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One of the important services anthropology has traditionally provided the other social sciences is to challenge generalizations about human nature and the social order that are derived from studies of a single society. The comparative perspective is especially valuable when the topic of inquiry concerns psychological “consequences” of particular social practices, such as for example, different methods of child-rearing (permissive vs. restrictive) or schooling (formal vs. nonformal) or mass communication (oral vs. literate). It is surely a hazardous enterprise to attempt to establish causal relationships among selected aspects of social and individual functioning without taking into account the totality of social practice of which they are a part. How are we to determine whether effects on psychological functioning are attributable to the particular practices selected for study, or to other practices with which they co-vary, or to the unique patterning of practices in the given society? When we study seemingly “same” practices in different societal contexts, we can better tease apart the distinctive impact of such practices from other features of social life.

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impact of such practices from other features of social life.

Here we apply one such comparative approach to questions about reading and writing practices and their intellectual impact. Our approach combines anthropological field work with experimental psychological methods in a study of "literacy without schooling" in a West African traditional society. We hope our findings will suggest a new perspective from which to examine propositions about the intellectual and social significance of literacy whose uncertain status contributes to our educational dilemmas.

These dilemmas have been repeatedly stated. They revolve around implications for educational and social policy of reports that students' writing skills are deficient, and that there is a "writing crisis". Is this the case if so, is it really a matter for concern? Does it call for infusion of massive funds in new research studies and methods of instruction? Or is it merely a signal that we should adjust our educational goals to new "technologies of communication" which reduce the need for high levels of literacy skill? (See for example Macdonald, 1973)

These questions call for judgments on the social importance of writing and thus raise an even more fundamental issue: on what grounds are such judgments to be made? Some advocate that pragmatic considerations should prevail and that instructional programs should concentrate on teaching only those specific writing skills that are required for the civic and occupational activities student groups may be expected to pursue. Many educators respond that such a position is too narrow and that it overlooks the most important function of writing, the impetus that writing gives to intellectual development. The argument for the general intellectual importance of writing is sometimes expressed as accepted wisdom and sometimes as knowledge revealed through psychological research. At one end of the spectrum there is the simple adage that "An individual who writes clearly thinks clearly," and at the other, conclusions purporting to rest on scientific analysis, such as the recent statement that "the cognitive restructuring caused by reading and writing develop the higher reasoning processes involved in extended abstract thinking" (Farrell, 1977, p. 451).

This is essentially a psychological proposition and one which is increasingly moving to the forefront of discussion on the "writing problem." Our research speaks to several serious limitations in developing this proposition as a ground for educational and social

policy decisions. One of these is the frailty of the evidence for generalizations about the dependency of certain cognitive skills on writing, and the other is the restricted model of the writing process from which hypotheses about cognitive consequences tend to be generated. Before presenting our findings on Vai literacy, we shall briefly consider each of these in turn.

Speculations about cognitive consequences of literacy

What are the sources of support for statements about intellectual consequences of literacy? In recent decades, scholars in such disciplines as philology, comparative literature and anthropology have advanced the thesis that over the course of history, literacy has produced a "great divide" in human modes of thinking. Havelock (1963) brilliantly speculated that the advent of alphabetic writing systems and the spread of literacy in post-Homeric Greece changed the basic forms of human memory. Goody and Watt (1963) maintained that these same historic events laid the basis for the development of new categories of understanding and new logical operations, and in subsequent studies Goody (1977) has concluded that potentialities for graphic representation promote unique classificatory skills. Ong's (1958) historical analyses of prose literary genres in the fifteenth century led him to conclude that the invention of the printing press gave rise to a new form of intellectual inquiry uniquely related to the printed text.

Intriguing as these speculations are, their significance for a theory of psychological consequences for *individuals* in *our* society is problematic on two counts. These scholars derive evidence for cognitive effects of literacy from historical studies of cultural and social changes associated with the advent of widespread literacy. Inferences about cognitive changes in *individuals* are shaky if they rest only on the analysis of *cultural* phenomena. The inconclusiveness of the great debate between Levy-Bruhl and Franz Boas (see Cole and Scribner, 1974) on the "logicity of primitive thought" reminds us of the limitations of reliance on cultural data as sole testimony to psychological processes. Secondly we need to distinguish between historical and contemporaneous causation (see Lewin, 1936). The development of writing systems and the production of particular kinds of text may, indeed, have laid the basis *historically* for the emergence of new modes of intellectual

operation, but these over time, may have lost their connection with the written word. There is no necessary connection between the modality in which new operations come into being and the modality in which they are perpetuated and transmitted in later historical epochs. Forms of discourse initially confined to written text may subsequently come to be transmitted orally through teacher-pupil dialogue, for example, or through particular kinds of "talk" produced on television shows. One cannot leap to the conclusion that what was necessary historically is necessary in contemporaneous society. There is no basis for assuming, without further evidence, that the individual child, born into a society in which uses of literacy have been highly elaborated, must personally engage in writing operations in order to develop "literate modes of thought". That *may* be the case, but it requires proof, not simply extrapolation from cultural-historical studies.

