TECHNOLOGY, LITERACY, AND THE EVOLUTION OF SOCIETY

Implications of the Work of Jack Goody

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Rethinking the Goody Myth

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Among Jack Goody's numerous works, his studies of literacy have had an especially influential and continuing impact on a wide range of different disciplines. Even the briefest search in the *Social Citation Index* reveals that his work on this topic continues to be used by anthropologists and historians, psychologists and sociologists. The range and depth of Goody's scholarly contributions to our understanding of literacy make any attempt at a brief but comprehensive summary a difficult undertaking in any circumstances. In approaching an analysis of his contributions to literacy studies appropriate to this occasion, we seek to understand a peculiar dynamic that seems to characterize academic appropriations of his ideas concerning literacy and the empirical materials on which they are based.

We begin by summarizing the major points of the initial Goody and Watt essay, "The Consequences of Literacy" (1963) which was the starting point of what we refer to in our title as the Goody myth. We then pause to examine aspects of the article's sociohistorical context, including the context provided by other prominent scholars writing in fields where literacy was a recognized focus of attention. We believe that the construction of the myth depended in good measure on these social-historical contextual factors. Our reexamination of Goody's writing on literacy and its interpretations leads us to a somewhat ironic conclusion. According to what we are terming the Goody myth, Goody is said to believe that literacy is the autonomous driving

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[1] The order of authorship was determined by genetic lottery.

mechanism of change that heats up "cold," homeostatic, amnesic, face-to-face, nonliterate societies, transforming them into "hot," rapidly changing, rationalized, bureaucratically organized, and possibly democratic societies peopled by rational, modern thinkers. As Brian Street (1984) summarizes, "The claims are that literacy affects cognitive processes in some of the following ways: it facilitates "empathy," "abstract context-free thought," "rationality," critical thought" post-operative thought . . . detachment and the kinds of logical processes exemplified by syllogisms, formal language, elaborated code etc." (p. 2). Sometimes this belief is met with disapproval (Ahern, 2001; Gee, 1990; Kawatoko, 1995; Street, 1984). At other times the idea of literacy as the engine of social and intellectual change is met with approval and extended to studies of educational design and policy both domestically and internationally (Gustafsson, 1991; Olson, 1989).

Whatever their attitude toward his ideas, many critics and admirers alike ascribe to Goody the view that literacy is an autonomous causal agent in history. This consensus is odd because, as we shall see, from the very beginning Goody explicitly rejects the technologically determinist view that his critics ascribe to him. For every text fragment that contains statements that provide "clear proof" that Goody is a technological determinist, one can find just as clear statements that the consequences of literacy at all levels of human activity are contingent on the cultural circumstances in which they are embedded.

In fact, some commentators believe that the literacy thesis is without merit precisely because, as his views have become more elaborated, he often emphasizes the special effect/potential/implication of a technology of communication (such as alphabetic writing), even while he affirms the central role of the society in determining what is, or is not, made of/with that technology. From this perspective, Goody is making two contradictory claims at once. The result is said to be incoherence or the implosion of the literacy thesis (Halverson, 1992).

We prefer to adopt the view that Goody has, from the beginning, been attempting to develop an account of literacy's role in historical change and human consciousness that does justice to both the peculiarities of the medium of communication and the sociohistorical context. Time and again, in various turns of phrase, he argues, "I want to maintain a balance between the refusal to admit differences in cognitive processes or cultural developments on the one hand and extreme dualism or distinction on the other" (Goody, 1977, pp. 16–17). These goals present difficult dilemmas that to date have not been successfully resolved, but it is not clear why they should entail a necessary contradiction; instead, the challenge is to articulate the dynamic interplay of tool and context that a balanced position requires. In what follows, we offer a reading of Goody's work that sees the route to achieving the needed balance and sense of complementarity in that emerging stream of social science research and theory that focuses on cultural practices, including practices of literacy, as the appropriate unit of analysis for the study of culture and mind.

