their own species and others and thus being aware to some degree of the states of creatures around them.

Some of this communication goes beyond the transmission of feeling to share images, perceptions, or observations, perhaps in some symbolic way. The cooperation of beavers suggests they somehow communicate design of the dam and the contribution of each piece of work of each of the dam builders, though this likely is emergent in the course of building the dam, with accomplished elements of the construction indicating to others consequent work to be done. Chimp calls, bird songs, and whale songs seem to signal unique identities and domains as well as observations of threats in the environment; they may convey even more precise information we do not much understand yet. Nonetheless, even though organisms become more sophisticated in this communication beyond the skin barrier, the signal remains thin compared to all that occurs within the large numbers of neurons and control systems within each of the complex creatures. And every external communication must be processed—perceived through each individual's sense organs to be brought inside the skin barrier and integrated into the internal neurobiological operations. In short, a lot more signaling is happening and coordinating internally in the neurological system than what is noticed from the outside as salient and relevant for the organism's well-being.

Organisms, as they gain from this communication, come to depend on it and seek it for immediate preservation, well-being, and awareness of the ambient world in which they make their way, of course still driven by their internal imperatives and processes. Parental nurturing, awareness of predators, food sources, potential mates, and the like are of great value; lacking that connection can lead to feelings of loneliness and isolation.<sup>1</sup> The ability to cooperate with others and take on differentiated roles make animals dependent on their social collectives, which may include host or symbiotic species or even species preyed upon. The organism in a sense becomes less lonely in addressing the difficulties of living but also may feel that loneliness more consciously as it becomes aware of its dependence on cooperation, information, and knowledge from other organisms, including these

---

1. Evidence for loneliness among animals is reviewed in John T. Cacioppo, et. al, 2015.



organisms' own states and intentions. That information from outside and its processing affects the neural development inside the organism, changing its internal connections and reactions. The organism comes to seek and interpret such information by scanning the environment visually, auditorily, olfactorily, tactilely. It may even seek responses by prods, calls, visual displays, or the like.

## Symbolic Communication and Cultural Knowledge

Language and other symbolic capacities among humans and other animals bring another level to this sociality (along with potential competition and hostility)—a level that previously would be unanticipated and not therefore missed by the organisms, though drawing on prior developments in neurological complexity, sociality, mutual awareness, memory, and communication. The repurposing of these earlier capacities seems to require cultural learning among like-minded, cultural creatures, along with refinement of existing biological potentials. Tomasello's (2019, 2022) comparative studies of chimps and human children suggested some of the kinds of empathy and social cooperation that seem requisite for language teaching and learning, including early ability for both infant and adult to track each other's eye gaze. Tracking eye gaze allows humans to notice what others are attending to and thus focus on common objects. This shared attention supports cognitive and emotional sharing and awareness of how language can affect the mind and feelings of others.

Language expands the potential for cooperation and coordinated action. When we turn language in on ourselves, language can also help us organize our perceptions, understanding of the world, planning, and actions. This internalization further increases our power to externally share with others as we are better able to share the contents of our own minds and thoughts with others beyond signaling feelings, which we are typically able to do at a much earlier age. Collaborations can become more complex as we can understand our role and its contribution to the whole. One can hear reports of things beyond one's immediate senses and one can participate in group planning.

Language further transforms consciousness as we find words to identify ourselves, the objects of our attention, our feelings, and our thoughts. These words then allow us to share our experiences, observations, thoughts, and plans with others. For writers, of course, much of the communicative activity requires conscious awareness, as writers turn impulses into words to be then transcribed; there may also be extensive conscious planning, choice making, and weighing of alternatives. Readers, as well, must consciously process the signs on a page as words, which then they recognize as meaningful in conscious thought. Writers become increasingly aware of the difference between their words and thoughts from those of others. The value of reading and writing hangs on the recognition of ownership of conscious thoughts both in the words one produces and in the words received.

We are even able through language to organize our experience to align with the collective knowledge of others in a group. Words can be powerfully influential in aligning members of the group around concepts, explanations, modes of behavior, expectation, and strong bonds of affiliation and commonality. Yet we must remember that words are artifices we create to communicate with others, and we have far more neurons than we have words. Every word must either arise out of or be interpreted into complex neural processes. Internally perceived neurological events activate us more intimately and viscerally than even the most powerful of words (which of course depend on how they resonate within our internal neurological systems for their power). Further, words resonate differently within the differently organized neural systems of different people, whose neural connections have developed through a lifetime of experiences and language exposure and use. So each word that we may share conveys only an approximate meaning which evokes different neural states within the separate skins of different people. Consider how we each have different sets of words that resonate deeply within us and that we find deeply meaningful, as suggested by the personal slogans and quotations people thumbtack to their corkboards, add to their electronic signatures, or post on their social media walls.

Nonetheless, meanings set in motion through the finite, constructed signs of words and other symbolic means can become powerful internal organizers of the self as they are used to organize perceptions, calculations, and reasoning, thereby influencing the connections within one's neural system. Words can be thresholds to concepts that are deeply persuasive to the individual and can become central to their perceptions and feelings. Consider for example when people feeling distress find a diagnosis that seems to fit them. Even if the named condition (with the research and knowledge that comes with the naming) does not lead to an effective treatment, it changes the person's orientation toward their feelings and experienced realities, whether increasing despair or creating some intellectual distance from feelings and perceptions. Less at the extreme, consider the effect of defining some foods as healthy or harmful, palatable or unpalatable. Those designations change our behaviors and change our feelings at the food's ingestion or even sight—even where those designations are culturally local and not a matter of biology. People may experience various organ meats or certain fruits as disgusting and nauseating and even may throw up if they discover they have unwittingly ingested the taboo food. Other fruits or meats may be culturally experienced as delightful beyond their effect on taste receptors. People who become vegetarian later in life may have their rational reasoning reinforced by their changed sense of taste, delight, or disgust.

## The Impact of Language on Our Selves

As our internal processes become more influenced by others, we have the words to better share what is going on within ourselves, what we have heard or seen, or

how what we observe makes or doesn't make sense. We become capable of comparing and testing our knowledge with those of others. We come to depend on confirming our senses against the senses of others we come to trust, and we can compare and confirm the wisdom of plans. Often our closest bonds of sharing and communication are among those who have grown up and live in the same kinds of circumstances we have, as in our same household or tribe, and accordingly have experienced some of the same events, cultural practices, and cultural reasoning. We may even have used the same words in interpreting those events. If we, however, experience some unusual conditions or hardships or we find ourselves driven by taboo impulses, we may find that those who understand us best may come from places not local to us. We in fact may seek them out, as we look for support or fellow feeling, whether from people who share diseases or traumas, who have less common passions like climbing mountains, or who have taboo attractions. They can help us in our self-understanding and can become perhaps our best collaborators in these specialized domains, even if they differ from us in other ways, because they "know what it is like" and are best able to recognize what we indicate by our words, having seen or felt similar.

In a world of language, we become hungry for information from relevant others and impelled to share with them, whether for immediate preservation (to address pain or hunger), or to help make sense of and organize internal complexity and processes, or to expand our knowledge and experience of the world to make sense of it. In this sharing, our closeness to others and empathy for their conditions can grow, creating strong bonds. The potential and need for sociality expand as our capacity for it increases. But the limitations of the signals by which that sharing of feelings, self-understanding, experiences, problem solving, or collaboration occurs mean we must find interlocutors who process what we say in ways sufficiently close to the impulses that have led to our formulations. We call this the process of finding friends or locating groups of like-minded people. The more they are able to understand what we mean, what we are indicating by our words, the more we are connected and feel ourselves having common substance and interests—Kenneth Burke (1969) might call this identification or consubstantiation.

Without that sharing one feels incomplete and under constant threat, even insecure and uncertain about whether one's thoughts have gone astray. Consider the Old English poems "The Seafarer" (Hostetter, 2024) and "The Wanderer" (Hostetter, 2022), which not only talk of the physical dangers the isolated poets find themselves in and the missed comforts of the collective life but also the sense of exile, not being part of others. As fitting with the culture of their times, both poets turn to God to seek some sense of the missed communion and consubstantiation. A major appeal of a number of religions has been the personal relation to a god that understands the individual as an ideal parent or friend might in ways that ordinary humans do not seem to do.

Also consider the impulse we have to persuade others to agree with our views, to confirm that we have made proper sense of the world and are choosing sensible

actions, even when there appears no particular benefit for us to do so. We need confirmation we are not living under private illusions and delusions or are off on an emotional sidetrack. Consider the need of the narrator of “The Rime of the Ancient Mariner” (Coleridge, 1798/n.d.), who stops the wedding guest to tell the harrowing tale of venturing into the supernatural, an experience which has driven him to the edge of sanity but has left him with a gospel of love which he is impelled to share. Consider the loneliness of those who have hallucinations, add up their experience in novel ways, invent ideas or ways of organizing experiences, or make plans that put them at odds with others. As they become aware of just how different their view of the world is, they become hungry to seek confirmation in events and conditions and may go to great lengths to make up stories to justify their views.

### How Culture and Language Learn to Travel

Within oral cultures the circulation of symbols and the organization of life and experiences are mostly local. People growing up within such groups learn to collaborate with those around them and come to view their worlds through the words and experiences available to them. Linguistic resources are limited by what circulates locally, and individual consciousness often becomes closely identified with the consciousness of the collective. Accordingly, people have great need and desire to fit in with the people they live among. Saying something different or challenging risks ruptures in necessary collaborations. The pressure is always to repair breaches and rejoin the local collective under the available roles and conditions, expressing what is comfortably expressed. The alternative is exile, ostracism, or being identified as having lost one’s mind, unless one is lucky enough to be designated as having been visited by the gods.

Material technologies and artifacts can travel beyond the people we see daily, loosely connecting practices of distant societies, but the most intense bonds and shared perceptions remain local. The social need to get along with each other encourages accommodations and endemic approximations in communication, good enough for the practical purposes in the moment and rarely held to greater coherence or accountability or principle over time.

From the time that humans started to migrate across the planet, there have been travelers who have had contact with others—whether in trading, or war. Other cosmopolitan roles developed as news bearers, entertainers, teachers of specialized arts, proselytizers, or seekers of wisdom moved from group to group. Such travelers tended to remain as outsiders, communing most fully with those who shared cosmopolitan experiences. The activities and forms of cosmopolitanism themselves are formative of ways of thinking, acting, and relating, often built around the activity that is the basis of their travels. Musicians, jugglers, carneys, traders, or mercenaries are typically most trusting and trusted among those of their professions but typically have been viewed with suspicion as marginal outsiders by the communities they travel among.

## Written Language, Finally

Written language, however, increases radically the information, ideas, alignment, organizations, identities, affiliations, and activities we connect with from a distance, even while we continue living within a local group. As Jack Goody (1986) documented, writing can allow people to gather wealth and power or to be influenced by ideas from beyond the local oral world. Humans can be regulated by governmental, legal, or religious strictures and structures that come from a great distance. Even if a person is not literate, interpreters and mediators such as scribes, priests, lawyers, government officials, or accountants can connect one to the worlds opened up by literacy.

Literate connections made with those at a distance may also draw us to migrate to distant or more cosmopolitan places. The rise of literacy happened simultaneously with the formation of urban centers, courts, and religious centers as people became drawn to the center of power, wealth, and knowledge. Literacy provided the tools for those centers to extend their reach, while creating the need for more literates to maintain and increase power and wealth. Literacy soon supported complex cultures and activities in the ancient Middle East, such as medicine, astronomy, prophecy, or literature. All these early literate activities became intertwined with the development of education (see Karen Radner and Eleanor Robson, 2011).

Literacy also extended the expressive reach and personal identities of readers and writers. Messages travelling through time and space can influence people whom writers may never meet. Literates can find identity and communion with people far away, particularly if messages from other times and places articulate experiences, provide enlightening knowledge and ideas, seem accepting of local taboos, or satisfy curiosities that are not readily supported in one's local community. In reading, one can recognize one's self in thoughts from other societies. Through texts one can imagine different audiences and refer to experiences, objects, and ideas locally absent or ignored. One can take on roles and identities one would never express locally.

Uses of literacy can influence and shape the individual's experience, development, perceptions, potentials for actions, and thus the organization of the person's plastic neural systems. Literacy also provides tools for self-examination, monitoring, and understanding that add layers to thinking and provide tools for examining one's expressions of observations, feelings, ideas, and principles—drawing on an expanding literate environment. That is, the social changes brought about by literacy draw us personally more deeply into varied and dispersed social relations and identities, goals and activities, ways of thinking and perceiving, coordination and systematic organization of activity, and even communion with people with whom we share unusual experiences, forms of attention and interests, or ideas.

## Writing and Individual Differentiation

The varied possibilities of connection afforded by a rich literate environment proliferate the possibilities of lines of personal development as we find deep

connection and learning from others far away. Those distal connections can differentiate us increasingly from some of the people physically closest to us. Books and schooling bring ideas and information from afar, with teachers who may also have been immersed in books from elsewhere. They may have been educated and even grown up elsewhere to bring new skills into the community. In short, teachers often bring some cosmopolitanism into even the most closed of communities. Schools, even at the most basic level, bring together instructors who devote their attention to different forms of knowledge and kinds of group activities. Schools, furthermore, train people for different roles, many closely tied to the needs of the more cosmopolitan parts of society. Some teachers attend to trade and finances, others to specialized crafts, others to medical and health practices, others to knowledge of the heavens and the earth. The varied knowledges for these separate tasks give rise to disciplines, subdisciplines, or research and theory groups. These many kinds of proliferating differentiations allow us to form our own paths and develop in distinctive ways. Moreover, within the same specialized area, people may bring different resources from their other interests and activities, complex personal histories, and even the books and articles that capture their attention.

Thus the more complex, rich, and varied the sociocultural worlds beyond the skin barrier one engages with through literacy, the more complex and varied becomes the organization of the self within the skin barrier. That internal reorganization itself guides how one experiences and acts in the world. People who make car parts, for example, act in a world of designs, specifications, commerce, stock sheets, and mechanics, among others, which creates common interests with different people in different organizations and worksites.

Our internal neurological monitoring and maintenance of heart, liver, and other internal organ functions may go on much the same as in other animals, continuing unnoticed and unnoted, except when things go wrong, leading us to consult with literate medical professionals. Nonetheless, these unnoticed functions may be affected by the levels of anxiety, blood pressure, and other somatic consequences of what we perceive and how we interpret the world around us, inflected by literate communication. The businessperson (perhaps informed by management and business theory learned at the university) worries about supply chains, production, deliveries, competitive pricing, and profits and losses; regularly scours spread-sheets, order forms, product specifications, machine part catalogues, state road regulations and taxes; and may suffer rapid changes in cortisol and blood pressure levels. Or consider how people use the wisdom offered by self-help books, exercise manuals, nutrition guides, and medical information to self-regulate their personal lives and bodies.

In modern literate societies humans' internal and external communication interact in managing personal conditions, but at the skin barrier the modality changes, with a further change in modality from speech to writing to overcome distance of time and space. As we move outward from our skin, we are able to draw on more, but we need to translate and compose our complex sensations

and meanings into words to be intelligible to people living in different social, cultural, and material circumstances. The few words we share trigger even more varied neurological events in people who have led increasingly different lives. The messages we receive and those we send are increasingly open to interpretation and adaptation.

## Overcoming Barriers of Differentiation

Of course, parts of our modern lives remain local, shared with people close to us, over meals or in gatherings, outings, activities, even shared reading. Yet even within families or community groups or sports teams, people read different books, watch different movies, go to different schools at different times, and develop different thoughts and perspectives they might want to share. We wonder how relatives get to see things so differently and hold different positions. We marvel or become upset at the different skills and imaginations and knowledge each person brings, though we may not understand exactly what they know or can do, or the ideas that excite them. The differentiation that comes with literate engagement with different communities at a distance further tests the limits of tolerance within each family, community, or team. It makes us aware of the difficulties of sharing our thoughts with people who interpret our words so differently through their personal systems of meaning. We may learn to take care with our words to make them as intelligible as possible to the audiences which might encounter them. This testing of our words against others' interpretive frameworks can also lead us to refine our thoughts, overcoming the idiosyncrasies of what we might try to express. Or it can lead us to despair at the impossibility of communicating with others, leaving us feeling isolated and giving up on the attempt of making ourselves understood.

Even with our different neurological constructions of meaning, we can at times develop shared understandings and become sufficiently intelligible to each other over shared experiences and projects. Members of different parties in a legislature can at times come to agreement on laws that they can feel proud of contributing to, even if every provision and every word is not precisely how they would represent it or would mandate exactly the action they would want. Lawyers can commit themselves to the judicial process and be proud of their contribution even if their clients may lose or judgments may not always be exactly what they want. In fact, if the arguments of all parties did not differ there would be little need for courts and judicial judgments. This is also true of people participating in research, theoretical, or creative professions—all of which thrive on novel perspectives, experiences, and claims that are then adjudicated through the practices, criteria, and needs of each field.

We can try to varying degrees make ourselves understood, learn from each other, and come to contingent agreement on some matters. But no matter how robust our shared understanding is at any moment for any particular purpose,

new considerations can change views and impel us to discuss new issues. Further, confirmation that we have been understood and approved by our readers is even rarer than in an oral face-to-face world. Often enough we get no response from readers, or if it comes it may be long delayed and borne only by written words. Further the response may be ambiguous or reflectively nuanced with distinctions or demurrals or even outright rejection. Even though the new social media platforms offer opportunity for rapid feedback, the response is often brief and blunt, offering little evidence of detailed understanding. Contributions receiving no response can leave one wondering whether anyone noticed or cared about the words, picture, or video one posted. These platforms seem to tempt writers to seek notice and quick response. Social media may proliferate popularity and even passions but not necessarily a sharing of minds.

This is why writing becomes so important and difficult—studying audiences, finding common ground, identifying topoi of persuasion, choosing recognizable genres that mediate activities, gathering and representing compelling evidence, sequencing the reasoning to carry our audiences along, or finding phrasing that speaks deeply to readers. At the same time, writers may be struggling for coherence, as different words with different implications may arise within the writer's complex of thoughts; this struggle for coherence also leads to fresh perspectives and syntheses that further make the writer's statements distinctive. Though writers may share some characteristics with our readers, readers understand writers only insofar as meanings are intelligible through the mediation of the limited, social medium of words. Readers inevitably interpret written words through their own senses of meaning, experiences, needs, and interests. This puts pressure on the writer's communicative skills to articulate ideas, knowledge, and sense of self. This added pressure can then foment further discoveries and unanticipated, unfamiliar things to say. The paradox remains: The more we as writers try to make ourselves intelligible, and the more we make sense of what various others offer us, the more we become different and harder to understand, requiring us to work harder on our writing.

One common resolution of this paradox is to limit the communicative burden by accepting the sets of beliefs and statements of a well-established community and trying to conform internal states to be consonant with the group's stated (typically written) beliefs. The vocabulary and phrasing of that group becomes the means of characterizing one's experiences, understandings, and communicative impulses. Communion can then be found with others adopting those same beliefs and terms, with those outside that circle considered as not understanding, perhaps being only communicated with for purposes of proselytizing or for typified practical purposes.

We may be able to communicate clearly with our tax collector or insurance agent if we follow well-established procedures, filling in a few pertinent details for circulation within robust organizations, accomplishing the institutional work at hand, but it is quixotic to imagine that we can persuade those same people of



our philosophy of life or even of evidence for the educational benefit of a new way of teaching writing. Even our colleagues in teaching writing are each trying to solve their own pedagogic problems—drawing on all they have found most effective as writers and in the classroom. So the sharing of what we have come to know and believe, our way of seeing things, only comes in flashes and patches, just as what others have shared with us only grabs ahold of our understanding in moments of recognition. Some ideas writers share touch us more forcefully than other ideas by the same writers, and some writers we believe more and with greater depth than others. Evidence carries a special weight, but there are many kinds of evidence, each with its impact on different people. The more we seek common ground with others, the more differentiated we become. Writing does that to you. It is lonely not because we work alone at our desks but because when we sit at our desks (even in a room surrounded by many others), we work so hard on not being alone. Being in a crowd would not necessarily cure the loneliness but would only deny the semiprivacy needed to work to try to overcome the loneliness.

Another alternative to this desire to communicate is to become smaller, attending only to the most common experiences and views while ignoring the heterodox. For writers this would mean producing only the most conventional messages, avoiding all the specificity and novelty of meaning people usually seek when they spend time and effort in reading. When, however, we lower our sights or practice denial, often enough this narrowing of the self brings internal tensions, unease, or deep psychological pain, as our nervous systems find it hard to live under the strictures of conformity. Deeper loneliness or even despair may be the result. If we have experienced the power of the written word to reach beyond ourselves, however, we will sense the need to write to breathe.

So our drive to share and have confirmed the complexity of what we see, experience, and think within our complex neurological interior leads writers to keep explaining ourselves, but in each explanation we go further into novelty and oddity, more into the strangeness of discovery. Our views may even seem monstrous to some others, who think we see things as no proper human would or should. Loneliness is an unsatisfiable hunger, putting us in more and more rarified company of people who might understand but who themselves have wandered into their own odd spaces of differentiation. Coming to see how they understand the world and what they have come to offer enriches us, increases our appreciation of diversity, and reminds us that our view is just one part of a complex tapestry of human awareness.

We rarely have the opportunity to enter into dialog with those who have moved us deeply, because they are passed or live elsewhere or do not connect with us. When we find a moment or point of intersection with others, when what we write is of use to them, that is filled with wonder; but there are so many more moments when communications remain one-way, either coming or going. Coming from one complex of thought and going to a very different one. No matter how much affirmation we may get in those rare moments of intersection, it never seems to be enough

to feel we have been able to share all we could, given the vastness, complexity, and diversity of the many people we are trying to communicate with.

## Into the Future, With No Resolution

Material technologies of writing have been developing for five millennia, but during the last century and a half, technologies have been speeding up the changes and possibilities. Telegraphy, telephony, sound recording, photography, film, radio and video transmission, and now digitization have increased the multimodality of our composed messages, convenience of production and storage, resources available, speed and reach of transmission, and formation and transformation of social groups through their mediating communications. We can now reach out and connect in real time with others at great distances—with effects on personal communication, news, business, commerce, finances, government, knowledge production, education, and many other domains of activity. Recordings keep the past in our present. Film, radio, and television create mass cultures while the internet has proliferated differentiated and individualized subcultures. As well, these technologies have increased the potentials for self-presentation, self-reflection, and expression. We can more easily and fully make available what we see and hear around us and what we think moment by moment. The ability to share sights and sounds in the moment across wide networks has changed our politics while also changing state surveillance of us. We have richer resources to render fantasies and dreams and fictions, to touch the feelings, fantasies, hopes, and fears of others. Consider even the simple act of seeing photos from a century and a half ago or of major events or of family ancestors. People now have films of their parents anticipating their birth and a film log of their childhood and adolescence. How much do these richer representations change our sense of ourselves, our histories, and our families? How much do they affect people's understanding of each other? How much might they tempt us to try to represent ourselves in ways idealized by these media?

In some ways these capabilities have brought our experiences more together; large social events and local outrages go viral with millions viewing. Yet each of these forms of sharing and presentation can be focused, amplified, or manipulated by communicative skills, crafts, arts, and technologies making our messages more immediate, effective, impressive on the senses, meaningful to the knowledge of others, or deceitful. Camera angles, lighting, selection of details, evocation of prior messages, narrative unfolding—all these and other even more subtle techniques of various written, graphic, or auditory media remind us not only that individuals have different skills and repertoires developed over a career of messaging but also that our experiences, feelings, and knowledge must be filtered through the affordances and possibilities of whatever technology of communication is available, transformed through our productive arts, and directed at the audiences we seek. That is, whatever communicative impulse we have must be

formed and transformed into the medium we are using, and those media and platforms keep proliferating. Once our impulses pass the skin barrier we must contend with the arts of exteriorization. The creativity of our meaning making through the tools of social communication keeps pushing our separate uniqueness, giving us more to explain and help others connect with. So this situation demands even more art and craft on our parts, more communicative skills to participate and attempt to overcome our sense of separation with each new communicative innovation. The hunger of loneliness only grows in the attempt to overcome it, leaving us with no end in sight.

Whether this lonely consequence of writing is just the human condition, a design flaw in *Homo scribens* in becoming such a sociocommunicative creature, a terrible problem that could lead to social breakdowns, or a wonderful potential for amplifying creativity, species flexibility, and the variety of human life—all this remains to be seen.

## And What About AI?

It is far too early to understand the consequences for writing of the newly available artificial intelligence technologies that produce texts, graphic art, and movies that seem humanlike. At the moment, they draw on existing human productions to form content and locate models to follow, with no particular communicative impulse or intent beyond fulfilling the human instructions or prompts. Although texts produced by large language models are not currently factually reliable, it is not hard to imagine evaluative and evidentiary layers being added to them. Consequently, they may displace the need for humans to learn or produce many kinds of documents or other composed communications. Further, as AI is configured not as a desktop symbol-only processor but as part of a robotic system with sensors, mobility, and autonomy to carry out missions and form inquiries, AI systems will become more sensitive to their experienced environment and deepening purposes. In that case, what they communicate among themselves and with humans may become more reliable and meaningful as well as increasingly autonomous.

For the time being, using corpora of existing texts, large language model AI productions may stay close to conventional wisdom, existing phrasing, and existing genres. For many tasks this will be enough. Perhaps through greater aggregations and evaluative and selection layers, which may incorporate greater purposiveness in problem solving beyond making human-looking products, there may be greater creativity and invention in AI, leading to advances in thought and elegance of expression and even authenticity and resonance with our own human experiences. If so, much writing may go the way of other outdated technologies, such as earlier forms of transportation, left for exercise, hobbyists, or aficionados but no longer central to human activity and economy. Nonetheless, we are still left with what we do to satisfy our individual hungers to share the

contents of our consciousness, the thoughts we recognize as our own, the stuff inside the skin with others across the skin barrier to connect and resonate with their consciousness.

## Another Coda

In these paragraphs, in the final analysis, I may be describing a very particular situation affecting only a small group of people invested deeply in their writing or other forms of composed expression such as music or film. Others who find all their communicative impulses readily expressible within quasi-stable social and conceptual worlds of relations and meanings may not feel the isolating tensions that come from heterodox knowledge and thoughts. Others may find that the conflicting ideas made available by literacy exist only untroublingly at the margins of lives lived securely within local communities. Nonetheless, writing does seem to have a compelling effect on some others who find themselves pulled into the rough seas of uncertain knowledge and contending ideas.

This speculative essay draws on and expresses a sense of my own experience. Although I write as though this loneliness or hunger for connection comes with the territory of writing and may be an inevitable consequence of immersive literacy, perhaps these paragraphs only reveal my own particular demons and the psychosocial dynamics of my work and sense of being. Or perhaps it is the enduring adolescent in me complaining, “you just don’t understand me.” Yet the popularity of E. M. Forster’s dictum “only connect” (1910/2021, Chapter XXII) may suggest that this hunger is widely felt, at least among readers and writers. It remains to be seen whether this speculative reflection resonates with anyone, and if so with whom—with which kind of writer? which kind of person? Perhaps this essay, this speculative journey, is only a provocation to see who feels this hunger and with what power and who does not. Please write. At least it may help me feel a bit less lonely.

## References

- Burke, K. (1969). *A rhetoric of motives*. University of California Press.
- Cacioppo, J. T., Cacioppo, S., Cole, S. W., Capitanio, J. P., Goossens, L., & Boomsma, D. J. (2015). Loneliness across phylogeny and a call for comparative studies and animal models. *Perspectives on Psychological Science*, 10(2): 202–212. <https://doi.org/10.1177/1745691614564876>
- Coleridge, S. T. (n.d.). *The rime of the ancient mariner*. Lit2Go. <https://etc.usf.edu/lit2go/181/the-rime-of-the-ancient-mariner/> (Original work published 1798 by J. & A. Arch)
- Damasio, A. (1999). *The feeling of what happens: Body and emotion in the making of consciousness*. Harvest.
- Damasio, A. (2010). *Self comes to mind: Constructing the conscious brain*. Pantheon Books.

- Damasio, A. (2018). *The strange order of things: Life, feeling, and the making of cultures*. Pantheon Books.
- Damasio, A. (2021). *Feeling and knowing: Making minds conscious*. Pantheon Books.
- Forster, E. M. (2021). *Howard's end* (E. Sobol & D. Widger, Eds.). Project Gutenberg. <https://www.gutenberg.org/ebooks/2946> (Original work published 1910)
- Goody, J. (1986). *The logic of writing and the organization of society*. Cambridge University Press. <https://doi.org/10.1017/CBO9780511621598>
- Hostetter, O. E. (Trans.). (2022, February 6). *The wanderer*. Old English Poetry Project. <https://oldenglishpoetry.camden.rutgers.edu/the-wanderer/>
- Hostetter, O. E. (Trans.). (2024, January 24). *The seafarer*. Old English Poetry Project. <https://oldenglishpoetry.camden.rutgers.edu/the-seafarer/>
- Radner, K., & Robson, E. (Eds.). (2011). *The Oxford handbook of cuneiform culture*. Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780199557301.001.0001>
- Tomasello, M. (2019). *Becoming human: A theory of ontogeny*. Harvard University Press
- Tomasello, M. (2022). *The evolution of agency: Behavioral organization from lizards to humans*. MIT Press.



## Section 3. Nurturing *Homo Scribens*: Puzzles of Writing Instruction

As writing has become central to economic, social, and personal well-being, writing instruction has become ever more important to human development. While simple symbols recording agricultural production could be learned rapidly in the field, over time more elaborate writing skills needed to be nurtured in organized settings. People needed to learn to specify details, form arguments, use evidence, organize ideas, make messages consistent, find effective phrasing, make strategic choices, interpret and use texts written by others, and many other skills. These more advanced writing skills also became intertwined with the knowledge, practices, regulations, and relations of different domains, such as law, medicine, finances, philosophy, or theology. Schools emerged as distinct locations and social institutions with distinctive practices to prepare people for specific forms of work.

Consequently, in the 21st century CE, around five millennia since the emergence of writing, literacy and writing instruction are complex subjects with their own bodies of knowledge, research, and practices. Many teachers are currently engaged throughout the world with teaching literacy and writing within different education systems with different education orientations in different regions. This section presents some of my thoughts on teaching and researching writing along with my thoughts on some of the challenges facing us today as we try to understand writing.

The section starts with “Writers Use Language, but the Teaching of Writing Requires More Than the Teaching of Language” to consider the complexity and multidimensionality of writing instruction as we support our students to discover the many potentialities that writing affords. This chapter was initially prepared as a talk for language instructors in Argentina who were trained as linguists and largely saw their work as teaching students the forms of language. This presentation reminded them of how much more is involved to help students to write effectively. No matter what region each teacher might come from, they are trained in one tradition or another, and it is useful to remind ourselves of the multiple dimensions of learning to write.

The second chapter in this section, “The Value of Empirically Researching a Practical Art,” contests the common idea that writing is relatively simple and all we have to do is share obvious skills with our students. In the over half century that I have been teaching writing, research has radically changed our view of writing. Because of this research we understand much more about what writing is, how it works, how we can go about doing it, and how writers develop. Yet there is still much more to know, and the continuing inventions of new ways of using and producing writing in new social and technological configurations suggest that writing may change in the future in ways far beyond what we might imagine

now. This essay is meant to remind readers of some recent advances, both so we act in consonance with them and so we remain humble as we go forward, not thinking that even our most recent discoveries are the final word.

The third essay “A? Developmental? Path? To? Text? Quality?” was written as a response to a special issue of the *Journal of Literacy Research* proposing curricula based on common assumptions about what constitutes growth in writing. This chapter calls into question some difficulties in our current common reduction of writing development to the assessments of texts in school contexts. Through a series of questions, the chapter destabilizes many of the assumptions that guide understandings about testing, curricula, and their relation to actual writing development.

Similarly, the fourth chapter in this section, “What Does a Model Model? And for Whom?” is a response to a special issue of *Educational Psychologist* offering articles conceptualizing writing. This chapter calls into question assumptions surrounding our attempt to build models that encompass all of writing. While there are important places for both assessments and models, they each need to be understood better to determine their places, uses, and limitations. Writing is remade, or made afresh, by every person in order to meet what they view as their circumstances and needs. The models of writing that count most are the models that writers themselves use to guide their perceptions, processes, and products. Humans can be creative and purposefully clever when they are not constrained by what others tell them they ought to do or how they should go about doing it. Rather we as instructors may be most effective in fostering growth when we offer meaningful challenges, provide options for writers to choose among in fulfilling challenges, and ponder with writers the implications of each choice.



# Chapter 10. Writers Use Language, but the Teaching of Writing Requires More than the Teaching of Language

In the United States the teaching of writing largely has been administered through the humanities for a century and a half, with a focus on developing writers, what a writer has to say, and how to design texts that convey that meaning.<sup>1</sup> The traditional name for the field has been composition—which we might understand best if we think of the way the term composition is used in music or the graphic arts. An alternative long-standing name is rhetoric, which highlights the forming of argument or getting one’s ideas and messages across to others in persuasive ways. While I prefer the newer term writing studies, composition is the tradition I came out of, focusing on students expressing their messages, thoughts, meanings, and arguments. In this tradition I learned my craft of teaching and formed my sense of researchable and important questions. In many other countries, the teaching of writing has developed within the study of languages and linguistics with a concern for developing students’ abilities to use the appropriate forms and resources of language to express their meanings. Accordingly, the focus has been on introducing students to the general resources and forms of acceptable writing rather than on advancing students’ abilities to use those resources to build their own meanings and ideas. This essay explains to writing teachers coming from the language and linguistics approach the alternative approach towards the teaching of writing coming out of composition, which is centrally concerned with students developing as individuals and thinkers so they can contribute unique, productive statements to collectivities. To writing teachers in the US much of what I present may seem familiar and reflect a perspective they may have gained from many alternative sources. For them, nonetheless, this essay may have the value of aggregating some of the approaches current in the US while highlighting the contrast with some of the language-focused approaches elsewhere.

## The Many Things Writers Do

Language is the material writers work with, the material they use to form their intentions and ideas, the material they keep revising and polishing, the material they share with their readers. The invention of writing, the symbols that humans

---

1. This chapter was originally presented as *Writers Use Language, but the Teaching of Writing Requires More Than the Teaching of Language*, by C. Bazerman, May 10–13, 2023, at the XVIII Congreso la Sociedad Argentina de Estudios Lingüísticos in Comahue, Argentina. Spanish translation under review for conference volume.

have been developing and transforming over five thousand years, and the various tools of inscription, means of reproduction, and forms of distribution we have developed have allowed us to work ever more conveniently and expansively with language while sharing it more readily with others. Writing, as well, has helped us regularize and make more accessible the resources of language in the form of dictionaries, grammars, and guidebooks. Writing has supported the refinement and extension of language. So it is not surprising that the teaching of writing often becomes the responsibility of language teachers who then perceive it as one of four language skills: speaking, listening, reading, and writing. Writing comes last on the list and is typically taught last and less after students have developed the other three skills.

Yet writing entails much more than familiarity with the resources of language. Nonetheless, in literary studies writing is also often treated as an afterthought to reading after students learn to appreciate the creativity and expressiveness of published, canonical authors. Students often are thought capable only of producing a pale shadow of canonical works. Sometimes, however, the writing of young children is considered as part of their social and personal development, with some attention to the writing process. Even with these occasional additions, however, students are rarely introduced to all they need to develop fully as writers.

Writers are busy people. They need to do a lot of things. They need to know the resources of language as well as the readers' perceptions of different language choices. Writers need to consider what their readers are likely to know, read, think, and feel. Writers need to conceive what they are writing about, what their messages and meanings should be, and for whom in what circumstances. They need to design the structure and substance of their texts. Writers need to draw on their experiences and observations as well as systematically gather evidence. They need to be able to report their knowledge and elaborate their thoughts in coherent ways. They also need to have read widely and understand how their statements fit with and draw on what others have written as well as how their new texts will advance the discussion of previous ones, leading to further statements by others. Writers need to become familiar with the styles and genres of the domains they are working with—whether personal expression to intimates, or advanced biology, or civic discussion of social issues. Writers, as well, need to be able to confront their own processes and give shape to their thoughts and feelings. From the beginning they need to be able to sit down to address the hard and sometimes stressful work of writing, overcoming procrastination and resistances.

Writing engages all these things simultaneously in the course of producing a meaningful, purposeful text. By repeatedly solving the varied problems posed by the what, how, when, and where of writing, students build their capacities as writers. Developing as a writer, however, takes a long time, with many different activities and kinds of supports in many different circumstances. As teachers who see students only a few times over relatively brief periods, we can provide only a few tasks, offer a few tools and guidance, and create a few situations to help students

on that long path. We cannot provide all that is needed in a single course, or even a year, or even one level of schooling. Writing develops across all years of primary, secondary, and tertiary schooling and beyond as people confront writing tasks in their lives, their jobs, and their roles as community members. Writing takes a lifetime to develop. So we should be modest about what we can accomplish in the brief period when students pass through our classes. We offer only small episodes in a much larger story that plays out differently for each student.

## What Can Teachers Do?

Teachers must make choices as to what is needed at the moment, what will help students best to continue on their journey as developing writers, and what we can provide given our situations, including the curriculum, institutional structures, and coordination with other teachers. So what are some of the things we can do during our brief contact with students? The following suggestions reflect an approach I have come up with over years. Many of these suggestions are based on the ideas, practices, and research of colleagues, so I don't claim originality or credit for much, but the suggestions do reflect my way of going about teaching. They are meant to be practical, but they do not look for quick fixes or overwhelming immediate results. Rather they seek to set in motion and encourage more enduring processes that may pay off long after students have left our classes. I do not have any way of knowing whether this payoff actually happens and for how many students. But I do know that writing development is something that occurs within each individual student, depending on what they hope to accomplish, their motivation, the kinds of communication they want to make, the meanings they find within themselves, and their persistence in bringing their messages forward. Once they no longer have us teachers standing over their shoulder, anything that does not enter into their personal development and understanding as writers, anything that is performed only to satisfy an idiosyncratically demanding teacher with a red grading pen, is not likely to endure.

As teachers we can create an atmosphere and community that will encourage students to create their meanings. We can offer tasks and puzzles that can foster problem solving. We can be receptive, attentive, and supportive as their meanings emerge. We can even give students clues and tools to solve writing problems. But developing as writers is something they do, not something we can make them do. Even the narrow desire to get good grades is something that students feel or they don't, with varying degrees of competitive passion and energy. Then once they finish the class and grades have been earned, such extrinsic motives fade.

One of the first and fundamental things that writers can experience and that can continue to grow throughout their lives is that writing can share ideas with others, enlist readers in meanings, and coordinate successful activities. This reaching out can start at an early age, with simple messages and feelings shared with people close by, and then expand and get more complex as engagement in

academics, community, and profession grow. The scope and focus of reaching out can change as life opportunities and conditions change, but the underlying dynamic and motive is the same. Each writing task poses myriad problems which must be solved in the context of the situation, and the writer must find those problems worth solving to do the work. Through solving problems, students' motives and skills grow as they learn to analyze each situation and develop successful strategies, tricks, and formulations to speak to the moment.

This experience of communicating and sharing depends on the writer's sense that they are writing about something they have a stake in. This means that the tasks teachers set should tap into something of significance in the students' lives as well as provide them with some degree of choice for them to locate a particular issue, idea, experience, cooperation, or project that they find meaningful and can commit to. This has the triple effect of finding a well of meaning in themselves to draw on, activating and coordinating personally available cognitive and emotional resources, and mobilizing persistence. In addition, the right task can lead to intrinsic rewards of fresh thinking and discoveries (see Michele Eodice et al., 2017).

Part of setting an engaging task is locating areas that students already know something about and have some authority in. People generally know most about their own lives and the people and community around them, so writing tasks built on students' immediate lives are a good starting point. As students mature, however, they can also discuss much more with authority, whether it is what they have learned in their various courses, their hobbies or sports, their consumer worlds, their part-time or summer jobs, or their community organizations. They can dig into interesting topics through interviews or library research. The more they know about something, the less they will need to fill their assignments with empty words, shallow opinions, or fabrications. And the more the students share thoughts about concepts they really know about, the more they will be interested in having readers understand their knowledge and perspectives.

Finding topics they are interested in writing about and about which they have something to say may require students looking into themselves through free writing, meditation, or other ways of surfacing and gaining confidence in their thoughts. Supportive questioning from the instructor and their peers can draw them out and create the atmosphere within which their thoughts grow and find words to articulate their ideas. Speaking their ideas out loud can give them the courage to elaborate and make the best case for them in writing. They realize their ideas and experiences may make sense and are worth writing about. As well, as they hear themselves talk, without anyone pointing out the problems to them, they may be able to locate contradictions or gaps or become aware of the need to substantiate claims.

After you as the instructor serve as an initial sounding board for ideas, as drafts emerge, an important role for you is to be a sympathetic but challenging reader for student texts. In school and university settings the teacher is inevitably an important reader, if not the most important. We should keep in mind that

more often than not, students are writing for us, to be read by us. In fact, throughout my education, until I was on the other side of the desk, only occasionally did I write for anyone other than the teacher or myself. Even when I wrote for peers or others, it was almost always under the eye of a teacher. While writing became increasingly important for myself to develop my own ideas, the opinion of the teacher always loomed large—with my ideas and writing flowering when I received thoughtful and sympathetic, though often precisely critical responses from teachers who could point me to real limits or flaws to work on in my writing. I inevitably came to respect those teachers because by their entering into my world of meanings they showed me that I could then enter safely and expansively into theirs—I trusted their world. I did my best writing for them. Those teachers who gave me only vague admonitions to go further with no other hints about what they were looking for gave me no help. If they could not identify a muted potential that I could elaborate, I didn't trust they knew what they were looking for or even that they paid much attention to what I wrote. I could sometimes see as challenges those teachers who did not seem interested in my thoughts if trying to reach them forced me to elaborate thoughts and make meanings clearer. But if repeated attempts only led to conflict or disinterest, I retreated to just fulfilling requirements. I did not see much in their worlds that would resonate with mine, and I lost interest and motivation. They may have had more to offer than what I could see at the time, but at the moment, when I had the opportunity to grow and learn, I did not find them inspiring. And without inspiration, writing plods.

So writing is a very personal communication, especially in a school setting, where we teachers want students to open their minds to the worlds we offer. Students write to us, so we need to take what they say seriously, showing a curiosity about their reasoning, taking their ideas, experiences, and evidence as worthy of attention, even if that means expressing doubts, concerns, or confusions or needing to ask for clarification or elaboration. Of course, our level of response needs to be calibrated according to the student's grade, age, and individual personality so that our feedback will be understood and meaningful, and not rejected out of hand. While we may miscalibrate, as long as the relationship remains dialogic, the student knows we are taking them seriously as a person and a writer. Likewise, among classmates you can foster a receptiveness and attentiveness on their parts to give critical yet helpful questioning to understand and take seriously other students' work.

This dialogic, challenging trust can even happen at the lowest grades and can be provided even by the youngest peers. Mirta Castedo and Emilia Ferreiro (2010) made this point forcefully in a study of early primary students in Argentina. First and third grade elementary children were asked to bring photographs of their family and events and write captions for them. Their peers then helped improve each other's captions. When confronted with low information captions like "that's me and my mommy," even first graders could ask questions to satisfy their curiosity: "What is her name? When was this? Where were you? Was it a special

day?” The third graders of course asked more detailed questions and could elaborate captions more, but even the youngest could discover how their words could be more communicative.

The teacher of course with more experience can know even better what kinds of questions to ask to bring out the young writer’s story. I have tried to cultivate asking the right question that would help deepen and make more coherent each student’s account, whether a story about a family event or a middle school science paper on the formation of the planets or a senior university thesis analyzing the politics and operations of a local town board. As teachers, we can respond to students’ passion for their topics even if the topics were not ones we would find compelling in themselves. Every time students experience the satisfactions of creating and sharing meaning, they are drawn further into crafting their language with precision and subtlety. When ideas matter, when helping the reader to understand matters, getting the details of language right begins to matter.