While most psychologists have been interested in the psycholinguistic aspects of reading, some have concerned themselves with these theoretical conjectures on the cognitive consequences of writing. Vygotsky (1962) considered that writing involved a different set of psychological functions from oral speech. Greenfield (1968) has suggested that written language in the schools is the basis for the development of "context-independent abstract thought" — the distinguishing feature of school-related intellectual skills. Scribner (1968) speculated that mastery of a written language system might underlie formal "scientific" operations of the type Piaget has investigated. Olson (1975) argues that experience with written text may lead to a mode of thinking which derives generalizations about reality from purely linguistic, as contrasted to empirical, operations. In his view, schooling achieves importance precisely because it is an "instrument of literacy". "There is a form of human competence," he states, "uniquely associated with development of a high degree of literacy that takes years of schooling to develop" (p. 148).

These views, too, lack clear-cut empirical tests. Greenfield was extrapolating effects of written language from comparisons of schooled and unschooled child populations, but it is clear that such populations vary in many other ways besides knowledge of a written language system. Olson, to our knowledge, has developed his case from a theoretical analysis of the kind of inferential operations that the processing of written statements "necessarily" entails. Scribner employed the same method of procedure.

These are perfectly satisfactory *starting* points for a theory of the intellectual consequences of reading and writing but they do not warrant the status of conclusions. At a minimum, we would want evidence that the consequences claimed for literacy can be found in comparisons of literate and nonliterate adults living in the same social milieu whose material and social conditions of life do not differ in any systematic way.

We not only lack evidence for theoretical speculations about the relationship between writing and thinking, but in our opinion, the model of writing which underlies most psychological theorizing is too restricted to serve as a guide for the necessary research.

Some dominant conceptions of writing

Although all disciplines that concern themselves with writing acknowledge that it has different “functions”, these are often conceived as external to the writing act itself — that is the functions being served by writing are not seen as intrinsic to an analysis of component skills. In theory and in practice, writing is considered a unitary (although admittedly complex) phenomenon representing some given and fixed set of processes. These processes, it is assumed, can be ferretted out and analysed by the psychologist, linguist and educator without regard to their contexts of use. Writing, together with reading, are described as “abilities” which it is the task of education to enhance.

“The writing process” is typically identified with the production of written discourse or text. Non-textual uses of writing, such as the notational systems employed in mathematics and the sciences which also require complex symbol manipulation, are excluded from the domain of writing, along with other types of graphic representation which use non-linguistic elements (diagrams, codes, maps, for example).

In practice, a prototypical form of text underlies most analyses of the writing process.¹ This is the expository text or what Britton and his colleagues (Britton et al., 1975) characterize as transactional writing. Transactional writing is described as writing in which it is taken for granted that the writer means what he says and can be challenged for its truthfulness and its logicity: “. . . it is the typical language of science and intellectual inquiry . . . of planning, reporting, instructing, informing, advising, persuading,

arguing and theorising" (Martin et al, 1976, pp. 24, 25).

Models of the cognitive skills involved in writing are intimately tied up with this type of text. Thus, in making the claim that certain analytic and inferential operations are only possible on the basis of written text, Olson (1975) selects the analytic essay to represent the "congealed mental labor" represented in writing. Nonliterate and literate modes of thought are basically distinguished by their differential experience with the production and consumption of essayist text.

The development of writing skills is commonly pictured as a course of progression toward the production of expository text. Bereiter's (1977) suggested model, for example, rests on the assumption that there is a lawful sequence in the growth of writing competence and that this sequence progresses toward the production of a well-crafted story or a logically coherent discussion of a proposition. At the apex of progressively more complex structures of writing skills is epistemic writing — writing that carries the function of intellectual inquiry. (Similar views are expressed by Moffett, 1968.)