THE CONSEQUENCES OF LITERACY

Written jointly with Ian Watt in 1960 at the Center for Advanced Study in the Behavioral Sciences, "The Consequences of Literacy" (Goody & Watt, 1963) starts from the following premise: We can no longer accept the ethnocentric notion that rational thought characterizes people who live in complex societies, whereas prelogical thought is typical of simpler societies, nor can we afford to ignore the differences between societies that represent polar opposites with respect to the complexity of their technological infrastructure. As a result, Goody and Watt set out to understand the differences between civilized and primitive societies by focusing on the different ways that cultural transmission takes place in them. In primitive/oral societies, they suggest, transmission of cultural heritage takes place through a "long chain of interlocking conversations between members of the group" (Goody & Watt, 1963, p. 306). Goody and Watt acknowledge that there may be some mnemonic devices in preliterate cultures that resist absorption into the "tyranny of the present," as well as individuals who retain a critical attitude toward the past. In general, however, they conclude that the whole content of social tradition apart from the material inheritances is held in memory, which tends to work through a process of automatic updating, shedding aspects of social life that are no longer relevant (p. 307). As a result, the past is transmuted in the course of being transmitted. This process of continual transformation means that the "individual has little perception of the past except in terms of the present" (p. 312) and that people's perceptions of social experience are therefore kept in line with the basic Durkheimian categories that organize social life.

Using ancient Greece as the germinal case, Goody and Watt (1963) hypothesize that the widespread use of alphabetic literacy, which they suggest was first attained in 5th and 6th-century Athens, had important effects on many aspects of social and mental life. They are careful to note that the degree to which literacy actually produces such changes varies "according to the system's intrinsic efficacy as a means of communication, and according to the social constraints placed upon it" (p. 311). They also point out that the widespread diffusion of the alphabet in Greece was "materially assisted by various social, economic and technological factors" (p. 318). These factors included an economic revival that followed on the Mycenaean collapse in the 12th-century, a relatively decentralized social system and increased contact with the East that brought "material prosperity and technological advance" (p. 318). As a further caveat, they suggest that even when a society is

text, of the exact words of the story" (p. 138). Classics was also the provenance of Eric Havelock, whose monograph, *Preface to Plato* (1963), extended the Perry-Lord thesis beyond a focus on the role of literacy in the production and reproduction of poetry to encompass a general "cast of thought, or a mental condition," which, he said, came to dominate Greece in the centuries preceding Plato. In Havelock's view, the crucial foundation for the pervasive consequences of literacy was the alphabet. Here he was following that thread of Goody and Watt's (1963) essay in which they suggested that phonetic writing systems are especially well suited for "expressing every nuance of individual thought"(p. 315) in contrast with syllabic or other writing systems, which "were too clumsy and complicated to foster widespread literacy" (p. 312).

Havelock (1978) argued that the alphabet's effects went beyond mere rendering of text into language and vice versa; it was the foundation for a new and more powerful mode of thought: "Atomism and the alphabet alike were theoretic constructs, manifestations of a capacity for abstract analysis, an ability to translate objects of perception into mental entities, which seems to have been one of the hallmarks of the way the Greek mind worked" (1978, p. 44).

A very different line of inquiry, this time from psychology, appeared consistent with the conclusions suggested by Lord and Havelock. *Language and Thought*, written by the Soviet psychologist Lev Vygotsky in 1934, was published in English in 1962 with an introduction by Jerome Bruner, an influential developmental psychologist whose work subsequently contributed to questions of education and its psychological consequences. Working within a Marxist framework, the basic assumption of cultural-historical psychology developed by Vygotsky and his colleagues is that the human mind is formed through the active appropriation of the cultural store of the past, embodied in material artifacts, rituals, belief systems, writing systems, and the modes of social interaction they entail. This process of appropriation is itself conditioned by the particular culture and historical era in which the person lives.

As children acquire their native language(s), rich new resources become available for gaining access to, and participating in, the process of cultural production and reproduction. It is during this period, according to Vygotsky, that "thinking becomes verbal" and "language becomes thoughtful" (1987, p. 112). These new forms of thinking and communicating remain with people for the rest of their lives. They are a universal achievement, attained by all normal people in all of the world's cultures.

Several years later, when children begin the transition to adulthood that we refer to as adolescence, a new transformation occurs in the relation between language and thought. Young people begin to acquire scientific concepts, by which Vygotsky (1934) had in mind something like closed systems of meaning with fully specified logical relations among all the terms. Such concepts, he believed, reorganize the spontaneous, everyday concepts that children have acquired before they are exposed to school.

Drawing on his own cultural circumstances, Vygotsky (1934) assumed that writing was central to this process of change. In a manner that echoes Goody and Watt (1963) (and a good many psychologists during the 20th-century), Vygotsky believed that the acquisition of literacy/schooling requires the ability to think in terms of a double abstraction: Language provides a first-order abstract representation of experience and writing, and a new materialization of language involves a second process of abstraction. As he put it, this materialized/abstracted nature of written language "requires a high degree of abstraction. Written speech lacks intonation and expression. It lacks all the aspects of speech that are reflected in sound. Written speech is speech in thought, in representations. It lacks the most basic form of oral speech; it lacks material sound" (Vygotsky, 1987, p. 202).