## Engagement With Writing and Time on Task

Growth as a writer requires much time on task, so students recognize, confront, and try to resolve the many puzzles that are needed to turn their communicative impulses and emergent meaning into fully realized texts that engage and satisfy the readers’ curiosities about their meaning. For most texts this requires many stages of work. Time on task starts early, with locating ideas, producing intermediate formulations, drafting text, and revising. To engage in this lengthy and challenging process requires developing commitment to the emerging text. I often spend much time in class and in student-teacher conferences asking students about what ideas they have for papers long before the assignments are due. Those who are ready to talk can start to test out their ideas and directions; for the others these discussions wake them up to the presence of the writing task and remind them they are already within a writing episode—a time when the project should be cooking in their minds. Sometimes I devote class time for freewriting about the topic. After discussion, I may ask students to write down a sentence or paragraph about their idea. Although I give them the option of changing their ideas later, most stay with their early commitments. When they do ask to switch topics closer to the due date, I usually find out it is because they have run into some difficulty in how to proceed, which we can then typically work out in our dialog. Sometimes they really only are asking about a minor refocusing or slight adjustment, which comes from them understanding their topic better. Then all I need to do is assure them that they are still on track. As the project advances, I may ask for more elaborate work plans, a list of things they need to read or find out, notes, sketches, or tentative outlines. Depending on the assignment, these preliminary kinds of writing may be a few days, a week, or even a month or more in advance of the deadline.

Often I find it especially useful to engage students with the material, experiential world they live in: people and events they have witnessed or evidence they

have gathered in a way appropriate to the task. This evidence could come simply from walking through their neighborhood or talking with people about their histories, struggles, work, or accomplishments. Or it could come from systematic data collection on environmental conditions or from designing and conducting a survey. This engagement with the facts of the world provides students with content; even more, it can trigger the excitement of discovery and the desire to share what they have found out or experienced. Further the reported facts focus and constrain speculative impulses or repetition of unexamined opinions and beliefs. In looking carefully and precisely at the world they live in, students can discover what is news to them and may be news to their readers. Reality is one of the most powerful heuristics there is.

This up-front work in the earliest stages of writing episodes can have big payoffs in the quality of the text at the end. I often find the most productive work I do with students is to discuss plans and help them discover what it is they actually have seen and experienced. This early focusing frequently sheds away wordy phrases, digressions, or irrelevancies—without a lot of instruction or correction from me. As students get a better idea of where they want to go, they are propelled to get there faster. I find I have many fewer corrections or suggestions at the end if I get students engaged and focused early. What suggestions I have made on interim drafts they have already incorporated and they have figured out all the rest on their own.

Because students become familiar with classrooms and relationships with teachers and peers from their earliest years of schooling, the dynamics of school writing often become tacit and unmarked and seem just the way things are. The basic genres and styles of school writing become familiar over the years so that they seem natural and synonymous with writing. Students as well are quick to pick up on the particulars of the expectations and quirks of each new teacher, often sharing among themselves how to keep this particular idiosyncratic person happy. But of course, schools are actually very particular, if not even peculiar, institutions. They are not like law offices, or auto repair shops, or social media platforms, or even academic conferences in the disciplines related to school subjects. Language or literature classes where writing typically is taught are even more particular, differing from physics or history classes. So often in secondary and higher education, it is valuable to point out to students the difference between school writing and writing in other spheres, as well as the differences in their various subjects. These contrasts make explicit the particularities of genres and styles and even more why the genres are the way they are. This helps students understand what they might try to accomplish within their writing, how it fits this situation, and what they might gain from it. The assignments may start to make more sense to them, and they will be better able to understand the problems they need to solve. This type of explanation will also make them more aware, thoughtful, and analytic about the expectations, styles, and genres in their other classes and the other situations they might write for outside or beyond school. This sort of discussion also helps them understand that these forms and expectations are vessels

within which they can shape their meanings and even what kinds of meanings are appropriate to each situation.

This differentiation of styles, genres, and expectations can begin even in early grades, as children recognize the differences between a holiday card for the family and the report to teachers of a classroom science experiment about growing plants. These distinctions of course can increase in specificity and complexity in more advanced grades. As students come to see genres in their contexts, they also get clearer ideas of what they need to include in them and what they need to communicate through them. Students may also over time start to internalize some of these differences, so they may spontaneously produce the kinds of meaning that fit different circumstances using the appropriate resources of language and meanings. They will start to see in greater detail why and how they are being asked to think and write in the history class, the physics class, or the home skills class. These contrasts will also help them adapt more quickly to the needs of their jobs or community engagements rather than continuing to write as they do for their Spanish or English classes.

## Self-Regulation, Procrastination, and Process

Writers can also develop by having greater awareness and control over the process of writing. I am not here advocating the rigid models sometimes taught under the name of process writing, which may force students into practices which don't fit their way of working or the particular task at hand, though these models at least can make students aware that there is a process and that multiple kinds of work can occur at different times. I am more interested in building self-regulation of how one produces writing over time. Being better able to guide one's actions and thoughts as one produces successful writing will lead to more effective productions. While students may first be introduced to management of processes with the teacher acting as a kind of external superego, students can come to understand their own way of working and how they can regulate their own processes in different situations. I have already suggested some ways I try to get students to think early about their assignments and engage in various kinds of interim work, but ultimately the students need to internalize and adapt their own procedures to work best for them. Simply asking students to discuss their processes helps students begin to be more intentional in their self-regulation.

An important part of the self-management of writing processes is to recognize and address the procrastination almost all of us feel when faced with the difficult and uncertain task of writing. Not only can each writing task seem a tall and strenuous mountain to climb, but also often we have little sense of the height and shape of the mountain when we begin. At times only the pressure of an impending deadline gets us moving, leaving us little time to work through our ideas and solve the many problems posed by a difficult piece of writing. Sometimes the challenge seems so great that we never start. While giving the benefit of avoiding



the immediate challenges, of course this avoidance creates other problems. So procrastination is important to address, for unless you begin to write, little learning or development of writing takes place.

When students do not have much self-regulation and find it difficult to write on their own, I have them do most of their writing in class, especially for the early stages. At times, if I ask students to do the work at home and bring it in, I get a low compliance rate—even if these are not particularly resistant or unproductive students. They just can't get down to the work of writing. But if I get them writing in my presence or the presence of their peers at the start, they are much more efficient, and over time they can start to write on their own even in the face of anxieties and uncertainties. Making the tasks at each level more specific—such as writing down three possible topics, putting a check next to the best alternative, and adding a short explanation of the choice—helps get them going. At first, I limit what they are asked to do on their own at home to some simpler follow-up tasks, only gradually increasing their independent work as they become capable of directing themselves as writers. Even having students discuss or share their ideas with peers or create mutual responsibility on collaborative tasks helps bring students out of their private struggles and uncertainties to get down to the work.

At some point, especially with more advanced students, I find it valuable to explicitly discuss with students the problems and challenges of procrastination, sometimes sharing my own experience and getting them to discuss their favorite ways of wasting time while avoiding writing. We then discuss the different ways we concentrate, whether it is meditation, working in a specific favorite spot, organizing our desks, listening to certain kinds of music, or going to a coffee shop. We also discuss the benefit of sometimes temporarily turning away from tasks to figure out preliminary challenges, to find some information, or just because at the moment we cannot concentrate on the task or because we get exhausted. Such discussions turn an obstacle into a problem to be solved, each in our own way.

## Levels of Work

Staying on task involves attention to many levels of work which I can help students recognize and self-manage. Starting to think and articulate ideas and plans early and often, even though it may seem like a long time from when the final product is due, gives the writer something to work with and interrogate. Spending too much time too early on word-level revision can distract the writer from getting ideas down on the page; it can also waste time and energy on formulations that will never make it to the final text. Writing drafts, then, provides concrete language which the writer can start elaborating, cutting, and rearranging.

This gradual process of the emergence of the writing frees the writer to be exploratory in the early stages. Coherence isn't necessarily needed as the writer explores different possibilities, unsure of how they fit together or even if they do. But as the shape of the text emerges, the writer can see what pieces might

fit together and how—leading to new insights. The statements that are not so relevant may become more obvious—to be either subordinated or just dropped entirely. As coherence of the ideas and reasoning develop and the line of argument gains clarity, the writer can also spot more easily what points might require clarification, what additional evidence or examples would make the ideas more persuasive and forceful, or what additional connecting points might be needed.

Once this coherence emerges it can then direct the writer to look back at the beginning, to recast the introduction to engage the reader in the main direction more rapidly and forcefully. When I find the important ideas emerge clearly only near the end of a text, I suggest to the student that they treat this early version as a discovery draft and that they move the ideas of the last paragraph or sentences to the start of the essay and build from there. This reorganization points the reader in the right direction from the beginning, gives the piece greater coherence, creates more energy and force for the whole text. I also suggest to writers that they can elaborate the ending by not just repeating the opening or summarizing what the paper has said but by transforming that message to what one can now see from the end of the journey, how the journey fits together to show new thoughts.

The character of the work changes as ideas and materials become external. The writer no longer needs to pull out impulses from deep in one's mind but rather can improve the words on the page or screen. As meaning choices are made, questions of word choice and grammatical form start to become clearer, and the writer can become more certain of what they want to put on the page. The writer can even start imagining the experience of the reader, seeing whether each sentence and paragraph flows smoothly and coherently from the previous and leads to the next, whether there is sufficient explanation and exemplification, whether the text moves along, offering the rewards of enough news and insight to keep the reader engaged.

## Writing in an Intertextual World

What we as writers have to write does not just rely on what we have directly experienced or witnessed. Through our education, reading, and other media we become familiar with the experiences and thoughts of each other, which we draw on when we write. Reading and other information from outside of us also connects with our readers, who may have learned from similar sources and rely on that information to make sense of and react to what we have written. Writing and reading are part of an ongoing discussion, part of the same literacy game. Some moments we are receptive, other moments we are productive. Yet we are always immersed in a world of texts.

This intertextual field we are part of requires many skills: looking carefully into what others have written, understanding what they meant and what they tell us about the world, evaluating what their evidence is and how sound their reasoning is, seeing how their ideas and observations connect to or differ from the writings of others, understanding how their comments arise from their situations

and beliefs and how those match the situations and beliefs of other writers and ourselves, deciding how relevant their thoughts and facts are to our concerns, making precise connections to what we are writing. We have to learn to select, understand, evaluate, synthesize, and then use our readings. Our readers too will see our text as contributing to ideas they have read elsewhere, so we need to be mindful of how they will place our work into the intertext they have constructed from their reading. Readings can provide us riches, expanding our view and knowledge and resources, but they also can complicate the terrain about which we speak and don't necessarily fit together simply or in ways all readers would agree on. Yet they can inspire us to deeper thought, give us ideas we can use or contend with, provide evidence we can draw on, and expand our vision.

We also need to consider the intertextual domains relevant to each kind of task, as specialized fields each have their significant texts that must be taken into account and that exclude many others that are not part of their worlds. Legal writing depends on the laws of the jurisdiction, prior precedents and opinions, works of legal theory, rules of evidence, and especially other documents filed in this particular case—and little else. Scientific articles primarily draw on recent articles in the specific field and neighboring ones that can be shown to be relevant; rarely can works of history or poetry or journalism be made relevant, not even works of other sciences, nor even articles in the same field that are no longer viewed as being correct or that contain novel and important information. So part of helping students address intertextuality is helping them understand in their specific communicative situations what is appropriate to draw on and how. Then of course there are the rules of giving credit to sources and citation form—which themselves vary from field to field. While citation and giving credit seem to get the most attention and create the most anxiety (often on the theme of plagiarism), they are the most superficial aspects of intertextuality.

When I was just starting out as a writing teacher, I surveyed colleagues in other departments about the writing they assigned. I had the shock of recognition when they reported almost all of the writing they assigned involved writing about texts in their disciplines, whether reporting, evaluating, synthesizing, applying, or reacting. This recognition engaged me in the pedagogy of using sources, resulting in two textbooks: *The Informed Writer* (Bazerman, 1981/2010), and *The Informed Reader* (Bazerman, 1989), along with a related article on the conversational model of reading and writing (Bazerman, 1980). This interest in intertextuality continued throughout my career, and one of my later studies revealed that when graduate students in education used their readings to discuss their observations of their classrooms, the thinking in those sentences was at a more sophisticated level than in the sentences when they didn't (Bazerman et al., 2014).

So in teaching writing it is important to engage students in their reading. While we often do not see reading as part of writing—just another of the four language skills—reading and writing are intertwined, and we need to think about how to engage students more fully in their reading as part of improving their writing.

## The Busy-ness of Writers and the Limits of Teaching

As I noted earlier, writers are very busy people, and it takes so much time and effort and work in many dimensions to become skilled in any part of this busy-ness. As teachers of writing, we should be ready to help students develop in any one of these aspects that they might need. All these aspects are always at play in every act of writing, though in our classes, given the ages, skills, and situations of our students, we may be best able to help them advance in one or another dimension. We do what we can, when we can, in those brief moments that we have contact with students within the long trajectory of their writing lives. It is within the students that writing develops; ultimately it is up to the students to determine what they find useful and accept and what they let pass. It is a real trick to be ready with what the students need when they are ready to use it to solve writing problems they are motivated to solve at that moment.

You may have noticed that in this discussion of writing I focused on developing students as writers, not on having them produce ideal texts by whatever standard that might be measured by. Quality is not an absolute but depends on effectiveness in situations. The quality of the texts is a consequence, evidence of how well students are developing and in what dimensions as a result of the practices they are learning to engage in. Language is what students use in writing, but language is not the sole focus of our instruction, for if students don't know why and how they are using language, what do they do with all the fine words and sentences we can teach them?

## References

- Bazerman, C. (1980). A relationship between reading and writing: The conversational model. *College English*, 41(6), 656–661. <https://doi.org/10.58680/ce198013907>
- Bazerman, C. (1989). *The informed reader: Contemporary issues in the disciplines*. Houghton Mifflin.
- Bazerman, C. (2010). *The informed writer: Using sources in the disciplines*. The WAC Clearinghouse. <https://wac.colostate.edu/books/practice/informedwriter/> (Original work published 1981 by Houghton Mifflin)
- Bazerman, C., Simon K., & Pieng, P. (2014). Writing about reading to advance thinking: A study in situated cognitive development. In P. Boscolo & P. Klein (Eds.), *Writing as a learning activity* (pp. 249–276). Brill.
- Castedo, M., & Ferreiro, E. (2010). Young children revising their own texts in school settings. In C. Bazerman, R. Krut, K. Lunsford, S. McLeod, S. Null, P. Rogers, & A. Stansell (Eds.), *Traditions of writing research* (pp. 135–150). Routledge.
- Eodice, M., Geller, A. E., & Lerner, N. (2017). *The meaningful writing project: Learning, teaching, and writing in higher education*. Utah State University Press.

# Chapter 11. The Value of Empirically Researching a Practical Art

When I began teaching writing fifty years ago, I thought I knew what writing was, how to do it, and what I needed to teach.<sup>1</sup> Writing, after all, is a practical art, making something out of words to affect the minds of others. Writing is learned through practice and making practical decisions in the making of each text. The teaching of writing aims to help students improve their practices of writing. Advice about writing comes from skilled practitioners who offer practical guidance. Endless interviews with famous writers seek such practical advice to become a writer. We attribute to successful writers the wisdom of effective action, or *phronesis*, which Aristotle (2000) says only comes from experience.

So why is research necessary from something learned in practical situations, through practice and practical decisions, leading to practical wisdom? Well, it turns out research in writing is immensely practical, helping us see more clearly our practical situations, our practical resources, our practices and practical methods, our practical choices and their consequences. Writing research also has told us more about the practices of our students, how we can help them improve their practical choices and extend their range of practices. Knowing the right things can help us act wisely, and well-framed research can tell us things which are immensely practical to know. Along with my colleagues in the growing field of writing studies, I have spent the last fifty years discovering practical things that practice alone did not teach me, researching some things that are useful for helping writers develop, and changing what and how I teach. During these fifty years writing studies has begun to sketch out the picture of how complex and varied writing is and how individual and personal each writer's path of development is. In the following lines I will point to some of the things we have learned and how that has changed our practical actions.

## What I Learned from Experience

Don't get me wrong: some basic truths are shared by most who have gone through traditional education, and these truths formed the basis for my early certitudes. Writers need to know the basic symbols and how to encode them and arrange

---

1. This chapter originally appeared as "The Value of Empirically Researching a Practical Art," by C. Bazerman, 2021, in *Multilingual Contributions to Writing Research: Toward an Equal Academic Exchange*, edited by N. Ávila Reyes, pp. 103–124, The WAC Clearinghouse and University Press of Colorado (<https://doi.org/10.37514/INT-B.2021.1404.2.04>). Copyright 2021 by C. Bazerman under a CC BY-NC-ND 4.0 License (<http://creativecommons.org/licenses/by-nc-nd/4.0>).

them in recognizable ways. Alphabet, handwriting (and increasingly keyboarding), grammar, syntax, and basic organizational coherence have long been taught and are all needed in at least a practical way. I was fortunate in having gone to schools that offered many opportunities to write in most subjects at every level from elementary through university. I learned what my schooling had to offer, meeting the expectations and going beyond, as my experiments in pushing the boundaries were generally accepted and even at times encouraged. I not only wrote complex sentences with few grammatical, syntactic, or spelling errors, I played games with writing and explored meanings that writing made possible. I wrote long essays about writers, managed to write with some originality and wit, and wrote some fiction and poetry published in small journals.

In the course of my school writing I learned to pay attention to the kinds of things writers often pay attention to as part of craft knowledge: precise use of words, clarity, conciseness, relevance, selection of poignant examples and details, sequencing of thoughts, playing with sentence rhythms, finding ways to reach audiences. I learned these in a practical way, working on each text I wrote, occasionally getting useful feedback that got me to look a bit more deeply or taking inspiration from writers I admired. Very rarely, though, did any of my classes or teachers explicitly touch on these things, which they typically attributed to individual talent, as something not to be taught.

I also recognized, as many writers do, the importance of creativity and novelty, in having something new to say in new ways that will excite the imaginations of readers. So discovery of what I had to say, what I came to observe, and what thoughts I developed were things I cultivated. Locating my internal voice, exploring the unknown, or seeking the wellsprings of imagination or the muse were mostly an individual quest, though at times shared with others who also fancied themselves as writers. While I spontaneously imitated writers who moved me, the discussion of literary examples in literature classes positioned us students as readers rather than writers. Further, these arts of writing were mostly associated with “creative writing”: poetry, fiction, literary essays. The rest of writing was not considered worth much thought or effort.

So by most common understandings I was a pretty good writer by the time I started teaching. And I had worked hard over a couple of decades to get good at it. I certainly knew a lot more about writing than the young children in my initial first and third grade classes, or a few years later the first-year college students. The main challenge in teaching I thought was to articulate what I knew in a practical way in order to reach the students, especially students who had not had such fortunate educational experiences as I had. Writing to me was knowing the school basics and then having creativity and something to say, combined with lots of practice. Even more I thought that writing was a single set of skills applicable in all circumstances. In holding these beliefs, I was not different from many other people then and still now who are writers and who even teach writing or make decisions about how writing should be taught.

## The Search to Know More

But some of us came to believe that we needed more than that, and we set out to learn more about writing and writers through research, and this knowledge has been important to help us become better teachers of writing. Over the ensuing decades my research has been driven by questions that arose in my teaching. At first the research was very close to the classroom and the academic situation, but as the questions became more fundamental, they led me out into the far corners of human practices of writing. Other researchers had different questions, investigated in different ways, and elaborated different concepts, but they almost always were driven by the same motives of helping our students develop as writers. This communal work enriched my understanding of writing, what I needed to teach, how to go about teaching, and what challenges my students addressed. This work also influenced my understanding of my own writing and development as a writer, what I wrote about, and how I went about writing.

The research of all of us engaged in the endeavor also influenced how the field understands writing and how we teach it. Some of these changes have been consciously enacted by teacher researchers. But other parts of the research have influenced the practices of the field more subtly, working into syllabi, textbooks, and professional standards and into everyday beliefs about writing, though the research may not be explicitly recognized. Thus teachers and writers who are not aware of research may nonetheless incorporate the findings and concepts. So research has turned out to be quite practical, even though the impact is far from complete or universal and our knowledge still remains limited.

I will tell this story in the way I know best, around the questions that drove my inquiries and what I learned from others. What I learned started in my puzzling through experiences and practical challenges, leading me to collect information more systematically and reading what others had found. I gradually widened my lens to include research quite different than my own as I started to understand its importance and observe its impact on classrooms quite different from mine. This story will in large part be focused on North America, since that is where my career developed and where teaching of writing has gotten perhaps the most extensive practical and research attention. But my lens widened as my own experience widened and as research expanded in more parts of the world.

### First Informal Discoveries

My path in understanding the teaching of writing started when I started teaching first and third grades in 1968. I found that young children even from the most difficult of circumstances could write with engagement and creativity if they were working with forms and stories they were familiar with and excited by. They knew the words, characters, and actions. Writing was an extension of the play they engaged in in their own social worlds and imaginations. This led me to

practical classroom experiments, inspired by reformist classroom narratives published at that time of ferment in public education. Herbert Kohl's (1967) inspiring stories in particular opened my eyes to the literacy potential of children. Anne Haas Dyson (1993, 1997, 2003) would later examine these processes in a careful ethnographic way, tracing out how the life, relations, play, and media in young students' worlds drove their imaginations as writers.

When I began teaching university writing in 1971, the ferment in the schools extended into the open admissions policy at the City University of New York. Mina Shaughnessy (1977) directed our teacherly attention toward what students could do and how they went about it, rather than where they did not meet our expectations. My own research proper began when I wondered why we were teaching writing and why all students were required to take two or three terms of writing, creating the very economic basis of our profession. Looking at the teaching of my colleagues, I saw there were many different kinds of approaches we could teach, from formal correctness to personal discovery, from business memos to literary production, from mental health to academic success. While all aims had value and were part of writing, I realized the college writing requirement was foremost to support academic success. While I knew what kind of writing I was asked to do in my particular major at a cloistered elite private university, I could not assume that that was the writing being asked of my students at an urban public university specializing in business. When I surveyed the teachers across my university about what they assigned and what they valued in their courses, I found that almost all writing in all subject areas beyond first year composition was based on reading materials associated with their subjects: book summaries and reports, analyses of texts, reviews of literature, or loosely defined research or term papers. This led me to develop my pedagogy based on writing about sources (Bazerman, 1981/2010), later associated with intertextuality when that term began circulating in U.S. academic circles (Bazerman, 2004).

## From Classroom Praxis to Research: Disciplines, Genres, Intertexts, Activity Systems

The prominence of disciplinary literature in academic writing also attuned me to the different kinds of writing in different disciplines (Bazerman, 1981), differences I was soon to characterize through Carolyn R. Miller's (1984) theorization of genre. To understand more the formation and implicit logics of academic disciplines, I began to look in greater detail at research articles in sciences, and I found science writing to be far from a stable single thing (Bazerman, 1988). It was historically evolving, flexible, aimed at changing intellectual projects, and situated within social structures. It engaged with different kinds of evidence, methods of data gathering and analysis, ideologies of disciplines, systems of activity, and other particularities. Growing understanding of scientific genres led me to consider the genres of other academic areas and the genres of classrooms, how they



are embedded within social systems and how historically writing practices have emerged to embody particular ideologies, practices, relationships, and goals. Simultaneously other researchers, such as Paul A. Prior (1998), David R. Russell (1997), and John M. Swales (1998), were exploring how writing engaged academic activity networks and was influenced by interacting genres. But it also led me outward to consider the genres and activity systems in society beyond academia, as also was being examined by such scholars as Carol Berkenkotter (2008), Berkenkotter & Doris Ravotas (1997), Lucille Parkinson McCarthy (1991), Graham Smart (2006), Dorothy A. Winsor (1990, 2003), and JoAnne Yates (1989).

The social embedding of genres became absolutely convincing to me as I realized how many genres arose out of letters; letters supplied explicit social markers of location and interaction until genres became so recognizably typified that they offered a virtual location for the activity systems that came to rely on them—such as financial instruments, legal documents, corporate communications, or scientific articles (Bazerman, 2000). Paradoxically, this inquiry into the social embedding of genres emphasized genre as flexible, mutable, and historically evolving rather than fixed and stable. This implied that it was important to make students aware of underlying functions, motives, and rhetorical and inquiry dynamics of particular sedimented genres they were being asked to write at the moment and not just the formal characteristics.

One aspect of the communicative systems of genres was that texts existed in relation to each other and referred to each other in systematic ways, creating a virtual landscape of texts—what theorists would come to call the intertext. Berkenkotter et al. (1991) examined how a graduate student's disciplinary growth was tied to how the student positioned himself with respect to his field's professional literature, and Amy J. Devitt (1991) examined how professional genres of writing of tax accounting systematically used and referred to the tax code. I also started elaborating how scientific writers positioned their work in relation to prior texts, creating coherent narratives that pointed toward their own next steps (Bazerman 1991, 1993), and how texts were related to each other in systems of genre (Bazerman, 1994). I would later continue looking into how engagement with professional literatures provided spaces for student intellectual growth (Bazerman et al., 2014).

This vision of how writing was a form of participation in a social system built on texts in organized relation to each other highlighted the importance of teaching students to work with a variety of genres that foregrounded intertextual relations. Nancy Nelson Spivey (1984, 1990; Nelson & Calfee, 1998) and others began to research more systematically how students learned to write papers of synthesis and how members of disciplines located their work within the literature and knowledge of their fields (Halliday and Martin, 1994; Swales, 1983, 1990). This research and related theory pointed to the importance of helping students position their thinking and arguments within the knowledge and texts of their fields as well as the practices of producing, using, and thinking about evidence within the

thought and expression styles of their fields (see Ludwik Fleck, 1935/1979, for an elaboration of thought styles and thought collectives). In my own writing as well, I became ever more aware about the evolving structures of texts in a field and how new texts could advance discussions and knowledge-making within intertexts, through strategic constructive interventions.

This research into how writing was embedded within the particularity of social formations and literature also highlighted that schooling itself offered a particular set of writing situations for students to learn in. In a very real sense we were not teaching writing in general, but only writing for school (Beaufort, 1999; Dias et al., 1999). We then would need to make the case about how writing in school might prepare students for writing in different situations or how it was failing to do so (Brandt, 2001). Understanding the activity system of classrooms became important to understand how the classroom defined writing activity. Assessments, whether local, statewide or national, were also highly influential in what was valued and taught in writing classrooms (Bazerman, 2003; Hillocks, 2002). The identities, motives, experiences, and writing knowledge students brought to the classroom and how well they felt empowered to use those resources also influenced how well their writing was valued in school contexts and how meaningful writing was to be for them (Heath, 1983; Smagorinsky, 1997; Villanueva, 1993). Further, understanding how these identities, motives and experiences aligned with and grew in relation to academic writing identities, motives, and experiences helped us support students' meaningful participation in the worlds of academic writing (Carroll, 2002; Castelló & Donahue, 2012; Poe et al., 2010; Thaiss & Zawacki, 2006).

These lines of research helped deepen some themes in my teaching. As I became familiar with the variety of students in my classes, I recognized the range of experiences, identities, and affiliations they brought with them as well as the personal curiosity, puzzles, and even troubles they brought with them that would be expressed through their writing and would drive their intellectual inquiries (Herrington & Curtis, 2000; Sternglass, 1997) and engage them in meaningful academic writing. Further, as I and others began to engage with international colleagues, we became ever more aware of the particularity of our educational systems and how writing was situated within it (Bazerman & Baltar, 2010; Bazerman et al., 2009; Bazerman et al., 2010; Bazerman et al., 2012; Bazerman & Moritz, 2016; Bonini et al., 2009; Plane et al., 2017; Thaiss et al., 2012).

## Learning from Others about the Psychology of Process

Inquiries into the social location and activity of writing occurred alongside inquiries into the internal psychological processes carried out by others (Bereiter & Scardamalia, 1987; Emig, 1971; Flower & Hayes, 1977, 1981; Hayes & Flower, 1987; Kellogg, 1994). This psychological research brought attention to the complexity of processes and how processes affected the outcomes of writing products.

I began looking more carefully at my own processes and the processes of my students, which confirmed to me the complexity and variety of processes. I also changed my own writing practices to pay more attention to processes, making them more orderly, self-conscious, and intentional. I moved from a single draft writer to one that worked on different kinds of concerns at different moments, in preliminary documents, multiple drafts, and other related texts. In this light I also found very illuminating the psychological research on working memory and cognitive overload that suggested that writers could only maintain focal attention on a limited number of problems at a time, and if they had to expend much effort on basic transcription, they would not have sufficient cognitive resources to attend to higher order issues such as content development, organization of text, or attention to audience needs (Kellogg, 1996; Klein, 1999). Conversely, if they were focusing on these higher order issues or learning new skills, some of the lower order skills might temporarily deteriorate.

Such findings reaffirmed that it was more effective to focus on only a few issues at each stage of drafting, often leaving lower order editing tasks to later iterations. The confidence of knowing that there will always be a chance later to work on coherence, sequencing, and the language could free up working memory in earlier stages to think about social motives and purposes and to locate and develop the ideas and content to be addressed. In my teaching I focused more on the early stages of process, attending to invention, brainstorming, and drafting, as recommended by process scholars—but also tying these to information gathering, analysis, and reasoning. I also became more explicit about drafting, revision, and proofreading—to help students to identify the kind of work to focus on at each moment and to decrease premature concern and anxiety about these later issues while they were still first formulating ideas, plans, and communicative strategies. I also was more attentive to variations my student reported about the ways they worked. While I did not take their reported habits as absolute and unchanging, I took seriously their current practices as places they could grow from rather than as habits to be uprooted and replaced. Developing process was less a prescription or formula than a discussion to help students elaborate their own best ways of addressing tasks and doing the work. In line with making students more conscious, planful, and intentional in their processes, I became interested in the research others were doing on metacognition and reflection (Taczak & Robertson, 2017).

Interest in developing ideas, creativity, and purposes led me to take interest in what colleagues were exploring in meditation and journaling, and sources of emotion, embodied cognition, and flow. Some classroom studies confirmed that such practices seemed to help writers identify states of focused attention on writing—what we might call getting into the right frame of mind or locating the mental writing space (Moffett, 1981; Perl & Egendorf, 1979; Rohman & Wlecke, 1964). The usefulness of this approach led me to look outside of composition practice and research to find illuminating accounts of what kinds of processes we

were trying to work with and how we might best release them. The psychological theories of Lev Vygotsky (1986) and Leon Festinger's (1957) ideas of felt difficulty and cognitive dissonance seemed to articulate some of the processes I experienced and were useful in helping students articulate their emerging thoughts and writing plans. Mihalyi Csikszentmihalyi's (1996) work on flow also helped identify target states of maximal creativity.

Providing an even more concrete sense of internal process was the emerging neural science on cognitive networks and the neurological organization of brain and mind, particularly as synthesized and elaborated by Antonio Damasio (1999, 2010), Gerald M. Edelman (1992), and V. S. Ramachandran (2011). This work highlighted that emotions and intuitions represented summative syntheses and action-oriented choices based on total experiences and knowledge and that emotional embodied responses often preceded conscious awareness. Related to these ideas was the way the neural networks were activated and reorganized themselves in relation to current perceptions and activity. Conscious awareness and rational calculation of these emotions and impulses often followed afterwards as people noticed what was happening to them and where their impulses were leading them.

These findings from neuroscience seemed to me to give greater warrant to trust the intuitive writing formulations that arose in my mind as I focused on my writing tasks and to elicit from students their own spontaneous impulses about what they wanted to say and how to go about formulating their ideas, even if they could not offer at first fully rational accounts. The reasoning would follow afterwards as the text emerged, although thoughts, plans, and detailed formulation might need to be adjusted or refined as the text emerged into public light. Pressing for fully rational and planned texts before students or myself had located and given some shape to our communicative and meaning impulses could misdirect attention. Impulses may not have always been fully formed or informed, but they are the starting point to be worked with, grown, supplemented with new perspectives and knowledge, but not to be readily erased and rarely usefully suppressed

## Locating Psychological Issues Within the Social

My interest in social locations of writing and genres led me to think about how process might be inflected by genre and activity domains; that is, whether disciplinary modes of thinking were intertwined with disciplinary forms of work and how texts were produced. My analyses of scientific and disciplinary writing had already shown there were differences in the reasoning that was overtly displayed in texts and which writers and readers would need to engage in within texts; however, I also wondered how these textual forms might suggest different processes of textual creation and perhaps also over time develop different forms of disciplinary thought and perception. If there were such deeper differences, this would suggest we not only ask students to attend to textual forms and the way

they carried out social relations but also help them develop disciplinary ways of thinking. This, of course, is a more difficult problem to address, as it is not determinable just by the texts students wrote, but I kept returning to it through studies of scientific writers, innovators of scholarly writing, and students engaging with disciplinary writing. In looking at the notebooks and drafts of the physicist Arthur Holly Compton early in my research, for example, I found him focusing on specific kinds of issues related to his science, such as precision and relevance of evidence (Bazerman, 1984).

In looking at intellectual innovators, like Isaac Newton, Adam Smith, and Joseph Priestley, who influenced the evolution of scholarly genres, I found their writing innovations grew out of their changing understanding of their social and disciplinary worlds and the roles and stances they took within them. In turn the new kinds of relations and communications they engaged in through their writing also led to further evolution of their thinking with consequences for their future writing. These innovations also carried within them ways of perceiving the world, disciplinary projects, and social interactive roles which in turn became embedded in genres and became standard practices for those that followed (see Bazerman, 2017, for an overview of how I connected social and psychological issues).

## Individuals and Collectives In and Beyond the Classroom

Making explicit these underlying ideas embedded in genres was useful in explaining to students why they were being asked to write in certain ways, and even more in helping them freshly examine rhetorical choices and to see their role in shaping communications rather than just reproducing forms (Bazerman, 1981a, 1997). More recently, in looking at student writing in disciplines such as education, engineering, political science, and linguistics, I saw the importance of gaining mastery of disciplinary practices of gathering and inscribing data to produce evidence (Bazerman, 2019; Bazerman & Self, 2017; Bazerman et al., 2013; Fahler & Bazerman, 2019). These disciplinary methods of data gathering and analysis help students internalize disciplinary perceptions and reasoning and then articulate them in their writing; moreover, these methods provide students content to report and reason about in their writing, improving the force of their arguments and the depth of reasoning.

Awareness of the importance of data-gathering and analytic methods appropriate to the different disciplines enriched my dialog with students as they were developing and analyzing evidence to identify resources to create credible claims. I came to view writers as constantly engaged in zones of proximal development as they struggled to say new things and represent expanded realities. I saw my role as providing them clues, handholds, and scaffolds to help them expand their conceptual and communicative powers. I was constantly adjusting my assignments to push students into more challenging spaces and calibrating my comments to provide just enough to carry them forward but not so much as to solve their

problems for them or to coerce them into my solutions. Their writing development was in their solving their sequence of writing problems. I also formulated my own writing challenges in this way to constantly stretch myself into rethinking and expanding what I was doing.

Combining the importance of disciplinary practices with findings of neural organization, plasticity, and development led me to consider how disciplinary writing might foster long-term cognitive development. Complex activities such as writing draw on multiple capacities that need to develop in tandem. Different kinds of writing, however, draw on different resources, such as visual memory, numerical and geometric sense, emotional resonance, conceptual reasoning, syntactic complexity, or historical reconstruction. Thus practicing different genres would strengthen both different capacities and different sets of connections and activations among neural subsystems so that the entire suite of relevant resources for each genre would be more easily evoked as a package. Entrainment into genres brings the representational forms and their associated states of mind and perception more readily at hand, familiar, and easy to reproduce. Creativity, spontaneity, and invention then arise within that genred psychological space or in the hybrid conjunction of multiple previously organized spaces. The idea of threshold concepts—concepts that open up a complex of perceptions, ways of reasoning, and theoretical structures—highlights the way that the representational form of conceptual terms integrate with ways of thinking (Meyer & Land, 2005; Adler-Kassner & Wardle, 2015).

Research has made more evident that writing is a collaborative, interactive process (Ede & Lunsford, 1990); similarly, the emergence of writing as solely the product of the unfettered individual consciousness has been shown to be a historical construct (Woodmansee & Jaszi, 1994). Varieties of explicit collaboration, the processes of collaboration, and how writers participate in collaborative projects have been investigated both in the classroom (Lee & Smagorinsky, 1999; LeFevre, 1987; Syverson, 1999) and in industry (Medway, 1994, 1996; Medway & Clark, 2003; Winsor, 1990, 2003). Also less explicit forms of collaboration have been examined, such as peer and supervisory feedback (Paradis et al., 1985; Smart, 1993, 2006), reviewing and refereeing (Myers, 1985, 1990), editing, and even ghostwriting (Brandt, 2015). Simultaneously studies of intertextuality, genres, community discourses, and the social formation of thought have deepened our understanding of how writers are influenced by others. We have come to see that these processes are varied and complex and the skills necessary for successful collaborative participation are not simple or self-evident. Nor is the distribution of credit and authority. Consequently, collaborative and interactive pedagogies have been implemented. Even sole authored writing is no longer viewed simply as the isolated product of an isolated individual, with consequences for our understanding of writing processes. This awareness has also changed practices of many writers, including myself, to be more intentional in seeking and using collaboration, feedback, and other forms of pre-publication interaction.

## Impact of Changing Technologies

While the major technological conditions of writing and text distribution (inexpensive paper, pens and pencils, typewriters, cheap printing, and manual transmission of paper documents) had been fairly stable from the late 19th century until the late 20th, in the last four decades the successive introduction of word processors, desktop computers, multimedia software, the internet, the world wide web, and social media have changed resources, processes, text distribution networks, immediacy, and temporality of interactions available to the writer. From the earliest days of personal computing, researchers have been examining the impact of these technologies of writing, starting with the facilitation of revision and the impact of screen display (Haas, 1996). The potentials of multimedia, hypertext, and what you see is what you get (WYSIWYG) display opened up new complexity of expression as well as greater potential for page design (Wysocki, 2008). The changing interactions of email have fostered new genres and new social formations as well as new rhetorical problems of managing successful interactions (Orlikowski & Yates, 2002; Orlikowski et al., 1995; Spinuzzi, 2008; Yates & Orlikowski, 1992). The internet, while increasing the availability of resources and the immediacy of dense intertextuality, has raised new issues about search, management, and display of materials and links and has intensified long-standing issues of citation and plagiarism. As technologies change rapidly, research has attempted to keep up with new directions and to project what students will need going forward (Bazerman, 2007, 2018).

These new technologies have impacted all writers and students of writing. Our classrooms themselves are increasingly transformed by these technologies as students compose and communicate with each other within digital environments. So research is absolutely necessary to know where we are, what new resources and practices are available to us, and what kind of texts we need to produce for what kinds of social interactions. This includes the changes occurring within specific domains, such as within scientific, medical, or citizen political communication. At the same time technological novelties have motivated a fresh and more complex reexamination of earlier writing technologies and their impact (D. Baron, 1999; N. S. Baron, 2000; Eisenstein, 1979). Such research can also highlight what elements of our prior knowledge and conceptual understanding of writing are useful for coping with new circumstances and what needs to be changed. This work will necessarily be ongoing to respond to the inevitable transformations yet to come.

## Issues We Are Just Beginning to Explore

All of the research areas I have discussed still have further to grow; other areas writing researchers are barely beginning to understand. Our growing knowledge of writing, for example, has revealed that writing is always potentially fraught

with risks, as a writer explores new areas of perception and thought, articulates new experiences, and asserts identities and beliefs within new or challenging public spaces. Writers are often unsure of how they and their claims might be understood, credible, or significant. They must handle these uncertainties at the same time as working at the far reaches of their skills and thoughts. While there has been some research on writing apprehension (Daly, 1978; Daly & Wilson, 1983), and while I have found the psychiatrist Harry Stack Sullivan's (1953) characterization of anxiety useful in understanding and managing my own anxieties and the anxieties of the student writers I work with (Bazerman, 2001), writing anxiety is a topic we have only begun to explore.

Another area I see us as just beginning to conceptualize and research is how writing develops across the lifespan. While we have had substantial research on writing within different ages and situations across the lifespan, we still have little idea about how a person develops as a writer as he or she moves through the changing situations, demands, and learning supports of a lifetime. We have had a few studies of university-to-work transitions, and fewer of high school-to-university, but overall we have little sense of the complexity and variety of the way writing develops over many years in the particularity of individuals' lives (Rogers, 2010). Some projects are trying to raise consciousness and encourage research in this central issue (see Bazerman et al., 2018, and Ryan J. Dippre and Talinn Phillips, 2020), but this work is just beginning.

No doubt there are other areas that scholars are coming to understand that have yet to impact my personal understanding of writing, and there may be areas that have so deeply worked their way into my vision of writing that I don't even recognize them or remember what it was like before I became aware of these ideas. No doubt other scholars would tell different stories of what research was most meaningful to them and how that has changed their writing and teaching practices. Yet all would agree that we see writing in significantly different and consequential ways than we did just a few decades ago. I no longer have the confident naivete that I brought to my first year of teaching writing, born of school success and unexamined cultural beliefs. I do now have, however, a much more articulated and precise sense of what I am doing as a writer and a teacher. Research has changed not just individual visions and actions but also the vision of the field, even for those writers and teachers not particularly attentive to research and theory. Process and revision, collaboration, feedback, genre, intertextuality, resistance and anxiety, identity, transfer, digitality, and lifespan development are now all part of the everyday vocabulary of us writing teachers. So to us writing now is a very different thing than it was.

Research on writing, no matter how arcane seeming, is immensely practical, because it lets us writers know what writing is, what it does, and how we do it. The more we learn about writing, the more effectively we can do it and the better we as teachers can support students in becoming effective writers. Just because some of us as individuals can meet some challenges of writing reasonably successfully



does not mean that we understand all of what writing is. Nor does any current competence mean we know what writing might become. Writing is constantly re-forming and expanding through what humans in their collectivity make of this strange practice of making marks on media to convey symbolic meanings. In the last five millennia we have explored and elaborated this invention. Even more we have built new relations, social groups, institutions, organizations, and activities relying on the communications and records made possible by writing. Through devoting our energies, thoughts, identities, and emotions to participating in these constantly evolving practices in these evolving literate forums we have also transformed ourselves as individuals, as societies, and as a species. What can be more practical than knowing the literate world we are making so we can participate more fully in it?

## References

- Aristotle (2000). *Nicomachean ethics* (R. Crisp, Ed. & Trans.). Cambridge University Press. <https://doi.org/10.1017/CBO9780511802058>
- Adler-Kassner, L., & Wardle, E. (2015). *Naming what we know: Threshold concepts of writing studies*. Utah State University Press.
- Baron, D. (1999). From pencils to pixels: The stages of literacy technologies. In G. E. Hawisher & C. L. Selfe (Eds.), *Passions, pedagogies, and 21st century technologies* (pp. 15–33). Utah State University Press. [https://digitalcommons.usu.edu/usupress\\_pubs/119](https://digitalcommons.usu.edu/usupress_pubs/119)
- Baron, N. S. (2000). *Alphabet to email: How written English evolved and where it's heading*. Routledge. <https://doi.org/10.4324/9780203194317>
- Bazerman, C. (1981). What written knowledge does: Three examples of academic discourse. *Philosophy of the Social Sciences*, 3(11), 361–387. <https://doi.org/10.1177/004839318101100305>
- Bazerman, C. (1984). The writing of scientific non-fiction: Contexts, choices and constraints. *Pre/Text*, 5(1), 39–74.
- Bazerman, C. (1988). *Shaping written knowledge: The genre and activity of the experimental article in science*. University of Wisconsin Press.
- Bazerman, C. (1991). How natural philosophers can cooperate: The literary technology of coordinated investigation in Joseph Priestley's *History and Present State of Electricity* (1767). In C. Bazerman & J. Paradis (Eds.), *Textual dynamics of the professions: Historical and contemporary studies of writing in professional communities* (pp. 13–44). University of Wisconsin Press.
- Bazerman, C. (1993). Intertextual self-fashioning: Gould and Lewontin's representations of the literature. In J. Selzer (Ed.), *Understanding scientific prose* (pp. 20–41). University of Wisconsin Press.
- Bazerman, C. (1994). Systems of genres and the enactment of social intentions. In A. Freedman & P. Medway (Eds.), *Genre and the new rhetoric* (pp. 79–101). Taylor & Francis.
- Bazerman, C. (1997). *Involved: Writing for college, writing for your self*. Houghton Mifflin.