What is apparent from this somewhat caricature-like sketch is that most of our notions of what writing is about, the skills it entails and generates, are almost wholly tied up with school-based writing. Centrality of the expository text and well-crafted story in models of the writing process accurately reflects the emphasis in most school curricula. A recently completed study of secondary schools in England (Martin et al, 1976) found that writing classed as transactional (see definition above) constituted the bulk of written school work, increasing from 54 percent of childrens' writing in the first year to 84 percent in the last. Since such writing skills are both the aim of pedagogy and the enabling tools which sustain many of the educational tasks of the school, their preeminence in current research does not seem inappropriate. But we believe that near-exclusive preoccupation with school-based writing practices has some unfortunate consequences. The assumption that logicity is in the text and the text is in school can lead to a serious underestimation of the cognitive skills involved in non-school, non-essay writing, and, reciprocally, to an overestimation of the intellectual skills that the essayist test "necessarily" entails. This approach binds the intellectual and social significance of writing too closely to the image of the "academic" and the professional member of society, writ large. It tends to promote the notion that writing outside of the school is of

little importance and has no significant consequences for the individual. The writing crisis presents itself as purely a pedagogical problem — a problem located in the schools to be solved in the schools through the application of research and instructional techniques. What is missing in this picture is any detailed knowledge of the role and functions of writing outside of school, the aspirations and values which sustain it, and the intellectual skills it demands and fosters. As our study of literacy among the Vai indicates, these facts are central to an evaluation of the intellectual and social significance of writing.

Three literacies among the Vai

The Vai, a Mande-speaking people of northwestern Liberia, like their neighbours, practice slash-and-burn rice farming using simple iron tools, but they have attained a special place in world history as one of the few cultures to have independently invented a phonetic writing system (Dalby, 1967; Gelb, 1952; Koelle, 1854). Remarkably, this script, a syllabary of 200 characters with a common core of 20-40, has remained in active use for a century and a half within the context of traditional rural life and in coexistence with two universalistic and institutionally powerful scripts — the Arabic and Roman alphabets. Widely available to all members of the society (though in practice confined to men), Vai script is transmitted outside of any institutional setting and without the formation of a professional teacher group.

The fact that literacy is acquired in this society without formal schooling and that literates and non-literates share common material and social conditions allows for a more direct test of the relationship between literacy and thinking than is possible in our own society. Among the Vai we could make direct comparisons of the performance on cognitive tasks of reasonably well-matched groups of literate and non-literate adults. To do so, however, required us from the outset to engage in an ethnographic enterprise not often undertaken with respect to literacy — the study of literacy as acquired and practised in the society at large. Our effort to specify exactly what it is about reading and writing that might have intellectual consequences and to characterize these consequences in observable and measurable ways forced us away from reliance on vague generalizations. We found ourselves seeking more detailed

and more concrete answers to questions about *how* Vai people acquire literacy skills, *what* these skills are, and *what* they do with them. Increasingly we found ourselves turning to the information we had obtained about actual literacy practices to generate hypotheses about cognitive consequences.

From this work has emerged a complex picture of the wide range of activities glossed by the term “writing”, the varieties of skills these activities entail and the specificity of their cognitive consequences.

What writing “is” among the Vai

Our information about Vai literacy practices comes from a number of sources: interviews with some 700 adult men and women, in which anyone literate in one of the scripts was questioned extensively on how he had learned the script and what uses he made of it; ethnographic studies of literacy in two rural towns;² observations and records of Vai script teaching sessions and Qur’anic schools; analyses of Vai script and Arabic documents as they relate to Vai social institutions (see Goody, Cole and Scribner, 1977).

We estimate that 30 percent of the adult male population is literate in one of the three scripts, the majority of these in the indigenous Vai script, the next largest group in Arabic and the smallest in English. There is a substantial number (20%) of literate men who read and write both Vai and Arabic and a small number of trilitrates. Since each script involves a different orthography, completion of a different course of instruction and, in the case of Arabic and English, use of a foreign language, multiliteracy is a significant accomplishment.³

As in other multiliterate societies, functions of literacy tend to be distributed in regularly patterned ways across the scripts, bringing more clearly into prominence their distinctive forms of social organization, and transmission and function. In a gross way, we can characterize the major divisions among the scripts in Vai life as follows: English is the official script of political and economic institutions operating on a national scale; Arabic is the script of religious practice and learning; Vai script serves the bulk of personal and public needs in the villages for information preservation and communication between individuals living in different locales.

