

Chapter 22. Edison: How to Write About Complex Multi-Dimensional Social Projects

Before visiting the Edison Archives and National Historic Site in West Orange, New Jersey in the fall of 1989, I was still conceiving my then current project as a rhetorical history of electricity from the seventeenth through the nineteenth centuries, with Edison being the subject only of the final chapter. Within hours of my arriving at the place where Edison had established a laboratory in 1887, however, the book transformed into a study about the decade it took him to conceive, invent, and build a centralized system of power and light. As I barely dipped into the archives, a new vision fell in place. It was that simple, though it took me as long to finish the book as it took for Edison to build an electrical empire.

Mobilizing Writing in Multiple Documentary Systems

On that first morning, to warm up to the over 5 million pages of documents in the archives, I looked at the folder of letters Edison received in the days just after he had announced to reporters in September 1878 that he had solved the problem of incandescent lighting. He was already a newspaper celebrity for his phonographic and telegraphic inventions. In those letters I saw his importance to people as varied as investors and widows with limited funds to urban mayors to technologists and inventors. Each letter writer pinned hopes and anxieties onto this media celebrity. Although all the documents were personal letters, they each suggested different activity systems and systems of genres in which Edison had meaning and value. These letters appeared to me as entry ways into the many different kinds of documents in the archive. I confirmed this intuition by leafing through the finder volumes, which listed the contents of the various archival boxes. I immediately knew I had a book just from those archives, interpreting them as documentary systems covering at most ten years, until central power had been established and the Edison companies had been consolidated into General Edison, then General Electric. I put aside the earlier book plan, thinking I would get back to it, but I never did as the Edison project addressed my initial research interests and more. By the time I walked to the local diner for lunch, I began plotting a book outline with chapters corresponding to the different communicative systems and genres—and I spent the rest of the day sketching out the plan of work. The book plan would evolve a bit as I got deeper into the story, but essentially this first outline guided the work of a decade.

I can't say *The Languages of Edison's Light* (Bazerman, 1999c) wrote itself, as endless work was needed to examine the documents in detail; solve puzzles of

who did what, when, and what their relation was; what genres and activity systems the documents were part of; how these systems and their genres emerged and evolved; and how Edison and his colleagues worked or innovated in each. I then had to create aggregating narratives and structuring ideas. The material was fascinatingly revealing about the complexity of genres as they arose historically and how they provided vehicles for Edison's symbolic actions. The investigation got me into places I never imagined I would have examined, like the histories of the patent office, stock markets, department stores, and urban domestic aesthetics. Issues of corruption in late 19th century journalism and the New York City construction licensing and inspection system soon were apparent. I came to appreciate how innovation and conventionality influenced each of the documents in the Edison papers and his communicative strategies at each moment.

There was much drudgery as I had to pile into documents day by day. This was made a bit easier when I received a small university grant to purchase a microfilm reader and a set of films. Yet the overall design was so clear from the beginning I pretty well knew what the next problem was to solve, what the next paragraph was to write, and what the next chapter was going to be. At some points I had to modify the plan by reorganizing material, adding relevant digressions, moving chapters around, and placing theoretical interludes into the historical narrative. But many chapters were similarly structured: the history of the systems at play; the organization of interactions and genres at Edison's moment; Edison's perception of his opportunities and strategies; what he and his colleagues wrote to fit the moment; and what consequences resulted. The book introduction framed the inquiry, but got down to historical narration rapidly. Most of the theory was withheld until the final chapter, so as to let the narrative tell its compelling story. So in some way the book did write itself—following the vision on that first morning. It just took ten years to do it, dragging me along the way.

Of course, I was prepared to see what I saw that first morning by how I previously had come to conceive of, organize, and present materials and articles; by the ideas and methods imbibed from other disciplines; by my previous studies and the theories developed from them; by the ways I had come to reconstruct the rhetorical thinking and development of innovative figures in sciences and social sciences. Edison, however, worked at the intersection of more socio-communitive systems than those I had previously worked with. These differences became part of the core problematic of the book: how large worldly projects required engagements with multiple kinds of documentary activity systems to create presence, meaning and value.