- Bazerman, C. (2000). Letters and the social grounding of differentiated genres. In D. Barton & N. Hall (Eds.), *Letter writing as a social practice* (pp. 15–30). John Benjamins. <https://doi.org/10.1075/swll.9.02baz>
- Bazerman, C. (2001). Anxiety in action: Sullivan's interpersonal psychiatry as a supplement to Vygotskian psychology. *Mind, Culture, and Activity*, 8(2), 174–186. [https://doi.org/10.1207/S15327884MCA0802\\_04](https://doi.org/10.1207/S15327884MCA0802_04)
- Bazerman, C. (2003). What is not institutionally visible does not count: The problem of making activity assessable, accountable, and plannable. In C. Bazerman & D. Russell (Eds.), *Writing selves/Writing societies*. The WAC Clearinghouse; Mind, Culture, and Activity. <https://doi.org/10.37514/PER-B.2003.2317>
- Bazerman, C. (2004). Intertextualities: Volosinov, Bakhtin, literary theory, and literacy studies. In A. F. Ball & S. W. Freedman (Eds.), *Bakhtinian perspectives on language, literacy, and learning* (pp. 53–65). Cambridge University Press. <https://doi.org/10.1017/CBO9780511755002.003>
- Bazerman, C. (2007). WAC for cyborgs: Discursive thought in information-rich environments. In P. Takayoshi & P. Sullivan (Eds.), *Labor, writing technologies, and the shaping of composition in the academy* (pp. 97–110). Hampton Press.
- Bazerman, C. (2010). *The informed writer: Using sources in the disciplines*. The WAC Clearinghouse. <https://wac.colostate.edu/books/practice/informedwriter/> (Original work published 1981 by Houghton Mifflin)
- Bazerman, C. (2017). The psychology of writing situated within social action: An empirical and theoretical program. In P. Portanova, J. M. Rifenburg, & D. Roen (Eds.), *Contemporary perspectives on cognition and writing* (pp. 21–38). The WAC Clearinghouse; University Press of Colorado. <https://doi.org/10.37514/PER-B.2017.0032.2.01>
- Bazerman, C. (2018). What do humans do best? Developing communicative humans in the changing socio-cyborgian landscape. In S. W. Logan & W. H. Slater (Eds., with J. Enoch & S. Wible), *Academic and professional writing in an age of accountability* (pp. 187–203). Southern Illinois University Press.
- Bazerman, C. (2019). Inscribing the world into knowledge: Data and evidence in disciplinary academic writing. In C. Bazerman, B. Y. G. Pinzón, D. Russell, P. Rogers, L. B. Peña, E. Narváez, P. Carlino, M. Castelló, & M. Tapia-Ladino (Eds.), *Conocer la escritura: Investigación más allá de las fronteras [Knowing writing: Writing research across borders]* (pp. 279–294). Editorial Pontificia Universidad Javeriana; The WAC Clearinghouse. <https://doi.org/10.37514/INT-B.2019.0421.2.13>
- Bazerman, C., Applebee, A. N., Berninger, V. W., Brandt, D., Graham, S., Jeffery, J. V., Matsuda, P. K., Murphy, S., Rowe, D. W., Schleppegrell, M., & Wilcox, K. C. (2018). *Lifespan development of writing*. National Council of Teachers of English. <https://wac.colostate.edu/books/ncte/lifespan-writing/>
- Bazerman, C., & Baltar, M. (Eds.). (2010) Genre [Special issue]. *Revista Brasileira de Linguística Aplicada*, 10(2). <https://wac.colostate.edu/journals/archived-journals/siget/rbla/>
- Bazerman, C., Bonini, A., & Figueiredo, D. (Eds.). (2009). *Genre in a changing world*. The WAC Clearinghouse; Parlor Press. <https://doi.org/10.37514/PER-B.2009.2324>

- Bazerman, C., Dean, C., Early, J., Lunsford, K., Null, S., Rogers, P., & Stansell, A. (Eds.). (2012). *International advances in writing research: Cultures, places, measures*. The WAC Clearinghouse; Parlor Press. <https://doi.org/10.37514/PER-B.2012.0452>
- Bazerman, C., Krut, B., Lunsford, K., McLeod, S., Null, S., Rogers, P., & Stansell, A. (Eds.). (2010). *Traditions of writing research*. Routledge. <https://doi.org/10.4324/9780203892329>
- Bazerman, C., & Moritz, M. E. W. (Eds.). (2016). Higher education writing studies in Latin America [Special Issue]. *Ilha do Desterro*, 69(3). <https://periodicos.ufsc.br/index.php/desterro/issue/view/2360>
- Bazerman, C., & Self, B. (2017). Writing the world to build the world, iteratively: Inscribing data and projecting new materialities in an engineering design project. In R. K. Durst, G. E. Newell, & J. D. Marshall (Eds.), *English language arts research and teaching: Revisiting and extending Arthur Applebee's contributions* (pp. 91–106). Routledge.
- Bazerman, C., Simon, K., Ewing, P., & Pieng, P. (2013). Domain-specific cognitive development through written genres in a teacher education program. *Pragmatics & Cognition*, 21(3), 530–551. <https://doi.org/10.1075/pc.21.3.07baz>
- Bazerman, C., Simon, K., & Pieng, P. (2014). Writing about reading to advance thinking: A study in situated cognitive development. In P. Klein, P. Boscolo, L. Kirkpatrick, & C. Gelati (Eds.), *Writing as a learning activity* (pp. 249–276). Brill. [https://doi.org/10.1163/9789004265011\\_012](https://doi.org/10.1163/9789004265011_012)
- Beaufort, A. (with Heath, S. B.). (1999). *Writing in the real world: Making the transition from school to work*. Teachers College Press.
- Bereiter, C., & Scardamalia, M. (1987). *The psychology of written composition*. Lawrence Erlbaum Associates. <https://doi.org/10.4324/9780203812310>
- Berkenkotter, C. (2008). *Patient tales: Case histories and the uses of narrative in psychiatry*. University of South Carolina Press.
- Berkenkotter, C., Huckin, T., & Ackerman, J. (1991). Social context and socially constructed texts: The initiation of a graduate student into a writing research community. In C. Bazerman & J. Paradis (Eds.), *Textual dynamics of the professions: Historical and contemporary studies of writing in professional communities* (pp. 191–215). University of Wisconsin Press.
- Berkenkotter, C., & Ravotas, D. (1997). Genre as tool in the transmission of practice over time and across professional boundaries. *Mind, Culture, and Activity*, 4(4), 256–274. [https://doi.org/10.1207/s15327884mca0404\\_4](https://doi.org/10.1207/s15327884mca0404_4)
- Bonini, A., Figueiredo, D. de C., & Bazerman, C. (Eds.). (2009). Studies in Brazil [Special issue]. *L1—Educational Studies in Language and Literature*. <https://l1research.org/issue/view/49>
- Brandt, D. (2001). *Literacy in American lives*. Cambridge University Press. <https://doi.org/10.1017/CBO9780511810237>
- Brandt, D. (2015). *The rise of writing: Redefining mass literacy*. Cambridge University Press. <https://doi.org/10.1017/CBO9781316106372>
- Carroll, L. A. (2002). *Rehearsing new roles: How college students develop as writers*. Southern Illinois University Press.

- Castelló, M., & Donahue, C. (Eds.). (2012). *University writing: Selves and texts in academic societies*. Emerald Group.
- Csikszentmihalyi, M. (1996). *Creativity: Flow and the psychology of discovery and invention*. Harper Collins.
- Daly, J. A. (1978). Writing apprehension and writing competency. *The Journal of Educational Research*, 72(1), 10–14. <https://doi.org/10.1080/00220671.1978.10885110>
- Daly, J. A., & Wilson, D. A. (1983). Writing apprehension, self-esteem, and personality. *Research in the Teaching of English*, 17(4), 327–341. <https://doi.org/10.58680/rte198315695>
- Damasio, A. (1999). *The feeling of what happens: Body and emotion in the making of consciousness*. Harvest.
- Damasio, A. (2010). *Self comes to mind: Constructing the conscious brain*. Pantheon Books.
- Devitt, A. J. (1991). Intertextuality in tax accounting: Generic, referential, and functional. In C. Bazerman & J. Paradis (Eds.), *Textual dynamics of the professions: Historical and contemporary studies of writing in professional communities* (pp. 336–357). University of Wisconsin Press.
- Dias, P., Freedman, A., Medway, P., & Paré, A. (1999). *Worlds apart: Acting and writing in academic and workplace contexts*. Lawrence Erlbaum Associates. <https://doi.org/10.4324/9781410602336>
- Dippre, R. J., & Phillips, T. (Eds.). (2020). *Approaches to lifespan writing research: Generating an actionable coherence*. The WAC Clearinghouse; University Press of Colorado. <https://doi.org/10.37514/PER-B.2020.1053>
- Dyson, A. H. (1993). *Social worlds of children learning to write in an urban primary school*. Teachers College Press.
- Dyson, A. H. (1997). *Writing superheroes: Contemporary childhood, popular culture, and classroom literacy*. Teachers College Press.
- Dyson, A. H. (2003). *The brothers and sisters learn to write: Popular literacies in childhood and school cultures*. Teachers College Press.
- Ede, L., & Lunsford, A. (1990). *Singular texts/Plural authors: Perspectives on collaborative writing*. Southern Illinois University Press.
- Edelman, G. M. (1992). *Bright air, brilliant fire: On the matter of the mind*. Basic Books.
- Eisenstein, E. L. (1979). *The printing press as an agent of change: Communications and cultural transformations in early modern Europe (Vols. 1 & 2)*. Cambridge University Press. <https://doi.org/10.1017/CBO9781107049963>
- Emig, J. (1971). *The composing processes of twelfth graders*. National Council of Teachers of English.
- Fahler, V., & Bazerman, C. (2019). Data power in writing: Assigning data analysis in a general education linguistics course to change ideologies of language. *Across the Disciplines*, 16(4), 4–26. <https://doi.org/10.37514/ATD-J.2019.16.4.18>
- Festinger, L. (1957). *A theory of cognitive dissonance*. Row, Peterson, and Company.
- Fleck, L. (1979). *Genesis and development of a scientific fact* (T. J. Trenn & R. K. Merton, Ed., F. Bradley & T. J. Trenn, Trans.). University of Chicago Press. (Original work published 1935)
- Flower, L. S., & Hayes, J. R. (1977). Problem-solving strategies and the writing process. *College English*, 39(4), 449–461. <https://doi.org/10.58680/ce197716437>

- Flower, L., & Hayes, J. R. (1981). A cognitive process theory of writing. *College Composition and Communication*, 32(4), 365–387. <https://doi.org/10.58680/ccc198115885>
- Haas, C. (1996). *Writing technology: Studies in the materiality of writing*. Lawrence Erlbaum Associates. <https://doi.org/10.4324/9780203811238>
- Halliday, M. A. K., & Martin, J. (1994). *Writing science*. University of Pittsburgh Press.
- Hayes, J. R., & Flower, L. S. (1987). On the structure of the writing process. *Topics in Language Disorders*, 7(4), 19–30. <https://doi.org/10.1097/00011363-198709000-00004>
- Heath, S. B. (1983). *Ways with words: Language, life and work in communities and classrooms*. Cambridge University Press. <https://doi.org/10.1017/CBO9780511841057>
- Herrington, A. J., & Curtis, M. (2000). *Persons in process: Four stories of writing and personal development in college*. National Council of Teachers of English.
- Hillocks, G., Jr. (with Myers, M.). (2002). *The testing trap: How state writing assessments control learning*. Teachers College Press.
- Kellogg, R. T. (1994). *The psychology of writing*. Oxford University Press. <https://doi.org/10.1093/os0/9780195129083.001.0001>
- Kellogg, R. T. (1996). A model of working memory in writing. In C. M. Levy & S. Ransdell (Eds.), *The science of writing: Theories, methods, individual differences, and applications* (pp. 57–71). Lawrence Erlbaum Associates.
- Klein, P. D. (1999). Reopening inquiry into cognitive processes in writing-to-learn. *Educational Psychology Review*, 11(3), 203–270. <https://doi.org/10.1023/A:1021913217147>
- Kohl, H. (1967). *36 Children*. New American Library.
- Lee, C. D., & Smagorinsky, P. (Eds.). (1999). *Vygotskian perspectives on literacy research: Constructing meaning through collaborative inquiry*. Cambridge University Press.
- LeFevre, K. B. (with D'Angelo, F. J.). (1987). *Invention as a social act*. Southern Illinois University Press.
- McCarthy, L. P. (1991). A psychiatrist using DSM-III: The influence of a charter document in psychiatry. In C. Bazerman & J. Paradis (Eds.), *Textual dynamics of the professions: Historical and contemporary studies of writing in professional communities*, (pp. 358–378). University of Wisconsin Press.
- Medway, P. (1994). Language, learning and “communication” in an architect’s office. *English in Education*, 28(2), 3–14. <https://doi.org/10.1111/j.1754-8845.1994.tb01115.x>
- Medway, P. (1996). Virtual and material buildings: Construction and constructivism in architecture and writing. *Written Communication*, 13(4), 473–514. <https://doi.org/10.1177/0741088396013004002>
- Medway P., & Clark B. (2003). Imagining the building: Architectural design as semiotic construction. *Design Studies*, 24(3), 255–273. [https://doi.org/10.1016/S0142-694X\(02\)00055-8](https://doi.org/10.1016/S0142-694X(02)00055-8)
- Meyer, J. H. F., & Land, R. (2005). Threshold concepts and troublesome knowledge (2): Epistemological considerations and a conceptual framework for teaching and learning. *Higher Education*, 49, 373–388. <https://doi.org/10.1007/s10734-004-6779-5>

- Miller, C. R. (1984). Genre as social action. *Quarterly Journal of Speech*, 70(2), 151–167. <https://doi.org/10.1080/00335638409383686>
- Moffett, J. (1981). *Coming on center: English education in evolution*. Boynton/Cook
- Myers, G. (1985). The social construction of two biologists' proposals. *Written Communication*, 2(3), 219–245. <https://doi.org/10.1177/0741088385002003001>
- Myers, G. (1990). *Writing biology: Texts in the social construction of scientific knowledge*. University of Wisconsin Press.
- Nelson, N., & Calfee R. C. (Eds.). (1998). *The reading-writing connection*. National Society for the Study of Education.
- Orlikowski, W. J., & Yates, J. (2002). It's about time: Temporal structuring in organizations. *Organization Science*, 13(6), 684–700. <https://doi.org/10.1287/orsc.13.6.684.501>
- Orlikowski, W. J., Yates, J., Okamura, JK., & Fujimoto, M. (1995). Shaping electronic communication: The metastructuring of technology in the context of use. *Organization Science*, 6(4), 423–444. <https://doi.org/10.1287/orsc.6.4.423>
- Paradis, J., Dobrin, D., & Miller, R. (1985). Writing at Exxon ITD: Notes on the writing environment of an R&D organization. In L. Odell & D. Goswami (Eds.), *Writing in nonacademic settings* (pp. 281–307). Guilford Press.
- Perl, S., & Egendorf, A. (1979). The process of creative discovery: Theory, research, and implications for teaching. In D. McQuade (Ed.), *Linguistics, stylistics, and the teaching of composition* (pp. 118–134). University of Akron.
- Plane, S., Bazerman, C., Rondelli, F., Donahue, C., Applebee, A. N., Boré, C., Carlino, P., Larruy, M. M., Rogers, P., & Russell, D. R. (Eds.). (2017). *Research on writing: Multiple perspectives*. The WAC Clearinghouse; CREM. <https://doi.org/10.37514/INT-B.2017.0919>
- Poe, M., Lerner, N., & Craig, J. (with Paradis, J.). (2010). *Learning to communicate in science and engineering: Case studies from MIT*. MIT Press.
- Prior, P. A. (1998). *Writing/disciplinarity: A sociohistoric account of literate activity in the academy*. Routledge. <https://doi.org/10.4324/9780203810651>
- Ramachandran, V. S. (2011). *The tell-tale brain: A neuroscientist's quest for what makes us human*. W. W. Norton & Company.
- Rogers, P. (2010). The contributions of North American longitudinal studies of writing in higher education to our understanding of writing development. In C. Bazerman, R. Krut, K. Lunsford, S. McLeod, S. Null, P. Rogers, & A. Stansell (Eds.), *Traditions of writing research* (pp. 365–377). Routledge.
- Rohman, D. G., & Wlecke, A. O. (1964). *Pre-writing: The construction and application of models for concept formation in writing*. Michigan State University.
- Russell, D. R. (1997) Rethinking genre in school and society: An activity theory analysis. *Written Communication*, 14(4), 504–554. <https://doi.org/10.1177/0741088397014004004>
- Shaughnessy, M. P. (1977). *Errors and expectations: A guide for the teacher of basic writing*. Oxford University Press.
- Smagorinsky, P. (1997). Personal growth in social context: A high school senior's search for meaning in and through writing. *Written Communication*, 14(1), 63–105. <https://doi.org/10.1177/0741088397014001002>

- Smart, G. (1993). Genre as community invention: A central bank's response to its executives' expectations as readers. In R. Spilka (Ed.), *Writing in the workplace: New research perspectives* (pp. 124–140). Southern Illinois University Press.
- Smart, G. (2006). *Writing the economy: Activity, genre, and technology in the world of banking*. Equinox.
- Spinuzzi, C. (2008). *Network: Theorizing knowledge work in telecommunications*. Cambridge University Press.
- Spivey, N. N. (1984). *Discourse synthesis: Constructing texts in reading and writing*. International Reading Association.
- Spivey, N. N. (1990). Transforming texts: Constructive processes in reading and writing. *Written Communication*, 7(2), 256–287. <https://doi.org/10.1177/0741088390007002004>
- Sternglass, M. S. (1997). *Time to know them: A longitudinal study of writing and learning at the college level*. Routledge. <https://doi.org/10.4324/9780203810835>
- Sullivan, H. S. (with Cohen, M. B.). (1953). *The interpersonal theory of psychiatry* (H. S. Perry & M. L. Gawel, Eds.). W. W. Norton & Company.
- Swales, J. (1983). *Aspects of article introductions*. ESP Research Report. Aston University.
- Swales, J. M. (1990). *Genre analysis: English in academic and research settings*. Cambridge University Press.
- Swales, J. M. (1998). *Other floors, other voices: A textography of a small university building*. Lawrence Erlbaum Associates. <https://doi.org/10.4324/9780203811153>
- Syverson, M. A. (1999). *The wealth of reality: An ecology of composition*. Southern Illinois University Press.
- Taczak, K., & Robertson, L. (2017). Metacognition and the reflective writing practitioner: An integrated knowledge approach. In P. Portanova, J. M. Rifenburg, & D. Roen (Eds.), *Contemporary perspectives on cognition and writing* (pp. 211–229). The WAC Clearinghouse; University Press of Colorado. <https://doi.org/10.37514/PER-B.2017.0032.2.11>
- Thaiss, C., Bräuer, G., Carlino, P., Ganobcsik-Williams, L., & Sinha, A. (Eds.). (2012). *Writing programs worldwide: Profiles of academic writing in many places*. The WAC Clearinghouse; Parlor Press. <https://doi.org/10.37514/PER-B.2012.0346>
- Thaiss, C., & Zawacki, T. M. (2006). *Engaged writers and dynamic disciplines: Research on the academic writing life*. Boynton Cook.
- Villanueva, V., Jr. (1993). *Bootstraps: From an American academic of color* (ED 362865). ERIC. <http://files.eric.ed.gov/fulltext/ED362865.pdf>
- Vygotsky, L. (1986). *Thought and language* (A. Kozulin, Ed.). MIT Press.
- Winsor, D. A. (1990). Engineering writing/Writing engineering. *College Composition and Communication*, 41(1), 58–70. <https://doi.org/10.58680/cc19898980>
- Winsor, D. A. (2003). *Writing power: Communication in an engineering center*. State University of New York Press.
- Woodmansee, M., & Jaszi, P. (Eds.). (1994). *The construction of authorship: Textual appropriation in law and literature*. Duke University Press.
- Wysocki, A. F. (2008). Seeing the screen: Research into visual and digital writing practices. In C. Bazerman (Ed.), *Handbook of research on writing: History, society, school, individual, text* (pp. 735–752). Lawrence Erlbaum Associates.

Yates, J. (1989). *Control through communication: The rise of system in American management*. Johns Hopkins University Press. <https://doi.org/10.56021/9780801837579>

Yates, J., & Orlikowski, W. J. (1992). Genres of organizational communication: A structurational approach to studying communication and media. *Academy of Management Review*, 17(2), 299–326. <https://doi.org/10.5465/amr.1992.4279545>



## Chapter 12.A? Developmental? Path? To? Text? Quality?

A special issue of the *Journal of Literacy Research*, titled “A Developmental Path to Text Quality” (Tolchinsky & Stavans, 2019), has brought together three significant and complex issues: writing development, text quality, and path (which in the school context implies curriculum or educationally structured activities).<sup>1</sup> Furthermore, in providing contrasts across languages and nations with differing educational systems, the studies in the special issue offer clues about the effect of language and educational culture on development and what may remain constant across these differences. Nonetheless, the issue title presents text quality as the goal of the path, putting focus on the evaluated text rather than on the writer’s pathway, motives, and transformations. The comments that follow are directed to this general goal of text quality rather than the particulars of any of the articles.

The turn in writing studies toward investigating how writers change over time is a significant advance from studies of learning specific language skills, the effect of instruction, or writing processes and strategies (whether individual or collaborative)—although no doubt these will remain important areas for research. Development is variable, multidimensional, and idiosyncratic, situated within the particularities, interests, meanings, and experiences of each person’s life. It takes a long time for writers to develop, writing in many situations over many years. Development at each moment draws on the resources, habits, stances, skills, and problem-solving practices from prior experiences and has consequences for further developmental opportunities (Bazerman, Applebee, Berninger, Brandt, Graham, Jeffery, et al, 2018; Bazerman, Applebee, Berninger, Brandt, Graham, Matsuda, et al., 2017).

The complexity and variability of development and the limited number of truly developmental studies we researchers currently have access to mean that our work at this time is only halting and exploratory, locating pieces that one day may fall into larger patterns. We cannot, consequently, be sure of any of the initial terms we rely on. Therefore, we must look at each of the terms of the title of this special issue with caution, interrogating each of them.

Issues of development, quality, and path might be applied at any moment in a writer’s lifetime trajectory. Any experience in writing (whether within formal instructional settings or not) is just a passage point contributing to development but not the end of the story or the mark of complete mastery. Nonetheless, schooling as a total process provides an extensive set of more or less structured experiences over years aimed at improving student performance and understanding.

---

1. This chapter originally appeared as “A? Developmental? Path? To? Text? Quality?” by C. Bazerman, 2019, *Journal of Literacy Research*, 51(3), 381–387 (<https://doi.org/10.1177/1086296X19858152>). Copyright 2019 by C. Bazerman.

While each student may be following an idiosyncratic path and interests outside of schooling, when they are fulfilling school tasks, students are constrained and focused by school mandates. Their expressive communicative and social needs and interests are for many years filtered through (or consciously defined in contrast to) this institutional location.

Early schooling, in particular, creates a passage point from the prior and ongoing lifeworld into an organized set of activities to prepare students for life beyond schooling. In daily life, children may be exposed to and engage in a variety of family and community practices; student horizons of learning, nonetheless, are likely to focus on the schooling that will occupy them and provide the most consequential sites of writing for the next dozen or sixteen or twenty years. This is the point when the child meets the curriculum and curriculum meets the child. So, at this moment when writing development becomes entangled with writing curriculum, we in writing studies perhaps can start to unpick the entangled threads and see how curriculum begins to exert a centripetal force on the diversity of experiences and individual sense making of growing writers and how the child might fight against the current to carve out fresh uses, solutions, and meanings both in the context of school and beyond (Bazerman et al., 2017; Bazerman et al., 2018).

Investigating writing development in the early school years, further, is useful for examining how the most basic and visible normalized elements of written language interact with the more communicative, relational, and expressive elements of writing development. Throughout their lives, writers work with words, making decisions about which to choose and how to put them together, as Ernest Hemingway notably said when asked why he revised the end of *Farewell to Arms* 39 times: “to get the words right” (Plimpton, 1958). The greater access writers have to wider language resources, the better they can select and combine words in ways that are recognizable, interpretable, and acceptable to others. Further, having those language resources readily at hand frees cognitive and emotional resources to be devoted to other considerations in putting words together, increasing the writer’s expressive potential.

Early education, therefore, needs to attend to basic inscription, graphophonemic correspondences, spelling, grammatical and syntactic conventions, and basic text organization. But the question remains whether other aspects of writing development—such as motivations and intentions, audiences and situations, strategies and planning, text structures and continuity, elaboration of content and reasoning—should be postponed while transcription preliminaries are mastered or whether preliminaries are most effectively and efficiently developed in more encompassing communicative contexts. Nonetheless, early attention to fundamental transcription skills highlights skills that are sometimes lost sight of in more advanced writing education. Few music educators would, in contrast, doubt that technical training and practice in the fundamentals of sound production and music theory must continue and be refined throughout the musician’s career, expanding expressive and creative potentials. Early writing education may provide important information about the relation of technical and communicative development (Rowe, 2018).

Writing development in early schooling can as well reveal much about the bigger picture of writing development, offering clues to untangle the complex relations between curriculum and personal development. But to untangle these puzzles, we need to be careful in not assuming particular solutions implied in our terms. To place the publication of this special issue and its studies in relation to the broader investigation of writing development, it is useful to sort out where these studies are situating themselves with respect to the many complexities of writing development. In that spirit, I will interrogate each term in the thematic title of this special issue, though for expository clarity I will not follow strict syntactic order.

## Path?

Do studies seek to understand the developmental path all humans go through? Or do they seek to guide school curricula to be more developmentally appropriate or to set out a more reasonable sequence to support development? Or do they propose a path by which research may tell us more about the development of writers? The title of this special issue promises a path to accomplishment of some evaluative criteria by students engaged in particular kinds of curricular experiences (see the questions about *quality* that follow). Is this end to be achieved by understanding development, identifying necessary supports, or implementing curricula? Since this special issue looks comparatively at the accomplishments of children in different countries with different languages and presumably different curricular structures, it is already looking at multiple paths, unless a single pattern is anticipated to emerge from the comparison. If so, will the pattern cover the entire dynamic of development or only some elements? In what aspect of writing development, then, ought researchers to be looking for patterned similarity across situations, conditions, personalities, languages, and individuals?

## A?

Why is *path* identified as singular, but not determinate? Is this because certain students following one path are being singled out for attention? Or are the authors proposing some form of educational path that might be one of many to lead to improved quality? Or that an educational regime can set out for children an actual path by which they develop—that is, the curriculum will be experienced in the same way for all the children in it and will have similar effects on all of them? On the other hand, is it suggested that there is not just one path (whether curricular, research, or individual) and that alternatives are reasonably to be expected?

## Developmental?

In what way is a developmental perspective adopted in the research here and elsewhere? Is development a context within which individual episodes of growth

or instruction are examined? Is development a theoretical assumption adopted in the collection and evaluation of data over time? Is development assumed to be the result of short-term changes in performance in response to school activities rather than a qualitative change or reorganization at certain junctures? Or is development conceptualized as the synthetic crystallization of multiple kinds of changes? Is the concept of development itself the object of investigation? If so, what are the relevant forms of data that will identify developmental processes or the overall development of writing in a child's life beyond the ability to meet curricular goals or the expectations embedded in school tasks? That is, how do studies disambiguate individual development from alignment to curricular mandates? Or is development considered to be congruent with the ability to perform the tasks set out in the curriculum and measured in school assessments?

Further, if looking beyond school textual productions to locate development, do studies continue to look primarily at textual productions but outside school contexts? Or do studies examine processes, practices, habits, dispositions, or orientations? Or strategies, reflections, problem framing, choice making, and other meta-talk? Or other indicators of writers' developing skills and understanding? Further, do studies look at the variables that might influence the development and the way in which they would impact, support, advance, impede, or direct development? What data would indicate these variables, the processes these variables would engage, and their effect on the way the writer would approach any task going forward? How might writing development interact with other aspects of development (whether cognitive, emotional, social, linguistic, relational, physical, economic, or other), and how would studies determine that?

## To?

What kinds of perception, attention, conscious awareness, self-monitoring, and self-direction are part of people working on and improving writing? What are the motivations, satisfactions, emotions, perceived rewards, or social relations that might support those forms of engagement, and what emotions, anxieties, or perceived obstacles interfere? Conversely, do habituation and unreflective, undirected practice have a role in development? What kinds of experiences in writing set up writers to address further challenges as part of school and nonschool experiences? How are these psychological, social, and situational elements crystalized in the performance of any text or group of texts? And how do these concomitants of individual performances or sequences of performances influence writing development?

## Text?

What are the salient elements of texts to identify in considering development? Are these the same as those identified by curricular traditions or current recommendations? Or is there something else to be attended to? What dialect and

linguistic diversity features enter into texts produced? How significant are these language differences within the totality of the text and in what way? How do the various elements and features carry out the social work of texts, and how are they the result of writers' processes, resources, positioning, stances, or perceptions? Further, how do the text and its production fit within sequences of events and activities within organized social settings to take on meanings for readers and writers? What role does interpretable meaning play within the text, and how do the various features of the text contribute to or detract from that meaning? Further, to what extent and in what way can the text be understood apart from the social situation, activity, and authorial identification realized through the text?

## Quality?

What is text quality, and how should it be assessed? Is text quality a clearly definable thing, or is it only identifiable through the assessments used in schooling to which curriculum and classroom practices may be aligned? To what extent are content, accuracy of representation, depth of evidence, or quality of reasoning part of text quality, or is text quality to be evaluated in content-neutral terms only? Is text quality a holistic entity, or do texts display multiplicities of qualities? If so, are these multiple qualities coherently aggregable in an overall assessment of quality?

Further, how are the quality or qualities displayed in each text the function of different qualities developed in the writer? That is, are texts in some way an embodiment of the character, personality, social relations, identity, or presence of the individual? Or are texts the result of qualities enacted in writing processes, such as persistence, attentiveness, meticulousness, or imagination? How might quality or qualities be related to the dynamics of situations? Is quality, alternatively, a function of social or interactional success in situations? If so, how can success within situations be identified, and how can textual quality be compared across differing situations? How salient, meaningful, and motivating are evaluations of text quality or success to the writer, the various readers, or the researcher? Might they each have different ways of characterizing quality?

In addition, to what extent does the evaluation of text quality require making texts comparable in meeting standard skills or expectations? How are tasks and texts aligned sufficiently to be comparable for quality to be evaluated? How does comparability allow for the presence of varied interests and resources of the writers? Are there other aspects of the writing development that might be revealed in less comparable parts of the text? To what extent does the evaluation of text quality attend to the communicative value of the text in expressing novel information, argument, affect, or effect—thereby making each text potentially worth the attention of its relevant reader? Does the assessor of text quality share the same interests and motives for attentiveness as the primary readers, or are they one and the same? Is the evaluation of quality in part or in whole an evaluation of the student's ability to align with and accommodate to the school situation and

mandates? What are the criteria of attention and interest in educational settings, and how do they compare to those in other settings?

## Final Comments

The questions offered here reverberate with the many studies of writing that have revealed the complexity of writing activity, engagement, and learning, situated in the particularity of individual lives, writing situations, textual intention, and meaning, even if these studies are not strictly developmental. More locally germane, the perspective embodied in these questions grows out of the positions articulated in the work of the Lifespan Development of Writing Group, which has proposed principles for the study of writing development (Bazerman et al., 2017; Bazerman et al., 2018). However evidence may fall out in the long run, our understanding will advance most effectively if we in writing studies are fully explicit about what we are looking for, doing, and assuming, as well as how each inquiry fits in with and contributes to building the large and complex picture of writing development. The picture at this point seems to be so large and inchoate we cannot assume that the meaning and value of each study for our growing understanding will be self-evident. In the short run, what this means for practice and assessment is that we attend to the individuality of our students' writing development, appreciate the particularity of the meanings they are bringing into being, and provide opportunities for them to continue developing in their own distinctive ways

## References

- Bazerman, C., Applebee, A. N., Berninger, V. W., Brandt, D., Graham, S., Jeffery, J. V., Matsuda, P. K., Murphy, S., Rowe, D. W., Schleppegrell, M., & Wilcox, K. C. (2018). *Lifespan development of writing*. National Council of Teachers of English. <https://wac.colostate.edu/books/ncte/lifespan-writing/>
- Bazerman, C., Applebee, A. N., Berninger, V. W., Brandt, D., Graham, S., Matsuda, P. K., Murphy, S., Rowe, D. W., & Schleppegrell, M. (2017). Forum: Taking the long view on writing development. *Research in the Teaching of English*, 51(3), 351–360. <https://doi.org/10.58680/rte201728980>
- Plimpton, G. (1958). Ernest Hemingway, the art of fiction no. 21. *Paris Review*, 18. <https://www.theparisreview.org/interviews/4825/the-art-of-fiction-no-21-ernest-hemingway>
- Rowe, D. W. (2018). Writing development in early childhood. In C. Bazerman, A. N. Applebee, V. W. Berninger, D. Brandt, S. Graham, J. V. Jeffery, P. K. Matsuda, S. Murphy, D. W. Rowe, M. Schleppegrell, & K. C. Wilcox. *Lifespan development of writing* (pp. 55–110). National Council of Teachers of English. <https://wac.colostate.edu/docs/books/lifespan-writing/chapter3.pdf>
- Tolchinsky, L., & Stavans, A. (Eds.). (2019). A developmental path to text quality [Special issue]. *Journal of Literacy Research*, 51(3). <https://journals.sagepub.com/toc/jlrb/51/3>

## Chapter 13. What Does a Model Model? And for Whom?

There are many ways of conceptualizing writing to aggregate theory and findings, drawing on different approaches and literatures.<sup>1</sup> I have elsewhere (most fully in Bazerman, 2013a, 2013b) elaborated a conceptualization of writing that integrates sociohistorical, rhetorical, phenomenological, linguistic, and cultural psychological approaches. Rather than repeat that conceptualization here, however, I will explain how that conceptualization calls into question the common practice among psychologists of offering models of writing processes. The critique I offer also extends to models of textual forms offered by applied linguists. Ultimately, I will argue that while such models of processes and textual forms may be of limited pedagogic use, they offer a foundational understanding neither of psychological processes nor of textual form. Individual writers may contingently invoke personally chosen models to guide what particular texts might look like and how they as writers may go about producing them, but these are not general models. That is, models are for users rather than analysts and are invoked situationally and mutably.

A psychological model of writing is different than models from other disciplines. From a linguistic perspective a model of writing might describe the normative forms a writer might be expected to produce within a designated sign system of letters, grammar, syntax, and text structure considered appropriate for a particular text, or it might describe the rules that might govern the production of such forms. Models in this sense are widely used descriptively within linguistic and applied linguistic circles and also prescriptively in form-based pedagogies. These generalized representations following Ferdinand de Saussure's (1983) dictum to document the *langue* (language system) and bypass the *parole* (individual purposeful uses) thereby miss the particulars of the message that give any piece of writing its meaning and point.

An economic model of writing might consider the various occupations that require writing, their roles in the economy, and their contributions to economic prosperity, similar to Fritz Machlup's (1962) analysis of the knowledge economy. An anthropological model of writing might examine the role of writing within various cultures and the relation to status, power, and belief systems, although usually anthropological studies are particular to specific cultures rather than generalized across cultures. Nonetheless, Jack Goody (1986) and Brian V. Street (1984) offered

---

1. This chapter originally appeared as "What Does a Model Model? And for Whom?" by C. Bazerman, 2018, *Educational Psychologist*, 53(4), 301–318 (<https://doi.org/10.1080/00461520.2018.1496022>). Copyright © 2018 Division 15, American Psychological Association, reprinted by permission of Taylor & Francis Ltd, <http://www.tandfonline.com> on behalf of © 2018 Division 15, American Psychological Association

the kinds of general accounts of the social implications of writing that might count as models, despite their each emphasizing the differences among societies.

From a sociorhetorical perspective, which is my primary point of view, writing aims to meet the demands of the situation perceived by the writer to achieve the writer's goal. The statement the writer produces for their perceived circumstance and the processes by which the writer produces it are creative and therefore neither fixed nor determinative. Moreover, because the success of a text is in the uptake by the audience and the social consequences of the text's distribution, competence in writing is even more elusive to model. Currently the best we can offer are only the approximate and contingent projections of genre and activity systems, recognizing that these are only typifications used by writers and readers as orientations for sense-making but not full realizations of what happens (Bazerman, 1994; Miller, 1984; Russell, 1997). Such typifications are pervasively hybrid, evolving, and filtered through individual perceptions, and they serve only as heuristic anticipations to support choice making (Schutz, 1967). That is, if anything can be modeled, it is the phenomenological processes by which people make sense of and act within situations and negotiate shared social categories that mediate the idiosyncrasy of individual sense-making. Models that participants may create within the individual and social sense-making belong to participants and not to analysts who can only document ethnocategories (see Bazerman, 2013b). This phenomenological approach does have psychological implications, as it relies on the perceptions, thoughts, goals, and intentional actions of participants, but it does not lead in the direction of sufficiently stable psychological phenomena of writing to support generalized modeling.

As a nonpsychologist, I have not been able to find definitive criteria for what counts as a psychological model, so I must proceed from examples that are self-labeled as models. These exemplars (for example, John R. Hayes and Linda S. Flower, 1987; Hayes, 1996; Ronald T. Kellogg, 1996; Paul Deane and Yi Song, 2014; and Steve Graham, 2018) have attempted to represent the writer's process, that is, what and how a writer thinks through in producing a text and within what psychological constraints.<sup>2</sup> The psychological phenomenon modeled by these theories would then be the writer's process or processes. Some of these more recent models, moreover, have elaborated the complexity of the writer's task so as to create a richer account of what writers need to learn and address (Deane & Song, 2014; Graham, 2018).

The exemplars of psychological processes within writing seem to serve primarily one of two purposes: first and more fundamentally, to examine writing as a complex special case of human higher order thinking in order to unpack the complexities of the human mind (for example Kellogg, 1994); second, to improve educational interventions and curricula by assisting students in improving their

---

2. It is worth noting that these models of psychological activity are distinct from models of pedagogic interventions (such as peer response groups or strategy instruction) that provide options for classroom activity (see Graham and Dolores Perin, 2007, for a metastudy evaluating the effect of these various intervention models).



processes. These models have been heuristically useful in directing empirical inquiry to hypothesized component processes (such as revision or translating) and in increasing educational attention to such component processes. Also, some of the more recent and richer models (Deane & Song, 2014; Graham, 2018) have taken into account more of the concerns that writers may need to address. As such they may provide useful fictions for instruction within contemporary schooling that would interact with how students are developing as writers to suggest greater or alternative possibilities to the writer (Schneuwly, 1994); nonetheless, I remain skeptical of their fundamental accuracy as accounts of what processes occur within any particular writer in any condition.

The article on “Models in Science” in the *Stanford Encyclopedia of Philosophy* specifies the kinds of phenomena that lend themselves to modeling as “all relatively stable and general features of the world that are interesting from a scientific point of view” (Frigg & Hartmann, 2012).<sup>3</sup> Applying this definition to writing processes would imply that to be modeled writing processes would need a degree of stability or at least sufficiently limited variation to warrant generalization, even if the modeling involves some idealizations. Both stability and generalizability present difficulties for writing, as I will argue here.

The difficulty in modeling writing processes is not primarily a difficulty in modeling neurological and brain structures or the ways these structures are activated in mental operations but in modeling the unstable complexity of writing and the processes engaged by it. Writing is an historical invention, constantly evolving, engaging an uncontained number of considerations, differently perceived by different writers, and approached in a variety of ways not fully predetermined by the nature of the task or the pattern of the individual’s prior experiences and constructions of other writing tasks, though these may be of substantial influence. Each new writing task brings some degree of novelty and the potential for creativity in the resulting text. What is to be written is not a fixed puzzle with an ideal solution. As has been documented, writing is a problem-solving process (see, for examples, Hayes & Flower, 1987; Flower & Hayes 1977); however, problems, solutions, and processes cannot be determined separate from considering the perceptions, resources, approaches, and calculations of each writer in each situation. The problems and their solutions adopted by writers within different situations proliferate rather than converge on a coherent model.

## Why School Writing Cannot Form the Basis of a General Model for Writing

One of the fundamental difficulties in developing a psychological process model of

---

3. The *Stanford Encyclopedia of Philosophy* also considers the modeling of data, but only in the limited statistical sense of data-cleaning and curve-fitting within large data sets, but this is not what is usually meant by psychological models of writing.

writing activity is the indeterminate variety of texts produced by writers within an indeterminate variety of situations. What we as teachers of writing may currently impute to be competence is in fact a culturally and historically localized set of assumptions, largely instantiated within school practices. The processes we then associate with that competence are those that have proved adequate to produce a current set of valued texts. Processes are, however, tied to the target product, and how that product will be used. Just as a multinational corporation creating an assembly line for electronically advanced hybrid cars will have many different considerations, resources, and design goals than a 19th-century blacksmith hand-producing nails for horseshoes, a Sumerian scribe enumerating tax-payers engages in a different set of processes than a householder assembling a shopping list in contemporary economically developed countries, even though they are both apparently making lists. In the same way, an alchemist writing a treatise in 16th-century Germany engages in different processes than a 21st-century chemist writing a toxicology safety report within a U.S. government regulatory agency.

Instead of considering the wide variety of texts produced over history in varying social conditions, psychological models of writing produced over the last half century have tended to consider texts and related values of competence from a small range of school essay tasks and have tended to gather evidence either directly from classrooms or from experimental tasks that are structurally similar to classroom assignments—that is an essay of moderate length composed for a simulated audience on an externally imposed prompt within a controlled condition within a limited time period. This is a legitimate task in both classroom and laboratory, but it is only one particular kind of task among many with implications for the processes that might be made visible under such conditions. Some psychologists (such as Kellogg, 1994) have drawn more widely on testimony from high-prestige authors of recent history who embody the values of contemporary humanities culture, which values inform much of U.S. writing education. Arthur N. Applebee and Judith A. Langer (2011) and George Hillocks (1987) documented some of the standard restricted practices of contemporary school writing in the US, and the exceptional variations noted by them remain largely within contemporary academic culture. This academic culture can provide a rich environment for learning to write within its expectations, but it is culturally and historically specific and far from universal.

Even today most writing occurs in more quotidian situations where other values and purposes rule. Research into writing outside of school has cast doubt on the assumption that even within the contemporary North American context school writing maps well onto and prepares students for writing for contemporary professional, business, civic, and personal worlds (for example, Patrick Dias et al., 1999, and Beaufort, 2008). Research has further revealed that as people engage with writing situations in different domains they go through distinctive personal apprenticeships (Beaufort, 1999) and organizational and institutional sponsorships (Brandt, 1998, 2001, 2015), building experiences, engagement, and

understanding of their situations and goals. Further, they have differing access to resources for realizing their ends.

Even within educational settings, genres, expectations, procedures, and standards for writing vary with disciplines and subject matters (Carroll, 2002; MacDonald, 1994; Thaiss & Zawacki, 2006). Moreover, within the same subject area writing varies across levels of schooling, from class to class, and even across assignments within a single class. Further, students each follow individual strategies and procedures with distinctive understandings of tasks and distinctive productions (McCarthy, 1987). Students develop individual messages and arguments, even when guided by well-defined assignment expectations (Herrington & Curtis, 2000). Individuation increases as students and adults mature into distinctive accomplished writers.

The individuation of writing and writers presents a dilemma for schooling, as regularization of instruction and assessment requires making students' writing more like each other so they can be made comparable and procedurally predictable (Hillocks, 2002; Jones et al., 2003; O'Neill et al., 2006). This is why standardized writing assessments tend not to be supported by teachers of writing who have come to know their students, what students are capable of producing, and how students go about the work (for example, see Conference on College Composition and Communication, 2014).