Writing also entails a different form of social interaction: "[Written speech] is speech without an interlocutor . . . speech monologue. It is a conversation with a white sheet of paper, with an imagined or conceptualized interlocutor" (Vygotsky, 1987, pp. 202–203).

As a result of these and related characteristics of the ways that literacy changes the structure and content of human activity, a conscious mental effort is required to both acquire and use it. From the perspective of the individual, it is a more difficult form of thought, but its difficulty is compensated for by the way it decontextualizes thought, enabling people to think and act in the more complex ways demanded of citizens of an industrialized world.

The reader can no doubt add to this list of texts from various disciplines that adopted a perspective similar to that proposed by Goody and Watt. It appears clear, for example, that the psychological consequences Vygotsky claimed for literacy/schooling are similar to the forms of conceptual activity that Lévi-Strauss (1966) associated with scientific thinking as compared to bricolage. These ideas also bear a strong resemblance to ideas put forth by Walter Ong (1967), who argued that the spatialization inherent in print enabled a transformation of consciousness in which an individual sense of self is differentiated from the social matrix of human life.

Space limitations preclude pursuit of these interesting parallel contributions. However, these examples should make it clear that Goody and Watt's (1963) initial statement of the relation between literacy, society, and thought was part of a much wider zeitgeist that made it an attractive tool for understanding processes of historical and cognitive change at several levels.

At the same time, as we have been at pains to note, Goody was keenly aware that the processes he was talking about highlighted only one side of a complex cultural-historical dialectic—the technology itself. As we read matters, his subsequent work on literacy was an attempt to achieve both more detailed and better balanced evidence concerning both sides of the dialectic,

moving back and forth from the sociohistorical context of various forms of literacy to a focus on the technology of literacy more narrowly considered. The difficult challenge, of course, was (and is) to represent both sides of this coin at the same time.

LITERACY IN TRADITIONAL SOCIETIES

Five years after the publication of "Consequences," Goody returned to the topic with the publication of an edited volume, *Literacy in Traditional Societies* (Goody, 1968). Goody frames the collection of essays as an effort to understand why the Semitic alphabet, which was diffused widely over the world, did not always have the same radical and pervasive effects that it appeared to have had in classical Greece. It is here that Goody begins to gather the ethnographic material that could allow him to understand the social factors that promote or retard expression of the potential implicit in written forms of communication. Most of the chapters, which focus on societies ranging from ancient India and China to Madagascar, are intended "to analyze in detail the uses made of writing in a particular social setting" (p. 4). Although all studies in this volume are relevant to appreciating the myriad roles that literacy plays in traditional societies, Goody's introduction and one of the chapters are particularly useful for our current concerns.

In the book's introduction, Goody (1968) sketches some of the restraints that limit and shape the potential impact of writing. These restraints on the effects of literacy include the practice of secrecy, which may limit the circulation of books and which usually arise when "people have an interest in maintaining a monopoly on their sources of power" because literacy is a source of power and prestige (p. 12). Another restriction is that in many societies writing becomes associated with magic and religion, which may foster an emphasis on the literal character and sacred repetition of the word.

In her chapter, Kathleen Gough offers a corrective to the general emphasis on the special properties of the alphabet. Drawing on case material from China and India, Gough forces recognition that non-alphabetic scripts can be exceedingly widespread. She disputes the universality of claims for the democratizing effect of literacy or the idea that literacy transforms myth and encourages the skeptical questioning of authority. Goody welcomed these correctives and asserted that "we are dealing with necessary rather than sufficient causes; with this we are in entire agreement, doubting whether there are any 'sufficient' causes which can account for the complex aspects of human behavior" (p. 69). However, at least when it comes to claims about human thought processes, agreement about necessary causes would prove more elusive than Goody anticipated.

DOMESTICATION OF THE SAVAGE MIND

If *Literacy in Traditional Societies* focused on the social, cultural, and historical features associated with the consequences of literacy, *Domestication of the Savage Mind* (Goody, 1977) focused more on the media themselves and the presumed cognitive consequences of their use. Although Goody devotes some attention to questions of history and social organization, as its title suggests, it is cognitive processes associated with different means and relations of communication that are the concern in this book.

