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.[1] 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

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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). 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.

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