Furthermore, schooling at other times has taken on other goals, values, and practices. For example, early Sumerian scribal schools were located within scribal houses, and students copied the tax and census rolls being done by the fully trained scribes in the same room (Vanstiphout, 1995; Vogelzang, 1995). As the needs for literate elites became more important for more roles, schools recruited more students, and literate school practices changed accordingly to meet the new needs (Clagget, 1989; Connery, 1998; Makdisi, 1984). As literacy became a religious obligation, an economic necessity, an essential for social inclusion, or an expectation of citizenship and cultural participation, schools changed. School's institutional organization, goals, curricula, and learning tasks arose and evolved to meet those needs, as did its expectations of students successfully completing its course. We still see these variations in the literate practices and expectations in such different schools as Hebrew Yeshivot, Islamic Madrassahs, U.S. secular public schools, and Summerhill-type experimental schools.<sup>4</sup>

Within the US, writing has been taught variously through history, at different times focusing on handwriting, recording commercial transactions (Monaghan, 2005), scripting oratory (Berlin, 1984), documenting daily life (Schulz, 1999), or fostering creativity. Even universities have been transformed from largely reading institutions focused on canonical texts with oral exams to writing institutions focused on the production of knowledge and critical evaluation (Clark, 2006;

---

4. For a classic study of the different cognitive consequences of different forms of literacy education see Silvia Scribner and Michael Cole (1981).

Kruse, 2006). This transformation currently continues, driving the development of writing programs globally (Thaiss et al., 2012). Writing expectations and standards in U.S. public education, furthermore, differ from state to state, school to school, and class to class. Even greater are the differences in public education in different countries. National curricula and the spread of assessment instruments within and across nations, however, have been enforcing similar expectations, which wash back into classroom practices and student learning (Carvalho, 2019; Hillocks, 2002; Purves, 1992)

## From Where Might Generalities in Writing Processes Arise?

I am not suggesting, however, that we throw up our hands at the complexity of the task of understanding writing processes. Nor am I suggesting we give up hope of finding some generalities among kinds of writing and writers. Rather, I am suggesting we should start from recognizing writing's flexibility, plasticity, and creativity and then see what we can find about how people use writing for their own complex and varied ends, building actions and meanings through their texts. Further, if there are generalities in processes, we need to find out where they arise from and not assume they are a result of imputed inherent psychological organization.

Generalities we find in writing may not necessarily come from the structure of the mind or other aspects of psychological organization. The materiality of transcription and body mechanics constrain the size and distinctiveness of letters through such variables as the mechanical means of inscription, the fineness of motor control, the limits of human vision, and the distance at which a transcribed medium may be viewed, whether a page at arm's length or stone inscriptions on buildings. Generalities may come from the nature of the sign system and the way it forms syntactic relations among elements or the way breath control limits length of phrasing (Chafe, 1994). Generalities may come from the typical raising of infants and young children within a small cluster of adults of particular classes and ideologies who are attentive to the children's needs and early communication. Generalities may come from the world observed by children, directed by need and desire or characterized by what is told them by those around them. Generalities may come from social processes of coordinating tasks and meeting needs in social groupings. Generalities may come from the organization of schooling experienced across a group of writers. Generalities may come simply from temporal sequencing of events to be narrated. Generalities may also indeed come from psychological organization, brain architecture, and biological and neurological development over the lifespan shared by most humans; yet, these psychological generalities may only constrain implementable solutions without determining the solution chosen, such as the way working memory limits the number of elements attended to, but not the specific contents of attention (James et al., 2016).

Any generalities we in writing studies discover from any cause, nevertheless, will be limited to those populations who share those typicalities of experiences,

materials, relations, sign systems, or psychoneurological organization. In all cases we need to be aware of atypicality and how that might lead to variation and alternative paths. So rather than starting searching for common models, assuming we all do this complex, variable, and creative thing of writing in the same way, it might be wiser to start modestly, assuming difference until we identify commonalities and causes within ranges of applicability.

The one generality I present arises from the historical invention of writing. Writing is an artifice that poses problems in each use, such as what created resources to draw on, how to assemble and use those resources in ways applicable to the situation, what we might additionally create to enrich the possibilities, and how to organize our work of creating a text. Writing presents puzzles to the writer as to how it should be done and what to represent, as Flower and Hayes (1977) noted, but it is not necessarily the same problem or set of problems for each writer. Different writers may pose the problems radically differently and seek fundamentally different kinds of solutions. After an overview of some of the differences that might lead writers to approach writing differently, I will sketch out the great variety of problem-solving activities that may (but not necessarily always) occur in writing, historical and contemporary, social and individual.

## What Makes Writers Different from Each Other?

The extensive ethnographies of writers of all ages document that each writer brings individual perceptions, resources, and backgrounds to each writing challenge at each point in their writing careers. These experiences and how they go about addressing them direct writers down their individual developmental paths to address their next challenge. Many variables contribute to this differentiation in the formation of writers.

From a psychological perspective, variables include neurobiological diversity, from large visible differences of hearing or sight impairment to behavioral differences, such as ADHD, to language and literacy specific disabilities, such as dyslexia, to more subtle variations like processing speed, pattern recognition, and short-term memory capacity (Albertini, 2008; Graham & Harris, 2011; Graham et al., 2016; Hengst & Johnson, 2008; MacArthur & Graham, 1987). These are not simple and stable in their effect but ramify as they condition consequent experiences as writers work with the neurobiological hand they are dealt. Equally fundamental are dispositions that appear early in infancy but also develop over time as children come to interact with the world and others. These dispositions influence relations and communications with others which then may be transposed to the written world as well as how the writer addresses the work of learning to manipulate signs to create textual meanings. Specific dispositions may be further developed or transformed precisely in the formation of writers' identities (Halpern, 1998).

Early social relations influence how one understands communications and coordination with others. The contexts of family, community, and schools influence

concrete perceptions of what can be accomplished through communication, how different kinds of communications will be attended to or accepted, and which will evoke negative reactions. In face-to-face interaction the child learns how to project the self through language to be taken seriously, comically, or lovingly; these expectations concerning communication set the initial template for written interaction. In these early social contexts, as well, the emerging writer is exposed to a limited or greater variety of literate materials to read and tools to write with—as well as opportunities to see how people around them do or do not use writing for their various purposes.

Social relations, motives, emotional responses continue to grow and evolve through the opportunities and accidents of life, in part conditioned by one's sociocultural position and style of participation. These relations then may be expanded or transformed as one discovers the possibilities of connection in the written world. Within these social relations are the potentials of sponsorship and mentorship as well as exemplars and anti-exemplars, particularly as one engages in the world of writing. While one's dispositions and accomplishments can affect mentorship and sponsorship, chance will also influence who, if anyone, might take on these roles in the developing writer's life or what kinds of institutions and organizations might provide opportunities and rewards. The social classes, cultures, and language (including dialect and multilingual) groups one grows up in and then moves through in life, furthermore, provide differences of expressive and meaning potentials and offer ideologies of language and communication, including about what a writer is and could be.

All these social arrangements are framed within particulars of available technology and cultural practices of the time and place as well as social and political exigencies and conditions. Just as the appearance of cheap paper and convenient writing tools may have changed writing, so did the growth of a middle-class reading market with a taste for news, fiction, and self-improvement (Blair, 2011; Finkelstein & McCleery, 2006). These complex, intertwined historical events create the writing environment for each writer inhabiting a certain locale and moment. It makes a difference if a writer grows up in a repressive regime with a tightly controlled press and social media, in a chaotic political situation with a turmoil of views expressed in a fragmented media world, or in a stable democracy with freedom of press and a large mix of public and private writing media.

Since school is a central location for writing development, variations in schooling and students' differential responses to school activities further lead writers down different paths. As schooling advances in contemporary U.S. education, students are often encouraged to create unique responses within the parameters of assignments; the assignments themselves are particular and distinct from each other across years, and even more across subjects. Teacher framing of specific assignments further creates varied developmental experiences for students in different classes as does how teachers respond to atypical texts where students draw on unexpected resources to express fresh meanings. As students are

granted more flexibility in their coursework, particularly as they advance through secondary into higher education, they can also migrate to subjects and writing tasks they find more success, pleasure, and value in.

Each writer through unique experiences builds idiosyncratic collections of skills, orientations, and resources to address new problems and challenges, advancing the writer on a trajectory of increasing differentiation. This development may stabilize if the writer migrates into a limited set of roles within a small set of activity systems, but even then increased efficiency, effectiveness, and sense of efficacy may produce individualized results over time. Some writers may take on additional tasks or move to different roles within those activity systems as the writer asserts his or her presence more forcefully, is recognized for particular talents, and is granted more responsibility. Further, life is likely to engage the writer in different activity systems, setting new challenges while offering new opportunities, resources, and sponsors. While sometimes the role of writing may decrease as adult roles may stabilize, writing can expand as age brings more sedentary, reflective, and socially responsible lifestyles and roles or brings deeper engagement in forms of social, political, and economic struggle. Accompanying that increased social experience may be increased understanding of the social and economic conditions that frame writing opportunities, allowing more strategic action to advance one's concerns through writing and perhaps to attempt to change those conditions.

These forces of variation and differentiation make it increasingly difficult to model writing behavior or writing production. Perhaps for particular subpopulations with shared motives and expectations within particular social settings and constraints some shared pathways for development may be sketched out to guide education, such as assuring basics of letter formation, spelling, grammatical form, and syntax within dominant dialects in early years of schooling. But even here atypicality of dialect, hearing, sight, social engagement, or emotional and cognitive organization may create obvious mismatches. More subtle mismatches may arise from the child's early communicative patterns in the family and community (Heath, 1983), preschool literate resources and environment, expressive impulses, dispositions, engagement with the worlds to be reported on in writing, or other factors. Teachers who become sensitive to these differences may feel the need to reach beyond the implied models in standard curricula.

As students move through education and their identities in school worlds evolve, defining common paths of learning becomes even more difficult. Required curricula in subject areas through secondary education to some extent do limit the dominant literate universes students must navigate. On the other hand, students may receive individualized mentoring and sponsorship that expand their views and practices. Students who strongly affiliate with writing and may be the most successful at it may gravitate toward extracurricular and community writing experiences, which will further differentiate them from the pathways set out by school curricula. By the time young people enter the university or other career

training or the workplace, they are engaging with ever more distinctive worlds of writing in disciplines, professions, careers, and citizenship, usually accompanied by higher demands for creating unique statements, reflecting individual observation, perspective, and thought.

The attempts in schooling to homogenize diverse student knowledge, skills, and communicative impulses may in fact be counterproductive as students see the models they are presented as not relevant to them, not using the resources they have at hand, or contrary to the identities they have formed and the activity systems they want to engage with. Much of higher education writing studies documents this diversity and how education can respect and draw on it as well as serve the communicative impulses that drive students to want to learn to write more effectively and efficiently (Carroll, 2002; Prior, 1998; Thaiss & Zawacki, 2006).

With more advanced writers who are already highly differentiated, writing models (both of how to organize processes and of target text form) may only have value within tightly focused situations and tasks that look towards a convergence of production. Job related reports may, for example, require defined information using standard professional phrasing and drawing on finite literatures of relevant texts. Even as writers learn to accommodate to the constraints of narrowed expectations, however, they may need individualized reorientation and skills development given their different prior writing experiences. Further, even within these constraints, at times originality and fresh approaches may be expected and rewarded, such as in legal briefs.

## A Radical Starting Point, Denaturalizing What We Have Normalized

So rather than asking the question of how we fulfill the potential of a preexisting capacity (a question that treats writing processes as a natural fact) or proposing an ideal path to a defined competence (a prescription that accepts as natural an assumed textual ideal), we might better begin by accepting the historical reality that writing is an ever-creative artifice, elaborated in many different ways and used for many different purposes in different situations. From this perspective, each individual writer embedded within a sociohistoric moment chooses from the locally available resources and practices to create an effective communication for local circumstances. Variety is expressed as much in the process as the product.

The psychological questions then become: What kinds of problems might people address in responding to writing challenges posed in school and beyond? What kinds of thinking are elicited by those challenges? What kinds of external and internal resources do writers draw on? What experiences, learning, and instruction can develop writers' abilities to recognize and respond successfully to writing situations? And what kind of thinking is facilitated and communicated in the produced texts? Neither writing nor reading are neurobiologically determined, as humans engaged in neither for at least 95 percent



of the species history, and perhaps more than 99 percent, depending on the estimate used of the age of *homo sapiens*. Given that writing is a recently invented behavior, how does each individual use, repurpose, and retrain evolved human neurobiological capacities and communicative social orientations to carry out the complex of functions required by the writing valued in his or her social moment? Finally, how do all these variables and dynamics influence both the specifics and the success of the texts produced within their intended situations, goals, and relevant expectations so as to communicate significant meanings (Bazerman, 2012)?

These questions are situated within each individual's perceptions of writing; identification, sense of exigency, beliefs about the situation sensed as calling for writing; the construction of intentions and strategies; and the mobilization of resources both internal and external. Some of these individual components may be conscious and intentional while others may arise unconsciously from prior experiences, habits, dispositions, emotions, or other deep psychological structures. Consequently, this approach to the psychology of writing relies on understanding how each writer sees and constructs writing within each situation, and thus is phenomenological (Bazerman, 2013b; Russell, 2010). Further, this approach relies on the individual's history of experiences and actions within particular sociolinguistic environments that have shaped the emergent structuring of individual minds and brains (in the manner suggested by Lev Vygotsky, 1986, and Alexander R. Luria, 1986).

## Problems Writers May Address

The approach here considers the writer as a creative agent, attempting to solve specific interactional problems through written texts and in-process problems in writing those texts. While the particulars of writers' situations, the kinds of texts they attempt to produce, and the means and processes they employ vary greatly, as I have suggested, we may be able to identify some of the kinds of problems that writers may address. Any such list, however, will be historically and culturally bound by our contemporary experience of writing and the categories imposed by those who assemble such a list. Any such list cannot be comprehensive, as each generation may put writing to use in different ways, creating new problems to solve or seeing problems in a different way.

These identifiable problems, nonetheless, imply particular skills or knowledge that writers may develop, though the problems do not directly dictate those skills or knowledge. Rather, recognizing a problem, writers will then attempt to make sense of it and seek what they think they need to solve it. What they seek may or may not match what we might predict and mandate in the curriculum or any model we might propose to explain or guide their actions or development.

Some of the problems may be addressed broadly by almost all writers or may even be a necessary part of writing, such as choosing a means of inscription and

learning to deploy both the mechanical and symbolic aspects of the inscription system (whether incising cuneiform characters with a stylus on clay or selecting Chinese characters prompted by pinyin input on a mobile electronic device). But some of these problems only need to be addressed by some writers as their circumstances demand (such as those people who write the text on food wrappers needing to align their representations with government regulations about nutrition and ingredient labeling).

Solutions to some of these problems may be handed to young writers by school or society (such as what set of symbols to use, though even these may be supplemented by creative neosymbols such as emoticons). Some solutions may be offered by informal social networks (such as advice on how to respond to an intrusive email by one's boss, though it is still up to the individual about what to select from the many conflicting suggestions and how to apply the advice). Some solutions, however, may need to be worked through by each individual idiosyncratically (such as articulating the writer's own emotions and traumas). Some problems may be largely solved in a limited period in life (such as manipulation of particular inscription tools, though new technologies, an interest in calligraphy, or neurological and physical injuries may require new learning), but some may present ongoing or recurring challenges throughout life (such as identifying and building relationships with readers).

Such a listing of the kinds of problems can begin to reveal the work of writers and thus the kinds of psychological processes each individual might engage in their own way. Listing problems may even begin to suggest the kinds of resources that each writer might draw on in each solution, but many problems have multiple solutions. Though learning to recognize letters might suggest retraining eyesight to notice distinguishing features of letters, those who are visually impaired have braille and now assistive technologies. Those who have worked in bureaucratic organizations have certain perceptions and resources for seeking redress of a government action, but those with legal training have different resources to guide them, and those who work with public interest groups have others.

The list elaborated below starts with some of the issues addressed at earlier moments of writing development. In a sense the problems grow outward from the child's discovery of the world and the means to participate in it, with some problems only coming into focus as writers mature; engage wider social, material, and intellectual worlds; and conceive of their roles within those worlds. Yet simultaneously as the writer's world expands, solutions to problems become internalized in perceptions, skills, ways of thinking and working, and orientations towards action. These internalized and reinforced solutions in a sense become individualized models of writing, which a writer may variously select among or modify according to what the writer perceives as relevant to the immediate situation. These user models to guide action contingently are different in kind than the analyst models that form generalizations across people and situations.

## 1. Discovery of Written Media and People's Orientation towards those Media

Before paying attention to writing, the potential writer needs to notice that other people attend to it. This may happen as soon as the infant is aware of the social environment (Tolchinsky, 2006). Anecdotally, I noticed my infant, long before walking or talking, would bat away the newspaper from my partner's and my faces so as to regain our attention. The impact of the amount of reading and writing behavior in a household on child literacy development is well documented (Purcell-Gates, 2001; Storch & Whitehurst, 2001) and the literature on emergent literacy has recorded early signs of the child's awareness of literacy. Awareness of the presence and uses of writing grows with engagement in new domains (Rowe, 2003, 2008). College students who think their chosen careers will not require much writing may be surprised to find out that accountants or engineers devote much of their day to writing reports (Selzer, 1983). People addressing trauma or life transitions may discover that others devote much energy to and derive benefit from writing about their personal struggles (Pennebaker & Chung, 2007). The appearance of new communication media platforms creates the potential for awareness of how people are engaging with those platforms.

## 2. Motor and Mechanical Manipulation to Engage with Media

Motor and mechanical control for inscription is associated with emergent literacy and early use of pencil, keyboard, or other electronic input. Motor skills can also pose new problems throughout life. Learning calligraphy or brush stroke ideographic writing or hand typesetting is typically an interest of late adolescents or adults who strongly affiliate with the written word. Historically, mechanical skills have varied, whether using a stylus on clay, or tapping a telegraphic relay, or thumb typing on smartphones. Each may require learning motor and mechanical skills. Illness or other incapacities may require relearning or alternative motor skills. Finally non-sight systems of inscription, such as braille, or non-hand means, such as eyeblink, require different skills. All these skills involve the retraining of human perceptual, motor, and control capacities that evolved for different purposes. Manipulating a pen to form letters, for example, involves refocusing and refinement of sight, hand-eye coordination, hand muscle group strength, and finger coordination.

## 3. Learning the Sign System and Its Realization in Spellings and Pronunciation

Closely tied to control of inscription mechanics is attribution of significance and sound correspondences to the distinctive differences of characters and their sequences. In alphabetic language this means learning the form and phonetic

correspondences of letters. In alphabetic languages where letter-sound correspondences are simple and stable, this task is soon complete. In English and other languages with complex phonetics, learning correspondences and pronunciation can be ongoing, tied to learning of complex rules, familiarity with specific spellings, and development of new vocabulary. Some words may continue to be difficult to spell, and some words learned primarily through reading may be idiosyncratically pronounced, especially family names and neologisms from specialized domains, such as pharmaceuticals. Further, managing current spell check programs requires monitoring and choice making skills. Consonantal and syllabic systems create further challenges for determining sound correspondences. Languages that inscribe tonal and other aural distinctions or that use ideographic, rebus, or other kinds of signs pose other problems.

Learning a new written language, even using the same alphabetic system as one's first language, requires learning new phonetic correspondences, often with subtle but consequential differences. For singers and actors, getting these correspondences exactly right are matters for accurate performance, and for religions relying on sacred languages, precision can be a matter of divine obligation. Much early linguistics was in fact tied to solving the problem of maintaining precise spellings and precise pronunciation of the divine scriptural word.

#### 4. Investing Signs with Meaning and Sentence Clarity

While ideographic systems to some degree carry the meaning within the sign (though such languages as Chinese are far more complex in this respect than the ideographic label would suggest, with homonym distinguishers, puns and rebuses, tonal markers, syllabic elements, and other phonetic supplements), in alphabetic, syllabic, and consonantal transcription systems one must identify a pronounced meaningful word with a sequence of sound identifiers. That is, meanings are not transcribed directly, but words must first be parsed for their sounds and the sounds then inscribed in the letters.

The spelling of words is only the beginning of meaning making, however, as the words become part of longer strings of meaning in syntactic relation. The more elements brought together in a sentence, the more the sentence needs to be crafted to put the elements in a meaningful relation. At the phrase or sentence level meaningful associations at first may be taken from spoken language, but as writers develop, they may employ greater syntactical complexity, requiring visual tracking and time to sort through appositions, prepositional chains, qualifying or elaborating phrases, subordinations, parallelism, or suspensions. Syntactic complexity may particularly appear in adolescence with conceptual and intellectual growth accompanying impulses to independence of thought. On the other hand, as the writer learns to detach phrasal length from breath patterns, he or she may become more aware of possible cognitive processing constraints that evolved in conjunction with oral language (Chafe, 1985, 1994). Accommodating readers'

cognitive constraints may then lead to the search for greater phrasal efficiency and simplicity while maintaining conceptual clarity and intellectual force.

## 5. Correctness and Expression

Written text's susceptibility to extended or repeated inspection may pose the problem of meeting higher standards of correctness, consistency, coherence, and precision than with spoken language, which is filled with fragmentary and tangled forms, fillers, mispronunciations, and repairs. Written language, which can be examined more slowly and carefully, holds the writer up to greater accountability. Further, canons of spelling, letter form, punctuation and spacing, grammar, syntax, and word meaning have become regulated through grammars, dictionaries, and schooling as texts have gained wider circulation through printing. While these standards can increase intelligibility to wider audiences sharing these conventions, they are also often used to judge education and intelligence.

Although we may admire the poetic creativity of young children's writing, children may over time discover that commonly available formulations are more accurate and more readily understood at the same time they are discovering that these standardized forms gain the approval of teachers and other adults. The further one advances in education or professional specializations, the more particular expectations may be, often with specific reference for the concerns of that group. So as students advance in chemical or legal education and begin writing for those professions, they learn to use disciplinary formulations for the work of those fields. Varying to create new meanings becomes an act of conscious intention. The challenges of making standard, correct, or simply interpersonally intelligible forms do one's bidding continue through a writer's life (see point #7).

## 6. Extending Statements, Developing Larger Text Structures, and Building Cognitive Grasp of the Whole

As writers venture beyond the sentence, problems of extended thought, sequence, coherence, maintenance of the reader's attention and focus, and planning become more challenging. Longer forms require higher levels of organization along with explicit guidance for readers as to the directions the text will take them, moving from one statement to the next, one section to the next.

Different genres (see point #13) may raise expectations of different forms of coherence and organization, so knowledge of those genres and situations can provide clues about what might be included, sequenced, and connected. Nonetheless, even when contents (see point #8) and sequence may be mandated, such as in certain school assignments or government documents, writers who have a sense of the whole and the underlying logic of the text can build the coherent force of the text, guiding the overall effect on the reader. Other writing situations may grant substantially more leeway in the internal organization and movement of text.

Extended texts also make possible more complex reasoning, incorporation of more content to be synthesized, broader scope of presentations, and more ambitious goals. These require the writer to have extended cognitive reach, confidence, commitment to the task over time, and constancy of purpose and intellectual vision. Vision of the whole may be facilitated by learning to use planning documents, whether outlines, sketches, notes, or strategy memos. At the same time as building a conceptual grasp of larger documents, writers need to develop text-based skills to explicitly display coherence through cohesive devices, transitions, text direction signaling, and the like, moving readers forward but not jumping too far or too fast so as not to confuse readers or lead them to lose trust.

As students advance through schooling they are typically challenged by projects of increasing length and more complex genres, even as they may continue to write in shorter forms. While in early grades the most ambitious assignments may be narratives of a few sentences or paragraphs, by secondary education students may be writing reports of several pages, synthesizing information from other sources (see point #9) or information collected from their surroundings (see point #8), and analyzing texts or data. In higher education, assignments of five to ten pages may lead to multichapter senior theses within students' major disciplines. Master's theses and doctoral dissertations become even more ambitious and lengthy, requiring integration of extensive disciplinary literatures, often freshly collected data following systematic disciplinary inquiry practices, and increasingly sophisticated analysis, claims, and arguments. Short forms may also continue to be valued, but expectations of meaning density, tight organization, and sequencing become more intense and exacting.

In artistic, entertainment, or other writing intended for leisure audiences the pressure for controlled novelty in structure is even greater for readers' engagement and pleasure while still maintaining intelligibility. Other domains have similar increased expectations for focused and ambitious designs, sometimes associated with increased scope, materials, and higher order thought (Paradis et al., 1985; Smart 1993, 2006). Even in drafting legal or regulatory codes, architectonic kinds of thinking and problem solving are required to coordinate the sequencing of definitions, conditions, restrictions, rules, prohibitions, exclusions, applications, penalties, and the like, both within the text and with prior existing texts in the code (see point #9). Often this high-level coherence must be achieved while working in collaborative or even conflicting teams with competitive goals, which requires even higher levels of architectonic understanding and what actions it supports (see point #11),

## 7. Meaning Making

In every writing task writers must develop and express meanings relevant to the situation and transaction of the text to be elaborated through the tools, conventions, and forms of written language. Meanings are potentially boundless, but

they grow in relation to the existing social, organizational, epistemic, or cultural systems one participates in and within which the meanings circulate and have value. Consequently, meanings develop in relation to the genres and activity systems the writer is familiar with and which become vehicles for the circulation of meaning (see point #13). But the meanings are also related to the contents and experience of the world one draws on and represents (see point #8) as well as the representations one has learned from others (see point #9).

While meanings are influenced from the outside, meanings also are impelled by internal commitments, identities, affiliations, experiences, emotions, and perspectives—all of which are developed through one's life. Expressive, trauma, or spiritual writing provide a far end of this personal spectrum, but most communicative impulses in some way come from oneself and one's perspective, even if only to protect one's legal interests or confirm membership in a group. Consequently, learning to consult personal communicative desires and internal meaning impulses challenges writers in many kinds of circumstances.

Bringing internal impulses to verbal form, however, presents attitudinal challenges that writers may need to address. The impulses to communicate strongly felt internal contents may seem to be much more encompassing than the limited verbal formulations one ultimately finds to express them. The diminishment that comes with bringing impulses to form may leave the writer with a sense of disappointment at the frailty of words, undermining motivation and engagement in the writing process. On the other hand, the desire to make words communicate the power of the idea one feels or the discovery of the meaning one is bringing into being may motivate greater commitment and craftwork. At the same time as the writer must deal with the limits of words, the writer must cope with the sense of risk or vulnerability that comes with presenting one's thoughts, words, or simple competence to readers who may judge the form, content, truth, wisdom, wit, or personality expressed in the emerged text. Whatever the response the writer has to the emergence of impulse into concrete words, such psychological processes add to the emotional complexity of writing (see point #10).

## 8. Relations to Material World and Experiences to Be Reported On

Even if writers follow the usually sage advice of writing what they know about (or have access to), they must still select from what they know. This is as true for journalists needing to know their beat as for fiction writers wanting to create stories within a social world. Writers benefit from understanding how attention to the world can clarify thinking, vivify a narrative, or contribute evidence to an argument. Building capacity to observe the world around one and transcribe it precisely can develop truthfulness, decrease bias, advance ideas, and persuade readers. Further, as writers engage with specialized knowledge worlds of different subjects, they can discover that each domain uses different kinds of facts, forms of representation of those facts, and selection among them, based on specialized

methods of collecting and transcribing realities. Each subject and domain, nonetheless, creates spaces for individual selection, representation, assessment, synthesis, and analysis of facts. A social worker still must identify important facts from client interviews that might impact client eligibility or a client may make selections about what to report, either because they think it irrelevant or they are afraid it may affect their services and benefits.

Underlying the problem of selection is the problem of how the world is experienced and information about it collected, which in the case of professions and disciplines may be regulated by training and made accountable in methodological narratives within reports. A chemical engineer examining the efficiency or safety in a factory will gather different data through different procedures, extracting different materials to be measured by different instruments, than a mechanical engineer testing the condition and safety of the machinery in the same factory or a civil engineer measuring the soundness of the building (Bazerman & Self, 2017). Each, as well, will be accountable to different professional standards and governmental codes. Some domains and roles offer greater latitudes of decisions about what to look at, what method to use, how to adjust to circumstances, and how to follow leads from one clue to the next. For a historian, finding an archive is only the beginning of mining, recording, and analyzing what it holds, and then connecting it to other archives and accounts.

Even outside the accountable procedures of disciplines, writers locate facts and record experience in some way—even if only to notice amusing things as seeds for anecdotes, or to observe flowers closely to write descriptive poems, or to remember stereotypical behavior to fabricate scurrilous political stories. Many people may remember only emotionally salient events of life, but some people record detailed, time-stamped daily transactions.

Issues of methodology are substantive matters for writing because methods direct attention and processes, develop content, and authorize the text's credibility. Behind methods employed are theories and values, even if the writer only follows conventional disciplinary expectations, habit, or unreflective practice. The writer's perspective, whether unreflective or well theorized, directs the writer to look for specific things to report. Government economists collect data on financial transactions they believe are part of an abstract entity called the economy, upon which the welfare (another abstraction) of citizens (another theoretical construct) depends, and for which the government will be held politically accountable (according to their ideas of how politics runs and upon which they are relying for social support for their positions). Each individual and corporate entity in this economic system may use that information in conjunction with their own records to calculate actions to promote personal interests and values. Becoming aware of the theories and values that stand behind and direct data-gathering gives the writer greater reflexive understanding of writing choices. So epistemology, too, presents problems or questions that writers may face to advance their abilities as writers.



## 9. Relations to Other Texts

All writing, as all language use, depends on the words, reported content, and expressed perspectives of others (Bazerman, 2004; Volosinov, 1973). In writing, prior texts can take on a greater salience, as texts are enduring and available for reference by both the writer and the writer's readers. Furthermore, prior texts often exist in organized networks within activity systems to which the writer is responding or contributing. Additionally, unlike unrecorded spoken language, published texts are protected by copyright property laws, and school texts are accountable to plagiarism and cheating regulations. Consequently, some domains have developed expectations for originality and identification of knowledge, thought, and words from prior texts. Legal argument and decisions are strictly tied to legal codes and precedent which are explicitly quoted and referenced, with substantial national and jurisdictional differences (Tiersma, 1999, 2010); accountancy relies on legal, regulatory, and professional codes, as well as financial documentation (Devitt, 1991); academic disciplines aggregate knowledge within professional literatures through evaluative sorting processes of citation (Bazerman, 1991); and corporations and bureaucracies build knowledge through records and reports while regulating practices, actions, and policies through networks of internal documents (Smart, 1993, 2006; Yates, 1989, 2005).

The intertextual practices of each domain have their particularities and peculiarities to be learned and mobilized by those who write for it. Some of that learning is regularized and explicitly taught (such as disciplinary citation form), but the more fundamental puzzles are often left to individuals to solve, tied to their own developing knowledge of their fields and strategic choices about how to position their statements within complex social textual fields and the knowledges these texts establish for their social networks. Among the many puzzles to be solved are identification, evaluation, synthesis, and representation of the most relevant and persuasive prior documents. Then the writer needs to coordinate the representation of prior documents to serve the purposes of one's new statement, maintaining the dominant voice and intention of the new text while drawing on the voices and knowledge of prior texts. Eventually the writer may come to see his or her texts as part of an unfolding intertext contributing to ongoing communal discussions. The more the writer understands the complexity of ambient knowledge and statement worlds, the more effectively the writer can move the communal project forward while asserting his or her interests, thoughts, imagination, or other contributions into the social reality created by texts.

## 10. Developing Processes

While the textual product is what is shared with readers, writing processes bring the text into being and constrain the results. If beginning writers are struggling with forming single words, they will likely devote little attention to larger

coherences. Writers' processes develop as they iteratively address sequences of writing challenges. Recognition, monitoring, and planning of writing processes themselves present challenges that writers may reflectively come to address to develop personal solutions.

Awareness that writing does not emerge full-blown but takes time and work is the beginning of reflection on process. No matter how advanced and confident a writer, impatience for the writing to be finished and to have the text in fully satisfactory form may be an ongoing struggle in order to slow down, work on the text in its many dimensions, and not skip over detailed problems. Learning to focus and persist on the tasks of writing goes hand in hand with learning on what to focus. Many emotional obstacles or lack of knowledge about what to do can contribute to reluctance to focus and persist, let alone reflect on the process. Although the writer may be deeply committed to the text as an expression of the self, learning to see the text as something apart from oneself facilitates its being worked on and improved to realize intentions and effectiveness—just as a professional musician or actor or sports player learns to examine performances minutely to improve through practice and further guidance.

Once one recognizes that writing offers time and opportunity for reflection and improvement, identifying the tasks one might engage in even before writing a first draft itself can be a puzzle. Writers may find different planning documents useful for different tasks, but also they may need to identify and gather relevant information and ideas or simply contemplate the subject and get inspiration from reading. Setting out the sequence and timing of these preliminary tasks and interim documents and then knowing when one is ready to move on to the next are all process challenges with potentially individualized solutions.

After the writer finally produces a working version of the main text, the writer needs procedures and criteria for guiding revision. Just rereading the draft and waiting for spontaneous appearance of red flags may make it hard to get beyond surface issues. Developing questions for deeper revision depends on understanding the issues most relevant for each kind of writing. Questions of sequencing, organization of evidence, stance, forms of criticism, representation of events and people, and other elements that can guide revision depend on genre for their salience, expectations, character, and force. Then solutions may be individual and handcrafted.

Ultimately revision requires the writer to step out of presuppositions and familiarity with the text to see how the reader may make sense of, evaluate, and respond to the text (Flower, 1979). Of course, engagement with actual readers during the revision process can help, but this too presents many challenges, starting with resistance to sharing work and defensiveness in hearing responses. Often writers are upset, offended, or even rejecting of comments, or they misunderstand what their readers, editors, or collaborating reviewers say. Knowing how to take the words positively and even to transform apparently misguided comments into useful information all present puzzles and challenges to narcissism the writer must work out largely on his or her own.

Listening to others as responders or guides in revision is difficult enough when there is no power relation, but when one is being reviewed by an editor, evaluated by a boss, or corrected by a teacher, taking positive lessons from feedback is even more difficult. Writers who learn to use response well, however, can move beyond specific suggestions to understanding and even internalizing the perspective of readers to be able to anticipate concerns. Finding trustworthy mentors and building supportive relationships is another dimension of writer development.

## 11. Collaborative Processes

From the earliest ages people write within collaborative social circumstances as adults or older children guide letter formation, help out with spelling or phrasing, and respond to whatever inscriptions emerge. Support from others continues throughout education and in many social and workplace environments, even if responsibility remains with a single writer. In some situations, moreover, writing is a distributed collaborative responsibility. Collaborative writing may be organized hierarchically or democratically; can engage deep communal thought and negotiation or can fulfill a single predetermined vision; may occur in a brief, single face-to-face event with a single immediate product or may extend over many years in many locations involving many documents; may be intensely interactive on all elements or compartmentalized with parts assigned to different people; can be harmonious or filled with conflict; can be credited to a single person, a team, a corporate entity, or anonymously (Beaufort, 1999; Dias et al., 1999; Ede & Lunsford, 1990).

There is not any one necessary path to collaborative success. Whichever way the collaboration is organized, the team must resolve many problems in organizing the work and harmonizing the final product, and each individual must find a way to participate effectively within the group. Effective participation requires recognition of and respect for the contribution and perspective of other members and building trust that they will carry out their parts. Even within the most hierarchical project the team leader needs to develop trust others will carry out responsibility for their tasks. Team members need to learn to recognize useful differences and negotiate them while sidestepping unnecessary or harmful conflicts. Each participant needs to understand and respect the constraints of timelines, specific expectations, length limits, and other parameters of project coordination. And someone or some combination of people needs to coordinate the coherence, completeness, and consistency of the final product. Each writer's history of collaborative participations builds a repertoire, perspective, and even taste for different kinds of collaborations, but each new collaborative project is likely to present new challenges, requiring new solutions both at the group and individual level.

## 12. Audience, Relations, and Situations

Ultimately, writing is meant to communicate with, influence, or be of use to

audiences. Understanding and reaching audiences are ongoing challenges with as many solutions as there are social configurations and people's ways of relating to them. The child's audiences for writing may initially be just a few surrounding older family members who may be supportive of early efforts but who do not substantively rely on the child's writing for communication. If the surrounding adults are inattentive, irritated, critical, or dismissive of writing, that may limit the young writer's imagination of what writing can do and of the child's capabilities. If writing continues, it may turn inward, advancing a reflective or memorial relationship to the self, making writing a private matter not to be shared with others. In school, children may be writing to practice and display formal competence to teachers rather than to explore a wider range of audience relations and purposes or to see the potential consequentiality of writing for social action and responsibility.

Developing writers may then overgeneralize these early audience relations, inhibiting recognition of the potentials of writing as they reach out into social, work, and public worlds. When writers do make the leap into meaningful purposes in these new audience relations, they may see those moments as the beginning of their real careers while rejecting school writing as stultifying and artificial, even though what they had previously learned was a necessary precondition to their moments of vocational discovery.

Each audience is engaged within a situation, which each writer needs to recognize and analyze. While knowledge of genres and activity systems provides generalized information about audiences and situations (see point #13), each text arises in a particular moment within evolving events and for specific readers, even if one does not have full access to details, as the text can travel through space and time. Many of the texts young people are exposed to come from cultural and literary systems that share texts among many people over extended time periods, supported by publishing interests, cultural values, family practices, and other social mechanisms that are not particularly visible to the child; therefore, children may not see those texts as tied to particular social circumstances. As writers develop, however, they may write stories for classmates or younger siblings, journals to parents reporting on the day's events, or letters to local government officials praising or criticizing them for a current initiative. The more writers understand what is entailed in that moment, what they want to accomplish, what drives the writing, and how the text might influence whom to improve the situation, the more writers can design the text to have the desired effect (Bitzer, 1968). In addressing challenges of situations and audiences writers are also learning about the great variety of the surrounding literate world and how to assess situations as sites for writing action.

### 13. Learning to Use Genres Within Activity Systems

To be understood in any social situation, writing must to some degree be recognizably familiar to co-participants, relying on typification of actions (Schutz, 1967). Genres are typified utterances (Miller, 1984). The recognizability of the

genre of written utterances provides the reader with clues about what is going on with whom and how that relates to oneself (Bazerman, 2013b). Writers early on develop a sense of genre, recognizing the differences among kinds of writing and what they need to do in order to meet the expectations of each genre (Donovan & Smolkin, 2006). Familiarity with genres depends on exposure to them, the salience of that exposure, and their usefulness in carrying out one's own meanings and intentions. The inscription of one's name is often an early writing task, not only because of a psychological identity, but because people always ask for it and because one uses it to claim ownership of pictures, texts, and possessions. Letters to significant relations expressing emotions and reporting events often are salient and can become vehicles of learning. Stories are as well familiar and often the basis of early writing (Rowe, 2003, 2008; Tolchinsky, 2006). On the other hand, a child may be in a household surrounded by history books, but the child may not pay much attention to them until later, if at all.

Whatever the pathways of salience, the repertoire of genres increases with the scope of the child's literate life. Family life may include invitations or planning lists, recipes, family newsletters, text messages, social media, and emails. Schooling introduces a range of academic genres, particularly as subject areas differentiate across the grades and into secondary and university education. Extracurricular and community activities also may extend genre awareness, or young people may be attracted to genres they discover in media even if no one around them writes screenplays, jokes, political screeds, hip-hop lyrics, or scientific reports. They may even imitate these genres and seek out groups of people engaged with them.

While writers may begin by imitating formal elements of genres, over time they may gain a sense of why those elements are there, how the elements address audience needs and provide necessary information, and how genres sequence thoughts and emotions in ways appropriate to the tasks they carry out. They may learn how audiences have particular roles and interests in activity systems, such as sales representatives who seek information from product designers in order to then communicate with customers, or medical professionals on the next shift who need patient information to continue effective care, or lovers of horror stories who regularly scan the offerings of publishers or authors whom they particularly enjoy. Understanding people's roles, motives, and situations within activity systems can aid writers in creating meanings most immediately relevant to the moment and events. Writers can also gain genre flexibility and engage hybridity as they see in new tasks similarity and differences from prior texts, discovering that each new message reinvents the genre (Reiff & Bawarshi, 2011).

Writers engaged with the genres of an activity system over time may recognize that each genre is part of a network of genres that together carry out the work of the system (Russell, 1997). Each of the genres is associated with a kind of situation that arises within the activity system so that analysis of the rhetorical situation can become rapidly focused once one understands how the genre fits within the system of interactions. The mystery story, for example, must first be

proposed to the publisher and the manuscript transmitted, perhaps through an agent, entailing correspondence between author and agent and agent and publisher. Then there are editorial reports, internal decision documents, revisions, revision transmittals, marketing and promotional documents, reviews, and many other genres all necessary to bring the primary genre to visibility in the marketplace, not to mention the contractual and financial arrangements within the legal and accounting worlds of commerce.

The writer's growing knowledge of how genres carry forward interactions in an activity system can help the writer understand what can be accomplished by writing and the potential impact of text. Such knowledge can help the writer decide not only how to write any particular document but also what kind of document to write. Rather than writing a letter to a television executive about an objectionable show with racial stereotypes, the writer might post a video clip with an ironic caption to a social media group in order to gather likes and forwards, which would then come to the attention of the network management concerned about lost viewership. Understanding the dynamics of an activity system may even identify the need for a new kind of genre to mediate a current lack of coordination or flow of information, as when an organization mandates a new accountability system requiring the production of new reports, evaluations, and feedback cycles. While the change may be initiated through familiar organizational memos, the new mandated documents can foster new kinds of organizational knowledge and action, reconfiguring the activity system. The authors of the initial implementation memos, while writing in familiar ways, may nonetheless be showing great genre creativity in the writing they mandate—creating problems (in both good and bad senses) for all those tasked with the work of producing texts in the new genres.

#### 14. Developing Identity and Efficacy as a Social Actor

Successes in communicating within social groups—having words attended to and understood and resulting in desired consequences—build the writer's self-perception as a successful social actor through writing. The identity developed through seeing the force of meanings created for particular others expands the writer's view of who one is and what one can be as accomplished through continued writing—whether as a poet whose works are appreciated, an architect whose proposals are accepted to be built, or a social services examiner who gains benefits for clients in need. Success may in turn build a reputation that opens up further opportunities to accomplish even more.

Part of coming to terms with one's writer's identity is recognizing, accepting, and appreciating how writing changes one's thinking. As a writer explores the content to write about, makes connections, articulates ideas more precisely, uses the structures of writing, and engages others' ideas, the writer develops new thoughts. Once expressed in writing, these thoughts become a personal

commitment of the writer, as these are discovered through the writer's own process. The thoughts then change the writer's public identity as readers associate the writer with words and ideas. The more the words circulate, the more the writer must learn to live with being the voice of those words, for good and ill. Most deeply, the more the writer internalizes the procedures and structures learned and practiced in his or her particular form of writing, the more the writer sees and thinks about the world and others through the orientation built through his or her writing. Writing also often brings a reflective interiority in the search for meaning and words and in the weighing of alternative formulations and approaches. Writing transforms minds and emotions, whether it turns one into a learned scholar, a witty songwriter, or an online fraudster.

Each of these personal and social identities are hand-built through the particulars of opportunities, experiences, and interactions. Each person will construe their experiences and resources differently and then deploy their own complex resources in the creative acts of making new meanings and new statements. Thus writing is always hard work but potentially expands the meanings in the world, the uses of writing, and the social networks of communal life. Courage is constantly required, as one puts one's identity and social presence literally on the line to be judged by the response and uptake of others. Yet making those statements potentially advances one's place in the world and the causes, concerns, and interests one addresses. Each success, however partial, brings greater sense of efficacy and courage, inspiring further risks in even more ambitious undertakings, more novelty and creativity to carry the world forward. Whether in small local terms or grand visions, writers are always presented with the puzzle of who they are, in what kind of world, and what they can accomplish by their writing.

## Models Are for Writers, When They Need Them, for Specific Tasks

Of course, significant social identities may be formed in the family, religious or neighborhood communities, sports, entertainment, business, or civic service with little or no writing. Writing, nonetheless, can take on an important contributing role in each of them, leading people to grow as writers even as they grow in their primary identities. As writers associate their identities with writing, they are tempted to explore what they can accomplish in the world through writing. They may look aspirationally to other writers, their texts, or their processes to find inspiration, form goals, seek guidance, imitate, or adapt. Each developing writer gathers a personal collection of model writers and texts that influence perceptions, motives, stance, style, skills repertoire, procedures, and choice making.