Goody (1977) begins by summarizing the evidence offered in favor of a great divide between the primitive and the civilized mind, drawing on a variety of influential authors including Levy Bruhl, Robin Horton, and, most importantly, Lévi-Strauss. He faults these approaches as being "either nondevelopmental or simplistically so." Early on he summarizes the main line of argumentation:

> I have tried to take certain characteristics that Lévi-Strauss and others have regarded as marking the distinction between primitive and advanced, between wild and domesticated thinking, and to suggest that many of the valid aspects of these somewhat vague dichotomies can be related to changes in the mode of communication, especially the introduction of various forms of writing. (p. 16)

And once again, he is very explicit about his antidichotomous intentions and his suspicion of developmental accounts:

> There is no single opposition but rather a succession of changes over time, each influencing the system of thought in specific ways. I do not maintain that this process is unidirectional let alone monocausal; thought feeds back on communication; creed and class influence the kind and extent of literacy that prevails; only to a limited extent can the means of communication, to use Marx's terminology from a different context, be separated from the relations of communication, which together form the mode of communication. (p. 46)

After reviewing literature in the great divide tradition and his strategy for superseding it with respect to issues of literacy and modes of thought, Goody sets out to destroy the dichotomy. Arguing that if one has a simple dichotomy with two homogenous and opposed sets of characteristics, change is impossible, Goody begins by exploring the heterogeneity that must exist if change is to occur by focusing on the phenomenon he refers to as intellectuals in nonliterate societies. Drawing on a variety of ethnographic examples, particularly his own work in Ghana, Goody finds ample evidence of critical thinking among a variety of specialists in a variety of nonliterate societies. He concludes that "even in non-literate societies there is no evidence that

individuals were prisoners of pre-ordained schemes, of primitive classifica-
tions, of the structures of myth. Constrained, yes; imprisoned, no" (p. 33).

He caps this line of argument by turning the presumed features of writing
against those who support great divide theories. Goody argues that because
they use writing to record the behaviors of people in so-called primitive soci-
eties, observers distorted what they had seen in the process of recording it.
They did so precisely because they represented it in writing and other literate
devices, such as tables and lists, which highlight and exaggerate the degree of
stability within, and difference between, the categories they were presumably
describing in constituting the great divide. In essence, what he argues is that
many of the features, and particularly the binary thinking that we see as con-
stitutive of the great divide, are artifacts of the technology of writing.

But Goody has repeatedly declared that there are differences to be ex-
plained, and in the remaining chapters he sets out to do so. He does so by
drawing on a mixture of historical and ethnographic data, to provide particu-
lar instances of how the modes of communication might plausibly condition
associated modes of thought and how the accumulation of these changes in
some cultural circumstances (accumulation aided and abetted by the tech-
nology of writing) could produce the marked social (and presumably cogni-
tive) changes that are the starting point for great divide theories.

Reception of *Domestication*

On this description alone, one might have thought that *Domestication* would
be accepted as providing, in more detail than *Consequences*, a general reso-
lution to the question of literacy's implications that skirted either reduction
to an unexplained binary division or silence on the mechanisms of change.
As we have outlined his argument, Goody seemed to have destroyed the
traditional binary division and made plausible, through historical and eth-
nographic example, the interweaving of people and their modes of com-
munication, which are themselves quite variable both synchronically and
diachronically.

But over the course of the following decades, several authors stepped for-
ward to argue that Goody had, in fact, failed to supersede the great divide. A
consistent refrain in these critiques has been that Goody claims that literacy
exerts effects independently of the context in which it occurs and the uses to
which it is put in a given culture (Gee, 1990; Kawatoko, 1995; Street, 1984).
Given that *Domestication* seemed so clearly to have just the opposite inten-
tions, how are we to understand the continued dominance of an autono-
mous/causal interpretation of Goody's ideas about literacy's cognitive conse-
quences?

There are undoubtedly many contributing factors, depending on one's do-
main of inquiry. But we would like to suggest that a common theme running

through many of the critiques is a general concern that despite Goody's dis-
claimers concerning causal and directional contributions of literacy and the
heterogeneity of literacy effects within as well as between societies, time and
again one finds that he writes both individual assertions and entire essays
that are very difficult to interpret in other than developmentalist, social-
evolutionary terms. Although this feature of such texts can be expected to
evoke opposition in many fields, we want to concentrate on the special diffi-
culties it causes with respect to claims about cognitive consequences. We of-
fer an alternative formulation that remains true to Goody's overall goals of
providing an explanation for sociocultural-historical difference that avoids
them—us, binary thinking. We choose to concentrate our efforts in this way
because the issues involved fall at the intersection of our own concerns about
culture and psychological processes as a cultural psychologist and anthropol-
ogist, respectively.

