

Technical Communication in an Information Society

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INTRODUCTION

Historical analysis of technical communication elucidates an evolution of tools, techniques, and roles that are connected to the establishment and growth of the information society. The emergence of technical communication as an identifiable force in the matriculation of Western and Eastern information economies and societies has been quite evident. Historical literature provides accounts that point towards graphic communication taking 30,000 years to evolve (Meggs, 1998). From cave paintings during 15,000-10,000 BC, to the invention of writing with pictographs in Mesopotamia; through the evolution of illustrated manuscripts, into the invention of paper and Chinese relief printing; transitioning to the rise of late medieval illuminated manuscripts and into the breakthrough of movable type in Europe, the role of the technical communicator and the function of technical communication was born. Investigation of technical communication today, and during the last century, reveals patterns of technological, economic, occupational, spatial, and cultural developments that can be attributed to the creation of an information-driven economy and information society which relies on technical communication for stability and growth.

Gutenberg developed movable type and revolutionized communication. O'Hara (2001) makes identification that "from the fourteenth century on, the social system of science has depended on technical communication to describe, disseminate, criticize, use, and improve innovations and advances in science, medicine, and technology" (p.1). O'Hara's reference provides a clear pathway to further discussion and interpretation on the rapidly changing tools, techniques, and roles that have caused the permutation of technical communication from an original tool of science and medicine in the 1400s to an academic discipline and a universally desired societal skill set for all who engage the information society.

The purpose of this research is to identify the stature of technical communication in societies which engage heavily in information design, social technological product consumption, and publishing. This chapter addresses the past, present, and future issues, controversies, and roles that technical communication has had and will have on the information society.

BACKGROUND

On the broadest level, technical communication techniques can be defined as technical writing, research, information management, digital document design, Web design, and foremost, persuasive, action-based communication (Sheehan, 2005). A simple definition of the information society is a society that relies on information products and serves to thrive and prosper (Webster, 2002). Investigation of the history of technical communication and the birth of the information society, revealed some interesting research questions. The connection between technical communication and the information society provides a pathway to gaining a deeper understanding of the role of technical communication within modern day society. To clarify the connections, I explored and answered two research questions. First, how do the tools, techniques, and roles of technical communication enable an information society to exist? Second, are there metaphors that may be translated into predictable analogies that can be uncovered that connect technical communication as a driving force in the information society? Answering these questions revealed commonality, pattern, and evolution within the tools, techniques, and roles of technical communication as they relate to the information society.

Historical Connections

The proliferation of technical communication into disciplinary maturity has occurred over the past sixty years and has yielded academic programs and a body of innovative research (Staples, 1999). Pringle and Williams (2005, p. 362) explain that "evidence exists, in fact, that traces technical and scientific writing back to ancient times where anonymous technical writers wrote on tablets in Babylon". The rise of moveable type and the English renaissance enabled technical writing to emerge as a "by-product of print technology and literacy" (Pringle and Williams, 2005, p. 362). This historical plateau in technical communication gave rise to the 1800s and the rise of technical writing in England. Pringle and Williams (2005) explain that the first works were "books that provided instruction on performing work in a broad range of fields such as medicine, agriculture, navigation, and military science" (*Ibid.* 362). These pre-industrial revolution and pre-war events helped to structure and enable the

foundations of technical communication, technical writing, and technology.

Technical Writing Connection

“Technical” occupations in the early 1890s through the 1940s, before the title and designation of technical communication practitioner ever existed, meant serving the tools, techniques, and roles of technical writing. The evolution of technical writing as a staple skill and a staple role within the context of technical communication has bred innovation and fostered change in the information society on economic, occupational, and cultural levels. Connors (1982) describes the early years as being established by the need for engineering education soon after the passage of the two Morrill Acts in 1862 and 1877. These laws provided land grant opportunities for agricultural and mechanical colleges (A&M) which made college education possible for large numbers of people in the later nineteenth century. This economic and cultural development initiated the birth of colleges which had engineering students going through freshman composition within an English department. In the period from 1880-1905 or so, Connors (1982) explains that this education in writing was thought to be adequate for the engineer of the day. However, this was not the case and in response, many engineering schools opened separate English Departments to cater to teaching not only freshman level English courses, but also advanced upper level composition courses which addressed the needs of student engineers. The metamorphosis of Engineering and English collaboration into technical writing brought the role of technical writing into both the arenas of science and humanities, and provided new occupational purposes for people to learn and communicate. These purposes were driven by technological needs of the day such as world war and post world war development of the defense industry. O’Hara (2001) points out that specifically during the war, technical writers were used to write “standardized procedure documents, definitions, descriptions, instructions, and training”. These skills were transferred into writing proposals and other military procurement documentation when war was over and the national defense sector evolved into a prominent player within the US government.

Technology Connection

After the postwar development of the transistor by Shockley, Bardeen, and Brattain (O’Hara, 2001) the United States, the most prominent ubiquitous application that has evolved from printed circuit board technology, is the personal computer (O’Hara, 2001). Having a computer on your own desktop, a personal computer, changed the nature of technical communication by complementing the technical writing skill set and knowledge base of technical communicators with the unbridled creative power of digital tools. This caused a

paradigm shift in the tools, techniques, and roles of technical communication in the late 1950s through the new millennium. Hardware and software pioneered by Microsoft, IBM, Apple, Aldus (now Adobe), Macromind (formerly Macromedia, now Adobe) helped usher in technical communication as a profession and an academic discipline that went beyond technical writing and digital tools towards research, design, development, publishing, and presentation.

The tools and technologies of today are not only specific to technical communication practitioners, students, and academics, but to all people who need to live, work, and survive in the information society. Steiner (1999, p. 389), looks to Heidegger’s definition of communication and argues against it by calling for innovation and individuality. Steiner (1999) explains that Heidegger finds no place for the technical specialist because he or she is part of an objective world in which there is no humanity to share. Therefore, Heidegger believes that “scientist, engineers, and technologists have no humanity to share” (*Ibid.* 389). Technical communication for the everyday person, professional, and academic will become cross functional as a commodity in the form of unlimited data content, information development based on needs and wants, and knowledge development based on problems and processes. Using e-mail, PDA’s, iPods, kiosks, interactive television, video games, and personal computers have become the technical communications tools, techniques, and roles of everyday life. These everyday technical communication activities drive the information society in the form of ubiquitous technology, occupational shifts, economic realities, spatial communication methods, and cultural identity changes.

TECHNICAL COMMUNICATION WITHIN THE INFORMATION SOCIETY

Literature review of technical communication theories and histories, graphic design histories, the various schools of thought behind the information society, and professional technical communication practices were interpreted to decipher connections between past, present, and future events. These connections are presented in a series of definitions and an interpretive narrative.

Communication and Technical Communication

To begin the investigation, quantification of the term technical communication needs to be established. Severin and Tankard (1979, p. 5) reinforce the idea that the definition of communication has been extended by a plethora of scholarly articles and numerous schools of thought. To establish meanings for this communication research project, several notable

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