No matter how much the writer may learn from these personally selected models, those lessons never quite meet the new situation and never quite dictate what should be written and how, at this moment, in this place, by this writer. The writer alone must take the leap to create new meanings based on the model he

or she constructs of the situation and what the situation calls for. The more the writer grows, comes in contact with more models, more situations, and more resources, the more the writer can gain a sense of the self, with a distinct writer's identity and an original approach to problems perceived in a world viewed through a personal lens, leading to innovations in writing, thought, and action. Such experienced writers have gone far beyond guidelines they learned in school, through other standard knowledge, or even through their previous self-selected models. The writer's fresh construal of each new situation leads to new ideas and ways of reaching out to others, expanding thoughts, processes, and practices.

Many, however, perhaps driven by other exigencies or other forms of development or perhaps constrained by lack of support, guidance, and sense of efficacy, do not explore further possibilities of writing in their lives beyond what they are offered in school. For them, the limitations of what is taught in school and how much it engages their total development may define boundaries of how they wind up using writing throughout their lives. For them the generalized models of writing deployed in school are likely to be most enduringly consequential; for them we ought to be most careful about which simplified, fictionalized models and guidance school offers, whether it is the most restrictive model of adhering to correctness within highly conventionalized paragraphs or the most challenging model of producing an advanced academic essay on social problems. We should ask whether the process and product models schools provide prepare them for how they might use writing in their lives; we should also ask whether these models are presented with such authority that writers find it difficult to choose and develop their own models flexibly as situations and needs arise in their lives. Excessively authoritative models can put high walls around school writing, making it harder for nascent writers to reach out to other meaningful writing experiences.

Our pedagogies should help students locate their own evolving models and build their confidence and judgment to evaluate situations and make choices on the basis of their individual internalized models that they continue to develop. Even more we should help students articulate the problems they are trying to solve in writing. We may offer aid in thinking through and suggesting alternatives for solving the problems they recognize and even suggest at times other models they might consider and other problems they might address. The problem of what to write and how, nonetheless, always necessarily remains the students' own.

Luria (1986), in his autobiography, told of experiments with children playing with blocks. Children who were given explicit diagrams of shapes to build, including the location of specific pieces, became efficient at locating the designated pieces and reproducing the diagrammed model but did not develop much understanding of the relation of the parts, design principles, stability of construction, or how to construct new or larger shapes. Those, however, who were shown only the outlines of the target design and then had to select and arrange pieces from a large collection of possible parts grew in understanding the relations and



contributing role of pieces, exploratory actions, creativity, and stability in new designs. They grew from the aspirational targets they were shown rather than being constrained by narrow instructions. Then they successfully came up with new detailed individual models of their own in order to construct their solutions to the problems they themselves framed.

The lesson for writing instruction and educational models of writing should be clear. We should not predominantly hand students detailed models of what texts should look like or the processes they should follow, limiting the depth and complexity of the problems they are solving. Rather we should regularly set aspirational goals that challenge students to solve the most interesting problems they can address and then provide students resources and support while they solve what to make and how. Introducing students at times to simplified models of form and practice might provide some useful heuristic starting directions. Responsibility, however, should remain with students for choosing among alternatives, identifying potentials, and building their own models relevant to their communicative situations. Only then will they become writers.

Writing is not a stable object produced by stable procedures; in a fundamental sense writing does not lend itself to being captured in a general model. This goes beyond the complex variability in each person's experience and capacities to the constant newness of discovery and invention, inspired by the novelty of situations. There is no predetermined model kit to make writing. Writers draw on an ever-expanding repertoire of models from model kits of unlimited size with untellable numbers of pieces to be brought together in indeterminate numbers of ways, sometimes using innovative procedures. Writing is always an act of creation, bringing a new text into the world, no matter whether the result looks pedestrian or exotic. Habits and ways of approaching writing developed over a writer's life trajectory (what we may call the writer's more persistent models of writing) are idiosyncratic, always open to amendment, and always to be reconsidered in light of immediate circumstance. While we can and should apply science to understand writing, writing is still an art produced by a writer impelled by the need to communicate in order to make something new that will reach across to another mind. Any science that overlooks that writing is an art creating fresh meanings from the shards of recycled words loses sight of the very phenomenon we are trying to understand.

## References

- Albertini, J. (2008). Teaching of writing and diversity: Access, identity, and achievement. In C. Bazerman, (Ed.), *Handbook of research on writing: History, society, school, individual, text* (pp. 387–398). Lawrence Erlbaum Associates. .
- Applebee, A. N., & Langer, J. A. (2011). A snapshot of writing instruction in middle schools and high schools. *English Journal*, 100(6), 14–27. <https://doi.org/10.58680/ej201116413>

- Bazerman, C. (1991). How natural philosophers can cooperate: The literary technology of coordinated investigation in Joseph Priestley's *History and Present State of Electricity* (1767). In C. Bazerman & J. Paradis (Eds.), *Textual dynamics of the professions: Historical and contemporary studies of writing in professional communities* (pp. 13–44). University of Wisconsin Press.
- Bazerman, C. (1994). Systems of genres and the enactment of social intentions. In A. Freedman & P. Medway (Eds.), *Genre and the new rhetoric* (pp. 79–101). Taylor & Francis.
- Bazerman, C. (2004). Intertextualities: Volosinov, Bakhtin, literary theory, and literacy studies. In A. F. Ball & S. W. Freedman (Eds.), *Bakhtinian perspectives on language, literacy, and learning* (pp. 53–65). Cambridge University Press. <https://doi.org/10.1017/CBO9780511755002.003>
- Bazerman, C. (2006). The writing of social organization and the literate situating of cognition: Extending Goody's social implications of writing. In D. R. Olson & M. Cole (Eds.), *Technology, literacy and the evolution of society: Implications of the work of Jack Goody* (pp. 215–240). Lawrence Erlbaum Associates. <https://doi.org/10.4324/9780203759752>
- Bazerman, C. (2012). Writing, cognition, and affect from the perspective of sociocultural and historical studies of writing. In V. W. Berninger (Ed.), *Past, present, and future contributions of cognitive writing research to cognitive psychology* (pp. 89–104). Psychology Press.
- Bazerman, C. (2013a). *A rhetoric of literate action: Literate action volume 1*. The WAC Clearinghouse; Parlor Press. <https://doi.org/10.37514/PER-B.2013.0513>
- Bazerman, C. (2013b). *A theory of literate action: Literate action volume 2*. The WAC Clearinghouse; Parlor Press. <https://doi.org/10.37514/PER-B.2013.4791>
- Bazerman, C., & Self, B. (2017) Writing the world to build the world, iteratively: Inscribing data and projecting new materialities in an engineering design project. In R. K. Durst, G. E. Newell, & J. D. Marshall (Eds.), *English language arts research and teaching: Revisiting and extending Arthur Applebee's contributions* (pp. 91–106). Routledge.
- Beaufort, A. (with Heath, S. B.). (1999). *Writing in the real world: Making the transition from school to work*. Teachers College Press.
- Beaufort, A. (2008). Writing in the professions. In C. Bazerman, (Ed.), *Handbook of research on writing: History, society, school, individual, text* (pp. 221–237). Lawrence Erlbaum Associates.
- Berlin, J. A. (1984). *Writing instruction in nineteenth-century American colleges*. Southern Illinois University Press.
- Bitzer, L. F. (1968). The rhetorical situation. *Philosophy and Rhetoric*, 1(1), 1–14. <https://www.jstor.org/stable/40236733>
- Blair, A. L. (2011). *Reading up: Middle-class readers and the culture of success in the early twentieth-century United States*. Temple University Press.
- Brandt, D. (1998). Sponsors of literacy. *College Composition and Communication*, 49(2), 165–185. <https://doi.org/10.58680/cc19983181>
- Brandt, D. (2001). *Literacy in American lives*. Cambridge University Press. <https://doi.org/10.1017/CBO9780511810237>

- Brandt, D. (2015). *The rise of writing: Redefining mass literacy*. Cambridge University Press. <https://doi.org/10.1017/CBO9781316106372>
- Carroll, L. A. (2002). *Rehearsing new roles: How college students develop as writers*. Southern Illinois University Press)
- Carvalho, J. B. (2019). Academic literacy enhancement along the schooling path: Students' reading and writing practices in Portuguese schools and universities. In C. Bazerman, B. Y. G. Pinzón, D. Russell, P. Rogers, L. B. Peña, E. Narváez, P. Carlino, M. Castelló, & M. Tapia-Ladino (Eds.), *Conocer la escritura: Investigación más allá de las fronteras [Knowing writing: Writing research across borders]* (pp. 69–89). Editorial Pontificia Universidad Javeriana; The WAC Clearinghouse. <https://doi.org/10.37514/INT-B.2019.0421.2.03>
- Chafe, W. L. (1985). Linguistic differences produced by differences between speaking and writing. In D. R. Olson, N. Torrance, & A. Hildyard (Eds.), *Literacy, language, and learning: The nature and consequences of reading and writing* (pp. 105–123). Cambridge University Press.
- Chafe, W. (1994). *Discourse, consciousness, and time: The flow and displacement of conscious experience in speaking and writing*. University of Chicago Press.
- Claggett, M. (1989). *Ancient Egyptian science: A source book* (Vol. 1, Knowledge and Order). American Philosophical Society.
- Clark, W. (2006). *Academic charisma and the origins of the research university*. University of Chicago Press. <https://doi.org/10.7208/9780226109237>
- Conference on College Composition and Communication. (2014). *Writing assessment: A position statement*. <https://cccc.ncte.org/cccc/resources/positions/writingassessment>
- Connery, C. L. (1998). *The empire of the text: Writing and authority in early imperial China*. Rowman & Littlefield.
- Deane, P., & Song, Y. (2014). A case study in principled assessment design: Designing assessments to measure and support the development of argumentative reading and writing skills. *Psicología Educativa*, 20(2), 99–108. <https://doi.org/10.1016/j.pse.2014.10.001>
- Devitt, A. J. (1991). Intertextuality in tax accounting: Generic, referential, and functional. In C. Bazerman & J. Paradis (Eds.), *Textual dynamics of the professions: Historical and contemporary studies of writing in professional communities* (pp. 336–357). University of Wisconsin Press.
- Dias, P., Freedman, A., Medway, P., & Paré, A. (1999). *Worlds apart: Acting and writing in academic and workplace contexts*. Lawrence Erlbaum Associates. <https://doi.org/10.4324/9781410602336>
- Donovan, C. A., & Smolkin, L. B. (2006). Children's understanding of genre and writing development. In C. A. MacArthur, S. Graham, & J. Fitzgerald (Eds.), *Handbook of writing research* (pp. 13–43). Guilford Press.
- Ede, L., & Lunsford, A. (1990). *Singular texts/Plural authors: Perspectives on collaborative writing*. Southern Illinois University Press.
- Finkelstein, D., & McCleery, A. (Eds.). (2006). *The book history reader* (2nd ed.). Routledge.
- Flower, L. (1979). Writer-based prose: A cognitive basis for problems in writing. *College English*, 41(1), 19–37. <https://doi.org/10.58680/ce197916016>

- Flower, L. S., & Hayes, J. R. (1977). Problem-solving strategies and the writing process. *College English*, 39(4), 449–461. <https://doi.org/10.58680/ce197716437>
- Frigg, R., & Hartmann, S. (2012). Models in science. In E. N. Zalta & U. Nodelman (Eds.), *The Stanford encyclopedia of philosophy*. Stanford University. <https://plato.stanford.edu/entries/models-science/>
- Goody, J. (1986). *The logic of writing and the organization of society*. Cambridge University Press. <https://doi.org/10.1017/CBO9780511621598>
- Graham, S. (2018). A writer(s)-within-community model of writing. In C. Bazerman, A. N. Applebee, V. W. Berninger, D. Brandt, S. Graham, J. V. Jeffery, P. K. Matsuda, S. Murphy, D. W. Rowe, M. Schleppegrell, & K. C. Wilcox. *Lifespan development of writing* (pp. 272–325). National Council of Teachers of English. <https://wac.colostate.edu/docs/books/lifespan-writing/chapter9.pdf>
- Graham, S., & Harris, K. R. (2011). Writing and students with disabilities. In J. M. Kauffman & D. P. Hallahan (Eds.), *Handbook of special education* (pp. 422–433). Routledge.
- Graham, S., Hebert, M., Sandbank, M. P., & Harris, K. R. (2016). Assessing the writing achievement of young struggling writers: Application of generalizability theory. *Learning Disability Quarterly*, 39(2), 72–82. <https://doi.org/10.1177/0731948714555019>
- Graham, S., & Perin, D. (2007). *Writing next: Effective strategies to improve writing of adolescents in middle and high schools*. Carnegie Corporation of New York. <https://www.carnegie.org/publications/writing-next-effective-strategies-to-improve-writing-of-adolescents-in-middle-and-high-schools/>
- Halpern, D. F. (1998). Teaching critical thinking for transfer across domains: Dispositions, skills, structure training, and metacognitive monitoring. *American Psychologist*, 53(4), 449–455. <https://psycnet.apa.org/doi/10.1037/0003-066X.53.4.449>
- Hayes, J. R. (1996). A new framework for understanding cognition and affect in writing. In C. M. Levy & S. Ransdell (Eds.), *The science of writing: Theories, methods, individual differences, and applications* (pp. 1–27). Lawrence Erlbaum Associates.
- Hayes, J. R., & Flower, L. S. (1987). On the structure of the writing process. *Topics in Language Disorders*, 7(4), 19–30. <https://doi.org/10.1097/00011363-198709000-00004>
- Heath, S. B. (1983). *Ways with words: Language, life and work in communities and classrooms*. Cambridge University Press. <https://doi.org/10.1017/CBO9780511841057>
- Hengst, J. A., & Johnson, C. J. (2008). Writing and communication disorders across the life span. In C. Bazerman, (Ed.), *Handbook of research on writing: History, society, school, individual, text* (pp. 467–480). Lawrence Erlbaum Associates.
- Herrington, A. J., & Curtis, M. (2000). *Persons in process: Four stories of writing and personal development in college*. National Council of Teachers of English.
- Hillocks, G., Jr. (1987). Synthesis of research on teaching writing. *Educational Leadership*, 44(8), 71–82. <https://www.ascd.org/el/articles/synthesis-of-research-on-teaching-writing>

- Hillocks, G., Jr. (with Myers, M.). (2002). *The testing trap: How state writing assessments control learning*. Teachers College Press.
- James, K. H., Jao, R. J., & Berninger V. (2016). The development of multi-leveled writing brain systems. In C. A. MacArthur, S. Graham, & J. Fitzgerald (Eds.), *Handbook of writing research* (2nd ed., pp. 116–129). Guilford Press.
- Jones, M. G., Jones, B. D., & Hargrove, T. Y. (2003). *The unintended consequences of high-stakes testing*. Rowman & Littlefield.
- Kellogg, R. T. (1994). *The psychology of writing*. Oxford University Press. <https://doi.org/10.1093/oso/9780195129083.001.0001>
- Kellogg, R. T. (1996). A model of working memory in writing. In C. M. Levy & S. Ransdell (Eds.), *The science of writing: Theories, methods, individual differences, and applications* (pp. 57–71). Lawrence Erlbaum Associates.
- Kruse, O. (2006). The origins of writing in the disciplines: Traditions of seminar writing and the Humboldtian ideal of the research university. *Written Communication*, 23(3), 331–352. <https://doi.org/10.1177/0741088306289259>
- Luria, A. R. (1986). *The making of mind: A personal account of Soviet psychology* (M. Cole & S. Cole, Eds.). Harvard University Press.
- MacArthur, C. A., & Graham, S. (1987). Learning disabled students' composing under three methods of text production: Handwriting, word processing, and dictation. *Journal of Special Education*, 21(3), 22–42. <https://doi.org/10.1177/002246698702100304>
- MacDonald, S. P. (1994). *Professional academic writing in the humanities and social sciences*. Southern Illinois University Press.
- Machlup, F. (1962). *The production and distribution of knowledge in the United States*. Princeton University Press.
- Makdisi, G. (1984). *The rise of colleges: Institutions of learning in Islam and the West*. Edinburgh University Press. <https://doi.org/10.1515/9781474470643>
- McCarthy, L. P. (1987). A stranger in strange lands: A college student writing across the curriculum. *Research in the Teaching of English*, 21(3), 233–265. <https://doi.org/10.58680/rte198715574>
- Miller, C. R. (1984). Genre as social action. *Quarterly Journal of Speech*, 70(2), 151–167. <https://doi.org/10.1080/00335638409383686>
- Monaghan, E. J. (2005). *Learning to read and write in colonial America*. University of Massachusetts Press.
- O'Neill, P., Murphy, S., Huot, B., & Williamson, M. (2006). What teachers say about different kinds of mandated state tests. *Journal of Writing Assessment*, 2(2), 81–108. <https://escholarship.org/uc/item/oh5093qh>
- Paradis, J., Dobrin, D., & Miller, R. (1985). Writing at Exxon ITD: Notes on the writing environment of an R&D organization. In L. Odell & D. Goswami (Eds.), *Writing in nonacademic settings* (pp. 281–307). Guilford Press.
- Pennebaker, J. W., & Chung, C. K. (2007). Expressive writing, emotional upheavals, and health. In H. S. Friedman & R. C. Silver (Eds.), *Foundations of health psychology* (pp. 263–284). Oxford University Press. <https://doi.org/10.1093/oso/9780195139594.003.0011>
- Prior, P. A. (1998). *Writing/disciplinarity: A sociohistoric account of literate activity in the academy*. Routledge. <https://doi.org/10.4324/9780203810651>

- Purcell-Gates, V. (2001). Emergent literacy is emerging knowledge of written, not oral, language. *New Directions for Child and Adolescent Development*, 2001(92), 7–22. <https://doi.org/10.1002/cd.12>
- Purves, A. C. (1992). *The IEA study of written composition II: Education and performance in fourteen countries*. Pergamon Press.
- Reiff, M. J., & Bawarshi, A. (2011). Tracing discursive resources: How students use prior genre knowledge to negotiate new writing contexts in first-year composition. *Written Communication*, 28(3), 312–337. <https://doi.org/10.1177/0741088311410183>
- Rowe, D. W. (2003). The nature of young children's authoring. In N. Hall, J. Larson, & J. Marsh (Eds.), *Handbook of early childhood literacy* (pp. 258–270). Sage.
- Rowe, D. W. (2008). The social construction of intentionality: Two-year-olds' and adults' participation at a preschool writing center. *Research in the Teaching of English*, 42(4), 387–434. <https://doi.org/10.58680/rte20086502>
- Russell, D. R. (1997). Rethinking genre in school and society: An activity theory analysis. *Written Communication*, 14(4), 504–554. <https://doi.org/10.1177/0741088397014004004>
- Russell, D. R. (2010). Writing in Multiple Contexts: Vygotskian CHAT meets the phenomenology of genre. In C. Bazerman, R. Krut, K. Lunsford, S. McLeod, S. Null, P. Rogers, & A. Stansell (Eds.), *Traditions of writing research* (pp. 353–364). Routledge.
- Saussure, F. de. (1983). *Course in general linguistics* (C. Bally, A. Sechehaye, & A. Reidlinger, Eds.; R. Harris, Trans.). Duckworth.
- Schneuwly, B. (1994). Contradiction and development: Vygotsky and paedology. *European Journal of Psychology of Education*, 9, 281–291. <https://doi.org/10.1007/BF03172901>
- Schulz, L. M. (1999). *The young composers: Composition's beginnings in nineteenth-century schools*. National Council of Teachers of English.
- Schutz, A. (with Van Breda, H. L.). (1967). *The problem of social reality: Collected papers I* (M. Natanson, Ed.). Martinus Nijhoff.
- Scribner, S., & Cole, M. (1981). *The psychology of literacy*. Harvard University Press.
- Selzer, J. (1983). The composing processes of an engineer. *College Composition and Communication*, 34(2), 178–187. <https://doi.org/10.58680/cc198315283>
- Smart, G. (1993). Genre as community invention: A central bank's response to its executives' expectations as readers. In R. Spilka (Ed.), *Writing in the workplace: New research perspectives* (pp. 124–140). Southern Illinois University Press.
- Smart, G. (2006). *Writing the economy: Activity, genre, and technology in the world of banking*. Equinox.
- Storch, S. A., & Whitehurst, G. J. (2001). The role of family and home in the literacy development of children from low-income backgrounds. *New Directions for Child and Adolescent Development*, 2001(92), 53–72. <https://doi.org/10.1002/cd.15>
- Street, B. V. (1984). *Literacy in theory and practice*. Cambridge University Press.
- Thaiss, C., Bräuer, G., Carlino, P., Ganobcsik-Williams, L., & Sinha, A. (Eds.). (2012). *Writing programs worldwide: Profiles of academic writing in many places*. The WAC Clearinghouse; Parlor Press. <https://doi.org/10.37514/PER-B.2012.0346>

- Thaiss, C., & Zawacki, T. M. (2006). *Engaged writers and dynamic disciplines: Research on the academic writing life*. Boynton/Cook.
- Tiersma, P. M. (1999). *Legal language*. University of Chicago Press.
- Tiersma, P. M. (2010). *Parchment, paper, pixels: Law and the technologies of communication*. University of Chicago Press. <https://doi.org/10.7208/chicago/9780226803074.001.0001>
- Tolchinsky, L. (2006). The emergence of writing. In C. A. MacArthur, S. Graham, & J. Fitzgerald (Eds.), *Handbook of writing research* (pp. 83–95). Guilford Press.
- Vanstiphout, H. L. J. (1995). On the old Babylonian Eduba curriculum. In J. W. Drijvers & A. A. MacDonald (Eds.), *Centres of learning: Learning and location in pre-modern Europe and the Near East* (pp. 1–16). Brill. [https://doi.org/10.1163/9789004247154\\_002](https://doi.org/10.1163/9789004247154_002)
- Vogelzang, M. E. (1995). Learning and power during the Sargonid period. In J. W. Drijvers & A. A. MacDonald (Eds.). *Centres of learning: Learning and location in pre-modern Europe and the Near East* (pp. 17–28). Brill. [https://doi.org/10.1163/9789004247154\\_003](https://doi.org/10.1163/9789004247154_003)
- Volosinov, V. N. (1973). *Marxism and the philosophy of language* (L. Matejka & I. R. Titunik, Trans.). Harvard University Press.
- Vygotsky, L. (1986). *Thought and language* (A. Kozulin, Ed.). MIT Press.
- Yates, J. (1989). *Control through communication: The rise of system in American management*. Johns Hopkins University Press. <https://doi.org/10.56021/9780801837579>
- Yates, J. (2005). *Structuring the information age: Life insurance and technology in the twentieth century*. Johns Hopkins University Press.





## Section 4. The Ethics and Values of Writing

Writing and the teaching of writing are deeply value-laden and ethical activities. Writing communicates and establishes relationships among people—directly in the written communications, less directly in forms of social organization writing makes possible, and indirectly in how writers represent others and their work. Further, teaching writing puts us as teachers in ethical and value relations with our students and societies they are entering.

One fundamental ethical issue is who gets to share in the power of writing. Historically access to the basics of writing and its more advanced competences has been inequitably distributed. This inequity of access has reinforced other inequalities of our societies. Since writing gives voice to individuals and groups within the expanding domains of literate practice, if individuals or groups of people are not given opportunities to develop as writers, they are silenced. Their needs, perspectives, and even presence are left invisible in the documentary world that forms ruling relations. As well, they do not have the opportunity or means to elaborate critical views or contest other perspectives that dominate the textual world. It is up to us as educators to ensure the powerful tools of writing are made available to all. Otherwise, those tools are left only in the hands of the already powerful to reproduce the inequities of society.

The first chapter in this section, “Equity Means Having Full Voice in the Conversation,” identifies writing teachers’ commitment to teaching writing to provide voice to students so they can become full citizens in a literate way of life, representing their own interests, concerns, knowledge, and identities in literate forums. Even if students gain access to higher education, if they do not have the academic and social supports to develop as writers, they may remain at the margins of professional communities and suffer the penalties of never truly belonging. This chapter, originally presented to South American educators, reviews some of the evidence-based practices and programs supporting writing in higher education.

The following chapter, “Schooling for Life, All Lives: Opportunity, Dilemma, Challenge, Critical Thought,” pursues writing teachers’ pedagogical obligations in developing students’ critical participation in literate ways of life. Educational systems historically have depended on critical analyses of the social, economic, and governance needs for literacy, but these analyses have been controlled by and served the interests of powerful groups that have directed education. The teaching of writing, however, has increasingly brought power into the hands of educators and now those being educated. Critical writing in particular brings the tools of critical thought and deliberation about education and educational systems to students.

Once people have the means to enter into consequential discussions transacted in writing, writers face the ethical and value-laden issues of how they engage

with the writing of others; how they draw on and represent their words, facts, and ideas; how they position their words vis-à-vis the words of others; and what they contribute to the discussion or growth of knowledge and organized social activity. The third chapter in this section considers our obligations as writers to live up to and exceed the expectations to contribute to our communal life through the genres we write in at the same time as we recognize the prior writers who brought us to this point. “Paying the Rent: Linguaging Particularity and Novelty,” raises the complicated question of how we identify our responsibilities to draw on and participate in shared prior writings while fulfilling our obligations for novel contributions—that is, the value-added work we need to carry out within each kind of writing.

This section’s fourth chapter, “Reproduction, Critique, Expression, and Cooperation: The Writer’s Dance in an Intertextual World,” pursues the paths by which writers develop the skills of locating their writing voices within intertextual worlds and how schooling at different levels can support that development. Only by learning to understand and respect the contributions of others can one effectively speak to their words, contribute to knowledge and communal life, and assert one’s needs. Schooling can help guide students and provide strength within the intertextual world they are born into and that will evolve through their contributions.

The final chapter of this section “The Ethical Poetry of Academic Writing” specifically considers the ethical roles and obligations of academic writers. Scholarly and scientific writing has particular ethical obligations to those we as researchers study, to the world we represent, to the people whose work we rely on and who rely on our work, to the social systems that support knowledge production, and to the society which relies on the knowledge we produce. We also have ethical obligations to ourselves as scholars. At heart, knowledge production is a deeply ethical and value-laden endeavor.

# Chapter 14. Equity Means Having Full Voice in the Conversation

Higher education reforms and inclusion policies have opened the door to many talented students who previously did not have access to traditional research universities.<sup>1</sup> These initiatives are to be applauded. They lead down the path of social justice and hold the promise of increasing the diversity and strength of the talent that will lead nations' governments and economies in the challenging years to come. Further, the presence in the university of students from all backgrounds enriches the experience for all students and their understanding of the complexity of their societies and nations. But the open door can easily become a revolving door if students do not get the needed academic support. That support must go beyond success in secondary education to help students orient to the new expectations and cultures of higher education. The support needed by nontraditional students may also be discovered to be of great value for traditional students, improving their university success as well. This essay will explore more specifically the value that supports for academic writing may have in Latin American countries as they have had in the US.

## The Challenge of University Success

Students who gain entry to top universities are among the most talented, energetic, and disciplined students in their countries. This is true whether the students come through traditional channels of economic advantage, top schools, and highest test scores or they have overcome many challenges of class, education, and limited opportunity to be still recognized as having great potential. In some ways, nontraditional students who come from less economic advantage, who have had fewer educational resources, whose school experiences have not prepared them for university challenges, and who have cultures, perspectives, and affiliations different from traditional students may bring advantages of character, commitment, and motivation that could bring even greater academic success than those who have had fewer obstacles to overcome. The nontraditional students understand well the opportunities being offered to them, and they have had the grit, discipline, and resilience to keep focused on academic success, despite obstacles and struggles.

Nonetheless, nontraditional students may be at risk because they may not have the specific academic preparation of others, may not have the confidence to assert their own voices, may not have families who can give them guidance in the

---

1. This chapter originally appeared as "Equity Means Having Full Voice in the Conversation," by C. Bazerman, 2017, *Revista Lenguas Modernas*, 50(2), pp. 33–46 (<https://revista-invi.uchile.cl/index.php/LM/article/view/49249/51716>). Copyright 2017 by C. Bazerman under a CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0>).

academic life, and may not feel fully part of university and academic life. Yet given the right support and guidance they can succeed as well as or better than the other students. In either case, traditional or nontraditional, failure to complete the university and to gain the most from the experience is a loss both for the individual student, who will carry the awareness and consequences of the lack of a degree throughout life, and for their nation, which will not have the full use of a talent gone astray. These students are potentials to be nurtured and supported rather than to be cast aside because they struggled with difficult-to-overcome obstacles.

Let me switch the metaphor. New policies and programs and expanding higher education systems (see Federico Navarro, 2017) are inviting people to the table who never received an invitation before. Will those newly invited stay to the end of the meal? Will they get the full benefit? Will they thrive, engage, and develop in mind and spirit in the rich discussion that will carry on long after the dishes vanish, and will they carry that development into their lives after?

Imagine you were invited to an exclusive restaurant, and the hosts, seeing you were new, first put you at the children's table until they were convinced you could act like a proper guest. And then imagine you could not understand the menu. Or the exotic dishes were unfamiliar to you, so you couldn't be sure what you were ordering or whether you would enjoy it. Or you could not pronounce your requests in a way that the waiter would understand or that would lead the waiter to treat you with the respect and pleasantness given to other customers. And then you were handed chopsticks which you did not know how to use, or you were given five forks that left you anxious about which to use when.

Assume you did not make excuses and did not run off in embarrassment or frustration before the meal was finished. Assume you could figure out the puzzles of ordering and eating, overcome anxiety about choices and how you appear, and endure the social judgment of others. Even if you survived all these, emotions may detract from what you take away from the meal and decrease your chance of hanging around for the talk, returning another day, or following up on the connections you made. What you experience, remember, and learn may be discomfort, lack of fitting in, and perhaps survival skills.

## Writing Facilitates Successful Academic Experience

I have taken this metaphor a bit far, but I want to make graphic that the real value of an invitation is in the experience that you have once you enter, the experience that will determine whether you persist in the opportunity and what you will take from it. Much of a successful experience in the university depends on a student's ability to write. Writing is a central means for students to express themselves and interact within the university. Writing is a means for students to develop their thinking and critical reasoning. Writing is also the means by which much of student work and learning will be evaluated. If students do not have the means to communicate successfully in writing in the university, their experience will be painful and

unfortunate. Without support for writing, an invitation to the university will be likely an invitation to failure. Since writing is a key skill in expressing ideas, building critical thought, developing reasoning and intellect, and communicating intelligently with others, I will in this essay focus on the kinds of writing programs that we have found to support student success in the particular contexts of U.S. universities. Latin American universities in their desire to support success of students must, of course, design programs that fit the context of their institutions, academic cultures, and students, but they may find the U.S. experience informative.

I have devoted my career to supporting student success through writing development, starting with teaching basic writing to nontraditional students in the early years of open admissions in the City University of New York. I gradually came to understand how nontraditional students' writing challenges are embedded within academic practices, disciplinarity, and ultimately the evolution of societies that have made literacy the hidden infrastructure of communication, thought, social memory, and social organization. In my research and pedagogy, I have come to see how writing gives all people voice in the literate world. Limits on our ability to write limit our ability to engage with and represent our interests in the institutions of modernity.

It has turned out that what is a challenge and opportunity for nontraditional students is also a challenge and opportunity for all students. Writing takes a lifetime to learn. Writing is endlessly complex, and people never stop learning, particularly as they enter into the highly specialized communicative worlds of academic disciplines and professions. So the extra benefit in building programs to support nontraditional students in their academic journey is that we as educators learn to support all students. As we discover what kinds of support help our new students benefit most from their education, we also discover the kinds of supports that may help all students, who may have been getting by but not yet understanding how to enjoy and engage deeply with the experience. This is precisely what we have been discovering in writing programs in the US over the last fifty years, as we have developed many models of courses and student supports, designed for the specific circumstances of each university and described in the extensive literature within composition studies.

## Demonstrating the Value of Writing Supports

Some quantitative, statistically significant studies have specifically shown that well-designed writing supports for students provide demonstrable benefit on such measures as persistence, retention, grades, and graduation. These numbers miss the depth and reality of the experience, but they do show in institutional terms that writing programs pay off and are worth the investment. The studies also offer some guidance on how support should be organized. These studies all come from the U.S. context where required first year writing courses have been standard at most universities for well over a century. This writing course of one or two terms is typically located within general education requirements for the first two university

years, before students are required to commit to a major. Through general education requirements students are introduced to a wide variety of disciplines and ways of looking at the world. Writing courses typically require extensive writing of essays, often on academic topics, usually involving student development of their own ideas and arguments. There is now also usually an attention to writing process and peer feedback. Also common are additional courses for students who are identified as less prepared than the entering norm and need additional instruction. Whether such a model of first year courses for all with additional work for selected students is structurally, financially, and institutionally viable in other countries or whether supports should be offered through other means, these studies show the value of well-designed supports. The experience elsewhere can help policy makers think through what might be appropriate in each local context.

Producing quantitative evidence of the success of writing courses is tricky because every writing program is different, along with every university and every student population. In fact, an important principle of writing program design is that writing programs need to fit local circumstances and cultures. Additionally, many variables influence student success and retention, and complexity of variables only increases if later consequences are considered, such as graduation or career success. Third, finding controls or comparisons is difficult, as programs are usually campus-wide and student populations in the different course sequences are not comparable because of the characteristics that initially determine how students are placed in different courses. Comparisons across campuses bring in too many variables to consider one campus as a control or comparison for the other. Finally, causality is, as always, a challenge to prove, though correlations can be suggestive.

Given these difficulties, I have searched for the clearest statistically significant studies that directly indicate the value of writing courses for university success. Separately they each establish important elements about the value of writing or writing instruction; together they make the arguments that writing skill is important to college success, well-designed writing instruction can improve writing skills, and attention to writing in subject area courses can foster deep learning. In total, these studies indicate attention to writing, in whatever form best fits the context, aids student success and learning.

## Writing is Important to College Success

The most general study I could locate examined student records at a small university using association rule mining, a technique to see what factors or patterns predict others to identify what experiences predict success (Garrett et al., 2017). The authors of this study found that success at the initial writing course was strongly predictive of graduation within six years, and success at this course was about equal in importance to success in courses in the major. They found that only 17 percent of students earning a C- or less in first year writing (below basic pass) eventually graduated compared to 53 percent who earned C or above.

Repeating the course did not improve the odds greatly. This correlation between doing poorly in the writing course and having a lower chance of graduating was about the same as for failing a course related to the student's major. That is, not being able to write well was as serious a difficulty as not doing well in one's chosen subject. While the authors of this study did not directly show whether success was the result of the course or of students' previous skills, they did show the course seemed to provide practice and evaluation of the skills and experience that students needed to succeed at the university. Further their study showed a cluster of courses consisting of first-year library science, first-year public speaking, and first year writing predicted retention more than any other general education courses, with first year writing being the most influential component.

The implication of these findings for Latin American universities is clear: even without a full-scale general education curriculum, the most significant components for retention and persistence to graduation, namely writing and other communication and information courses, can be added within students' higher educational careers.

## Well-Designed Writing Instruction Can Improve Writing Skills

Other studies have shown retention improvement for specific programs designed for the needs of students within particular institutions. These studies have provided more direct evidence that success is due to the course and not students' prior skills. Two such programs shown to be of value in appropriate contexts are the CLASP model at Washington State University which combines faculty development with a curriculum that focuses on critical pedagogy (Buyserie et al., 2017) and the Accelerated Learning Program which has been effective in Baltimore County Community College (Cho et al., 2012) and has been replicated in other two- and four-year colleges. The Accelerated Learning Program integrates students into university level work and presents challenges for critical thought from the beginning.

One of the most detailed series of studies of the value of a well-designed writing program has come from Arizona State University, examining the impact of a redesign of the writing course sequence for students who are identified as needing extra support (Glau, 1996, 2007; Snyder, 2017). Prior to the redesign such identified students had to take a no-credit remedial, pre-university level course. (Glau, 1996). Both before and after the redesign all students at the university had to take a 2-term sequence of English 101 and 102, typically completed in the first year or as early as possible for those needing remedial courses. After the redesign, the remedial no-credit course was eliminated, and the students identified as needing more work were placed in a two-term version of 101 (designated WAC [Writing Across the Curriculum] 101 followed by English 101), but stretched out and with smaller class size. This sequence relied on the theory that these students were ready for university work but that they needed more time and personal support to do the

work. Integration into college level work was hypothesized to be more effective in advancing writing skills than holding students in preliminary courses. It was a simple concept and a simple change, that the key thing to be worked on was university writing rather than a more generic writing, repeating high school skills.

In the first year after this program was instituted in 1994, 23 percent more passed the first stretch term WAC 101 than the remedial course, 20 percent more went on to take English 101, and 30 percent more passed English 101, with a 92 percent pass rate (Glau, 1996, p. 85). So the stretch course was clearly an improvement, and the concept of integration into university work seemed correct. Further, the stretch course students seemed to be more engaged than even the traditional students who were not required to take extra work, as indicated by the retention rate for the two-term sequence fall to winter, which was 81.8 percent, 15 points higher than students placed directly in regular sections of 101 who continued to 102 the next term at a 66.2 percent rate (p. 83). Results for spring to fall and summer to fall versions of the stretch course were not as successful, suggesting momentum and continuity in integration into the university may be an issue.

A ten-year follow-up which included data for all the intervening years confirmed the value of the stretch course and indicated that the students who passed through it were even more successful than the non-designated students who took only the traditional 101-102 sequence (Glau, 2007). It turned out that at the end of 101, students in the stretch versions had higher pass rates than students in the traditional one term version (p. 38). Not only that, the stretch students got as good or better grades than the non-designated students in the follow-up course 102, where they were mixed together. Persistence across terms was also better for the stretch students (p. 42). These trends also held when looking only at the subgroup of students from under-represented minorities (pp. 40-41). The lesson from this set of studies is that not only are appropriately designed writing courses useful in improving student writing for students with weaker skills, but that with appropriate support students entering with weaker skills could surpass their peers who enter with stronger skills.

A follow-up study looking at second language students taking an ESL version of the stretch course found even greater persistence than for the native English speaking (NES) stretch students (Snyder, 2017). The cohort of ESL stretch students beginning in fall 2012 passed at a 93 percent rate compared to the 89 percent pass rate of the students in NES stretch course. Of those passing, 97 percent of the ESL students registered in the second course of their sequence, and of those, 96 percent passed compared to 88 percent of the NES students registering and 91 percent passing. Then in the final course, 74 percent of the ESL students who had completed the stretch sequence enrolled, and 97 percent of those passed, compared to 64 percent of the NES students who had completed the stretch sequence and 85 percent passing. The pass rates of the NES speakers coming out of the stretch sequence were almost as good as those of the traditional students who did not take the stretch sequence, and the ESL students taking the stretch sequence exceeded both the NES stretch students and the traditional students.



Overall, these studies confirm that at-risk students with proper support can become highly successful and that well-designed programs that meet the needs of particular populations have positive effects on persistence, retention, and even grades in consequent courses. In their study, Garrett et al. (2017) further indicated that writing skills are important not only in further writing courses but also in success in completing majors, so improvements in writing skills resulting from appropriate writing courses can be linked to university success. These studies also indicated that the students who come through these programs can match or even exceed better-prepared students who take only the traditional sequence. These findings suggest these special programs may offer something that even more typically prepared students can use.

## Attention to Writing in Subject Area Courses Can Foster Deep Learning

Appropriate university-integrated writing support thus seems to prepare students for success in the directly related courses as well as in courses in their major and in completion of degrees. This then leads to the questions of whether attention to writing in consequent subjects is also of importance for academic success and what kind of attention that might be. A study based on data from the large annually administered National Study of Student Engagement suggests how important well-designed writing assignments are to perceived student learning in their majors (Anderson et al., 2015). The findings are a bit complex, so I will go through the reasoning, assumptions, and methods in detail, so as to make the findings as clear as possible.

Previously three large-scale studies had shown the importance of writing for university success. A. W. Astin (1992) found that attention to writing skills correlated positively with achievement of general education outcomes more than any other variable measured. Richard J. Light (2001) also found the amount of writing assigned correlated more with student engagement than any other variable. Richard Arum and Josipa Roksa (2011) further found that the only variable to correlate with increases in critical thinking and complex reasoning in the first three semesters was to assign in each course more than 40 pages of reading a week and 20 pages of writing over the term. However, more detailed studies of the relation of writing to learning in specific contexts produced more mixed results. In order to identify whether specific characteristics of writing tasks might influence effects, Paul Anderson and his colleagues (2015) polled experts in college writing to develop three constructs of good writing assignments, which became the basis for questions added to the National Survey of Student Engagement, with responses for over 90,000 first and final year students from 80 participating institutions. These constructs were “Interactive Writing Processes,” “Meaning-Making Writing Tasks,” and “Clear Writing Expectations”—specified as follows:

- Interactive Writing Processes, which involve the student writers communicating orally or in writing with one or more persons at some point between receiving an assignment and submitting the final draft. . . .
- Meaning-Making Writing Tasks, which require students to engage in some form of integrative, critical, or original thinking. . . .
- Clear Writing Expectations, which involve instructors providing students with an accurate understanding of what they are asking their students to show that they can do in an assignment and the criteria by which the instructors will evaluate the students' submissions. (pp. 206–207).

These constructs, after some adjustment, were confirmed by the survey and then found to correlate with already established constructs of deep learning (taken from Laird and colleagues, 2006), measured as follows:

- Higher-Order Learning is measured by four questions about how much students say their course work emphasizes analyzing experiences and theories, synthesizing concepts and experiences into more complex relationships, making judgments about the value of information, and applying learned concepts to practical problems.
- Integrative Learning survey items measure the student's engagement in combining ideas from various sources, such as including diverse perspectives in course work, using ideas from different courses in assignments or class discussions, and discussing course concepts with either faculty members or others outside of class.
- Reflective Learning is measured by three questions that center on the student's self-examination of views on a topic, understanding the perspectives of others, and learning that changes the way the student understands an issue (Anderson et al., 2015, p. 211).

The correlations between constructs of writing and the constructs of deep learning ranged from 0.19 to 0.42 (Anderson et al., 2015). These correlations were stronger than those between constructs of deep learning and amount of writing, which ranged from about 0.11 to 0.27. Further it was found that these three constructs of effective writing instruction correlated with student perceptions of learning and development. Students perceived that they were learning and developing more through experiencing these best practices but did not perceive the same gains just from the amount of writing assigned.

While these data do not indicate actual learning, nor actual outcomes, they do indicate that writing assigned and carried out across the curriculum within best assignment practices were perceived by students to be associated with deep learning and development. Since such perceptions are indicators of engagement, and engagement has been shown to correlate with a variety of academic success outcomes (Kuh, 2008), these findings suggest that engagement in writing tasks is important to learning and academic success.

The findings from the NSSE study indicate the importance of meaningful writing experiences across the curriculum, which would entail greater engagement and forethought of disciplinary faculty in assigning, supporting, and responding to writing assignments. These findings combined with those reported earlier in this essay, suggest well-designed locally appropriate writing instruction and support, integrated into actual university level work with writing assignments in subject courses aid learning. That is, these findings indicate the educational value of a Writing Across the Curriculum approach that works with the faculty in the various subject areas to provide better assignments and supports that foster deep learning.

## Writing in Latin American Higher Education

What would such a Writing Across the Curriculum orientation look like within Latin American higher education, and in particular among the most demanding public and private universities? That ultimately is something that is best left to local knowledge and local educators with wisdom about the nature of students, institutions, and majors. The expanding set of writing studies with the Latin American context provides important starting points (for overviews of that work see Natalia Ávila-Reyes, 2017; Navarro et al, 2016; and Mónica Tapia-Ladino et al., 2016). Nonetheless, based on my own research, experience, and pedagogy, as well as the consensus of national panels of writing teachers and researchers, I can make a few general comments about writing development and the challenges faced by students.