DEVELOPMENTAL PSYCHOLOGY
AND THE LITERACY THESIS

During the 1960s and 1970s, when Goody was venturing to account for the
consequences/implications of literacy, a parallel effort was underway in de-
velopmental psychology. We already mentioned that in 1962 a translation of
Lev Vygotsky's *Language and Thought* was published with a forward by Je-
rome Bruner. In 1966 Bruner and his colleagues published a monograph on
cultural differences in thinking linked closely to questions of literacy and
schooling, which explicitly invoked Vygotsky's ideas about the transforma-
tive influences of writing on thinking. Not long after, A. R. Luria, Vygotsky's
student and colleague, published the first account of their jointly planned re-
search comparing the cognitive performances of literate/schooled and non-
literate Central Asian pastoralists conducted during the early 1930s (Luria,
1971, 1976).

Luria (1976) presented a wide range of reasoning and classification prob-
lems, including logical syllogisms that appeared to reveal developmental dif-
ferences when presented to children of varying ages in Moscow. Common to
all of the studies was the finding of a difference between literate and non-
literate populations that conformed to the general picture that Goody had
provided concerning historical change, literacy, and cognition. For example,
in contrasting nonliterate pastoralists with literate workers engaged in newly
collectivized agricultural enterprises, Luria wrote that "as the basic forms of
activity change, as literacy is mastered, and a new stage of social and histori-
cal practice is reached, major shifts occur in human mental activity. These
are not limited simply to an expanding of man's horizons, but radically affect
the structure of cognitive processes" (p. 161). According to Luria's interpre-

tation, the fundamental changes between the contrasting populations were from "elementary graphic-functional" modes of thinking that were situationally bound up with practical activity to "theoretical," "abstract" modes of thought which he sums up as a "transition from the sensory to the rational." As a result of this transition, we see the creation of the rudiments of discursive thinking, whose inferences become as compelling as those from practical experience (p. 163).

Bruner and his colleagues (1966) reached similar conclusions on the basis of similarly organized research on categorization and reasoning that contrasted children of different ages who had or had not attended school in countries such as Senegal and Mexico, where schooling was not universal. For example, in a chapter by Greenfield, Reich, and Olver (1966) on classification, the authors conclude that schooling "forces on all pupils the ability to operate intellectually *in the absence of a concrete situational context*" (p. 288). When data collected by Greenfield using Piagetian tasks indicated children who fail to attend school also fail to achieve the concrete operational stage ordinarily associated with cognitive development in middle childhood, she and Bruner concluded that cultures that use writing systems and schooling "push cognitive growth better, earlier, and longer than others" (Greenfield & Bruner, 1966, p. 654). Based on comparison of preschoolers and elementary-age schoolchildren, David Olson (1975), a student of Bruner's, concluded that literacy biases individual children and the cultures they inhabit toward the development of formal reasoning systems.

What makes this line of research and interpretation relevant to understanding the way *Domestication* was interpreted with respect to its claims concerning cognitive processes is that Goody (1977) refers to these developmental psychologists in making the case for his arguments about the cognitive consequences of literacy. The parallels between changes in individual cognition and historical change are clear at many points in the text. For example, in his examination of Sumerian and Egyptian administrative lists, he discusses at some length how the list format undergoes historical changes analogous to the developmental changes reported in Bruner et al. (1966). Historically later lists shift from simple orderings to hierarchical orderings based on more abstract categories in the same manner as the categorizing behaviors of children shift from simple to hierarchical and abstract, if they go to school (see Lloyd, this volume). Or, to take an example from Luria cited by Goody (1977), syllogistic reasoning appears with schooling and not in its absence.

What makes the use of developmental-psychological data so damaging to Goody's efforts to avoid simple historical evolutionism with literacy as its motor is that nowhere in the developmental literature at that time was there a strong basis for incorporating all the caveats and reminders of the centrality of social context in determining whether, when, and to what extent the pre-

sumably higher levels of cognition would be developed and deployed in presumably more advanced social formations. Rather, to many readers, it appeared that the developmental psychological literature, despite the intentions of its practitioners, was leading rather directly to the 19th-century idea that primitives think like children. In fact, in 1979, anthropologist Christopher Hallpike (1979) reached exactly this conclusion drawing on developmental/cross-cultural literature. Nonliterate peoples, he argued, think preoperationally, like preschoolers in Geneva or Cambridge, "because the milieu of primitive societies is cognitively less demanding than our own, the cognitive development of its members will be correspondingly retarded" (pp. 31–32).