Rhetorical Puzzles

As the parts of the Edison project came into focus, I had to think through who I wanted to reach by the book. The earlier planned book about the rhetorical emergence of electricity had a narrower academic audience in writing studies

and social studies of science, in order to show how knowledge emerged through documents produced within activity systems. I wanted to show how these documents were the result of creative actions of individuals, engaged with the material world yet speaking to their contemporary social words. That engagement would be symbolically represented in their texts and would constrain what could be accountably represented. Analysis of documents would also show how systems of genres and activities arose, and how they became playing fields for individual strategic writers. While the multiple disciplines that comprised social studies of science and writing studies each had their own framings of these problems, relevant literatures, forms of argument and warranting evidence, I had been working with these and attempting to bridge them in prior studies.

I still wanted to reach these specialized disciplinary audiences, but I saw the Edison book could reach other audiences beyond the academy to demonstrate the importance, pervasiveness, and situated complexity of writing. I saw the chance to reach readers of biographies of innovators, to show them Edison as a communicator as well as an inventor, opening them to think about other historical actors in their communicative dimension. The book might also reach current entrepreneurs and others engaged in carrying out large social projects to help them reflect on the rhetorical complexities of their own undertakings.

I had hopes for a compelling narrative with wider circulation. I wrote the introduction to have only enough theory to indicate the kind of story that would be told. From the opening chapter, I tried to engage the readers into the unfolding events and Edison's rhetorical position. Each chapter kept the story of the production of light and central power moving forward as I examined Edison's rhetorical strategy at each moment. I used historical flashbacks within chapters to situate the texts and activities in the chapters within the activity systems and Edison's experience with them. With most of the explicit theorizing in the final chapter, when theory was needed earlier, I used extended footnotes.

Structuring the Story

The first chapter encapsulated what I saw in the archives on the first day—the personal letters that came in response to Edison's announcement that he had solved the problem of incandescent light, that immediately got a lengthy story in the *New York Sun* on September 16, 1878. The interests in each of those letters came from one of several different activity systems: lecturers were looking for good materials to present in their public presentations; investors were looking for opportunities; widows were worried about their investments; patent managers were looking for business; small businessmen were looking for franchises or local representation; technologists were looking for jobs. All the letters were framed within a cultural narrative (fostered in the contemporary newspapers) of the heroic inventor who could deliver the fulfillment of their desires. I first published this material separately as an article in a technical writing journal

with a bit more explicit theory (Bazerman, 1994c). In the book I presented this story as the opening moment of the complex narrative to follow, giving glimpses of the multiple communicative systems that would be elaborated in the rest of the book. This was easy to write because I was fleshing out a vision that had come that first day.

Another early publication opportunity for an electrical industry journal gave me a chance to put together how Edison had amassed such celebrity and public credibility that his suggestion of success would get such a big response. As this article was specifically for a non-academic audience, it gave me an opportunity to practice writing the material as a biographical narrative with almost no explicit theory. This material was to be much elaborated, reorganized and rewritten to become the second substantive chapter of the book. Again, this article was easy to write as the materials I was examining told a powerful story about the development of Edison as a communicator. He learned the power of new kinds of newspapers in a changing society first as a boy hawking newspapers on a commuter train, then as a brash telegraphic inventor, and ultimately as a celebrity inventor of the phonograph. Among other things, he learned how to give good interviews and play the reporters to advance his own interests. The article was entitled “The Publicity Wizard of Menlo Park” (Bazerman, 1993i).

Indeed, many of the chapters fell in place as I dug into the documents which told compelling stories. The structure of the chapters was largely narrative, with subheadings indicating the events and actions, or background. The sequence of chapters was chronological, although some chapters overlapped, as clusters of activity systems moved in parallel. The documents together made evident how documentary systems developed, how events unfolded, and how Edison and his colleagues operated intentionally and strategically in their particular historical, communicative environment. Their actions were often clever and rhetorically savvy within the practices of the time, even if we today would consider some scandalously corrupt and contrary to the modern iconic myth of Edison.

It was striking to see how the young Edison had learned the potential of communication and publicity and how he dealt with the press and governmental corruption of his time. He leaned on private trust networks to gain and maintain financial backing and then found ways to draw on the emerging potential of public equities. The strategies he and his agents developed for dealing with the patent filing system and patent litigation revealed the actual workings of the system behind the public face of intellectual property at his time and to some extent still in ours. It was also remarkable to see how he transformed the private inventor’s notebook into a coordinating document in his newly-minted industrial laboratory at Menlo Park. Edison’s attempt to gain presence in the technological press and legitimacy as a scientist uncovered some of the messy early history of U.S. technological and scientific institutions. In sum, the materials told me stories not only of Edison, but of the professional, financial, commercial, and public institutions of late nineteenth century United States. Even the rise of celebratory

fairs, department stores, and gender ideologies became part of the story as Edison sought to place electric lighting in everyday life.