First, students to develop as writers need a variety of meaningful and motivated experiences, opportunities to practice writing in a variety of specific settings, and understanding the value of carrying out those tasks (Adler-Kassner & Wardle, 2015; Bazerman et al., 2017). That is, students, in fact all writers, grow in their capacity to write by being engaged in writing tasks they find interesting, challenging, and useful, resulting in valued accomplishments. Each experience then builds capacity for each new one.

Second, if the goal is improvement of academic writing, the settings need to be specifically academic, and the most motivating rewards are those of learning and intellectual discovery. So while brief periods of directed instruction and support within separate writing contexts are useful, these must be seen and experienced substantively as moving students into the identities and worlds of knowledge and thought students aspire to. Further, these experiences must provide the opportunity for students to assert their own thoughts, meanings, and conclusions into the disciplinary space, solving puzzles they have taken ownership of and asserting themselves as legitimate participants.

Within the university curriculum we educators have some control of the sequencing of these writing experiences, and within the careers or majors chosen by students departments already have a framework of experiences and affiliations that can drive engagement. The majors or careers identify where students have already been successful, where they want to go, and what they want to become.

Insofar as students see writing as part of achieving those directions and goals, they are predisposed to solve problems and engage in communicative tasks.

What are the specific kinds of challenges students face in academic writing and the problems they must solve to produce successful academic work? University reading and writing present challenges for even the best-prepared students. The language and textual forms of academic disciplines are unfamiliar and specialized but, even more, disciplinary communications establish different relationships among the participants and different stances towards the subject matters. To understand disciplinary texts and to be able to produce them, students must develop new ways of thinking and new ways of looking at the world. Merely repeating received knowledge using phrasing from textbooks leads at best to limited understanding and poor performance and does not allow students to develop a sense of competence, performance, and autonomous thought. Students must be able to synthesize the ideas and information from multiple sources and come to their own conclusions; they must be able to evaluate points of views and biases of sources; they must weigh the claims of their sources against evidence they themselves learn to collect; they must come to argue for their original claims. Students must do all these things within the disciplinary practices and theoretical frameworks of their chosen fields—representing data, evidence, and knowledge appropriately and drawing meaningfully from relevant literatures. They must recognize and care about the stakes in disciplinary discussions and develop confident positions to speak from. If they fail to carry out these transformations of knowledge, they will remain alienated from the academic work and academic ways of reasoning. They will see academic work as artificial, not meaningful, and done only under duress for grades. They may even develop more negative beliefs about academic work. In short, students must develop and commit to professional or academic identities that give them positions from which to participate wholeheartedly within the work of their careers, citizenship, and communities. It is a long journey to emerge from beneath dominant authoritative texts in order to assert active, engaged, confident, and competent voices in the discussions of their professions.

To guide curriculum development in the US to prepare students for this kind of disciplinary engagement and academic success, a consortium of the major teaching of writing organizations—the Council of Writing Program Administrators, the National Writing Project, and the National Council of the Teachers of English (which includes the Conference on College Composition and Communication)—have developed a set of outcomes for first year writing courses (<http://associationdatabase.co/archives/38n1/38n1outcomes.pdf>). In addition to the traditional understanding of conventions, this statement of outcomes has three other major categories that coincide with the kinds of development we have been discussing: “Rhetorical Knowledge”; “Critical Thinking, Reading, and Composing”; and “Processes.” This outcomes statement may prove useful as a heuristic for considering the goals of programs elsewhere that would fit local needs in Latin American countries.

Other potentially useful resources are available at the WAC Clearinghouse website (<https://wac.colostate.edu/>). These include pedagogic and program development materials that illustrate and provide alternatives for both first year courses and writing across the curriculum materials, including the Reference Guides in Rhetoric and Composition book series and the Landmark Publications in Writing Studies book series.

Support in both the first year courses and the more advanced subject courses within majors has been useful for all students, nontraditional and traditional, within U.S. settings. This support goes beyond the kinds of preparation students are likely to achieve in even the best of secondary school experiences and requires the atmosphere, motives, and culture of higher education to be meaningfully realized for students. Such support has increased retention, completion, and success for all students in the US and may be of some use in other national contexts. The challenge now facing Latin American universities is to design and implement appropriate support in ways that fit the institutional structures of local institutions, the societies they are part of, and the characteristics and motivations of the students. I look forward to the solutions that Latin American academics will find.

## References

- Adler-Kassner, L., & Wardle, E. (Eds.). (2015). *Naming what we know: Threshold concepts of writing studies*. Utah State University Press.
- Anderson, P., Anson, C. M., Gonyea, R. M., & Paine, C. (2015). The contributions of writing to learning and development: Results from a large-scale multi-institutional study. *Research in the Teaching of English*, 50(2), 199–235. <https://doi.org/10.58680/rte201527602>
- Arum, R., & Roksa, J. (2011). *Academically adrift: Limited learning on college campuses*. University of Chicago Press.
- Astin, A. W. (1992). What really matters in general education: Provocative findings from a national survey of student outcomes. *Perspectives*, 22, 23–46.
- Ávila-Reyes, N. (2017). Postsecondary writing studies in Hispanic Latin America: Intertextual dynamics and intellectual influence. *London Review of Education*, 15(1), 21–37. <https://doi.org/10.18546/LRE.15.1.03>
- Bazerman, C., Applebee, A. N., Berninger, V. W., Brandt, D., Graham, S., Matsuda, P. K., Murphy, S, Rowe, D. W., & Schleppegrell, M. (2017). Forum: Taking the long view on writing development. *Research in the Teaching of English*, 51(3), 351–360. <https://doi.org/10.58680/rte201728980>
- Buyserie, B., Plemons, A., & Ericsson, P. F. (2017). Retention, critical pedagogy, and students as agents: Eschewing the deficit model. In T. Ruecker, D. Shepherd, H. Estrem, & B. Brunk-Chavez (Eds.), *Retention, persistence, and writing programs* (pp. 151–166). Utah State University Press.
- Cho, S.-W., Kopko E. M., Jenkins, D., & Jaggars, S. S. (2012). *New evidence of success for community college remedial English students: Tracking the outcomes of students in the Accelerated Learning Program (ALP)* [Working Paper No. 53]. Community

- College Research Center, Columbia University. <https://ccrc.tc.columbia.edu/publications/ccbc-alp-student-outcomes-follow-up.html>
- Garrett, N., Bridgewater, M., & Feinstein, B. (2017). How student performance in first-year composition predicts retention and overall student success. In T. Ruecker, D. Shepherd, H. Estrem, & B. Brunk-Chavez (Eds.), *Retention, persistence, and writing programs* (pp. 93–113). Utah State University Press.
- Glau, G. R. (1996). The “Stretch Program”: Arizona State University’s new model of university-level basic writing instruction. *Writing Program Administration*, 20(1–2), 79–91 <http://associationdatabase.co/archives/20n1-2/20n1-2glau.pdf>
- Glau, G. R. (2007). Stretch at 10: A progress report on Arizona State University’s Stretch Program. *Journal of Basic Writing*, 26(2), 4–50. <https://doi.org/10.37514/JBW-J.2007.26.2.03>
- Kuh, G. D. (2008). *High-impact educational practices: What they are, who has access to them, and why they matter*. Association of American Colleges and Universities. <https://www.aacu.org/publication/high-impact-educational-practices-what-they-are-who-has-access-to-them-and-why-they-matter>
- Laird, T. F. N., Shoup, R., & Kuh, G. D. (2006). *Measuring deep approaches to learning using the National Survey of Student Engagement* [Conference presentation]. 2006 Association for Institutional Research Annual Forum, Chicago, IL, United States. <https://hdl.handle.net/2022/24141>
- Light, R. J. (2001). *Making the most of college: Students speak their minds*. Harvard University Press.
- Navarro, F. (2017). Piensa globalmente, actúa localmente: cómo diseñar un curso de escritura académica para estudiantes que ingresan a la universidad [Think globally, act locally: How to generate an academic writing course for students entering college]. In P. H. J. Quintanilla & A. Valle (Eds.), *El desarrollo de las competencias básicas en los estudios generales* (pp. 103–134). Fondo Editorial Pontificia Universidad Católica de Perú.
- Navarro, F., Ávila Reyes, N., Tapia-Ladino, M., Cristovão, V. L. L., Moritz, M. E. W., Narváez Cardona, E., & Bazerman, C. (2016). Panorama histórico y contrastivo de los estudios sobre lectura y escritura en educación superior publicados en América Latina [A historical and contrastive account of higher education reading and writing studies published in Latin America. *Revista Signos*, 49(suppl. 1), 78–99. <https://doi.org/10.4067/S0718-09342016000400006>
- Snyder, S. E. (2017). Retention rates of second language writers and basic writers: A comparison within the stretch program model. In T. Ruecker, D. Shepherd, H. Estrem, & B. Brunk-Chavez (Eds.), *Retention, persistence, and writing programs* (pp. 185–203). Utah State University Press.
- Tapia-Ladino, M., Avila Reyes, N. A., Navarro, F. D., & Bazerman, C. (2016). Marcos, disciplinas e o future das inciativas de leitura e escrito no ensino superior: Uma análise a partir dos principais acadêmicos no campo na América Latina [Milestones, disciplines and the future of initiatives of reading and writing in higher education: An analysis from key scholars in the field in Latin America]. *Ilha Do Desterro*, 69(3), 189–208. <https://doi.org/10.5007/2175-8026.2016v69n3p189>

# Chapter 15. Schooling for Life, All Lives: Opportunity, Dilemma, Challenge, Critical Thought

The history of schooling is long, driven by the need for literate people in evolving societies.<sup>1</sup> At every stage critical analysis has helped define the needs for literacy and the role for schooling, but not everyone has had the power or position to participate in that critical analysis of social needs, educational policies, and educational practices. Over time, however, social needs have expanded educational participation and ultimately fostered cultures of critical analysis such that critical literacy is a prerequisite for all to participate fully in modern economies and democracies. This chapter will identify in broad strokes six major moments or steps in the reasoning that has led to modern schooling and how they have changed the locus of power for critical thinking. This is also a story about how literacy is tied to power, mediated by the relation between reading and writing as educational imperatives. Ultimately it is a story about who has a thoughtful, analytic, informed say in how schools and life are organized.

But first, before we look at the sweep of history, we should gain some clarity about critical thought. Critical thought is more than having contrary views or negative feelings. Critical thought depends on a systematic framework of ideas that gives one a standpoint from which to make criticisms and an organized set of categories and terms that allows one to analyze an issue, problem, or situation based on a systematically collected set of data or facts to be examined. The organized and analyzed evidence can be compared, evaluated, related to each other, or otherwise developed into a coherent set of conclusions that can then guide understanding and action to solve exposed problems.

## Step One. Literacy, Power, and Centralization

Literacy was invented separately at least three times (in ancient Mesopotamia, China, and Mesoamerica), and perhaps elsewhere, but we only have extensive early records from Mesopotamia because clay was used from the beginning as a primary medium, which has been preserved in the arid climate. In other

---

1. This chapter originally appeared in Spanish translation as “Escalarizando para la vida, todas las vidas: Oportunidad, dilema, desafío y pensamiento crítico,” by C. Bazerman, 2022, in *Literacidad Crítica, Formación e Inclusión*, edited by M. Vergara Fregoso, R. García Reynaga, & S. Ayala Ramírez, pp. 87–107, Editorial Universidad de Guadalajara (<https://www.bibliotecaebook.com/reader/435733/%26returnUrl%3D?productType=e-book&viewInside=true>). Copyright 2022 by Editorial Universidad de Guadalajara. Reprinted with permission.

regions the loss of perishable media such as wood and bamboo slips or leaves have obscured many early uses. In Mesopotamia and the surrounding region, writing began with agricultural record-keeping and over time expanded to include governance, census, taxation, economy, and ownership, along with military administration, legal codes, glorification of regimes, and similar centralizing state functions. Commercial arrangements, medical knowledge, astronomy, prognostication, and other forms of technical knowledge were also communicated and codified through literacy. This meant that scribes were increasingly needed to administer the government, military power, the economy, and cultural ideologies. Scribes served the powerful and scribal careers offered the entryway into other roles that exerted power within society (Goody, 1986; Radner & Robson, 2011; Wang, 2014).

One set of critical conclusions we as analysts can draw is that literacy has long been a means of asserting power and grew in relation to the needs of power. It reinforced and extended the control of the powerful. These conclusions, of course, would also be apparent to the powerful at the time who would employ scribes and other literates to support governmental and commercial projects, extend power and wealth, and publicize ideologies that would support their hold on power. Further, for those seeking more powerful roles in society, literacy would be a means of rising and attaching oneself to those in power. This analysis would also be available to those who would seek opportunities, perhaps to escape the difficulties and uncertainties of rural life and agricultural labor.

Even today we can see this analysis playing a part in economic statistics predicting the skills needed by labor markets in the advanced economies, where numbers of jobs and wages for routine manual and factory labor are steadily decreasing along with routine white-collar work, such as record-keeping, calculation, or other low-level bureaucratic work. At the same time wages and job numbers are increasing for nonroutine work, including advanced white-collar and professional work (Autor et al., 2003).

Although literacy grew out of agricultural needs (Schmandt-Besserat, 1992), it served to centralize control of agriculture, ownership, and taxation. Maintaining a literate class also relied on settled agricultural communities with excess production that freed a class of people from direct agricultural labor, allowing them to live in emerging cities (Chambon, 2011). Literacy-supported regulation needed to maintain urban order and extend courtly power over wider domains. Further while literacy fostered law and regulation, it also facilitated documenting all residents, collecting taxes, keeping crime records, pursuing surveillance, and thereby controlling individuals and their behavior. This analysis would be well understood by royal leaders using literacy as a tool to project law and power over their regions, extend their domains, and support prosperity to be monitored and taxed from the center.

Modern societies have equally and continuingly shown this shift from rural to urban as cities have grown particularly in the last century and a half, so that over



55 percent of world populations now live in cities with 68 percent projected by 2050 (United Nations Department of Economic and Social Affairs, 2018). Rural areas, consequently, are becoming depopulated and sparse in the necessary services that are increasingly available in urban centers. National and state capitals regulate and keep records on the more rural areas in jurisdictions, establishing laws and agencies, branches of which reach out into local communities. News and media markets that define modern cultures have become centered in large cities and report on events in national governmental and financial capitals that affect all regions. Financial capitals affect the economy, jobs, and prices in all regions, even for agricultural produce, and even in ways that reach beyond borders. Large multinational corporations now centralize power in ways that even contest the control held within national capitals. As well, internet technologies and social media have attuned us in our daily lives to attend to global networks that form a unified virtual urban environment, configured and controlled by a few centralized corporations. Recent statistics indicate that as of 2019, 67 percent of the global population owned mobile devices, 57 percent used the internet, and 45 percent were active social media users (Kemp, 2019).

## Step Two. Critical Analysis of Schooling

The need for people with literacy skills to administer these increasingly complex and centralized societies required increasingly extensive training for elites to serve the most powerful people and institutions. Schooling arose to serve those needs, and the curriculum developed around the functions served by literacy. In turn, schooling became a mechanism for advancement of lower classes and social reproduction for elites.

When writing was a simple means for recording agricultural produce, it could be learned readily at the work site and passed down within families and communities with little distinction between literacy and other advanced communicative abilities. As record keeping became more extensive and part of governmental functions, however, trained scribes were needed to carry on more complex and regularized practices. Apprenticeship schools were formed on the site of Mesopotamian houses of scribes (or *eduba*), initially using copying actual records as exercises. Over time, however, simplified learning exercises were developed, schooling became more distinguished from practice, and schoolrooms were separated from the working scriptoria. As schools began providing training for more complex roles that required scribal skills, such as law (Démare-Lafont, 2011), divination (Koch, 2011), astronomy (Steele, 2011), and medicine (Böck, 2011), alphabetization was not sufficient, and more advanced literacy was required. The ability to write also started to require more and different composition skills. Over time literate cultural practices that supported the regime (Brisch, 2011) became even more distant from immediate practice in the form of dirges and prayers that praised the king (Löhnert, 2011), literary letter writing (Vulliet, 2011), and religious

texts (van Koppen, 2011). An urban court-based culture, dependent on literate production, became increasingly removed from agriculture (Wiggerman, 2011). Finally, historical records indicate scribal and consequent professional training was passed down within families to maintain elite class privileges, and further training in literacy became an important accomplishment not only for those who served the court, but also for royalty themselves (Frahm, 2011; Zamazalová, 2011).

From the critical analysis of power and class we can see that schooling early on became tied to the institutions and sources of power, with specific training for roles useful to the power structure. Consequently, schooling became a pathway into elite roles and became a device for passing privilege from one generation to the next. As literacy became important for more roles in society, schooling moved from preparing students for the most immediately practical roles of scribes to preparing them for more extensive roles in the administrative, cultural, and ideological apparatus of the society. At the same time, schooling moved into separate buildings with specialized curricula and specialized reading and writing materials and provided opportunities to study subjects that were not obviously useful in daily life.

We can see these functions of schooling until today, when the most favored professions in modern societies require extensive training that keeps youth out of the labor market and occupies much of their day in separate facilities, working with school books and doing distinctly school things. The roles they ultimately train for encompass specialist financial, medical, and technological roles, as well as cultural and ideological leadership roles in politics, religion, journalism, the arts, and the like. Current members of power elites continue to protect educational opportunities for their children to maintain the elite position of their families.

Analysis of the role literacy has played and continues to play in the historical production of inequality is evident to those who create and support schools, recruit students, and make policy choices, particularly around the allocation of resources and the work needs of the economy. This analysis, as well, is often useful for families who can afford to make educational choices for their children and for youth to choose career paths within their educational options, but these consumer choices are constrained by current economic arrangements, often leaving families with little power to change the system or change the options.

### **Step Three. Social Needs Required Increasing Numbers of Literates: Critique of Class Dominance in Education**

As societies have become more dependent on literacy and urban culture, particularly in the last couple of centuries, societies have needed the literate talents of many more people, and empowered participation in society has required ever-higher levels of literacy skills. This has meant that more and more segments of the population had to be recruited into the educational systems, even as elite classes have ensured that their children receive ever-higher levels of educational

qualifications to protect their positions within nominally democratic and meritocratic educational systems. Since power and wealth have been connected in different societies to other social distinctions, such as race, ethnicity, geographical origin, religious beliefs, or gender, the recruitment of wider pools of talent has led to inviting diversity across the divisions that previously had marked the ruling from the ruled.

In the United States the movement to inclusion and diversity has been gradual, though it has accelerated at moments of social change that have affected the economy and structures of employment. Free public schooling and then mandated attendance developed throughout the nineteenth and earlier twentieth centuries as urbanization and white-collar employment began replacing agriculture and other manual labor and as manufacturing jobs required higher levels of trained skill. The expansion of the U.S. economy after the First World War created more opportunities for women in the job market and was accompanied by greater access for women to higher education. Women's educational and employment opportunities again expanded during the Second World War as men were conscripted into military forces. After the Second World War the U.S. economy grew rapidly again, accompanied by rapid growth of higher education and various forms of federal support for advanced education starting with the GI Bill of Rights, which offered opportunities to veterans from all social groups.

During the post war economic expansion that continued for most of the remainder of the century, the Civil Rights movement, with great struggle, was able to increase educational and employment opportunities for African Americans and other underrepresented groups as well as other previously excluded or restricted groups, such as women, gender minorities, and people with disabilities. Immigration was encouraged with changes in the federal law, further diversifying the workplace and schools. Access to higher education particularly opened up with the expansion of public institutions, including formation of the community college system that made it possible for any high school graduate to gain access to higher education at modest cost. On the other hand, economic slowdowns and political changes in recent decades have put pressures on higher education institutions to raise fees and limit access, especially as public funding has decreased at both state and federal levels.

The critical analysis at this step indicates the intersection of economics and social demographics directed policy choices about access to schooling. This step follows on the analysis of the previous two steps that directed policy towards the need for literate classes and the need to provide schooling to produce these literate classes. While the previous two analyses facilitated the reproduction of class through the restriction of access to schooling, this third step argues for opening access more broadly. This analysis, however, does not give voice to curriculum designers, let alone teachers in the classroom, and certainly not to the students or their families, except to try to position themselves within whatever system policy has put in place. If there is an inherent curricular mandate in this level of policy,

it is only to be attentive to workplace skills and maintain the social and cultural structures that define current economic and political arrangements. The next step will bring us closer to the classroom where curricular designers and teachers shape the student experience.

## Step Four. Critique of Elite Assumptions in Education

The expansion of schooling to more diverse groups of people created some dilemmas. Schools from the beginning were aimed at developing people who could take on elite roles in society and thus would become committed to the economic, legal, and governmental systems they would be part of. This of course often meant histories that glorified leaders, religious and arts training that supported the values and ideological commitments of the regime, and development of practitioners to serve the health, wealth, and well-being of the populace (thus demonstrating the beneficence and wisdom of the regime).

The cultural beliefs embedded in education typically looked back to the founding documents of the culture or religion, such as sacred books and the study of ancient languages in which they were inscribed. In European Christian education this led to the primacy of Latin and to a lesser extent Greek, which brought with them veneration and authority of the knowledge and texts of the classic Roman and Greek civilizations. The texts of church fathers and more recent scholars were also included in this world of classic languages. These languages and texts, removed from the everyday life of students, were treated as the key to values, cultural authority, and power, available only to the educated elite. Only with the rise of romantic nationalism in the 19th century were these classic texts in dead languages supplemented with more recent vernacular texts of each nation. But these texts in turn became canonized as exemplifying the genius of each nation and were taught in schools as a cultural heritage. Of course, these texts were chosen for moral and ideological values that would inspire the young to uphold the ideals of the society.

These educational and cultural ideals meant that school attempted to enlist the new students from non-elite backgrounds into distant values, texts, knowledge, and even languages that would set them apart as elites, distinguished from the world around them. These values and modes of life would often be at odds with the lives and communities of students from non-elite backgrounds. Students would have to choose between elite values and identities and the values and identities of their families and communities. These various challenges and tensions would affect motivation and attachment to the world of schooling and keep students from engaging in education with whole hearts and whole minds. Many students would come to believe schooling was not for them or just an academic game played by the ruling class. Some would play along for their advantage while others might adopt what they saw as a better way of life, though at the cost of rejecting much of their experience outside the enclaves of the academic world.

This analysis of the impact of curriculum on students led some educators to redesign curricula to bring texts more familiar to student lives and even to admit heterodox texts and forms of knowledge that might speak to the students' skepticism and experience. This movement to open up the perspectives taught and discussed in schools is in large part the product of the latter decades of the 20th century, at least in the US. History taught in the universities and secondary schools moved beyond the accomplishments of western civilizations and American progress to examine the complexity, interests, cruelty, misdeeds, or just thoughtlessness of deeds done in the name of civilization and nation. Colonialism, racism, slavery, genocide of indigenous peoples, exploitation, class privilege, homophobia, and trauma became central concerns, along with the study of everyday lives of people and families. Similarly literary studies opened students to critique of traditional ideologies and began to value vernacular texts that reflected the diverse experiences of many different kinds of people that formed everyday culture. Heterodox and skeptical texts offering social critiques appeared in classroom curricula. Sociology focused more on problems currently confronting society, and anthropology turned from the study of exotic others in vanishing traditional ways of life to examination of contemporary cultures and subcultures coping with the changing conditions of the modern world.

This critical discussion of curriculum has been carried out by educators, curricular designers, textbook writers, and teachers as they have developed their lesson plans. The ability to have power to make decisions based on critical analysis of student needs and motivations has moved closer to the classroom and those familiar with the students. Those most familiar with students have recognized the importance of using more inclusive materials so students will in fact understand that their lives and the lives of their communities are important, respected parts of the world of education and society. Decisions and critical judgment, nonetheless, are still not in the hands of the students, and students still must work with what others find fit for them to work with. Those making the decisions are those that have already risen through the world of education and thus have been enculturated into the viewpoint of literate elites, even if that viewpoint has been more accepting of diversity and the values that others bring. Students, however, do not yet have voice to develop their own views and formulate their own knowledge. This will be the topic of the remaining two steps.

## Step Five. Critique of Reading-Based Education and the Rise of Writing

Although early scribal schools treated reading and writing as two sides of the same coin, as the weight of traditional texts and knowledge grew, the study and interpretation of received knowledge (that is, reading), came to dominate over writing, which remained largely limited to the correct formation of letters, words, and sentences (that is, handwriting, spelling, and grammar). This tendency became

even stronger as religious scriptures became the center of education in the Jewish, Christian, and Islamic world. What little attention was devoted to logic, rhetoric, and argumentation was reserved for the most advanced scholars and was largely restricted to oral practice. In European education, lectures interpreting selected classic or scriptural texts became the dominant mode of teaching, and libraries became the authoritative repository of knowledge. Scholars wrote largely to copy or compile classic texts. Often, student examinations, even at the most advanced levels, remained oral.

While scientific publication and reports from colonial empires expanded rapidly from the 15th century onward, schools, including universities, remained largely in the medieval reading mode. Only with educational reforms in the late eighteenth and nineteenth centuries was the production of new knowledge and the texts that embodied it given much value or place or seen to be the function of university scholars to produce (Bazerman & Rogers, 2008). The largest reforms were in France and Germany, and these modes spread to universities throughout the world in the nineteenth and twentieth centuries. In Germany, in particular, as universities were reorganized around research disciplines, production of seminar papers became central to education. This incorporation of scientific and disciplinary inquiry and evidence brought with it an expansion of academic freedom and university autonomy as a protected space for critical questioning and writing (Gürüz, 2011). Faculty members increasingly were expected to write, and journals and academic presses expanded. Further each of the disciplines developed its modes of criticism of previous knowledge, methods of gathering data, and practices of incorporating that data as evidence within texts. Specialized forms of critical writing became part of the technical and professional work of disciplines.

Initially, enculturating students in critical reasoning in writing was focused on advanced students in the form of seminar papers, theses, and dissertations, but these disciplinary forms of critical reasoning have been working their way down the curriculum, particularly in the latter part of the 20th century and fostered by the Writing Across the Curriculum/Writing in the Disciplines movement. These practices give students disciplined and focused windows to the world, to question and transform received knowledge and mandated curricula. This gives students voice and an opportunity to criticize received knowledge, educational practices, and the socioeconomic and institutional arrangements they live under. They are able to substantiate their observations and claims through authoritative modes of evidence, analysis, and reasoning.

However, this student voice is still monitored and constrained by the standards and practices of the disciplines—thus students of psychology are restricted to the methods, practices, and modes of analytical reasoning normative to psychological claims, and likewise students of sociology or economics must filter their investigation of the world through their appropriate disciplinary methods as evaluated by their disciplinary professors. In other disciplines where the application to the world is specific and limited, such as marine biology, investigations

and critical analysis, while of value for those fields, often cannot reach beyond professional concerns. On the other hand, some disciplines, such as cultural studies, media studies, and literary studies, open wide doors into considering fundamental issues about social life and widely disseminated cultural messages. But no matter how passionately the students may connect their claims to the conditions of their lives, within their disciplines the level of professional work sets a high bar for credibility. While student work may be seen as good student effort worth an “A” grade and an indication of potential disciplinary talent, it is likely not to be yet seen as a significant contribution to the field. In the interim, classrooms can model and support development of disciplinary critical thought, but the cards remain stacked against the students in these discussions, as they are constantly being corrected into normative standards, and their arguments are only practice performances to be graded.

### Step Six. Students Critically Respond to Their Education and World to Transform Education and Society

Even when students had no official voice in schooling, they long had a history of articulating their views after hours in coffee shops, student organizations, artistic creations, political movements, unofficial journals, and political publications. Then after graduating or prematurely leaving schooling some have gone on to careers in politics, journalism, or the arts and literature and may articulate views and make critical arguments outside the canons of academic study. Yet how much have these nonofficial views, often about the most passionately experienced and felt issues in their lives, been brought into their academic studies and academic voices?

This is a challenge worth addressing, as it not only touches the heart of student motivations and commitment to learning, but it also is likely to engage issues of most concern to societies and bring social change. Student concerns arise from the education that they confront daily and the other institutions that constrain, define, and make demands on their lives. Their questions also arise out of their communities and out of the conditions of life that they see defining their futures, such as the nature of political regimes, the economy they will enter into, the values and ideologies of their societies, the use of natural resources, and the changing natural environment they will live in. Their questions may also be driven by their expanding view of the world as they start to meet people of different backgrounds and travel to different regions.

Students can even ask tough questions about whether the skills and knowledge that our schools offer are providing the tools they need to address their many concerns and whether schooling is empowering them and their communities to thrive in their societies. Raising these questions within the classroom can turn the classrooms themselves into incubators of critical thought with important consequences.

Meaningful engagement with critical thought in the classroom relies on students doing more writing, not as an exercise in correctness but to express their

experiences, observations, and lives. Writing is the means of developing voice and taking ownership and responsibility for the words one puts on the line. But the writing needs to go beyond reporting experiences and representing student lives to evaluating the conditions and institutions that surround, constrain, and afford opportunities in their lives and then analyzing the consequences and alternatives. The questions, of course, will vary with the level of education and the nature of the subject, but such questions as the choice and value of assigned readings or other tasks, the daily institutional arrangements and resources of schooling, or the purpose of various topics studied can encourage reflection on why things are as they are and how they might be otherwise. Such issues may also generate differences among students or perhaps with the teacher or others who are in charge of controlling school arrangements. After some exchange on the substance of perspectives, it could be of value, then, to discuss the criteria and procedures for confronting alternative views and identifying what it might take to convince those holding those alternative views. Such rhetorical discussions can lead to discussions of methods for gathering persuasive evidence and carrying out persuasive forms of analysis and argument. Often enough such discussions may then touch on methods used by different disciplines to establish their truths.

Observations, formulation of problems, and systematic investigations to address issues beyond the classroom in the community could then broaden the canvas of critical thought and the various disciplinary methods that might apply to the different problems. Sometimes a problem to be addressed may fall quite clearly within a single disciplinary domain and engage well-known methods which can be drawn on, such as in measuring pollution in the local environment or examining local climate history. But sometimes issues may be interdisciplinary, as when examining social perceptions of the economic and health burden of unequal environmental effects on different neighborhoods, so that students have to consider what combination of methods are relevant to careful critical examination and analysis. It may be even that questions escape the bounds of any combination of current disciplines so that students have to develop their own set of credible methods to proceed.

The role of the teacher then becomes a resource for helping students formulate issues, locate disciplinary and interdisciplinary resources and methods that will help them, carry out the investigation and analysis, and write reasoned credible arguments. The teacher no longer serves as a disciplinary enforcer of normalized practices—though at times the teacher may need to explain reasons for methods and challenge the credibility of student choices. The teacher instead becomes a support and facilitator of students building their own reasoning, perceptions, evidence, and analysis. Students retain ownership and responsibility for their representations, criticisms, and projects, to be disciplined only by the credibility of the arguments they can mount.

This stance of the teacher puts the power of critical thought, analysis, and disciplined methodological choices in the hands of students. This gives students



voice, amplified and enacted through all the strengths of disciplined inquiry and well-analyzed proposals and action. Their reasoning draws on the intellectual and practice resources or disciplines and positions them in an intellectual space where they cannot simply rely on conventionalized norms of disciplines but must constantly rethink in critical ways the empirical and analytical methods they base their writing on.

While this proposal seems to transform the conventional power relations and authority structures of the academic world, it still grants full due to the expertise, methods, and knowledge of the disciplines. But we as teachers and engaged members of our disciplinary communities must be prepared to receive student queries and critiques and respond with transparent explanations of disciplinary reasoning—including recognition of limitations and narrowed focus of the disciplinary perspectives, open controversies in the field, and theoretical and methodological challenges at the boundaries of the field. But even more we need to take student projects and ambitions seriously to work with them to see how methods of various disciplines can help advance their thinking. In all this we do not give up our knowledge, experience, and commitments, but we grant consideration to the students' perspectives and pursuits. Of course, some courses may provide more overt space for these broad student critical inquiries, while some courses may be more focused on exposition of current knowledge and practices, but all would recognize that finally critical inquiry will only advance insofar as each student takes it up as important for their understanding and contribution to society. Critical inquiry will only advance insofar as each course becomes a site of students learning to articulate and develop their own thoughts, especially through the complex work of writing, by which their thoughts become more articulated and open to critiques and responses from others. Critical thought is not a formula but is developed through a process of engagement, where the strongest, most credible arguments based on the most convincing data and methods stand. Students only learn this through the constant challenge of writing to contested forums in the classroom and beyond to discover what they can credibly defend.

This vision starts with writing that invites student questioning and claims but makes them accountable for credibility. The search for credibility can lead students to draw on the resources of the disciplines appropriate to their questions, even as they learn to focus and direct their questions to issues where they can come to strong specific claims. This kind of writing can appear at every level of schooling, as students in the primary grades can consider immediate challenges in the school environment or can gather information about their families, communities, or local environment. In secondary education, questions can deepen about local and national history, social problems, language prejudices, or environmental and medical conditions—or any domain where subject learning can help students look more critically and deeply. In higher education this approach may mean lecture-based content courses are mixed with courses that ask students to develop their own inquiry-based problems and realize them in papers to be

presented to peers and faculty. A typical ultimate form of this inquiry currently is a senior year thesis, but this must be prepared for by many earlier, less ambitious experiences. Too often I have seen students asked to work on senior projects with little prior preparation, resulting in poorly formulated inquiries, weakly designed methods, and confused or weak arguments. Consequently, students do not experience the satisfaction of actually knowing something with some authority, a sense of satisfaction that can motivate ever further critical inquiries.

## The Opportunity

Engaging students in critical thought provides the opportunity to make schooling truly inclusive for them and their communities. Schools are not just to reproduce society, or even to invite new students into the reproduced world. Education can be an engine for social power and change. By helping new generations of students develop their own lights, using all the tools, knowledge, and wisdom of the past, but reshaping them for their own ends, gathering new facts, and advancing new methods, we invite students to be empowered critical members of society. Writing critical research that is meaningful for the students challenges them to engage in the highest levels of reading and writing, of informed literate interaction. But it is even more of a challenge for us as teachers to create the environments that will invite and support those critical writings. This receptive negotiation of new perspectives challenges what and how we teach.

This to me seems the true challenge of democratic inclusive education.

## References

- Autor, D. H., Levy, F., & Murnane, R. J. (2003). The skill content of recent technological change: An empirical exploration. *The Quarterly Journal of Economics*, 118(4), 1279–1333. <https://doi.org/10.1162/003355303322552801>
- Bazerman, C., & Rogers P. (2008). Writing and secular knowledge outside modern European institutions. In C. Bazerman (Ed.), *Handbook of research on writing: History, society, school, individual, text* (pp. 143–156). Lawrence Erlbaum Associates.
- Böck, B. (2011). Sourcing, organizing, and administering medicinal ingredients. In K. Radner & E. Robson (Eds.), *The Oxford handbook of cuneiform culture* (pp. 690–705). Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780199557301.013.0032>
- Brisch, N. (2011). Changing images of kingship in Sumerian literature. In K. Radner & E. Robson (Eds.), *The Oxford handbook of cuneiform culture* (pp. 706–724). Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780199557301.013.0033>
- Chambon, G. (2011). Numeracy and metrology. In K. Radner & E. Robson (Eds.), *The Oxford handbook of cuneiform culture* (pp. 51–67). Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780199557301.013.0003>

- Demaré-Lafont, S. (2011). Judicial decision-making: Judges and arbitrators. In K. Radner & E. Robson (Eds.), *The Oxford handbook of cuneiform culture* (pp. 334–357). Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780199557301.013.0016>
- Frahm, E. (2011). Keeping company with men of learning: The king as scholar. In K. Radner & E. Robson (Eds.), *The Oxford handbook of cuneiform culture* (pp. 508–532). Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780199557301.013.0024>
- Goody, J. (1986). *The logic of writing and the organization of society*. Cambridge University Press. <https://doi.org/10.1017/CBO9780511621598>
- Gürüz, K. (2011). University autonomy and academic freedom: A historical perspective. *International Higher Education*, (63), 13–14. <https://doi.org/10.6017/ihe.2011.63.8549>
- Kemp, S. (2019, January 31). *Digital in 2019: Global internet use accelerates*. We Are Social. <https://wearesocial.com/uk/blog/2019/01/digital-in-2019-global-internet-use-accelerates/> We Are Social (2019). *Global digital report 2019*. England. <https://wearesocial.com/global-digital-report-2019>
- Koch, U. S. (2011). Sheep and sky: Systems of divinatory interpretation. In K. Radner & E. Robson (Eds.), *The Oxford handbook of cuneiform culture* (pp. 446–469). Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780199557301.013.0021>
- Löhnert, A. (2011). Manipulating the gods: Lamenting in context. K. Radner & E. Robson (Eds.), *The Oxford handbook of cuneiform culture* (pp. 402–417). Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780199557301.013.0019>
- Radner, K. & Robson, E. (Eds.) (2011). *The Oxford handbook of cuneiform culture* (pp. 446–469). Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780199557301.013.0021>
- Schmandt-Besserat, D. (1992). *Before writing* (Vols. 1–2). University of Texas Press.
- Steele, J. M. (2011). Making sense of time: Observational and theoretical calendars. In K. Radner & E. Robson (Eds.), *The Oxford handbook of cuneiform culture* (pp. 470–485). Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780199557301.013.0022>
- United Nations Department of Economic and Social Affairs. (2018, May 16). *68% of the world population projected to live in urban areas by 2050, says UN*. <https://www.un.org/development/desa/en/news/population/2018-revision-of-world-urbanization-prospects.html>
- van Koppen, F. (2011). The scribe of the flood story and his circle. In K. Radner & E. Robson (Eds.), *The Oxford handbook of cuneiform culture* (pp. 140–166). Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780199557301.013.0007>
- Vulliet, F. H. (2011). Letters as correspondence, letters as literature. In K. Radner & E. Robson (Eds.), *The Oxford handbook of cuneiform culture* (pp. 486–507). Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780199557301.013.0023>
- Wang, H. (2014). *Writing and the ancient state: Early China in comparative perspective*. Cambridge University Press. <https://doi.org/10.1017/CBO9781139235709>

- Wiggerman, F. A. M. (2011). Agriculture as civilization: Sages, farmers, and barbarians. In K. Radner & E. Robson (Eds.), *The Oxford handbook of cuneiform culture* (pp. 663–689). Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780199557301.013.0031>
- Zamazalová, S. (2011). The education of Neo-Assyrian princes. In K. Radner & E. Robson (Eds.), *The Oxford handbook of cuneiform culture* (pp. 313–330) Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780199557301.013.0015>

## Chapter 16. Paying the Rent: Languaging Particularity and Novelty

The ancient topics of plagiarism, imitation, and originality have gained new prominence in the age of the internet in relation to two issues that evoke different spectra of values.<sup>1</sup> First, the internet has provided new tools, new fears, and new urgency to questions of school cheating—raising values of individual responsibility, academic integrity, and institutional policing. Second, the internet has heightened the tension between intellectual property and the cultural commons—raising values of economic reward and ownership versus those of cultural heritage, communal creativity, and critical comment. The first pits integrity versus individual expediency that is destructive to the institutions of education. The second weighs the nature of property and how it might be balanced against other social values, including each generation's access to the accomplishments of the previous. Both of these discussions are important, but it is hard to speak of them in the same space without conflating distinct sets of concerns. Yet in sorting through these issues we as educators will also gain clarity on other related concerns that test the boundaries of individual and communal creativity, such as the role of schools in enculturating students into received knowledge and practice versus the role of schools in fostering individual judgment and accomplishment.

The words people speak and write grow out of the words of others. Our use of each other's words makes language possible, and our response to the words of others motivates us to speak. This realization about the intertwining of our words with the words of others complicates the certainty of moral judgment many attach to plagiarism. Using each other's words is no sin, but it does go back to the origin; it is the seed of human knowledge, and it is the means of our originality and intellectual differentiation. Schools, in particular, intentionally surround children with the words and knowledge produced by their culture so that each new generation can draw on those wells. Yet we also know there are criminals, people who abuse others' words for narrow self-interest, and we also know that some students cheat by relying too directly on the words of others.

The paradoxes of originality arise because we use the common stock of words, *topoi*, figures, organization, phrases, and all the other tricks of language to fit the moment and situation. As Mikhail M. Bakhtin (1981) wrote, we populate the language of others with our intentions (p. 294). The words may be familiar, but the

---

1. This chapter originally appeared as "Paying the Rent: Languaging Particularity and Novelty [Pagando o aluguel: Particularidade e originalidade no uso da linguagem]," by C. Bazerman, 2010, *Revista Brasileira de Linguística Aplicada*, 10(2), 459–469 (<https://wac.colostate.edu/docs/siget/rbla/bazerman.pdf>). Copyright by C. Bazerman. Creative Commons Atribuição 4.0 Internacional.

intention is ours at *that* moment in *that* situation. Children in and out of school are constantly expected to speak and write to reveal what *they* have learned from reading others, what *they* understand as relevant to the questions being asked of *them* in the moment. Further, in some situations our utterances are expected to have the ring of novelty or special situational appropriacy. Depending on the question, a student may be expected to draw fresh implications, applications, or conclusions, but wandering too far into the student's own thoughts risks falling into error or off the topic. At the right moments the appropriate appearance of novelty may grant the benefits of recognition, privilege, or future authority if the words succeed, but if the words are found wanting, intentions and acts may be incomplete and subject to failure, leaving a blemish on future reputation and authority. So, if we rent words, certain tasks require us to pay the rent by particular work of our own. But this is not a single kind of work—different genres, activity systems, and situations call for different kinds of work. So while there may not be an original sin here, there are many potential local failures.

Before I analyze these moments of failure to do specific forms of work, let me reframe the problem of originality. Every child born since the start of language grows up in a complex built symbolic environment—built and maintained by predecessors and contemporaries. Without the constant animation and reanimation of that symbolic environment and without each child's learning to participate in it, it would collapse into a silence that separates people. Schools serve to familiarize students with these symbolic riches, to engage students in the meanings of this heritage, and to enable them to act wisely using these resources in the fresh circumstances of their lives in an evolving society. In this symbolic environment, children learn to do the repetitive, the expected, and the unexpected. Further, each child born today, 5,000 years into the literacy experiment, 1,000 years into the print experiment, 150 years into the electric communication experiment, and a decade into the World Wide Web experiment lives in an increasingly dense symbolic world, resonant with messages from long ago and far away and messages that encompass the globe in an instant. Yet this inscribed symbolic world must be constantly animated in use to be more than scratches in clay or electrons entropically sinking into disorder.

This symbolic environment is ever more complex, and people find themselves in increasingly novel positions in a proliferating landscape. But this world is not inchoate—it is organized through activity systems and genres that mediate particular interactions and relations and that form chronotopic expectations for information, location of knowledge spaces, and unfolding of symbolic events. In this symbolic environment we learn by imitation and appropriation, yet we always act from the origin point of ourselves and our intentions to mark our presence, interests, and action—no matter how forthcoming, clever, strategic, coded, deferential, defensive, reticent, submerged, or hidden we may inscribe ourselves. Even when we only respond to a request for our names, we respond from the origin, appropriately. And when we account the events of our

lives or what we have witnessed, we respond from our origins with particularity and novelty. In each case we create a unique presence in the symbolic world—time and place stamped with local content. Our comments are anchored to the unique moment and within a unique co-text and intertext by the pervasive linguistic features of indexicality.

But we do not attribute originality to each of our acts. In many situations attribution of originality is not desired or prized. I have at times studied tai chi and sung in a chorus. In both activities, individuals work hard—physically, technically, cognitively, and emotionally—to inhabit and reanimate a deeply familiar practice. We do not want ill-formed notes or movements, but rather a performance filled with intention and meaning that reinhabits and reanimates the tradition as we best can understand it—guided by the local master or conductor whom we trust as having a connection with the originary conception. In the same vein, some people have a talent for the heartfelt fulfillment of the phatic rituals of daily life, and some people are inspired clerks. In much school learning we are looking for just that meaningful inhabitation of the formulas—at least until one moves into the upper reaches of scholarship. It is not only arithmetic, calculus, classical mechanics, or even economics that calls for inspired performance of the familiar. In literary studies ability to recount the content and articulate a meaningful appreciation of the creative literary work precedes fresh analysis, and in history being able to retell the received tales with understanding and engagement precedes fresh archival work.

