

On Writing and Thought

Jyotsna Vaid

Andre Roch Lecours

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Sylvia Scribner and Michael Cole
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Review by
Jyotsna Vaid and André Roch Lecours

Sylvia Scribner is professor in the Developmental Psychology Program in the Graduate School and University Center of the City University of New York. She is coauthor of Culture and Thought with M. Cole. ■ Michael Cole is professor of psychology and communications at the University of California, San Diego (La Jolla). He is coeditor of The Making of Mind: The Autobiography of A. R. Luria with S. Cole. ■ Jyotsna Vaid is postdoctoral fellow of psychology at Michigan State University. She is author of the chapter "Bilingualism and Brain Lateralization" in S. Segalowitz's Language Functions and Brain Organization. ■ André Roch Lecours is director of the Centre de Recherche du Centre Hospitalier Côte-des-Neiges in Montréal. His books include L'Aphasie.

The introduction of written forms of communication has been thought to influence the development of the human mind, quite apart from its obvious impact on societal development. Mastery of a written language may lead to cognitive growth by virtue of the assimilation of new bodies of knowledge transmitted in written texts. A more tantalizing possibility is that the act of writing itself affects not only the content of our thought but also the very ways in which we think.

The notion that literacy affects cognitive change dates to early philosophical speculations concerning the differences between oral and written language. In writing, words can be considered apart from the context in which they were expressed, making possible a higher level of abstraction than that characterizing speech, which is highly context-dependent. Detachment from the immediate context, however, requires that written communication be more explicit and exact. As a result, writing entails a more conscious, directed use of language, or what Vygotsky (1962) called a "deliberate structuring of the web of meaning" (p. 100).

Until recently, claims about the cognitive repercussions of literacy have not been adequately tested. Although psychological studies of cultural variations in cognition have demonstrated consistent differences between literates and illiterates in tests of cognitive ability, it is unclear from these studies whether the differences are due to literacy per se or to factors that normally occur with literacy (e.g., formal schooling or urban living). In *The Psychology of Literacy*,

Scribner and Cole present a summary of five years of research among the Vai community of Liberia, aimed at identifying the cognitive effects of literacy per se.

The Vai script, a syllabary invented by the Vai a century ago, is used by 20% of the men, who learn it as adults at home or at work, over a period of a few months. It is used primarily to write family letters and to record commercial transactions. Literacy in Vai is a means neither for the maintenance of traditional knowledge nor for the introduction of new bodies of knowledge. As such, the script represents a case of what the authors call "literacy without education" (p. 238). Two other scripts are also used in the community—English, the language of formal schooling, and Arabic, the language of religious instruction, taught outside the school setting in special classes emphasizing rote memorization and recitation of the Koran. A substantial percentage of the Vai are biliterate, and nearly all members of the community are bi- or multilingual.

The approach followed by Scribner and Cole may best be described as a combination of (a) experimental anthropology, involving observation of the contexts of acquisition and use of each script, and (b) psychological experimentation, designed to allow inferences about the processes by which literacy might exert its effects. The interplay of observation and experimentation is an admirable feature of the research project.

Three goals appear to have motivated the authors' choice of research questions: (a) to establish whether literacy, as distinct from schooling or other major life

experiences, predicts performance on cognitive tasks commonly used in developmental psychology, (b) to explore psycholinguistic repercussions of reading and writing on listening and speaking, and (c) to determine whether cognitive skills associated with particular literacy practices generalize to experimental tasks requiring similar skills.

With regard to the first research goal, the performance of selected groups of Vai monoliterates, Arabic monoliterates, Vai-Arabic biliterates, English (schooled) monoliterates, and Vai illiterates was examined using a series of tests of abstract thinking, categorization, reasoning, memory, and metalinguistic knowledge. Multiple regression analyses indicated wide-ranging effects due to schooling but scattered effects due to literacy. Schooled subjects generally provided better explanations of the principles underlying the cognitive tasks as compared with non-schooled subjects. Vai literates outperformed other groups on a test of grammatical knowledge, whereas Arabic literates stood out on a test of memory. It is interesting that biliteracy contributed to enhanced performance on a variety of the tasks (see pp. 120, 125, 129, 210, 223), although this finding was not systematically discussed by the authors. The pervasive effects of schooling suggest that other factors besides learning to read or write contribute to cognitive change in the schooling process.

An imaginative set of experiments designed to address the second research goal support the notion that skills that are developed in reading and writing influence both the perception and the production of spoken language. For example, on an auditory integration task expertise in reading Vai was related to a superior ability to comprehend and recall Vai sentences parsed into syllables.

Studies bearing on the third research goal indicated that practice in letter writing fostered more effective instructional communication among Vai literates compared with other literate groups and with illiterates, and that years of experience in memorizing the Koran selectively improved performance among Arabic literates on a test of memory for serial order.

The findings as a whole are taken by the authors to support the view that "Literacy is not simply knowing how to read and write a particular script but applying this knowledge for specific purposes in specific contexts of use. The na-

ture of these practices . . . will determine the kinds of skills . . . associated with literacy" (p. 236).

The Vai project was carefully designed, conscientiously executed, appropriately analyzed, and judiciously interpreted; it should serve as a model for such efforts in the future. There is, however, one troublesome feature of the research design, namely, that the findings are almost entirely based on comparisons of groups that were neither randomly selected nor matched on measures of linguistic or cognitive ability prior to experimentation. Although the authors acknowledge this fact, they do not adequately confront its implications. A

case in point is the performance of the biliterates—one is left wondering about the reasons for their superior performance, for example, whether it reflects their advanced reading scores in Vai and greater expertise with the Koran, or whether it reflects other factors associated with biliteracy among the Vai or with biliteracy as such. This problem notwithstanding, the book offers an engaging treatment of issues of relevance to current research in several domains of psychology.

Reference

Vygotsky, L. S. *Thought and language*. Cambridge, Mass.: M.I.T. Press, 1962.