Once these connections to developmental psychology are made, and Goody (1977) himself makes the connections explicitly, it becomes pretty clear why *Domestication* evoked the notion that Goody is a great divide theorist as well as a technological determinist. When we add the fact that the 1960s and 1970s were a time of intense debate over the mental competence of the poor and those of African origin, and that formerly nonliterate/situation-bound thinkers were mounting successful revolutions against the (literate) regimes that dominated them in several parts of the world, the intense emotions evoked by this debate make the great divide interpretation, powered by literacy, seem almost inevitable.

TOWARD ACHIEVING THE INITIAL GOAL: A FOCUS ON CULTURAL PRACTICES

In 1987 Jack Goody wrote his last book focused on the relation of literacy and cognition. In the interim, we had the good fortune to have him as a visitor while the first author was doing fieldwork in Liberia among the Vai and the second author was learning her times tables. Working with Goody, Scribner and Cole (1981) were able to collect, and collectively analyze, the written corpus of a rural Vai villager, which contained a wide variety of written documents, including a family almanac, the constitution of a fraternal organization, and family and business records. This article was included in the 1987 volume. Goody also included a chapter in which he commented in detail on the multiyear project carried out by Scribner and Cole focusing on the psychological consequences of various forms of literacy. He titled this chapter "The Interface Between the Sociological and the Psychological Analysis of Literacy." This chapter is the focus of the remainder of our chapter because it raises all the troubling problems of how literacy, in its manifold material forms and social contexts, should be conceived of in relation to human cognitive processes.

Scribner and Cole (1981) approached the study of literacy among the Vai as psychologists who found in the fact that Vai literacy is acquired independ-

ently of schooling an opportunity to test a variety of the theories about literacy's impact on cognition, which we review in this chapter. The work was carried out in three overlapping phases.

First, although mindful that Vai literacy was acquired outside of school and knowing that most people literate in Vai had never attended school, Scribner and Cole (1981) did not know how literacy in Vai related to other social experiences that might be expected to influence the way people think according to the psychological literature of the time. For example, involvement in wage labor in mines, or foreign travel, or knowledge of several languages might all have cognitive consequences in their own right. Moreover, Scribner and Cole knew that Islam had had a long-term effect on Vai society, and many Vai considered themselves practicing Muslims. This meant that Scribner and Cole were dealing not just with literacy in Vai but also literacy in Arabic acquired in Quaranic schools and, for some unknown part of the population, literacy in English acquired in missionary-sponsored or government-supported schools conducted on the model of European education. As a result, the study began with a comprehensive sociological-style survey that included questions on every aspect of people's lives that might have a relation to Vai literacy.

In addition, they administered a battery of psychological tests of cognitive performance based on experimental procedures that had manifested cognitive changes associated with literacy in prior research (Cole et al., 1971). The cognitive test battery included a memory task in which a list containing familiar categories of items was presented several times to see if people learned the list and categorized it, a set of logical syllogisms, and a sorting task using geometric figures that could be sorted in three different ways (size, form, and number). Crudely put, the purpose of this phase of the work was to see if the measurable cognitive consequences of schooling would also be found for one or more of the forms of literacy encountered in Vai country while also exploring which configurations of social experience were associated with which forms of literacy.

The results of this first phase of the work are easily summarized. Those who had attended school generally outperformed all other groups, and neither Vai literacy nor Quaranic literacy had any substantial influence on performance except for an increased ability to sort geometric figures by multiple criteria.[2] Scribner and Cole's (1981) conclusion was that in so far as schooling engendered cognitive consequences it was because of the way literacy was deployed in the cultural practices associated with schooling (a special

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[2]Two forms of literacy associated with Islamic practices were found: Most people who professed to be literate in Arabic could recite from the Quaran and recognize the text they were reciting but could not understand Arabic. A smaller proportion were functionally literate in Arabic as measured by the ability to answer simple written questions.

form of discourse, expansion of the range of knowledge about varieties of nonlocal knowledge, etc.), and not because people had learned to read or write per se. In the second phase of research, Scribner and Cole focused on hypotheses about the impact of literacy on linguistic knowledge itself (generally referred to as metalinguistic awareness). Although they found no general effects of Vai or Quaranic literacy on people's ability to analyze language, they did find some specific effects, such as the ability to specify what was ungrammatical about a particular or ungrammatical or just cut sentence. By this time they had accumulated enough experience in the field (assisted greatly by Michael Smith, a graduate student of Goody's, who conducted a traditional anthropological ethnography of literacy in a single Vai town) to be able to identify a variety of quite specific uses to which Vai literacy was put. Hence, the third phase of the work was based on a variety of experimental and quasiexperimental procedures modeled on local practices of literacy. These included a letter-writing task explaining an unfamiliar board game, rebus reading and writing tasks, and a memory experiment that modeled the forms of literacy instruction traditional in local Quaranic schools.