Only some specific situations in school and life seem to call for novel work which would earn the attribution of originality and bring to the creator specific and appropriate recognitions, credit, and rewards. It is failure to meet the situational expectation for originality that would open up an attribution of plagiarism, lack of talent, or other failing. We sometimes take the laws surrounding intellectual property as prototypically defining originality, for the law of intellectual property hangs on the idea of innovation. And the definition and application of originality is regularly argued in court. But copyright and patents also exhibit the odd particularity of what we consider originality. First, only cases that are in fact financially consequential are litigated or litigatable and in a sense worthy of determining originality. If there is no substantial financial interest, courts will not hear cases, and there will be no judgment of originality. Second, if there is a case, the case will likely be civil, not criminal, and penalties will likely be financial.

The patent or copyright grants a temporary license to monopolize economic benefit for a particular kind of novel work to encourage production of these novelties, which are considered a benefit to the nation and public. The nature of novelty has been contested since the beginning of intellectual property law. In patent law, one general formulation has been that the innovation would not be obvious to one versed in the practice; this is a cognitive evaluation of an idealized audience and not an issue of wording or formulation. Originality in copyright law, however, is a matter of copying wording or formulation. So in copyright one

is free to use the ideas of the other as long as one can reformulate those ideas in ways that are sufficiently distinct. One can even then copyright the new formulation of the borrowed idea.

If you have ever written textbooks, you likely will have confronted oddities of copyright. Textbooks in a subject often share a high degree of similarity in structure, topics, content, and analysis, in part because they must compete head-to-head to serve similarly structured courses and in part because there is the common practice of authors studying their competition. I know of few cases of plagiarism being litigated between producers of closely similar textbooks, even if a leading book is widely copied in form, content, or approach. On the other hand, legal departments of publishers watch like hawks any quoted material you use, even though it is clear that the inclusion of this material will not harm the economic value of the original publication but will likely increase its visibility and value. Thus you fear litigation not from the competitors you copy, but from third parties you are publicizing.

The textbook market reveals also another face of originality that has little to do with intellectual property law. Textbooks may be valued because they have exactly what is expected in the most accessible way that incorporates all the innovations of all the other books. Books that are too original may be less valued. While some books may present a novelty in pedagogy or presentation that is highly prized and emulated, it may be the books that copy the innovation putting them in a more conventional form that are best valued in the market. Nonetheless, all of these books are equally copyrightable.

In books directed toward entertainment, however, there is usually a more consistent desire for originality, because just the right amount of novelty of the right kind gets our attention. On the other hand, too much novelty of the wrong kind makes the work unrecognizable, meaningless, unengaging, and unentertaining. We know this from cognitive experiments with infants where variation of a rhythm or light pattern can energize attention and repetition dull it; other stimuli outside attention or ability to interpret, however, go unnoticed. But again, what kind of work this novelty consists of may vary from book to book. A detective story may gain from having fresh characters and fresh locales but must deliver intriguing, not easily interpreted clues. In pirate movies of the mid-20th century a major site for innovation and amusement is in the ingenious daring of swinging from masts.

For literature considered more serious, an attribution of derivativeness, though not litigatable, indicates a major failing, but in other cases other influences serve to mark the genre, identify the homage, provide a field against which new meanings and experiences are created. It takes detailed analysis of each case to locate the combination of sources and influences that underlay the text, that reformulate uniquely in combination and local context, and that provide sites for specific surpluses of creation. Which of these combinations and excesses in which context, drawing on which resources the writer brings, provide for a depth



of expression, observation, imagination, structure, or thought to be considered original? Which will be seen as fakery, ineptly parading in borrowed costume? It is the work of literary criticism to parse the virtues, sources, and inventive work of texts valued for their uniqueness. The tropes and measures of literary originality are quite distinct from those of the intellectual property courts.

In news, novelty comes not from the freshness of the wording or structuring which are so routine as to be churned out against deadline but in the happenings reported which are to be collected and transcribed through witnessing in real time and going to the right sources. Failures and fakery here have to do with not being in the right place, not going to the right source, making up material (being too original!) not grounded in fact gathering. In the extreme case, stock reports must in a sense be original every moment, but the elements are absolutely repetitive in form and in source—which are signs of authority and accuracy.

In science, plagiarism and fakery are rarely of immediate economic value but steal fame (which might have secondary rewards for tenure, promotion, and reputation) or mislead colleagues, wasting their time on unauthenticated or faked results. There the work of originality depends on both intertextual savvy and material practice—on both theoretical and empirical work. All these forms of work rely on learning from the writings of colleagues, which are then re-represented as part of identifying one's contribution.

I could continue the examination in every other sphere where visible word borrowing or allegation of inauthenticity of words is attributed as a failing, and in each case would be a somewhat different configuration. Politics is particularly interesting in that political speeches are highly patterned and familiar in content and phrasing, and politicians themselves are evaluated not for originality so much as leadership, trustworthiness, representation of group values and interests, and other such communal phenomena. But every once in a while a politician gets in trouble for borrowed words (as a sign of inauthenticity)—though not for purchased ones (from their hired speechwriters).

But to academics and educators the site most important to sort out, and the one currently most conflated ideologically with other settings, is schooling. In schooling the kinds of novelty and work added we as educators look for are quite distinct from what concerns people in other domains, and we make serious pedagogical mistakes by not recognizing the particularity of our educational interests in work added by students. No serious money is involved, nor fame and promotion, nor amusement, nor the production of new documents that extend the human experience, nor the production of reliable news. We are, rather, concerned with student learning and development which we believe requires students to perform certain kinds of work while producing texts by which we then evaluate student learning.

Student learning and growth are not necessarily congruent with originality. There are many moments from primary through undergraduate education where it is appropriate for students to repeat words from their books, lectures, and class

discussion, even without attribution. Many classrooms live under the umbrella of a single authoritative voice embodied in an alliance of textbook and teacher. Students are expected to repeat mantras from their mathematics, physics, biology, and grammar textbooks at the appropriate moments and apply them in problem procedures that are so familiar and expected that the teachers are given answer keys. There is no need for citation, because everyone knows the textbook defines the universe of discourse. Students who remember from the textbook without citation are praised. Those who use the intermediary of a classmate in the exam room are punished. However, a study session with the same classmate and the same textbook the night before would help both do well on the exam.

This does not mean that there is no intellectual work in learning calculus or sentence subordination or chemical analysis—but only that the work the students need to accomplish is authoritatively guided and the results known. Students have to think and work hard to get to the right place, but that place will have no surprises for the more knowledgeable instructor.

Until students reach more advanced levels of schooling, originality, if it is desired, is a specialized domestic creature. Student products, if surprising, are likely to be so because of what we learn about the student rather than because no similar utterance has ever come from the mouth or pen of a student or scholar. When the task is summary (and consider that some student summaries can be surprisingly good in ways we might even call clever, inventive, and even original), the task is of selection, arrangement, coherence, and transition—not of coming up with fresh wording. Many instructors expect that students will use some wording from the original—with no need to scatter quotation marks throughout. Often only an overall attribution to the text summarized is sufficient. Where multiple sources are drawn on, or students are asked to take on commentary roles with respect to texts, then citations may need to be more explicit and wording of the sources needs to be marked. Even then shared resources that pervade the classroom may not need specific citation in the resulting essays. The need for explicitness of citation increases as students reach beyond the texts that are common ground in the classroom. In the case where outside materials are welcome or even expected, it could be that simply the hunting out and selection of appropriate resources may be the extent of the novel intellectual work appropriate to the situation. Or complex tasks of analysis, evaluation, synthesis, or application may constitute the desired intellectual work.

Plagiarism, failure, success, exceptional success, or going off the tracks is finely calibrated to specific pedagogic goals. Insofar as we can articulate the particular kind of work students are expected to do in the situation, the better we can direct them, give support, and evaluate their products. In some cases, the teacher would prefer that students would remain within the bounded discursive space of the classroom to encourage students to be responsible for all the analytic, evaluative, or discussion discourse, all the supplement to the required reading. In such cases students reaching for novel sources (whether

overtly or covertly) in a sense poison the pristine field for student production of original utterances—even if those “original” utterances might be quite pedestrian in any larger intellectual world.

In different subject matters and different kinds of inquiry students may be asked to bring in unique material and think fresh thoughts in relation to them. To think about literature from even the earliest age, children may be asked for personal experiences and observations even though fresh statements about critical theory may be many years away. In social studies, students’ personal experiences and observations about the world around them come in and out of focus at different levels, although social science inquiry may wait until the undergraduate or even graduate years.

We want to define activities and exercises that allow students to develop, practice, and display specific forms of intellectual work. And we also want to give them the means to draw on the extensive knowledge resources available in the library and internet. If their work does not create sufficient distance and novelty from the sources they are working with, however, there will be failure—which might be interpreted as lack of skill or fraud in any particular case. If there is substitution of work by other people—knowingly or unknowingly—for the work we wish students to accomplish, then they have avoided the work we want them to engage in. The tension between students’ drawing on more extensive resources at the same time as they face increasing demands for their own synthesis, analysis, evaluation and argument creates challenges for student writing. If they cannot resolve this tension at their level of skill and within the time and energy they feel they can allot to the task, they may elect a shortcut. Some students may be so alienated, cynical, or self-indulgent that they set the bar low on the effort they are willing to devote, but most students I know want to learn and will do the work, if they can find a way to do it legitimately. Most acts of conscious plagiarism I have seen are last minute desperation moves. When the instructor sets the right tasks, identifies difficulties ahead of time, and provides guidance and support, students can usually learn to be original in the ways expected of them.

Ultimately, we hope students develop independent voices in the public or professional discourses that become important to them. But even this ultimate goal is no unified one. A public servant, a business executive, or a lawyer each has a different relation to different received bodies of discourse and needs to transform them in different ways to complete their tasks and realize their potentials for action. Among academics, a philosopher stands in a different relation to the previous utterances of the field and will be rewarded for producing different kinds of documents than a chemist or an anthropologist. Just consider the kind of reading each will have to do, the kinds of inquiry practice and data gathering each will need to perform, and the pattern of citations each will have to gather in order to create an original publishable article. Learning how to do these things is learning how to be, think, and act like a public servant, an executive, a lawyer, a philosopher, a chemist, or an anthropologist.

So there are many points of origin for our statements, and only some of them are in any sense personal—many of the originary points are deeply communal. Locating and acting on the right originary sources for any task is important so that we know what we are doing and do it well, but only in a subset of those tasks do we seek the attribution of originality. And in those cases, originality has to do with specific kinds of work to be performed. Originality is not a general characteristic of a personality, nor is it a general faculty to be uncovered within individuals. It is in each case a specific accomplishment, and its failure has specific local implications.

I end with a paradox: The more one attunes to communal existence and the resources communally developed, the more focus and resources one can bring to a task so as not to view the task in a conventional way and not to be limited to the most conventional tools. Deeply immersed in the situation and attuned to a wide selection of the potential resources developed over human history, one can perform work that appears more original across more circumstances, finding fresh possibilities within the particulars of circumstances than the person who prizes difference and stands apart. It is this paradox that makes plagiarism paranoia so harmful. Plagiarism paranoia puts barriers between us (teachers, writers, students) and as much of the human experience and accomplishment as our path through life allows. Only by drawing deeply from collective resources can we add most fully to them and pay our share of the rent.

## References

- Bakhtin, M. M. (1981). *The dialogic imagination: Four essays* (M. Holquist, Ed.; C. Emerson & M. Holquist, Trans.). University of Texas Press.

# Chapter 17. Reproduction, Critique, Expression, and Cooperation: The Writer's Dance in an Intertextual World

The journey of becoming an independent critical writer is a long one.<sup>1</sup> We as educators want our students to draw from and be responsive to what has been previously written. We also want them to have something fresh, credible and situationally appropriate to say. We want them to become academic, social, political, and policy thinkers to carry our cultures and ways of life into unknown futures, using newly emergent communicative technologies. The challenges and transformations facing our societies will require high degrees of knowledge, coordination, and concerted organization, dependent on our students' communicative skills. Even maintaining our current complex literate social arrangements requires sophisticated writing.

Even as we rely on the knowledge and wisdom of our forebears and treat with respect the statements of our peers, we recognize the importance of questioning prior thought, debating what new knowledge might be credible, and deliberating on smart and humane forms of progress. Skill in writing is crucial for such knowledge creation, deliberation, application, and cooperation. Our educational systems are charged with developing such writers to guide us in our ways forward. Writing education goes far beyond learning letters and spelling, which are typically instructed in the earliest grades, or grammar and text organization that are introduced shortly thereafter, or even the specialized academic and professional forms which students might be introduced to in secondary or higher education (for overviews on writing education, see Charles A. MacArthur and colleagues, 2015; Charles Bazerman, 2008; and Peter Smagorinsky, 2006). Each level and domain of writing presents new challenges and poses new levels of problems to be solved. While ultimately the writer must diagnose challenges and make choices, yet they can be supported at each level by learning new tools and concepts, being shown models, and entering into dialogs that will make choices more evident and reveal the implications of each choice (see Bazerman et al., 2018, for an overview of lifespan development of writing).

---

1. This chapter originally appeared as "Reproduction, Critique, Expression, and Cooperation: The Writer's Dance in an Intertextual World [Reproducción, crítica, expresión y cooperación: la danza del escritor en un mundo intertextual]," by C. Bazerman, 2023, *Revista de Educación a Distancia (RED)*, 23(75) (<https://doi.org/10.6018/red.543471>). Copyright 2023 by Revista de Educación a Distancia (RED) under a CC BY-NC license (<https://creativecommons.org/licenses/by-nc/4.0/>).

## The One Continuing Theme of Becoming a Writer

Yet there is one common theme that runs throughout writing education that needs to be respected and deepened everywhere, for it motivates the hard work and close attention that are part of each act of writing. That is, writing creates meaningful communications (see Michele Eodice et al., 2017). Unless a budding writer finds this meaning, he or she will likely be inattentive to those small superficial details of form and correctness that we as teachers are so quick to spot and use to evaluate the quality of students' writing and thinking. Once students care about writing because it is a way to create meaning and draw others into their vision, they also start to care about the detailed work of meeting and exceeding readers' expectations to create powerful shared meanings.

Consider how children learn to excel in a sport. If children learn to love a sport, make beautiful plays, and feel success in winning, then they will spend hours in repetitive practice to hone skills and build strength and flexibility. They will study the rules so as not to be called out for violations and to seek advantages that the rules and allowable actions can give. Even more they become attentive in noticing their teammates and opponents—where they are, what they are doing, what techniques they are employing—to learn from them and to engage on the field with them. They search out the best equipment, the best strategies, and the best techniques. They will look to heroes for inspiration. Their love of the game, success, and sense of reward only grows with this hard work. But if they never care for the sport, then their technique is limited and slovenly, their play becomes routine and inattentive, they repeat the most common errors, and they exercise and practice only under duress. No amount of external pressure, required instruction, repetitive practice, or punitive evaluation will ever get them to progress very far.

With writing too, unless neophytes learn to enjoy, even love the game, they will not put in the hard and sometimes tedious work to get better, to notice where they are in the field, and to find the right move at the right moment. Instead, they may be filled with fear of embarrassment, haunted by failure, and worried about those who stand over them in judgment. Worse, they may learn to hate writing and resent every attempt to try to teach them what they have failed at many times before (see Keith Hjortshoj, 2001).

On the other hand, if budding writers find they can express themselves, evoke emotions in readers, tell powerful stories, share meanings and information, create ideas and knowledge, coordinate with others, or just be admirably clever users of words, they will put up with the hard work and struggle of writing. Children can sense that meaningful game even before they can form letters. Children want to grow up and master the powers of those older people around them (see Lev S. Vygotsky, 1978, pp. 92–104), emergently imitating forms, attributing meaning to the forms even before they can clearly communicate to others (see Graver J. Whitehurst and Christopher J. Lonigan, 1998). But unless they get meaningful response to their writing and not just correction of their form, they can readily lose

interest, as the game doesn't seem to have much of a point beyond gaining praise for correctness. The sense of meaningful engagement needs to stay with them as they engage in different situations and communities with evolving needs and uses for writing—from simply reporting daily events and sharing emotions to crafting extensive fictions; from filing legal briefs to planning urban development; from sharing recipes to developing investment strategies. Whatever they write, it needs to be meaningful for them to experience the rewards of writing and for them to continue working at it.

## Writing in School

Schooling offers a particular and unusual subset of writing experiences. Ostensibly writing in school is to prepare students for later needs and participation in society, but for students school is largely experienced as a self-contained social system with its own values, activities, and rewards. From the perspective of adults—whether parents or government policy makers or educators—the rewards of school are fundamentally built around delayed gratification. But young people within schooling need to experience immediate satisfactions beyond the hopes of some future gratification, particularly as the schooling apprenticeship starts with very young children and can continue as long as twelve or sixteen or twenty years. Even when students complete their schooling, they still will only be at the entry point of writing for their careers, with perhaps years of on-the-job apprenticeship to follow. While reward for reproducing received models and knowledge—that is, getting top marks in school—may be sufficiently motivating for a few, most students need something more. And even those who get good grades without meaningful communication will be ill-prepared for situations when they are more on their own and are expected to show judgment, creativity, and situational responsiveness.

While issues of creating meaningful writing experiences are relevant from the earliest years of schooling, they get most visible and troubling the higher up in education students go, because more is expected of them. Sometimes the problem is not even recognized until the crisis moment when doctoral students are struggling to write their dissertations. At that point, they are expected to make novel contributions to knowledge, based on awareness of what others have written previously, with careful reasoning and good theoretical understanding, while offering strong evidence produced through appropriate methods, and coming to pointed conclusions in terms that show the relevance and implications of the research. All this is expected to be presented in clear language, without digressions, confusions, contradictions, or undue prolixity while following standard expectations of correctness. That is, their work is expected to be knowledgeable, meaningful, high quality, and persuasive according to disciplinary standards. This is a tall order, especially if students haven't been prepared for increasingly ambitious writing tasks throughout all the years of their schooling. And remember, these

students are the few who have come this far, somehow struggling past all the earlier challenges to get to this point. Is it a wonder that so many struggle, never complete doctoral dissertations, or turn in only marginally acceptable texts, never to offer significant contributions again? Actually, the wonder may be that any get to this point at all.

Because the need is so apparent at this near-end point of education, affecting the most successful of students, more universities worldwide are offering support for doctoral writers (for examples of programs see Steve Simpson et al., 2016, and Marilee Brooks-Gillies et al., 2020). All support is welcome, but the best time for help was much earlier. Writing education should have started in the primary grades and continued throughout schooling and university so that postgraduate writers would be prepared to meet the new challenges of dissertation writing. Throughout the school years writing can expand students' expression of knowledge, experience, and point of view. The child may begin simply writing notes of endearment or of gratitude to those around them. With proper guidance this can grow into sharing new ideas and complex materials, facts, and concepts learned in their subjects. Commenting on events and familiar situations can develop judgment and confidence in their views, even as students learn to report carefully and with considered stance the material they are commenting on. More informed views can be held accountable to higher levels of precision in language and carefulness in reasoning and evidence. While students may wish to hide behind the voices of authority from their sources, they need to learn to evaluate, analyze, and deploy their readings to show the sense they make of their sources and apply those resources to the questions and tasks they themselves define. Otherwise, they can wind up mired in the incoherence of cutting and pasting. The work of thoughtful evaluation and synthesis continues and becomes more challenging at every level of education and professional life. The building of confidence, judgment, and courage never ends as one keeps getting into deeper waters, pulled by the writing one does, and looking more deeply into one's understanding of the issues and projects embodied in other texts.

## Building Thought, Critique, Judgment, and Stance in an Intertextual World

Study questions and exams can develop accurate reporting and understanding of assigned readings. Summary and paraphrase activities can practice the skills of knowledge reproduction. But the developing writer needs more than repeating phrases and information; the writer needs to engage in value-added tasks that invite taking a position outside the presumed authority of the assigned reading. This could be as simple as providing personal experiences that resonate with the text or question the text's applicability to a particular situation. Or it could be as complex as providing an ideological critique based on a well-articulated theoretical framework and detailed analysis. A first step in developing this judgment is



simply locating points of agreement and disagreement with what one finds and reports in the text. This can then become elaborated in arguments about validity or limitations or evaluation of the evidence and presentation of counter evidence. More subtle stances can develop with sardonic commentary, discussion of the assumptions or beliefs inherent in the text, evaluation of the reasoning, or any activity that requires taking a position that stands outside the text to comment on it. Even a book review (as opposed to a book report) puts the writer in an evaluative, critical position outside a text being written about (for examples of textbooks built on these principles, see Bazerman, 1981/2010, 1997/2015).

In the early stages of increasing student sense of the expressive and meaningful possibilities of writing, teachers may want to provide detailed instructions and guidance to point a way for students to move forward. But as students' skills, confidence, and judgment grow, students should be given wider latitude to find their own directions and make decisions about the shape and contents of texts. Advice and guidance need to be more dialogic and strategic, supporting the directions students want to explore while helping them meet the expectations of persuasive and well-formed work. The emphasis should shift from what the final result should look like to how the students can get there: how they can formulate appropriate intentions and strategically carry those intentions out.

At some point students need to engage with more than one text, as texts do not always fit together neatly, to be pasted together side by side. Texts may disagree, or they may be talking about different things, or they may take somewhat different perspectives. There may even be large gaps between the texts with different kinds of relevance for the student's interests or projects. Students need to learn to make sense of the relations of these differing texts and then see how they can be accurately added up, pieced together, or differently evaluated. A comparison of two or more texts to contrast the positions they hold and an evaluation of the information and arguments in each provides one starting place. Next students might be asked to develop a composite picture that would come from the different ideas and information from multiple related texts.

At the same time as students are learning to make sense of multiple texts, their own thinking will grow as they select and synthesize what they learn from the various texts. They will be developing their own perspectives and stances, their points of view. Throughout this process students should be given space to express how their thinking is evolving and how they are coming to understand the issues discussed in the readings. In placing their own thoughts in relation to the statements of others, they learn to use texts as context, resources, and interlocutors. Writers will be able to develop their authorial positions distinct from the sources drawn on and establish their own authority as writers. Students are challenged here to maintain their voices in this increasingly crowded field of knowledge while still taking seriously what others have to offer. This also means students learning to develop control over the voices others bring in while not distorting their messages. Whenever writers quote, and especially if they quote at length, they hand over the voice of the text

to others. Only by framing the quoted material and placing it in the overall design of their own writing can the writer wrest back control of the text's voice. Then the readers can see why and how these voices are being brought in, in relation to the meaning and point the student writer is trying to develop. In the process of learning to make the statements their own, students may become more selective and purposeful in quotation (as well as briefer) while also learning to deploy summary, paraphrase, allusion, and other means of reference strategically. This flexibility of means of reference gives them more control over what is being said and how, and allows them to maintain the force and continuity of their statements. Appropriate citation, of course, gives recognition to material from others, but it also marks off the rest as the writer's own statement. The more adept and knowledgeable students become at integrating the words, ideas, and information from others, the less unintentional plagiarism will become a problem. Of course, intentional cheating, to claim the work of others as one's own, no doubt will be a recurring problem, but that is appropriately recognized and treated as intentional cheating. The more students know how to navigate the complexity of intertextuality and the building of their meanings within an intertextual word, however, the less often they will need to resort to such cheating. For an informed view of plagiarism and citation see the Citation Project (<http://www.citationproject.net/>).

## The Path to Research

As students gain awareness of the positions and stances they want to hold in the intertextual fields they engage in, they may start to feel the need for more knowledge and evidence to elaborate their positions, to hold their ground, or even to know where they want to stand and why. Research begins with the awareness that one can participate and act more fully and effectively if only one knew more. Parts of the needed knowledge may already have been found out by others and are available in the library, on the internet, in a company's files, or in the city archives. In that case, students will still have to figure out where to look, how to evaluate and make sense of what they find, and then integrate the pieces into an answer to their question. Further, students will need to consider whether what they have found adds up to a complete, coherent, and reliable answer. If not, they have to decide whether they should gather new evidence in primary research or limit their question to what is currently known and knowable. It is very possible that no one has asked the same question they have, in exactly the same way, and applied to the exact same circumstances, so no matter how excellent the resources they find, they may need specific local data, evaluation, adaptation, interpretation, and application, along with coordination with other knowledge.

Much of the research students do in high school and university is of that secondary sort, carried out in libraries, using already inscribed knowledge or statements to build their own knowledge and present their synthesis and analysis to others. But as students advance in their disciplines as undergraduates and then as postgraduates,

they are increasingly expected to form their own inquiries and seek information that hasn't already been inscribed, let alone codified. They need to collect new data to more accurately and precisely represent the world they are analyzing, evaluating, or acting on. In their disciplines they will typically learn field-specific methods and engage in methodological discussion for choosing and evaluating those methods. Behind the selection of methods and methodological reflections are the questions they pose: what they are trying to find out so that they can make new meanings.

This advanced inquiry is a further extension of creating meanings as they have been doing from the beginning of their writing education. Even in the earliest schooling, inquiry can be fostered in meaningful ways that go beyond cookbook experiments where teachers already know the answer. In primary grades students can collect information about problems or conditions in their community. Inquiry processes can become more extensive and elaborate as children know more and move more deeply into their subjects and professions. Throughout this process, the connection between meaning making and inquiry helps motivate developing writers, reinforcing the idea that writing, meaning making, and knowledge making are acts of personal agency, extending what one can know and do.

After students finish their university educations, they will likely need to continue reporting on the world and forming actions within communal intertexts or within the practices and expectations of their professions, domains of practice, or organizations. Only if they collect and inscribe what they find in ways the fields have come to recognize as legitimate will their observations, findings, or recommendations be persuasive. Internship activities, community projects, collaborative teams, or organizational simulations can help students start to see how their writing will shift once they leave the classroom.

## The Rewards of Claiming One's Place in an Intertextual Culture

If meaning making and sharing of thinking and experience remain at the core of writing education, students learn to place their stories in relation to the stories of others and to create new stories, enriching the intertextual landscape. Learning to find one's way and create one's place in the intertextual world of meanings is learning a complex dance, a dance of appreciation of others, but also of respect for how one contributes to the communal built symbolic environment. One learns from and against the texts one draws on, but ultimately one tells one's own story.

As students learn to make more complex and informed judgments and decisions, they can sense the rewards in their increasing understanding of the world and growing sense of intelligence and problem solving, particularly in the areas of greatest interest to them. These areas of interest are likely to expand as students comprehend more, moving beyond their most immediate experience, to see their concerns represented on broader canvasses of ideas, history, society, culture, or science, even as increasing knowledge may make inquiries more focused and precise.

Even more they will be able to participate in wider and more advanced domains of society. As we have lived with literacy now for five millennia, writing has become increasingly central to the organization, communication, knowledge, and coordination of most domains in society. In fact, many domains of social organization only formed and developed through the mediation of writing. Banking, insurance, and all the financial domains would not have evolved beyond barter without records, contracts, and regulations. State legal and governmental regimes and institutions would not exist, as we would live only by the transient words of household and village leaders. Medicine, agricultural technique, and other forms of practical knowledge would be passed only by word of mouth. News would be only rumors passed by travelers. Most domains of social life through the mediation of literacy have grown, become more complex, more highly coordinated, and more knowledge based, particularly in the last two or three centuries. The pace of change has become ever more rapid in recent decades, which we now think of as the information age. In short, power, decision making, pursuit of interests, value, and even basic recognition have come to depend on literacy and documentary systems (see chapters in Bazerman, 2008, on the history of documentary systems and the relation to social domains). Persuasively representing one's interests, needs, and contributions requires being able to articulate one's presence and case within knowledge based literate fields. For our students, learning to write goes beyond satisfying personal curiosities to being enabled to become effective members of society in a world whose literate practices are constantly growing and changing.

It is not even enough for students to become familiar with a current set of literacy practices; their literate worlds will keep expanding, and technologies of communication will bring with them new communicative challenges. Students need more fundamental ways of understanding their communicative situations and realizing their messages strategically and skillfully. Students may be introduced to the power of writing through their contemporary situations and forms, but they also need to be able to analyze the underlying rhetorical dynamics of the evolving domains they will participate in during the half century or more of their productive and contributing lives (see Deborah Brandt, 2015).

## Writing as a Peculiarly Human Communicative Practice

The importance of communication, history, and transformation are built into our nature as humans. Our cultural evolution is dependent on our communicative and literate evolution, resting on a biological evolution that makes humans unusually cultural creatures. We share with other animals internal neurological processes that allow us to perceive and act effectively within the ambient world. With biological evolution these internal neurological communicative networks have become increasingly sophisticated, making possible complex monitoring of our internal states and external contexts, accumulation of information, and flexible decision making responsive to our material and social environments—even

to the point of coordination with others of the species (see Antonio Damasio, 2010, 2018). But all this information gathering, reasoning, and calculation for most creatures happens only internally, within the physical limits of the individual creature. Every new member of the species must learn, organize knowledge, and train personal neural and sensing systems on their own, only aided by genetic evolution. This means that as long as the species is biologically stable, the life of each individual is much the same as the life of each previous one, going back millennia. Single-celled creatures, fish, insects, and even reptiles now live pretty much the same lives as they did when their species first evolved. Learning starts afresh with each new generation, adjusting only for changes in the material environment that changes the learning environment of each individual of the species.

However, some creatures have developed means of coordination and communication that allow them to work together and even create cultures that grow and change across generations and from place to place (Tomasello, 2019). Thus, individuals become more responsive to each other and even learn from one another so that their lives are conditioned by the knowledge and practices of their cultural compatriots. Their learning reaches beyond the skin barrier to participate in sociocultural practices and knowledge. Some of these means of communication can be much more sophisticated than was previously imagined, resulting in the formation of complex animal societies, particularly among birds and mammals. However, the human capacity for language has brought communication to a different level, allowing highly differentiated cultures, forms of knowledge, and practices among different groups of people. This has been accompanied by extended periods of learning (and dependency) for the young and highly plastic neurological systems with brains that evolve throughout life in relation to activities in social and material contexts. Language becomes important in brain formation in affecting perception, categorization, and reasoning. Nonetheless, for the first couple of million years of hominids and perhaps two hundred thousand years of *homo sapiens*, culture and society were largely local matters, with cultural knowledge relying on direct in-person transmission, word of mouth, and a few enduring material artifacts.

The appearance of writing about 5,000 years ago, however, created new ways of communicating across space and time (Schmandt-Besserat, 1996), facilitating persistent shared knowledge and belief while making possible larger social structures of cooperation, affiliation, and meaning (Goody, 1986). Recorded documents could be compared, fostering higher degrees of argument, reasoning, and evidence within more elaborate and extended statements. Knowledge could be aggregated, synthesized and critiqued. Structures of social organization emerged with texts and written records at their center, such as scriptural religion, philosophy, sciences, finances, law, governance, literature, history, design, and architecture. Each domain became an arena of competition and contention, with battles largely carried out over written words and documents, though written words could also be used to design, strategize, and deploy material resources. Experiences and observations could be compared and reports received from distant

parts of the world, expanding knowledge, and awareness of diversity. Writing also fostered reflectivity, planning, and synoptic vision. The rise of schooling institutions followed the need for literates to carry out expanding social functions and the centralized coordination of knowledge through texts. In the last millennium, print further supported the replication and distribution of copies of texts and contentions across regions and jurisdictions, along with the formation and standardization of national languages, the proliferation of school books, and the aggregation of texts in collections, such as libraries (Bazerman, 2006).

Over the last two centuries, communication at a distance and across time has been enriched by telegraphy, telephony, audio recording, photography, wireless broadcast, and most recently digital technologies and the internet. These technologies have increased the available media for representation and changed the temporalities, distribution, and economics of exchange. But, like writing, they all afforded possibilities of intentionality, reflective composing, revision, and awareness of physically non-present audiences, social organizations, projects, affiliations, knowledge formation, and knowledge aggregation. These technologies as well frequently depend on writing directly in their scripting or their design. The affordances of changing communicative technologies only intensify the need for intentionality, purposefulness, control of design, content, stance, and the other arts associated with writing. Changing technologies also transform existing literate social activity systems and foster new ones. As machines may take over or support more automated tasks (such as is already the case with letter formation, spell and grammar checking, and formatting), human choice making becomes more fundamental, requiring monitoring, guiding, correcting, and projecting. Human beings remain the starting and endpoints of the communication, at least for the foreseeable future (Bazerman, 2018).

Our current students now will likely carry out active careers until 2070 or 2080, and their students well into the 22nd century. What they will need is not limited to the lowest common denominator of writing skills which already are being automated. They will need the highest sociorhetorical awareness of what kinds of messages and knowledge making are possible, with whom, and how their messages will both travel and endure across time, space, and socially organized activity systems. The built symbolic environment is getting more dense. It is harder to carve out one's place and value in this symbolic virtual landscape. This is the future of argument. Our educational task is to prepare students for both the world they inherit and the world they will make.

## References

- Bazerman, C. (2006). The writing of social organization and the literate situating of cognition: Extending Goody's social implications of writing. In D. R. Olson & M. Cole (Eds.), *Technology, literacy, and the evolution of society: Implications of the work of Jack Goody* (pp. 215–240). Psychology Press.

- Bazerman, C. (Ed.). (2008). *Handbook of research on writing: History, society, school, individual, text*. Lawrence Erlbaum Associates. <https://doi.org/10.4324/9781410616470>
- Bazerman, C. (2010). *The informed writer: Using sources in the disciplines*. The WAC Clearinghouse. <https://wac.colostate.edu/books/practice/informedwriter/> (Original work published 1981 by Houghton Mifflin)
- Bazerman, C. (2015). *Involved: Writing for college, writing for your self*. The WAC Clearinghouse. <https://wac.colostate.edu/books/practice/involved/> (Original work published 1997 by Houghton Mifflin)
- Bazerman, C. (2018). What do humans do best? Developing communicative humans in the changing socio-cyborgian landscape. In S. W. Logan & W. H. Slater (Eds., with J. Enoch & S. Wible), *Academic and professional writing in an age of accountability* (pp. 187–203). Southern Illinois University Press.
- Bazerman, C., Applebee, A. N., Berninger, V. W., Brandt, D., Graham, S., Jeffery, J. V., Matsuda, P. K., Murphy, S., Rowe, D. W., Schleppegrell, M., & Wilcox, K. C. (2018). *Lifespan development of writing*. National Council of Teachers of English. <https://wac.colostate.edu/books/ncte/lifespan-writing/>
- Brandt, D. (2015). *The rise of writing: Redefining mass literacy*. Cambridge University Press. <https://doi.org/10.1017/CBO9781316106372>
- Brooks-Gillies, M., Garcia, E. G., Kim, S. H., Manthey, K., & Smith, T. G. (Eds.). (2020). *Graduate writing across the disciplines: Identifying, teaching, and supporting*. The WAC Clearinghouse; University Press of Colorado. <https://doi.org/10.37514/ATD-B.2020.0407>
- Damasio, A. (2010). *Self comes to mind: Constructing the conscious brain*. Pantheon Books.
- Damasio, A. (2018). *The strange order of things: Life, feeling, and the making of cultures*. Pantheon Books.
- Eodice, M., Geller, A. E., & Lerner, N. (2017). *The meaningful writing project: Learning, teaching, and writing in higher education*. Utah State University Press.
- Goody, J. (1986). *The logic of writing and the organization of society*. Cambridge University Press. <https://doi.org/10.1017/CBO9780511621598>
- Hjortshoj, K. (2001). *Understanding writing blocks*. Oxford University Press.
- MacArthur, C. A., Graham, S., & Fitzgerald, J. (Eds.). (2015). *Handbook of writing research* (2nd ed.). Guilford Press.
- Schmandt-Besserat, D. (1996). *How writing came about*. University of Texas Press.
- Smagorinsky, P. (Ed.). (2006). *Research on composition: Multiple perspectives on two decades of change*. Teachers College Press.
- Simpson, S., Caplan, N. A., Cox, M., & Phillips, T. (Eds.). (2016). *Supporting graduate student writers: Research, curriculum, and program design*. University of Michigan Press. <https://doi.org/10.3998/mpub.8772400>
- Tomasello, M. (2019). *Becoming human: A theory of ontogeny*. Harvard University Press.
- Vygotsky, L. S. (1978). *Mind in society: Development of higher psychological processes* (M. Cole, V. John-Steiner, S. Scribner, & E. Souberman, Eds.). Harvard University Press. <https://doi.org/10.2307/j.ctvjf9vz4>

Whitehurst, G. J., & Lonigan, C. J. (1998). Child development and emergent literacy. *Child Development*, 69(3), 848–872. <https://doi.org/10.1111/j.1467-8624.1998.tb06247.x>



# Chapter 18. The Ethical Poetry of Academic Writing

A long time ago, when I was in my doctoral program, I wrote poetry.<sup>1</sup> I wrote a poem a day. As an ambitious young writer with a large ego, I aspired to the power captured by some lines in the opening of John Keats' (1856/1982) "The Fall of Hyperion: A Dream":

For Poesy alone can tell her dreams,  
With the fine spell of words alone can save  
Imagination from the sable charm  
And dumb enchantment. (p. 361, lines 8–11)

As I started to write my dissertation it occurred to me that I was writing a special kind of poem, a truth poem. I wanted my scholarship to have the kind of power I sought in my own poetry—a power to articulate meanings important to me; a power from aesthetic form that gave inevitability, conclusiveness, and authority to the message; a power to touch other people's minds and emotions as it gave shape to unarticulated experiences and feelings.

But the dissertation, I also realized, was not the same as the usual poem, where I could follow wherever my imagination, feelings, and aesthetic judgment led me. No, truth poems had special ethical responsibilities—responsibilities that came from the work to be accomplished by scholarship also captured in Keats' lines—to "save / imagination from the sable charm / and dumb enchantment." To violate these ethical responsibilities would not only be a personal failure on my part but would undermine the work I hoped to accomplish by the scholarship. To violate these responsibilities would diminish the work, even if others never caught my ethical violations. The ethics were actually guidelines to produce good work, strong work, work that might last a while to add to human knowledge.

I want to address several of the domains of these ethical responsibilities, but I also want to address the poetry that good science and scholarship can accomplish. Our work as scholars can transform the knowledge and vision of individuals and societies to live with a deeper understanding of who we are as people and the world we live in, so we can live more successfully with each other and the world, with greater appreciation of both. That is the ultimate ethical calling our work appeals to.

---

1. This chapter was originally delivered as a Visiting Fulbright Faculty Lecture at the University of Porto in May 2016 and then appeared as "The Ethical Poetry of Academic Writing," by C. Bazerman (2021), *Educação, Sociedade e Culturas*, (58), 185–188 (<https://doi.org/10.24840/esc.vi58.152>). Copyright 2021 by C. Bazerman under a CC BY-NC-SA license (<https://creativecommons.org/licenses/by-nc-sa/4.0/>).

There are many dimensions to the ethical responsibilities as well as opportunities to carry out ethical actions. Every responsibility is an opportunity. And every responsibility or opportunity is about forming relations. There are ethical relations to the object of study, whether human or nonhuman, animate or inanimate. There are ethical relations for the kind of knowledge we produce for society and how it will further our lives and the life of the planet. There are ethical relations to our colleagues and our disciplines and the institutions we work with and for. There are ethical relations to the authors who have come before and contributed work that has made ours possible. There are ethical relations to our contemporary colleagues and the researchers to come after—and to the body of knowledge we are contributing to. There is even an ethical relation to ourselves as individuals. Ultimately, if we fulfil all these opportunities and relations, our work has the possibility to live, to enter the network of human knowledge and life. Tapping into this power of ethical action even helps us mobilize the power of language in the way we usually attribute to poets. Words gain their beauty and power from their ability to mobilize emotions, reactions, meaning, and actions with condensed efficiency, moving us rapidly to where we want to go, even if we did not know where that was until we encountered the words that have the force of rightness.

## Do No Harm to the Bodies of Our Subjects

These days before we can begin any research at my university and most universities around the world, we need to file plans and gain approval from our ethics boards that assure we meet ethical responsibilities to the subjects of our studies. Since I study the human practice of writing, this means I must show that my inquiries will not do medical, physical, or psychological harm to the people I study. Also, I must protect against any social harms that would come from disclosures of any information I might gather about subjects that might be traced back to them as individuals. If there is the potential of even minor harms, I must demonstrate that the benefits to the subjects and society outweigh those potentials. The benefits and harms must be fully disclosed to the subjects or their guardians, and the subjects or guardians must provide full informed consent for any procedures. Further the subjects must be notified that they can withdraw from the research at any point without penalty.

If we study nonhuman animals, we must also show that our research meets ethical guidelines; there are also guidelines for research on stem cells. And if the research might have impacts on the environment, there are further protocols we must follow. These review procedures are the result of the disclosure of unethical behavior in the past, such as the notorious Tuskegee syphilis study, which have led to government regulation and legal liability for research sponsors. Other regulation also might require prior approval or after-the-fact liability for such things as harm to items of cultural heritage or to unique artifacts, destruction of

monuments, removal from their region of provenance or proper ownership, and so on. In short, we can't inflict harm on the things we study.

## Do No Harm to the Representation of Our Subjects

But there is a deeper ethical responsibility to report accurately the nature, processes, and consequences of the things we study—if just to honor their integrity, life experience, and life choices. In a number of social sciences, it is becoming an increasing ethical practice to share the results of research with the people and communities we study so they know what is being said about them, so we can gain their evaluation and response, and so that they can use that knowledge for their own benefit and reflective action.

In studying an historical figure long dead, we have a responsibility to look as fully as we can into the evidence and not just intentionally select a one-sided view, whether a critical case about their failings or a laudatory case for their heroic virtue. To distort the historical or documentary or literary record to support a current ideological position does a disservice to the lives people led, the struggles they had, the accomplishments they made, or the failures and harm they caused. Their reputations are in the hands of those who come after. Distorting the record or not digging as deeply into it as we can also means we cannot learn as much from their lives as we might, and the lessons and accomplishments of their lives will not carry forward as richly to future generations as they might. Of course, in humanities and social sciences we have a dilemma, as we are often rewarded for re-evaluating the meanings and actions of past individuals and societies. We hope that our opening of new archives, adopting fresh theoretical perspectives, posing new questions will deepen our understanding, but in re-evaluating, we cannot forgo our ethical responsibilities to the fullness of lives, if only because later scholars may remind people of all we have forgotten.

There are similar concerns if we consider nonhuman life, where our partial studies or the metaphors we adopt may have limiting and perhaps negative consequences for the species we examine (think of the consequences of the term “invasive species” that has driven much environmental research) or lead to the overvaluation of one species over another. This equally goes for understanding constantly changing inanimate nature. Mistakes and limitations are inevitable, metaphors are inevitable, but our ethical commitment to the natural world asks us to keep digging deeper to understand better each component out of respect to the being and integrity of each component, and ultimately to understand how all works together to form our world.

But each of these responsibilities is an opportunity—to help us connect to and appreciate the things we study. If we study someone just to make a hero or a villain out of them, we become distant from their lives, and we see their accomplishments as beyond human or beneath human rather than as the actions of a human at a particular moment of time. In examining the writing of major

scientists, thinkers, and inventors such as Isaac Newton, Joseph Priestly, Adam Smith, and Thomas Edison in the contexts of their life and times, I have found that I understand their choices as writers more deeply—deepening my understanding of how writing and writers work and expanding the repertoire of writing choices I have available and can share with my students. I also feel closer to these major figures, seeing my writing dilemmas as not so different from theirs—including those instances when I see them making decisions we would not currently consider ethically precise or admirable.

Although I do not study biology, geology, or physics, I have certainly heard from people who do study them a similar admiration for and connection with the material they study, because they have insight into the wonder of the operations of the world. Even if they find the particular microbe or infectious agent they study repulsive and harmful, the processes they study fill them with wonder.

