America Calling: A Social History of the Telephone to 1940. (Book Review)

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Original Publication Citation

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*America Calling: A Social History of the Telephone to 1940* is a historical analysis about one of the most pervasive communication tools of the twentieth century, the telephone. Fischer's work can benefit technology educators along at least three fronts. First, the author provides an excellent overview of historiographic approaches utilized within science and technology studies (STS). Second, Fischer's approach offers unique insights into the social aspects of communication technologies that can help technology educators better appreciate and understand the technologies. Third, the research methods used can offer technology educators an effective example of both positivistic (quantitative) and post–positivistic (quantitative and qualitative).
research.

Fischer's *America Calling: A Social History of the Telephone to 1940* won the Dexter Prize in 1995 from The Society for the History of Technology (SHOT). The Dexter Prize is an annual award presented to one author for an outstanding book in the history of technology. The Dexter Prize committee selected *America Calling: A Social History of the Telephone to 1940* based on the quality of research and the insights offered into the process of technological change (Editor, 1996).

Fischer begins by critiquing predominant historiographic methods. According to Fischer, the modern (modernism, modernity) approach, which focuses on technology of the nineteenth and early twentieth century, contains too many assumptions. Fischer feels modernity assumes that economic, social, and psychological changes occur simultaneously. Fischer also rejects the notion of using technological determinism to analyze the telephone. Fischer views hard determinists, those who believe that technology evolves independently from social influence, as too mechanical. Soft determinists, on the other hand, believe there is an interaction between technological and social forces but Fischer feels this approach relies too heavily on imagery.

After his review of historiographic approaches, Fischer eventually settles on a "user heuristic" constructivist model to study the history of the telephone. This approach is unique and well defined. Instead of focusing on the telephone as a technological artifact or the telephone system, Fischer looks at the telephone from the private consumer's standpoint. The main theme states that the consumer ultimately decides which uses of a technology will predominate. This theme is heavily supported through industry documents, advertisements, and quantitative analysis.

Fischer's analysis of evidence offers several important insights into the social aspects of communication technologies. The time frame of the study, 1875 to 1940, was selected because the telephone was considered an emerging technology in the United States during this period. Alexander Graham Bell received the majority of his patents in 1875 and began marketing the telephone. By 1940, most middle class families in the United States had adopted the telephone. This method of analysis can help technology educators understand the complexities of an emerging communication technology and provide valuable insight into this common device.

Fischer classifies the telephone as a "space transcending" technology and makes some interesting connections to other technologies. He mentions the home computer, but does not use
the computer as a major analytical tool. Instead, the automobile is used as a comparison focus because it's developmental period, marketing, and social influences were similar to the telephone. While this comparison is a theoretical stretch at points, Fischer often uses statistical evidence to support the connection.

The research methods utilized in this book offer technology educators an excellent example of mixed-method research. As Petrina (1998) has suggested, technology education research needs to be aligned with research in general education and STS. Fischer's use of quantitative and qualitative methods provides an excellent model of post-positivistic research. Statistical analysis and case studies are both used effectively by Fischer to support his main theme.

Data collected from telephone companies, along with advertisements from newspapers and magazines, is used to demonstrate how the telephone was adopted into daily life. This content analysis clearly shows how telephone company management shifted advertising during the 1920's to reflect the demands of the private consumer. Prior to this shift, managers marketed the telephone as a practical, rather than social, tool. Once they realized more Americans were buying automobiles instead of telephones, the telephone companies changed their marketing strategies to reflect the predominant use of their product.

Fischer uses statistics (regression analysis) from voter and census records as a second method to support his "user heuristic" model. Although the sampling technique is questionable on the selective use of certain documents, the analysis does lend itself to the overall theme that the consumer ultimately decides which uses of a technology will predominate. The statistical methods used demonstrate marketing patterns as well as national and local patterns of diffusion. The majority of statistical data is placed in the eight appendices and is one of the great benefits of America Calling: A Social History of the Telephone to 1940. This format not only adds to the readability of the text but also creates a quick reference for statistical and technical data.

Fischer's third method of research, the case study, shows how the telephone was adopted into daily life. Three northern California towns were studied to show the differences between the diffusion of the telephone and the automobile. Telephone and government records, along with local newspapers, were utilized in the case studies. Interestingly, these case studies support the national statistics on diffusion. At this point, Fischer does an excellent job of bringing the three methods of inquiry together. No profound conclusions are reached, but the discussion clearly supports the theme that the consumer ultimately decides which uses of a technology will predominate.
America Calling: A Social History of the Telephone to 1940 has been awarded within the field of STS and deserves attention by technology educators. Fischer's discussion of historiographic methods, insights into communication technology, and the use of positivistic and post–positivistic research can be an excellent model for technology education researchers. Brusic (1992) illustrates how technology education furthers the goals of STS, but we need to ask the reciprocal question as well: how can STS further the goals of technology education? America Calling: A Social History of the Telephone to 1940 is an excellent work of historical research that can offer important STS insights for technology education.

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References