At this point, Scribner and Cole (1981) routinely found what they considered cognitive consequences of literacy. Vai who wrote letters in Vai dictated more complex oral descriptions as letters to a friend about the unfamiliar game. They were more facile in rebus reading and writing tasks, and they showed a greater ability to segment text by syllables.

One further point is worth emphasizing in light of the issues surrounding the Goody myth. The effects of Western schooling were not uniformly superior to those of Vai or Quaranic literates. Western-style schooling did not facilitate analysis of the written language into syllables, for example, nor did it facilitate memory performance modeled on Quaranic recitation procedures.

Surveying these results, Goody offered a number of objections to Scribner and Cole's (1981) approach, which centered, as the title of the chapter suggests, on their use of psychological experiments as central sources of data, and he sought to formulate a more adequate account based on two central sets of ideas.

First, he sought to distinguish between the bias of psychological experiments to restrict their analysis to what he referred to as unmediated (short-term) consequences of literacy in place of sociohistorically mediated effects of literacy, in which its cognitive consequences accrue over a long period of time. At one point he makes this contrast equivalent to the idea that psychological tests assess the individual cognitive consequences of literacy, whereas the analysis of how literate devices come to be used reveal the cultural consequences.

Second, he offers a reformulation of psychological approaches to theorizing cognition based on a hierarchy that begins with physiological processes

(e.g., lateralization of brain processes), which generate cognitive abilities, which in turn generate cognitive skills. He then links these individual processes to a cultural progression that begins with the sounds of the language, cultural invention of a system for representing those sounds, production of written discourse, and, finally, propagation. The convergence of the psychological and cultural lines produces culturally relevant cognitive skills. The short-term, individual, unmediated and long-term, cultural, mediated effects of literacy are thus brought within a single framework.

For various reasons, however, the set of concepts he proposed to avoid destructive dichotomies (individual/social, short-term/long-term, etc.) has not found the resonance that its well-motivated considerations deserve. First, Goody's use of the term *mediated/unmediated*, where *unmediated* refers to the short-term effects of literacy on the individual, while *mediated* refers to literacy's long-term, cumulative effects, is problematic because, in taking as given the claims Vygotsky (1987) made for literacy, it failed to distinguish adequately between the effects of literacy and that of schooling. Vygotsky clearly was wrong about the consequences of writing for thought processes; he confused the cultural practices of his time and place (where literacy and schooling were tightly combined) for those that obtain across history more generally such that literacy and schooling were virtually synonymous. The same can be said of Luria (1976) and Bruner (1966). That literacy and schooling co-occur and that modern schooling would not exist without literacy is certainly true, but as Scribner and Cole (1981) clearly demonstrated, literacy is not entirely subsumed by schooling or even the many forms of schooling that share similar technologies of writing and reading.

Second, in using the terms *mediated* and *unmediated*, Goody was adopting the language of cultural historical psychology but using these terms in a way that was at odds with actual cultural-historical theory. According to Vygotsky, all human thinking is mediated by culture, and he took the notion of cultural-historical psychology quite seriously, even if his methods were not sufficient to his theory. The time scale and social distribution of various practices is what is at issue here, not direct versus indirect effects. Psychological tests are cultural practices, and in some societies (such as the ones in which Goody and we have grown up) they are very widely distributed. They are also closely connected, historically, to schooling. To refer to the behaviors displayed in such practices as unmediated is to invite unsought mischief because according to cultural historical psychology all human thought processes are shaped by mediating tools that are themselves historically produced and situated.

Interestingly, what Goody does not discuss in his 1987 chapter is the solution of the general to specific and short-term to long-term problems offered by Scribner and Cole (1981). The two approaches are clearly similar to each other, with the exception that Scribner and Cole do not venture into specu-

lations about physiological processes and do not draw on historical data from other societies and other times.