## Do No Harm to Our Colleagues and Our Fields

The ethical responsibility to represent the phenomena or objects of study as fully, accurately, and nonmanipulatively as possible is connected to the ethical responsibility to one's colleagues who are engaged in related endeavors. Any distortion or lack of transparency has the potential to mislead, confuse, or waste the time of other researchers who are trying to carry on their work. If those faulted findings contradict their work, they may need to step back and figure out why, or they may feel compelled to add new investigations to check out the discrepancies. Or these faulted findings may lead to complications in the analysis of their results. Once colleagues begin to suspect reported results as not complete or intentionally partial or manipulative, that may lead to then ignoring or discounting the work, even the parts that may be more solid, so the ethical failure will lead to a stigmatizing of large parts of accomplished work. The cost will not only be theirs, but yours. Their work, your work, and your communal collaborative work all are disrupted. The ethical lack is a social disruption that distances you from your investigative community. But enacting ethical behavior draws you closer to the community, even if you are in conflict over some ideas and interpretation, because you share the evidentiary struggle in working out the knowledge of your field, and eventually the chance for mutual respect remains, even if there may be competitive bad blood in the short term. Again, we can view the ethical choices as dilemmas, because caught up in competitive struggles with peers we want to make the best case for our position, yet we must bound the force of our statements by the limits of ethical argument if we are to maintain long term engagement with our fields.

This brings us to the ethical responsibilities to our disciplines and fields. This also contains dilemmas. Whatever field we are trained in or carry out work in has ways of working, of gathering data, of framing ideas in particular theories, of attending to particular kinds of articles in journals. There are good historical reasons that have led smart people to the choices embodied in disciplinary

practices and to the regulatory mechanisms that attempt to hold researchers to these standards and practices (through graduate education, disciplinary manuals, journal requirements, reviewing procedures, etc.). So, these practices are worth respecting, and we often have some loyalty to the ethical goals of the field.

## Do No Harm to Knowledge

At the same time that we respect the past, each discipline has had some historical exclusions, focusing on some things and not others, and thus the disciplinary accounts of phenomena may be partial. In studying our phenomena, however, we may find that in its complexity and richness its study requires moving beyond our training or disciplinary procedures to new procedures and ideas. Sometimes this may involve invention of new tools or new theories or new analytical procedures that call into question earlier disciplinary procedures. Sometimes this may mean we may call on the theories, procedures, and methods of other fields, which we also have a responsibility to respect, taking their knowledge and way of reasoning, not distorting it. In either case our ethical responsibility becomes complex as we need in some sense to violate normal good behavior of our field, or what Thomas S. Kuhn (2012) would call “normal science” (pp. 10–42). If we continue to believe in the value and project of our field, this then requires careful thought of how we bring new resources into our field as useful and even necessary to move the field forward towards its higher goals, even as we may be violating some norms. Particularly if we draw on resources of other neighboring fields, we may be violating distinctions between lines of work, methods, and phenomena that were drawn long ago. Sometimes ethical attachment to the phenomenon or application in the world may even push us to abandon the past to claim a new field and a new project in alliance with similarly minded colleagues. Or we could be attracted to the problems and practices of another established field we are drawing on—though integrating the resources and perspectives into your new home may also present problems in how you can respect and contribute to the problems of your adopted field. But at some point, you will need to recognize where your fundamental programmatic commitments are and where your primary contributions are aimed—and then make the work meaningful, important, and persuasive to that field.

Let me give some examples from my career. My doctorate was in literary studies, but I then discovered literacy education where I felt I could contribute more to the lives of young people entering society. In making that transition I found many of my fundamental values changed, and I no longer held so dear the practices and aims I had learned in my literary training, even though I brought with me many skills of text analysis and literary text production. In a sense I betrayed the work and goals of some of my teachers. To carry me across this divide I had to work through a worldview that changed my own ethical commitments and revalued the work of many of my former colleagues and mentors. As I entered more deeply into understanding academic and particularly scientific writing, I found I needed

the resources of sociological thinking, historical thinking, and science studies. I began attending different conferences and reading different journals, and I found their problems and commitments intriguing. But ultimately, I found that their problems were not mine. I found myself getting into too many arguments where I held views that strayed from the projects of the fields I encountered. I needed to realize that literacy education was my ongoing commitment, even as I used resources of various fields. Nonetheless, I needed to understand the expectations and purposes of sociological and historical inquiry and reasoning so I could understand and evaluate the work accurately. Using these resources to understand writing in its historical and social contexts to advance current practice then led me to reframe my studies and the arguments to be made from them.

## Respect for the Contributions of Others

Respect for disciplines brings us to those who have previously contributed, building the literature we draw on and framing current issues for discussion. The most obvious aspect of encountering past literature is not stealing others' works to present as one's own, whether by intentional thievery, oversight, hazy memories, or sloppy record keeping. This of course is the notorious issue of plagiarism. More fundamentally, we have an ethical obligation to other authors to recognize we are part of a communal endeavor, building on each other's work, drawing strength from each other, evaluating as accurately as we can, and finding in it what is useful. While we should be appropriately critical of the limits of each other's work, we also should not be unduly dismissive or unnecessarily harsh. This obligation to communal knowledge and communal knowledge building puts a further affirmative obligation on us to be comprehensive in our search for all resources that might be useful to us, not ignoring other research programs or other subspecialties that we might dismiss too readily.

A further complicating dilemma is that over our lifetimes and careers we will have read and heard many things that will have influenced our thinking and approach to any research question. Any citations we provide in an article are necessarily selective, limited by criteria of immediate relevance mixed with strategic value in helping others understand and respond positively to our argument. Each of these decisions of strategy and relevance has ethical dimensions.

## Responsibilities to Contribute and Learn

We also have an ethical obligation to contribute. This makes us ask what is the value-added work expected in each task. In research articles this usually means some new specific finding or theoretical perspective or research method which is the highlighted news of each publication. But not always. If, for example, we are doing bibliographic work, the value-added work we do is the collection and organization of the material. In this instance very few words would be original, and we would not

be guilty of plagiarism for reproducing the citations we would get from the original. What would be plagiarism is if we took the full list of citations from another bibliographic list. So plagiarism really has to do with the expected work added for each task and attempting to present someone else's work for those tasks as one's own.

This issue of the expected work added puts the issue of student plagiarism in a different light, as well as our obligations as teachers to frame our tasks and evaluations more precisely.

Most student tasks don't really have the goal of adding to communal knowledge. Student tasks are usually designed to foster student learning so that they learn prior knowledge, learn to synthesize it, learn to think in ways consonant with it, learn to think critically about it, and sometimes learn to carry out investigative procedures. The ethical obligation of the students is to do the work of learning. The work or value added we expect as teachers should be targeted precisely at what we want the students to learn, what we want them to be working on, solving the problems we think will help them develop.

Many student tasks simply involve reproduction of received information. On an exam, students often only have to reproduce material from their textbooks and lectures. Further if there is only one textbook and one set of lectures, the students may not be expected to give citations, because there is only one authoritative source of correct knowledge. Even use of exact wording is allowed. So the expected value added is only in the memorization of the material and reproduction of the material under exam conditions. Plagiarism would be copying from a nearby student who has done the memorization. In fact, if the student asked a friend about a question five minutes before the exam while waiting to enter the room or checked an answer after leaving the exam, it would still not be cheating. It would only be cheating if they had entered the exam room and the exam had begun. In summary writing, similarly, the expected work added is in the selection and condensed representation of material (all of which is from the original source); what would be plagiarism and cheating is if the student took someone else's selection and condensation and presented it as his or her own. If we provide students a data set for analysis, the work added is the analysis and not the collecting or even checking of the data (and even the citation of the data source is entirely dependent on the bibliographic information we provide them in the assignment).

If students do not do the expected value-added work and substitute the work of others for their own, they short-circuit the learning process. They are not solving the problems we think will teach them what they need to learn. They not only harm themselves, they undermine the cooperative environment that ought to pervade the classroom, and they undermine the value of the credential they have earned under false pretenses. They are keeping themselves at a distance from the material, the learning, and the discipline, as well as from the educational institution, losing the connections that can add to their strengths.

For ourselves as scholars, clear recognition and demarcation of the work of others helps highlight the remainder, which is our own work, which we hope

over time will be recognized as valuable and enter into the realm of accepted knowledge. Perhaps we will even get credit and some of the personal rewards for that, but the biggest ethical reward is to see that we have provided something of use to others and something that influences understanding and practice. This is even the case if others try to steal our thunder. Perhaps in the short-term others may get some undeserved credit, but at least the ideas enter more fully into the world of knowledge. Over time, if we produce consistent and related work that is well connected with the phenomena we study, our community, and the relevant literatures, our work will have a consistency and depth that will make it more recognizable than the small fruits picked from the side of the road by others. In fact, sharing work with others and being supportive of their development extends the presence and uptake of our work and more cumulative growth. Supportive ethical behavior with colleagues in the long run redounds to the power and recognition of our own work, with generosity extending even to those who may not be so careful recognizing our work.

## Responsibilities to Ethical Publication

Concerning the long-term growth of communal knowledge, I want to raise one more contemporary ethical dilemma concerning where and how we attempt to publish our work. For many years the publication system was fairly stable with commercial academic print publishers, university presses, and academic society journals sharing values with the academic world and not seeking undue profits. Academic evaluation procedures came to rely on the selections made by these publishing venues. For a number of reasons including corporate growth and the disruptions of digital publication, major academic publishers are consolidating and becoming predatory in their pricing. They are also becoming ever more clever in hyping the status of their products, even influencing academic evaluations by such devices as impact factors and listings in particular databases controlled by the publishers. At the same time the academic world is growing with wider markets (often poorly funded) for academic knowledge but without access to the publications. Fortunately, open access publication is growing and offering alternatives, although not all the new venues are legitimate or legitimated, and academic reward systems may be slow to recognize the new legitimate venues. There is a real struggle going on for the future of academic publication, and the choices we make as individuals have ethical components about which future publication systems we are supporting.

## Responsibilities to Ourselves, Our Work, and Our Communities

Throughout, I have been emphasizing positive building of knowledge, community, practice, and professions. I have emphasized that ethical responsibilities



and choices are also ethical opportunities to build connections, draw strength from nature, from our disciplines, from our colleagues, from prior researchers and thinkers, even from our publication systems. For our careers are ethical careers, and ethical work makes for strong careers. Ultimately, we have an ethical obligation for ourselves, to carry out life work which we will feel proud of, that will contribute to our societies. I have cast the net of ethical choices quite broadly to indicate the many dimensions of ethical choice and opportunity before us. This includes our teaching; a large part of our work is to provide guidance and challenges for students that will help them build their strengths so they can do the proper value-added work and have the skills to make contributions and apply knowledge with judgment and responsibility.

There are intentional cheaters (even sociopathic liars) whose violations of ethical expectations deteriorate our research professions and educational climates in untold ways. Insofar as we can identify these cheaters, they should be corrected, disciplined, and even in some cases excluded because of the harm they cause to our communal endeavors. Faked data has long been a concern because of how it confuses related research. Plagiarism also has long been a major concern, especially in educational contexts, but for different reasons—because it allows students to avoid the work of learning, grants undeserved credentials and rewards, and demoralizes other students, deteriorating motivation and learning engagement. But in my experience, most students are not pathological or determined to cheat. They are often lost within assignments and do not know how to proceed, or they did not start early enough to do all the requisite work and solve all the problems, or they do not understand or value the content of the course. So they borrow work from elsewhere, whether their friends, published work, the internet, or for-profit services. Stronger guidance and mentoring, building greater motivation and engagement in the material, better-structured activities, matching assignments to challenges students can meet—all these can diminish shortcuts and fakery. Smaller classes and more interaction between instructors and students of course will help this process; even with large classes, however, well-structured assignments with opportunities for students to display their work in progress and identify trouble points can make the plagiarism problem vanishingly small. Whether with our colleagues or students, we should not focus all our ethical energy on castigating moral deviation or ethical failure of others. Rather we should devote our energy to creating paths that facilitate ethical action, building relationships that can guide writing choices along lines of strength, giving power to our words.

Words do not come out of our heads alone. They are inspired by the world around us and the struggle we have to express and connect. In trying to synthesize what we find in the literature we are pushed to identify meaningful categories and articulate the underlying ideas that connect the work that comes before us. In making sense of the literature, we also articulate the problem we are addressing and come to terms with the kind of formulation that would serve as a solution to

the problem. A boring review of the literature does not contribute much to reformulating and reconnecting the prior work or reframing that work around a new problem and new ideas. An exciting review shows us our field in a new light and opens up new possibilities for investigation. It puts fresh life and dynamism into all we thought we knew and understood. But this requires close ethical attention. Otherwise, we normalize the literature into an old and familiar story, driven by tradition, conventional thinking, or ideological preferences.

Coming to terms with problematic or confusing data and phenomena, even more, can push us to identify new variables, new processes, new observations, new investigations. Then we suddenly see how phenomena or data that seemed disorderly make sense, fall into a pattern, reveal a previously hidden process. That moment can be filled with excitement and intellectual beauty. Then we are driven to articulate what we have seen in order to share it with others. But again, this requires an ethical attention to precision and honesty about the data, not making them fit prematurely into an expected meaning or categories into which they don't quite fit.

Then we need to struggle to make our new insight visible and persuasive to our readers, to transmit the power of what we offer. As we find the words and figures and equations, we can see the beauty and power of the knowledge we have made.

Thinking through how our inquiries relate to larger social problems in a precise way and what specific wisdom the findings might have for current interventions will locate the importance and force of the work for those beyond one's specialty. Likewise, thinking through where our discipline is going and how our work carries that along or redirects it, including relations with other fields and bodies of knowledge, can tap into larger strengths and dynamics that can feed words with energy. Even recognizing the audiences and publication choices open your work to create fresh thinking about the value and purposes of the work.

All of these considerations are about connections and relations and building them through ethical choices and actions, not diminishing or losing the strengths by shortcuts or obfuscations. These ethical commitments push us to find the right words, the right formulation that connects the relations with clarity and precision. They push us to poetic strength that mobilizes the power of relations and moves our readers to share the vision we present.

Academic writing is hard. Creating new statements grounded on close observation and data collection of phenomena, located within but distinguished from large bodies of prior knowledge, speaking to the needs, interests and questions of a discipline and society more generally—this is hard. It takes commitment, and it takes courage, and it takes solving many puzzles over an extended period over multiple projects and even over a career built on recurring themes.

Many risks come with this work: whether our work can navigate all the difficulties and complexities to get good results and be judged publishable; whether others will find fault with our knowledge, our understanding of theory and methods, our procedures, our results; whether our work will be judged sufficiently

original yet disciplinarily intelligible; whether our work will show us as smart and innovative or conventional and a bit slow; whether others will discover ethical lapses that will cast us beyond the pale; whether we can fulfil our ambitions for knowledge and live up to our own high estimates of talents.

One way to avoid the hard work, commitment, and risk is just not to begin the work or follow through on it. If we don't solve the problem of getting down to work, in a sense we don't have any further problems to work on. There are no more ethical lapses to fall into nor ethical opportunities to fulfil. And there will be no relations to build and no power of knowledge to be articulated. There may also be no job. So, the first and most fundamental ethical task and ethical opportunity is to get down to work. From here all ethical opportunities flow.

## References

- Bazerman, C. (2021). The ethical poetry of academic writing. *Educação, Sociedade E Culturas*, 58, 185–188. <https://doi.org/10.24840/esc.vi58.152>
- Keats, J. (1982). The fall of Hyperion: A dream. In J. Stillinger (Ed.), *John Keats: Complete poems* (pp. 361–373). Belknap Press. (Original work published 1856)
- Kuhn, T. S. (with Hacking, I.). (2012). *The structure of scientific revolutions* (50th anniversary ed.). University of Chicago Press.



## Section 5. Guesses at Unknown Futures

Having considered where the past has brought us to in the first two sections and the implications for our current life as writers and teachers in the next two, the book now offers a single chapter about where writing may be headed: “Looking Backwards Towards the Future.” In it, I look at the clues the past offers to glance into that unknown place, the future. It is the place we need to know about the most, but it is the place about which we know the least. While I try to point imagined flashlights into the dimness, I suspect I miss the yawning chasms just in front of my stumbling feet.



## Chapter 19. Looking Backwards Towards the Future

Søren Kierkegaard has been imprecisely quoted as saying, “Life can only be understood backwards; but it must be lived forwards.”

Guessing the future, the world in which our students will live, is a fool’s game. The future makes fools of us all because we need to live life forward but have only our past to rely on. Before we can even understand the past, life keeps pushing us into the future. The actual words of Kierkegaard taste of this anxiety, if not the tragedy. But perhaps it is a comedy of pratfalls as we keep trying to look backward while we are forced to step forward. Kierkegaard’s actual words from his *Journal* (1843) in English translation are:

It is quite true what philosophy says, that life must be understood backwards. But then one forgets the other principle, that it must be lived forward. Which principle, the more one thinks it through, ends exactly with temporal life never being able to be properly understood, precisely because I can at no instant find complete rest to adopt the position: backward. (Cappelørn et al., 2008, p. 179)

Born almost eight decades ago, I am especially aware that I am a creature of the past, trying to live for today and tomorrow. I was formed in a world long ago, but still I must adapt and respond to the accelerating changes around me, unless I am to be left muttering in my beer. Moreover, I have studied the communicative worlds of the past to understand the invention and elaboration of literacies to assist us in our current pedagogical work. Our students today, however, will live their lives and use their literacy skills throughout the 21st century, perhaps even into the 22nd. So we are pushed, dragged, and sucked ever more rapidly into a quickly evolving future, with barely time to look backward and even less to glance forward.

### Writing with Technological Changes

For the first 40 years of my life, until 1985, practices of writing were much the same as they had been since the beginning of the 20th century, including practices at the university, despite a few curricular and genre changes. During this period, I learned to become a published scholar and writer and developed many of my approaches to teaching. During the next decade desktop computers changed the practices of many writers, myself included, facilitating drafting, revision, formatting, and multimedia. But much remained the same: People printed out the same documents in the same genres and transmitted them on paper. Computers worked their way into a few university classes, with some of the same effects on

writing processes and document design, but most writing at primary, secondary, or tertiary levels stayed much the same as before. Students wrote traditional essays on exams or at home for their classes, based on prompts from the teacher and submitted on paper, to be commented on, corrected, and graded.

But starting in the mid-1990s cheaper computers, mobile devices with writing capabilities, the internet, email, assistive technologies, cloud computing services like Google Workspace, and social media began to transform the possibilities of writing for people in many spheres of life and in many nations. These changes are likely to continue into the foreseeable future with consequences for the means of production and distribution, the social arrangements and uses for writing, and the proliferation of media that are seamlessly being integrated with the use of letters.

As a result of these changes people now write a lot more, and the balance between reading and writing has shifted. Deborah Brandt in *Literacy in American Lives* (2001) spanning much of the 20th century, found that most of her interviewees had happy associations with reading but most found writing unpleasant, evoking painful memories of school corrections, and did not do much writing in their current lives. Yet just a few years later, in her 2015 book *The Rise of Writing*, she found text production pervasive among all age groups and in many spheres of activity.

So after more than 30 years of rapid technological change in writing production and distribution, where are we left with writing? And where does writing seem to be going? Let's start with what valuable remains from the first 5,000 years of writing. We still rely on alphabets, patterns of syntax, genres, written records, written regulations, inscribed knowledge, and many spheres of activity that have evolved through millennia of literate communication. Systems of law, finance, commercial production, marketing and distribution, governance, scriptural religions, schooling, academics, philosophy, literary culture, and knowledge production along with their associated genres have evolved and continue. Practices of text organization, evaluation, and reasoning also continue, though with some additions and changes. Cultural practices of narratives, autobiography, trauma writing, fiction, poetry, journalism, scripted drama, and media productions all endure. Publishing and journalistic industries are struggling to find new business models, but their basic work continues. And most relevant for those of us in writing education, schooling continues and even expands, driven by the multiple societal needs for literate citizens and workers.

## Much the Same

Although writing continued much the same during the 19th and first half of the 20th centuries despite the technological advances of telegraph, telephone, phonograph, movies, radio, and TV, these advances increased the need for more literates to work in the resulting industries. Only a few functions migrated to these early forms, such as brief informal messages by phone and movie entertainment. Dissemination of information, advertisement, news, political engagement, enduring



records, regulations, contracts, knowledge production and dissemination, and other functions remained largely in written form. And even many of the audio and graphic productions were scripted, transcribed, or recorded and maintained, giving them the permanence and reach of writing.

Within schooling, in addition to skills of handwriting, typing, spelling, grammar and syntax, certain genres evolved in relation to schooling practices, local cultures, and subject matter priorities. As students became more advanced, they were introduced to forms of reasoning, logic, use of evidence, argument, and intertextual relations to selected educational and library materials. Longer and more demanding texts were expected at the higher levels of education with more disciplinary specialization. Students were expected to produce disciplinary forms of argument, intertextuality, reasoning, and evidence. These longer forms of argument particularly became associated with the production and validation of knowledge within disciplinary publications. Postgraduate education and research careers became focused on the production of such documents along with the research activities that provided the data or substance of those publications. Thus, these longer forms of academic argument were highly prized and seen as the heart of the communal project of the advancement of knowledge.

These are the legacies of the print world, most of which continue to be valued (even if transformed) in our contemporary era, although they may be placed under stress by new possibilities and values enabled by technological changes. In the academic world this continuity may be most visibly seen in the continuing popularity of the pdf article as the main method of academic knowledge contribution and distribution (Owen, 2007), though pdfs may now embed more graphics, links, and other digital objects. This continuity in the face of so many new possibilities for production, form, and distribution suggests these continuing practices serve ongoing needs and structures of academic life and are not simply the nostalgic artifacts loved by dinosaurs like me.

The introduction of computing into secondary and higher education was uneven in the late decades of the 20th century, largely because of economic disparities. Where computing was introduced, however, the initial impact on education was on facilitating revision through ease of change, decreasing time and labor to produce and transform drafts, and facilitating sharing of drafts for peer and professorial feedback. Computing also made possible more use of multimedia and document design. Multimedia and greater control of document design excited a number of teachers and did have some consequences for tasks and instructions, but these remained mostly a niche set of potentials in schooling, more talked about than used, though multimedia did have greater impact on commercial worlds and the public sphere.

## Much Different

In the last two decades, however, technology has proliferated in the classroom with the internet, search engines, learning management systems, smart mobile

devices, assistive technologies, social media, and cloud services. These developments have opened up new possibilities for the educational world, as catalogued in the recent volume *Digital Writing Technologies in Higher Education: Theory, Research, and Practice* (Kruse et al, 2023).

Seemingly mundanely, learning management systems (i.e., software platforms for use in educational settings) initially facilitated access to course information and materials, but they also had the potential for increasing interactivity among students as well as between students and professors. LMSs were to become integrated with other internet enabled tools, including asynchronous video lectures, forums, collaborative workspaces, assignment submission, feedback cycles, and interactive video classes. These added tools became central to distance education and became widespread during the Covid pandemic.

Mobile devices have put computing devices in the hands of many students and other people who would not otherwise have them. Even the simplest of these devices now has massively more computing power than the desktop models of the 1980s and 1990s. While this has not eliminated the digital divide, it puts more people in the middle of the accessibility spectrum.

Electronic communication and its associated tools are accessible to users everywhere and at every moment. This accessibility has proliferated messaging and other text-based productions as constant potentials and frequent activities. Everyday considerations for most people now include immediacy of written communication and response (in contrast to the slow time scales of sending letters or publishing articles and waiting for response, if any ever comes), explicit selection of audiences (or consequent dangers of uncontrolled recipients), and shaping of messages for context and audience. Because most people engage in messages with different degrees of informality and formality, genre distinctions, and a range of different consequences and responses, students potentially bring with them much rhetorical experience along with conscious awareness of the choices they make.

Further these mobile devices are deeply multimedia with cameras, videos, sound recording, and music built in. The affordances of multimodal composition are at the heart of several of the social media apps, like TikTok. Even what started out as word-based apps like Twitter or even email now may embed multimedia. Because students are likely to have had lots of experience viewing and producing for these multimedia social forums, they may have some knowledge of their associated tools and design principles.

The possibilities of production, even on small handheld devices, are greatly expanded by cloud tools, storage, and collaborative cloud workspaces. Composing and editing tools are readily available and often free in these workspaces, and the creator can move across platforms and programs readily, so what starts as a video or audio on a phone can be embedded, redesigned, and edited on a large screen. Collaborators can work closely, synchronously or asynchronously, with full transparency of contributions and discussion of possible choices. So more

complex, extended, and collaborative composing processes are supported, along with extended feedback and revision cycles.

Other kinds of assistive tools are increasingly embedded in the workspaces, not only the now familiar spell check and autocorrect, but also word choice suggestions, phrasal suggestions, voice to text and text to voice, and format templates. Text is now automatically generated to provide real-time reports of highly typified information and more extended Artificial Intelligence responses to prompts and queries. We can only imagine the automatic production of text will increase while overcoming some of the current difficulties of large language models discussed in the next section. Translation software is becoming usable and is likely to get even better rapidly. As well distribution of messages and information is often automated. All this means that humans need higher-level skills to monitor, critically evaluate, and confirm these choices. Humans over time may become more like the executives that edit and finalize drafts produced by ghostwriters than the lowly intern who has to produce the first draft.

Not only do mobile devices coordinate with multimedia, cloud computing, and assistive tools, they work hand in hand with the internet. The internet gives ubiquitous access to information, much of which is free, though some is firewalled and expensive. Newspapers, Wikipedia, medical websites, climate information, commercial offerings, cosmetic recommendations, celebrity biographies, and an endless variety of other information, of good and bad quality, driven by organizational interests and agendas, are a click away. No longer are students in their knowledge of the world limited by what they learn from their family and what the teachers provide through the textbook. The proliferation of access to information and disinformation created by people and groups with different motives requires new levels of critical evaluation by users, which creates challenges for us as teachers of writing, because students use this information as core elements in the arguments they make. Whether we would agree with the criteria various people have developed for assessing information quality, there is no doubt searching for and evaluating information are part of popular culture. Students will bring practices, beliefs, and stances toward research and information into our classrooms from their lives outside. We have responsibility for helping students develop their critical understanding and assessment of information as well as awareness of why and where they might seek and use information. As they bring information to the classroom and their writing, it is also more puzzling for us to understand what their sources are and how they are using them, unless students learn the practices of making their sources transparent and open.

Social media proliferating on the internet and the devices students use raise many of the same issues of genre, format, multimedia, selective and broadcast audiences, quality of sources and intertexts, and immediacy of response. Social media have lowered the bar for informality while increasing personal motivation and immediacy. They have also raised the stakes for audience response, making

students more aware of the way others perceive them and increasing the pressure for managing social impressions of one's self and one's message.

Social media are also sometimes the gateway to new social groupings for writers to engage with. Most obvious for writing are writers' groups such as fan fiction writers, poets, or autobiographical writers. But there are also groups for technical writers, journalists, environmental activists, political activists of all stripes, and so many others that elicit highly motivated writing. Social media groups that aren't organized around communication still communicate through writing, whether extended family groups, community and neighborhood groups, job-related groups, faith communities, or whatever draws people together. There are also new roles for content creators, such as the notorious influencers and those who promote their organizations and businesses through social media platforms.

The internet offers so many possibilities for connecting people and engaging them in communal projects that groups previously stabilized over the last century are now being reorganized. Citizen journalism, labor organization, wider participation in commercial markets, consumer reviews, self-publishing, and distributed authorship are just a few examples. Even family and friendship groups are becoming wider and reorganized. The distribution of work—connecting office, field, home, organizational partners, and contingent workers—also is being reorganized, using writing as a coordinating medium. I do not know where these social reconfigurations will end, but wherever they go their changes are likely to be at least as consequential as, perhaps more than, the technological changes that have enabled them. Our social arrangements are being reorganized because technologically we have more possibilities of connecting with more people in different kinds in different situations. For us as teachers that means we would do well to provide students with the tools to read the changing social communicative landscape and evaluate where they want to contribute and how—and even how they may innovate to bring new groups together in new ways. The choices facing them to engage in composed communication are expanding, and our responsibility seems to extend beyond the most obvious and immediate charge to help them succeed in their academic classrooms. That means we may need to offer support in more than just the traditional academic genres. And we may need to see how we can use all the new kinds of support technology can offer, leaving us to ask, in the words of the title of another recent chapter of mine “What Do Humans Do Best?” (Bazerman, 2018). That is, what are the important judgments that no technology is (as yet?) ready to take over more efficiently and accurately? These are the critical judgments our students will need to direct technology, monitor what technology produces, and then edit the productions so that technology fulfills human purposes, intentions, and values.

## The Puzzles Posed by AI

No technology seems to challenge our critical communicative judgment more at the moment than artificial intelligence, posing large puzzles for how writing

will be produced, what kinds of writing will be produced, what functions it will carry out, how it will be directed and monitored, and how it will be circulated for what purposes. First, I should note that the technologies, the technical understandings embodied within them, the discussions about them, and the controversies and issues that arise are now moving so rapidly that anything I say here is incompletely informed based only on public reports with little technical knowledge and will be rapidly out of date, overtaken by events. Further I should note that there are many kinds of artificial intelligence that have little to do with writing or language, and some of these are already with us—whether biometric recognition, autonomous vehicle navigation, manufacturing quality control systems, or graphic rendering. These systems may have little reason to communicate with humans beyond those engineers who design and monitor them, except for occasional specific highly routinized reports or, on the other hand, the relatively sparse prompts humans give them—in fact that is their very idea, to do things on their own, communicating only digitally within their systems. So for these AI technologies the first puzzle is to ask the following: When do these varied technologies need to communicate with humans as input or output? Then what should be in the content and form of that human-computer interaction? Coordinately, when and how should humans be monitoring what is occurring within the black box of autonomous technologies? Some of the most poignant examples of these kinds of concerns currently occur around military or police use of autonomous robots when confronting hostile or criminal human adversaries.

The specific kinds of AI that most immediately puzzle us now as writers and writing instructors are those that are aimed at producing the kinds of communications now largely done by humans. The large language models (LLMs) currently gaining attention have been around for several years in the form of translators, phrasing suggestions, and speech to text transcribers. All of these train on large corpora of data from humans to make suggestions based on prior collocations in their corpora. The text production tools now being introduced are just quicker, being trained on much larger corpora, and easier for non-technical experts to access. Some of their products may appear to be pleasantly, amusingly, or appallingly surprising, but they are simply predicting the next word based on the corpora of human-produced texts they employ or are prompted to use. The current state of this technology has a number of limitations, as being noted and documented in the media. While the technology can be remarkably effective in pulling together prior knowledge and producing texts that sound human, they are prone to spectacular errors, including misrepresentations or hallucinations that may have the sound of things that might be said but need to be caught and corrected. Where any novelty, fresh thought or expression, technically complex accuracy, or critical acumen is required, they fall short, and at the very least human monitoring and review are required. A number of pedagogical responses have already been implemented to develop students' critical tools to be able to do that monitoring,

evaluation, and revision. These limitations, even as we may assist students to spot them, nonetheless leave these LLMs adequate for certain writing tasks that are highly predictable and repetitive, and there are already reports of humans being replaced by them in some jobs as catalogue copywriters or business report writers, drawing on information already in symbolic form. The plausible sounding texts they produce also seem to be quite effective in cheating on academic assessments, which may say a lot about the nature of classroom interactions, the assignments being given, and the aspects of writing being assessed. Such considerations pose important questions about the differences among learning, intellectual development, and assessment.

We need to remember and take seriously that at the moment LLM text production is very good in aggregating and replicating the past, but LLMs have little way to evaluate the accuracy of their productions, to look toward the future, nor to form intentions. Current AI text production uses historical data to guide current formulations. Its only potential creativity is within the remixing of ideas and representations already existing in symbolic form. AI text prediction currently does not bring in new experience of the world through fresh data or through formulating intentional projects that lead it to interact with the world. Current tools that I am aware of lack means to evaluate the truth, judgment, or wisdom of what people have said or what the tools draw on to construct their new amalgam of former patterns of symbols. Nor do they know how to make sense of areas of controversy where minority opinions may reflect deeper or more currently emerging truths. They simply replicate what is in the digital record, which at best is the common wisdom and at worst is common bias and error. If there are intentions, they have been placed there by humans—either the designers of the systems (who are likely interested in profit maximization) or the purposeful queries of the users, who accordingly need to become critical and thoughtful about what the tools are capable of and what they want them to do.

These limitations of AI text production, however, need not remain the case as AI tools add filters or layers to their text production. As a start, checking of citations against actual texts seems an easy next step to be then combined with improved summary capacities and relevance checks along with monitoring for fair use and appropriate crediting norms. Such layers of checking seem not far in the future, and parts are already available, as some of the text production models are being integrated with search tools such as BING or Google. Further, since AI text production systems theoretically have access through the internet to the same full set of digital texts produced anywhere in the world, any novel digital texts entered into the global information system can influence statements going forward, particularly if they gain the attention of many humans through links, citations, or visits if the LLMs are weighted for this interaction, and even further if the expertise or prominence of those users are additionally weighted. So through this kind of rapid social learning these systems may become more sensitive to the most persuasive near-current texts.

An even greater transition will be when digital text production tools go beyond symbol manipulation of existing human texts to gather fresh data about the world, and when they start to move around in the world. They may begin to observe the world's complexities and challenges as they carry out their tasks. Ultimately, they may formulate their own inquiries and writing projects to address their needs of carrying out their missions and perhaps sustaining their systems. Then we may see AI producing nontrivially new things. Also as part of effective communication AI communication tools would need to take on problems of addressivity, which would seem to require gaining some data about their audiences and some kind of theory of mind and emotions of their audiences as they anticipate the communicative needs of human users.

A number of these capacities are already at hand, at least in early forms. Some digital text producing tools are attached to sensors about the world to provide information they report and analyze. Internet traffic is regularly monitored to distinguish between normal patterns of traffic and anomalous patterns that suggest malign actions, with reports then generated for users. More familiarly, for years automatic seismographic and meteorological reports based on instrument data have been produced in real time to warn humans about emergent conditions. Robotic devices with internal and external sensors move around on this planet and elsewhere in space to report to humans about what they encounter, operational difficulties, and the tasks they accomplish. Some of these robots are now moving autonomously. Even my robotic vacuum cleaner does a rudimentary form of these things, sending reports to my iPhone about missions accomplished, machine problems, and maps of the floor plan and furniture footprints in my rooms.

Some of the information collected and evaluated also includes psychological and sociological conditions and preferences of audiences. My media and communication devices record my choices and algorithmically suggest next items for my tastes or news I might find engaging as well as people I may wish to contact and messages I may want to send them. Devices are also being wired into the nervous systems of disabled persons to guide artificial limbs as well as to assist word choice and production. This could be considered developing a theory of mind, thoughts, and emotions so as to be able to address, anticipate, and support individual desires along with social networks the individuals are engaged in and the activities carried out within those networks. Biometric and visual recognition information then can correlate this psychological and sociological characterization with physical movement of individuals in the world.

Autonomous robots on extraterrestrial vehicles seem to identify and solve challenges to carrying out their missions and even to extend their working lives. These actions may even involve them setting their own new fact-finding and analytical inquiries, including internal diagnostic inquiries along with the consideration of ambient conditions, challenges, and opportunities. This may mean that machines train and use as resources machine-produced texts as well as the initial human samples. This can lead down some novel paths of text production, making

text production less conservative and dependent on prior human productions but more capable of manipulating human perceptions, interests, and emotions. If and when these various capacities are integrated into writing tools, I am not sure where this will leave writing and how soon. But if humans are to stay in control of the productions, monitor whether these capacities continue to meet their intentions and interests, and make final choices, humans will need to develop some level of understanding of the operations, consequences, and values enacted by the automated devices as well as a critical understanding of their limitations and tendencies. With respect to text production, this means writers would need to remain final editors with a full understanding of all issues at play in the documents.

The ethical questions and dystopian possibilities of these integrations of AI systems proliferate. But the ways human agency may insert itself into these emergent possibilities are also unknown in large part because these possibilities depend on human creativity, critical intelligence, and agency that will largely be carried out through symbolic, inscribed means. That leaves us with questions as to who the human agents will be that will be able to assert presence and power within these emergent systems and what roles and values may affect their evaluations and choices. Again here is the role for writing education, to be able to develop in students the critical understanding, communicative competence, and knowledge to be able to monitor the products of AI, direct and instruct the systems, and to come to agreement about policies that will guide the design, principles, and uses of these technologies. This especially means that those in charge of policy need to be able to discuss these matters on high levels and that all citizens need to be able to judge and communicate on these matters with informed views. Further, technologists will need to be able to discuss and take seriously ethical, social, and other communal issues and to be able to integrate their respect for those concerns and communal policy decisions within the design of tools at effective points of control. It also means users need to understand and respect the limits of those tools. This will be a tall and somewhat utopian order for education in the future.

## Social Challenges

So far, I have been addressing the consequences of technological changes that offer new challenges and opportunities for writing education, perhaps because they are easiest to see from our classrooms looking outward, but of course there are other challenges that will change the needs and uses of written communication in the coming decades.

We already see some very large challenges facing our societies that need rhetorical skill and will change the conditions and motivations for communication. Climate change, with its economic, geographic, political dislocations, and conflicts, will call forth more intense communicative needs across wide locations and communities. Climate change will increase natural disasters with the need for accurate, precise, real-time communication and long-term coordination for



recovery and readjustment. Agriculture, food production, and distribution will require constant coordination and adjustment. Changing conditions will likely require constant medical advances and responsiveness, coordinating advances of science with real-time community services and citizen-provided information, if the recent Covid pandemic is any guide. Preserving democracy and freedom of communication in an increasingly stressed world will require more sophisticated communication and intelligent communal deliberation.

This may all sound like bizarre science fiction premises, and I may be tripping over my own imagination fed by dystopian novels from prior decades and newspaper stories in the more recent past, but what else do we have to go on to imagine the communicative environment and composing tools that our students may live among? What we understand of this emerging world and how we teach communicative skills and communicative systems will contribute to how much agency and critical understanding our students will have in this evolving world. Ready or not, something is coming.

Yet before we crash into the blinking lights in front of us, we still need to think through how our past practices serve us in the current moment and may be of use in the future. Some traditional skills and expectations may not require the same level of practice and persistence as previously. Keyboarding has taken pressure off handwriting. Spelling and grammar checks can monitor texts and suggest changes. Words, synonyms, and phrases can be suggested to finish our thoughts. Even format can be suggested and variations flagged. Citations can be enabled and formatted. Artificial intelligence can now suggest wording and information for even whole texts. Such tools no doubt will increase in number, quality, and ambitiousness. These tools if used wisely can in themselves improve spontaneous practice, as the tools remind us of the expected forms while also giving us the option of intentional variation. They may even provide us fresh evidence, reasoning, or means to reach our readers.

Perhaps the most important legacy for education, however, is also what may be too easily lost. Intellectual discipline, organization of thought, and creative insight that come with the longer forms of academic writing which incorporate critical thought, conceptual reformulation, and intentionally sought evidence to solve human problems are at the heart of advanced education. Whether within works of multiple paragraphs, pages, or chapters, these longer forms are associated with density and coherence of concepts, evidence, and reasoning. They rely on explicit engagement with related texts and disciplinary resources that are examined critically and form important parts of the knowledge context. These modes of thought may be precisely what is needed most to address the complexities of both the technologies and problems facing us.

So the challenge I see for us as educators is how we integrate the kind of disciplining of thought and reasoning that we associate with extended academic writing with all forces that call for change—whether the exciting and terrifying potentials of technology, the new social configurations emerging through new

communicative possibilities, the richness and accessibility of ubiquitous information, or the pressing social needs to be addressed. These in turn all need to be mobilized within the students' own desires for personal contribution, understanding, and advancement. Furthermore, all education is using increasingly large components of online interaction. Online interaction encourages writing as the regular medium of exchange, but it is often in short forms of chats, forums, and brief assignments. While the shorter assignments and activities may provide some built-in feedback and interactivity, longer forms also offer an intensity of reading, response, and feedback so students can learn to meet critical examination by viewers. These prospects are exciting, but they require we understand our roles as teachers of communication more deeply—not just correcting and enforcing expected forms but bringing students to higher levels of reasoning, disciplined inquiry, and thoughtful participation within information-based society.

One thing though is fairly certain, that higher levels of analytical understanding and agency will require high levels of education and knowledge about technological systems and the tasks carried out by them along with the consequences for society. What writing will mean in this new world and what kind of education will be of value to these writers of the future is yet to be determined. We have met previous rounds of technological advancement and increased needs for writing with creativity and developing practices, though it has sometimes taken a while for progressive responses and new pedagogies to emerge. Even internet and plagiarism fears have been domesticated by new practices and understandings that have limited the assessment-driven punitive first response. So looking backwards gives us some hope as we move forward, even though the changes seem to come more rapidly and with greater consequence.

A more optimistic and hopeful version of Kierkegaard's dilemma, but one equally fraught with peril, appeared in 1769, almost a hundred years before Kierkegaard wrote his journal, when Joseph Priestley published what may have been the first timeline of human history in *A New Chart of History*. It was a large fold out sheet with an explanatory booklet. On the extreme right side was a barely discernible empty column for the readers to fill out during their lifetimes, to record the history that they would live through. But that is also the history they would make. So let us think how we will fill out that column.

## References

- Bazerman, C. (2018). What do humans do best? Developing communicative humans in the changing socio-cyborgian landscape. In S. W. Logan & W. H. Slater (Eds., with J. Enoch & S. Wible), *Academic and professional writing in an age of accountability* (pp. 187–203). Southern Illinois University Press.
- Brandt, D. (2001). *Literacy in American lives*. Cambridge University Press. <https://doi.org/10.1017/CBO9780511810237>

- Brandt, D. (2015). *The rise of writing: Redefining mass literacy*. Cambridge University Press. <https://doi.org/10.1017/CBO9781316106372>
- Cappelørn, N. J., Hannay, A., Kangas, D., Kirmmse, B. H., Rumble, V., Söderquist, K. B., & Pattison, G. (Eds.). (2008). *Kierkegaard's journals and notebooks* (Vol. 2, Journals EE–KK). Princeton University Press.
- Kierkegaard S. (1843). Journals IV A 164.
- Kruse, O., Rapp, C., Anson, C. M., Benetos, K., Cotos, E., Devitt, A., & Shibani, A. (Eds.). (2023) *Digital writing technologies in higher education: Theory, research, and practice*. Springer Nature. <https://doi.org/10.1007/978-3-031-36033-6>
- Owen, J. M. (2007). *The scientific article in the age of digitization*. Springer. <https://doi.org/10.1007/1-4020-5340-1>
- Priestley, J. (1769). *A new chart of history*. London. Available at The Barry Lawrence Luderman Map Collection, David Rumsey Map Center, Stanford Digital Repository, Stanford Libraries, Stanford, CA, United States. <https://purl.stanford.edu/tm577xw2724>





# Unfinished Business

In *Unfinished Business*, Charles Bazerman considers long-standing puzzles in writing studies, from the most fundamental ideas about humans as writers and writing as constituting modern society to the most practical issues of curriculum and teaching. Together, the chapters provide a broad vision of the importance, role, consequences, and means of writing. The opening cluster of chapters places Homo sapiens' capacity to write within the biological and cultural evolutionary arc. The second cluster of chapters focuses on how writing has extended and transformed our knowledge with major consequences for us as societies and individuals. The third cluster considers how we go about teaching this increasingly important skill that gives people voice in the literate world. The fourth reflects on the values and ethical concerns that pervade the practice and teaching of writing. In his final chapter, Bazerman speculates about where writing and writing instruction may go in the rapidly changing future.

**Charles Bazerman** is Distinguished Professor Emeritus of Education at the University of California Santa Barbara. He is founder and former chair of the International Society for the Advancement of Writing Research and former chair of the Conference on College Composition and Communication. He has been a visiting professor in Portugal, Denmark, the Czech Republic, France, China, Hong Kong, Singapore, Nepal, Chile, Mexico, Brazil, and the US. His books include *How I Became the Kind of Writer I Became*, *A Rhetoric of Literate Action*, *A Theory of Literate Action*, *The Languages of Edison's Light*, *Shaping Written Knowledge*, *The Informed Writer*, *The Handbook of Research on Writing*, *What Writing Does and How It Does It*, and *Lifespan Development of Writing Abilities*.

## PRACTICES & POSSIBILITIES

Series Editors: Aimee McClure, Kelly Ritter, Aleashia Walton, and Jagadish Paudel

The WAC Clearinghouse

Fort Collins, CO 80523

wac.colostate.edu



University Press of Colorado

Denver, Colorado 80202

upcolorado.com

ISBN 978-1-64215-234-0