This is not to say that she has not made some very good points about educational computing. Solomon is a very good writer, and her extensive background in educational computing is evident. Some of her views on computers as an expressive medium and teacher reactions to learning about computers are right on target. Indeed, the last two chapters in which she discusses her vision of computers in education, based on the framework which she has provided, are probably the best.

Solomon has included an extensive reference list, particularly valuable for anyone interested in reading more about this popular area of research. Although the title of the book would suggest that it might be a practical manual for classroom use, the text is probably better suited as a good theoretical book providing an excellent historical framework of particular interest to researchers as well as educators.

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Lorri Neilsen.
LITERACY AND LIVING:
THE LITERATE LIVES OF THREE ADULTS.
Portsmouth, NH: Heinemann, 1989.
143 pp.

"Literacy, like an organism, only manifests itself in action" (p. 139). At a time when parents, communities, and governments are hotly debating the issue of literacy, Lorri Neilsen's work provides a valuable perspective on the ways in which literacy grows and changes in the daily lives of three adults in her community of Hubbards, Nova Scotia.

Neilsen, a writer, researcher, and literacy consultant, provides us with detailed descriptions of the lives of her three participants and their community. Emerging as it does from her doctoral dissertation, this book is a research report; it is also a story of the village of Hubbards (population 750) on the Atlantic coast, thirty miles from Halifax.

As a participant observer (this is her community, too), she reveals the evolution of her own learning "to read, write, and see Hubbards in the ways the adults who worked with me do" (p. 11). The impulse for the research grew as she witnessed shifts in theory from a product to a process orientation, as

she worked with students in school settings and adults in industry, and as she read, wrote, discussed, and observed during her graduate studies. Transformations in Neilsen's thinking about reading and writing motivated her to study literacy "not as a means for describing what people read and write, but as a means of seeing ways they behave in the world" (p. 7). Metamorphosis is a central theme of *Literacy and living*.

Neilsen's views on literacy and learning are, as she says, most influenced by the fields of semiotics and adult development. Thus her observations about Judy, Jim, Elizabeth, and the village of Hubbards are formed in part by her beliefs that human growth and development are lifelong processes and that "as human beings with intention, we receive and create signs that embody meaning from the world around us" (p. 7). Toward the end of the book, Neilsen proposes that her three participants primarily use linguistic, social, mathematical, and spatial signs to negotiate their lives. These are also the signs by which Neilsen creates her reading of Judy, Jim, and Elizabeth in Hubbards. She describes Hubbards in terms of its speech and conversations, its physical layout, and its institutions. Judy, Jim, and Elizabeth are described through Neilsen's conversations with them; the books they read; the lists, diaries, letters, and reports they write details about their family structures; and their social interactions at work, at home, and in the community enrich these stories.

Neilsen's engaging style draws us into Hubbards and the ordinary lives of her three subjects. On a morning run with Neilsen through the village, we learn the names of some of its inhabitants and the daily routines that shape their lives. We see their houses from a distance as we run past the school, over the bridge, and around the cove until finally, we stop to pick up the mail at the post office. Neilsen takes us into the offices and the homes of her participants—"A home reveals priorities, expresses who we are" (p. 97). And thus we become participants and observers in the community.

The first case study is of Judy, a mother of two children, a substitute teacher, and a community volunteer who "lives the traditional vows espoused by the community: the good daughter, mother, and wife" (p. 53). Having lived in Hubbards all her life, Judy "reads the lives of people here like a book, and as an active member of the community, helps to write their lives as well" (p. 51).

Jim, formerly the controller for a software company, is now the vicepresident in charge of finance of a small gold exploration company near Halifax. He has three sons and is also active in community affairs. Neilsen

takes us to Jim's home and to his office where we learn how he deals with reading and writing on the job.

Elizabeth is the general manager of the Halifax branch of a data processing systems company. We visit Elizabeth in her office and discover how she reads and replies to her electronic mail. Conversations with Elizabeth reveal the evolution of her self-concept and her management philosophy. She spends fourteen hours a day at work in the city, and unlike Judy and Jim, is not deeply involved in community life. Elizabeth actively pursues success through reading, reflection, and interaction and "extends the terms reading and writing to include understanding and creating signs in human behaviour, such as speech and body language" (p. 118).

For Judy, Jim, and Elizabeth writing and reading are an integral part of their lives, but as Neilsen's research indicates "each is a literacy of one" (p. 123). Although each has a unique literacy, Neilsen states that they share a common process for becoming literate in context. The process begins by learning to read the signs in their environments and then evolves as they take an active part in shaping meaning in those contexts. In each of the case studies, Neilsen uncovers a "Transformative Experience," a literacy event that changes her participants' views of reality. Judy's literary experiences influenced her decision to become a teacher. Jim's career change was aided by the autobiography he wrote for a career counsellor. Through a re-reading of her adolescent diaries and the discovery of Jungian psychology, Elizabeth found herself and a way out of a life without purpose.

Neilsen's conclusions about the ways literacy shapes lives ground her recommendation for literacy education: children need complex knowledge of many contexts to know and shape their own worlds. Neilsen's final chapter explains the implications of her study for education. Supporting John Dewey's claim that the "ideal aim of education is the power of self-control," she suggests that this aim can be met by 1) making the child, not the subject, the centre of the curriculum, 2) recognizing that schooling is only a part of literacy and must be connected to literacies outside school, and 3) helping the child to understand self in society through literacy. She urges educators to think of reading and writing "not as forms of knowledge, but as means of forming knowledge" (p. 140).

As an ethnographic study, Neilsen's book is a rich and detailed description of three adults' literacy. One might quibble that these participants were not representative of the community; they all had university degrees and were engaged in the very literate activities of teaching and high-level man-

agement. What are the literacies of individuals who have no university degrees, and who are managed? Neilsen frequently includes her own life experiences in the case histories of her participants. Although these experiences seem to interrupt, they clearly remind us of Neilsen's role not only as observer, but participant as well.

Literacy and Living is a book for all those interested in the teaching of reading and writing. For researchers, it is a provocative invitation to a way of coming to know. Finally, it is a delightful inside look at the people and ways of Hubbards. Nova Scotia.

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