Scribner and Cole (1981) offer what they refer to as a "practice account of literacy." By a practice they mean the following:

> a recurrent, goal-directed sequence of activities using a particular technology and particular systems of knowledge. We refer to the term "skills" to refer to the coordinated sets of actions involved in applying this knowledge in particular settings. ... All practices involve interrelated tasks that share common tools, knowledge base, and skills. ... Whether defined in broad or narrow terms, practice always refers to socially developed and patterned ways of using technology and knowledge to accomplish tasks. Conversely, tasks that individuals engage in constitute a social practice when they are directed to socially organized goals and make use of a shared technology and knowledge system. (p. 237)

They then provide a summary of their findings quite compatible with Goody's own. They note the many factors that limit the spread of literate practices among the Vai, citing the approach taken in *Literacy in Traditional Societies* as an important model for identifying both practices and the factors that do or do not disseminate them widely. In this connection they note that the generality of any particular cognitive consequence will depend on the generality of the practices of which it is a constituent as well as a consequence. They take some pains to distinguish what appear to be the same practices (e.g., writing a letter) when they are a part of different socially organized institutional systems of activities (e.g., writing to a relative about the death of a kinsperson vs. writing a letter to demonstrate mastery of the form to a teacher). Different skills are involved in these different practices, which each link to different configurations of practices, hence cognitive commonalities among them should be modest at most and restricted to rather microlevel junctures of skills, technologies, and goals. Scribner and Cole (1981) comment:

> If ... the topic of inquiry is the configuration of practices, cultural and psychological approaches do not stand in relation to each other as concern with different sets of phenomena. We have seen that Vai culture is *in* Vai literacy practices: in the writing system, the means used to transmit it, the functions it serves and contexts of use, and the ideologies which confer significance on these functions. But literacy activities are carried out by individuals, and our research has shown that psychological skills are also *in* Vai literacy practices: in properties of the writing system, in its method of acquisition, and its uses. ... we can look upon [the research] endeavor as a search for relationships among various sets of practices which can be analyzed in terms of both their cultural and psychological components. (p. 259)

Although Scribner and Cole (1981) were writing about a particular set of technologies relevant to literacy that mediate human activities, their general position that calls for the study of culture and mind by focusing on culturally situated practices is broadly applicable and one that we believe Goody might endorse and potentially make good use of.

Such a practice-based approach to the study of the relation of culture, history, and mind sets questions of cognitive functioning in their cultural and historical context and applies across a broad range of technologies, as Goody would wish it to. It extends, for example, not just to maps (an example Goody uses) but to memorial tombs and the practices of remembering that they mediate (J. Cole, 2001). Any specific occasion of the mediation of human activities by recourse to the involvement of memorial tombs is simultaneously a short-term event in which members of a clan are remembered and a whole cascade of longer term forms of remembering that begin with particular individuals who initiate the event, to the local kinship group they are affiliated with to the tribal group of which that kinship group is said to be a part to the history of that group's relationship to the nation-state and its tangled colonial history. In so far as a focus on practices requires one to understand the larger social and economic configurations in which a practice takes place, it provides a way of thinking about the relationship of culture and mind that attends both to the affordances of specific technologies and the wider social and economic context in which technologies are embedded. Moreover, by focusing on cultural practices as a unit of analysis, anthropologists and psychologists alike can escape from the widely used, mistaken view that culture and history can be treated as an antecedent variable to individual psychological functioning. Interpreted in this general way, the approach to cultural practices, situated within larger historical contexts as the unit of analysis for the study of culture and psychological processes, has quite general value as both a strategy of empirical research and a means of theorizing the difficult relationship between the social and individual processes.

A FINAL THOUGHT

It will come as no surprise to any reader of this chapter that interdisciplinary work that crosses such vast expanses as does the work of Jack Goody is fertile ground for misunderstanding. Goody quite rightly objects to having his ideas about the consequences/implications of literacy lumped together with those of Havelock, Bruner, Vygotsky, Luria, and others we have not taken the space to mention (after all, we left McLuhan out of our narrative!). It is understandable that he objects to the characterization of his views as "technological determinism." But, as we hope we have shown, both the scholarly and social contexts within which he developed his ideas invited such interpreta-

tions, and he himself contributed from time to time by using concepts and examples in ambiguous ways.

Herein lies an important caution. The social sciences were created to bring analytic rigor to the increasingly inchoate claims of people who had yet to distinguish anthropology, psychology, sociology, and so on. In their search for rigor, concepts that had common (if vague) meanings became more precise, but also more disjointed, allowing honest scholars to confuse and conflate ideas in new ways, an error hidden by the use of a common vocabulary, which now had a systematically different meaning depending on the discipline with which it is associated. It is the great virtue of Jack Goody's contribution to the human sciences that he has dared to cross those 20th-century boundaries and try to render whole again the complex web of human nature that the "advances" of 20th-century social sciences had torn asunder. We are in his debt for his efforts and accomplishments.

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