Much of the writing occurred just in the process of juggling and making sense of the materials, making connections among the many pieces I was finding, and then identifying other literatures I needed to read in order to gain enough understanding of the context—such as the history and theory of intellectual property, feminist history of nineteenth century urbanization and middle-class home life, organizational theory, and theories of charisma (to understand Edison's role in the organization of his many companies and their consolidation into General Edison and General Electric). It was exciting to see the great variety of communicative systems involved in bringing the electric light and central power into the world. Sometimes the work seemed liked drudgery, as I was just putting one foot in front of the other describing the materials and then whittling sprawling texts down into tight, but well-documented stories. Yet the inherent interest of what the material revealed kept me from feeling overwhelmed. I was learning a great deal about story telling as I brought the pieces together, as the final book did not have the labored carefulness and overburdening documentation of my earlier studies where I was learning how to be rigorous and systematic in presenting evidence.

Themes

In writing the chapters, I was identifying theoretical themes that would come together in the final chapter. I had worked through some ideas in smaller articles, conference papers, classroom discussions—anywhere I could bend someone's ear about material I found fascinating. Simultaneously, I was working on an integrated theory of writing, how it might be viewed from several angles and frames, trying to find the right form in which to put these ideas together, as I will discuss in the next chapters. So as not to burden the Edison book with the weight of an incomplete theory, however, I elaborated only those ideas that directly clarified the Edison story, leaving other ideas implicit in the way I told the story. The final chapter's theory only quickly sketched out an intersection between social studies, technology studies, and rhetorical discursive studies, drawing on these literatures and elaborating concepts that bridged them. My subheadings in this chapter foregrounded the essential concepts and were designed to serve as a map through them, with each section being approximately a page in length. It was an attempt to create the impression of a forest through making visible a few tall conceptual trees: Heterogeneous symbolic engineering; systems of document circulation; differentiated values; satisfactory representations in specific discursive systems; material accountability; the rhetoric of operations; persuasion as an influence on consequent actions; conditions of accomplishment; symbolic integration and the process of enlistment; representational resting points; interpretive variability; structurationism and social learning; the individual and society; electrification

as revolutionary and conservative. Each of these sections explained and elaborated these concepts to make them more intelligible and to connect them with the detailed evidence in the book. Obviously, these terms were denser and more obscure than the straightforward narrative I had offered to this point. Anyone who found them too technical, abstract, or obscure could skip this chapter.

Although I was drawing on much the same materials available to the authors of other books about Edison's accomplishments, my background, interests, and theoretical questions led me to a different story. The other studies viewed Edison as primarily an inventor, secondarily as a person, and never as a writer. They treated the documents largely as evidence of his inventive thinking and his life. I in-

stead approached Edison (aided by all his colleagues and agents) primarily as a communicator and writer. I viewed the documents as strategically produced texts for communicative purposes within specific social systems and circumstances. This different story was not readily absorbed into the conventional view of historians of technology nor supported by the many museums that celebrate the mythic, heroic Edison, but the story has had some uptake among technological entrepreneurs who are looking to find his secret sauce. The role the book will take in writing studies is still in process, though I see it as particularly relevant to lifespan development of writing as well as to writing for multi-dimensional social accomplishments.

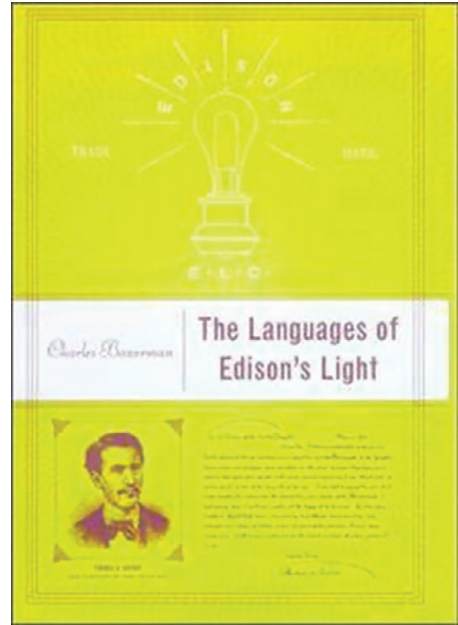


Figure 22.1. *The Languages of Edison's Light*