
Writing Like an Engineer

A Rhetorical Education

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Editor's Introduction

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Writing Like an Engineer: A Rhetorical Education, as the initial title in the Rhetoric, Knowledge, and Society series, opens up much of the terrain we hope to explore in the ensuing volumes in this series. The founding of the series recognizes the substantial body of recent work on the rhetorical production of knowledge, particularly in academic settings and with a particular focus on the sciences. The Rhetoric, Knowledge, and Society series, while providing a venue for the increasingly sophisticated monographic work in the rhetorics of science, inquiry, and the professions, also hopes to encourage investigations into the rhetorically dynamic intersection of disciplinary knowledge with the complexity of society outside the academy.

Writing Like an Engineer presents a longitudinal study of four engineering students' perceptions of their writing as they move through their undergraduate education and, bridged by work study, into industrial careers. It is a study of how professional ideology teaches developing engineers to deny the rhetorical nature of their work at the same time as professional practice and experience teach those same developing engineers to write strategically. Engineering's arhetorical objectivity, students are told and believe, rests on data; at the same time practical experience teaches students that data are produced, selected, and presented strategically within situational contexts. Data are what convince, apparently objectively, but an engineer's job is to produce in each situation the data that convince.

The students' awareness of audience grows through familiarity with the genres within which engineers write, and through close contact with real audiences in work situations. The closer students get to the actual transactions of the workplace, the more the rhetorical necessities and complexities become apparent and compelling.

Even as the newly professional engineers maintain allegiance to the professional ideals of objectivity, they learn the importance of their communications in the complex negotiations that construct corporate realities and bring products into the world.

Students participate in those negotiations in different ways, based on the communicative skills and attitudes they bring with them and the particulars of the circumstances they find themselves in. Through sequences of such negotiations, they each develop their own professional skills, roles, identities, and career trajectories. How each learns to communicate is closely tied to the kind of engineer each becomes. In the course of this longitudinal study, we see each of the emerging engineers develop an individual professional personality.

We barely have an idea of how deeply our society is organized, enacted, and sustained upon knowledge that is produced, transmitted, and made materially consequential through acts of communication, particularly acts of written communication. Understanding the communicative life of knowledge, particularly disciplinary and professional knowledge with all its power and authority, is essential to understanding modern society. Yet we, like the engineers Winsor describes, know this only in practice and not in our reflective theory or research. We have so stigmatized rhetoric and so compartmentalized our ideas of writing, that we only engage in the great welter of our communicative world behind our intellectual backs. Our ideals of knowledge that escapes the particularity of our human circumstances are so strong that those who call our attention to the creative role of situated strategic communication seem to do so only to debunk those institutions that produce knowledge and authority. But to examine carefully and sympathetically the rhetorical travels of knowledge in society is not to debunk our ideals of knowledge, but to understand more about the power of knowledge to make a difference in the world. Rhetoric, knowledge, society—there is much very real life for us to observe at the intersection of these three mighty concepts.