In daily practice these distinctions are often blurred, raising a host of interesting questions about the personal and situational factors which may influence the allocation of literacy work to one or another script.

English script has least visibility and least impact in the countryside. It is learned exclusively in Western-type government and mission schools, located for the most part outside of Vai country. Students leave home to pursue their education and to win their place in the "modern sector". Little is seen of English texts in the villages, but paramount chiefs and some clan chiefs retain clerks to record court matters in English, and to maintain official correspondence with administrative and political functionaries.

Arabic writing, on the other hand, is an organic part of village life. Almost every town of any size has a Qur'anic school conducted by a learned Muslim (often the chief or other leading citizen). These are usually "schools without walls" — groups of boys ranging in age from approximately 4 years to 24, who meet around the fire twice a day for several hours of recitation and memorization of Qur'anic verses which are written on boards that each child holds. (Qur'anic teaching in West Africa is described in Wilks, 1968). In Islamic tradition, committing the Qur'an to memory (internalizing it in literal form) is a holy act, and the student's progress through the text is marked at fixed intervals by religious observances and feasting. Initially, learning can only proceed by "rote memorization" since the students can neither decode the written passages nor understand the sounds they produce. But students who persevere learn to read (that is, sing out) the text and to write out passages — still with no understanding of the language. Some few who complete the Qur'an go on to advanced study under tutorship arrangements, learning Arabic as a language and studying Islamic religious, legal and other texts. In Vai country, there are a handful of outstanding scholars with extensive Arabic libraries who teach, study and engage in textual commentary, exegesis and disputation. Thus Arabic literacy can relate individuals to text on both the "lowest" (repetition without comprehension) and "highest" (analysis of textual meaning) levels. Arabic script is used in a variety of "magico-religious" practices, its secular uses include correspondence, personal journal notes and occasionally trade records. The overwhelming majority of individuals with Qur'anic training, however, do not achieve understanding of the language and their literacy activities are restricted to reading or writing

out known passages of the Qur'an or frequently used prayers, a service performed for others as well as for oneself.

Approximately 90 percent of Vai are Muslim and, accordingly, Qur'anic knowledge qualifies an individual for varied roles in the community. Becoming literate in the Arabic language means becoming integrated into a close-knit but territorially extended social network, which fuses religious ideals, fraternal self-help, trade and economic relationships with opportunities for continuing education (see Wilks, 1968).

Knowledge of Vai script might be characterized as "literacy without education". It is typically learned within a two week to two month period with the help of a friend, relative or citizen who agrees to act as teacher. Learning consists of committing the characters to memory and practice in reading, first lists of names, later personal letters written in the Vai script. Demonstration of the ability to write a letter without errors is a common terminating point for instruction. With rare exceptions, there are no teaching materials except such letters or other written material as the teacher may have in his personal possession. "Completion of lessons" is not the endpoint of learning: there are frequent consultations between ex-student and teacher. For the practised scribe as well as the novice, literacy activities often take a cooperative form (e.g. A goes to B to ask about characters he cannot make out) and sometimes a contentious one (e.g. A and B dispute whether a given character is correct or in error).

Vai script uses are overwhelmingly secular. It serves the two classical functions of writing: memory (preserving information over time) and communication (transmitting it over space) in both personal and public affairs, with a heavy emphasis on the personal.⁴

From an analytic point of view, focusing on component skills, it is useful to classify script functions according to whether or not writing involves the production of text or non-text materials. Non-textual uses range from very simple activities to complex record-keeping. Among the simple activities are the uses of individual written characters as labels or marking devices (e.g., marking chairs lent for a public meeting with the names of owners, identifying one's house, clarifying information displayed in technical plans and diagrams).⁵ Record-keeping, most typically a list-making activity, fulfills both social cohesion and economic functions. Lists of dowry items and death feast contributions,

family albums of births, deaths, marriages — all help to regulate the kinship system of reciprocal rights and obligations. Lists enlarge the scope and planful aspects of commercial transactions: these include records of yield and income from cash-crop farming, proceeds netted in marketing, artisan records of customer orders and payments received.

A mere “listing of lists”, however, fails to convey the great variation in levels of systematicity, organization and completeness displayed in records. Some are barely decipherable series of names; others orderly columns and rows of several classes of information. Some genealogies consist of single-item entries scattered throughout copy books, others of sequential statements which shade off into narrative-like texts.

The more expert Vai literates keep public records from time to time when asked to do so. These are less likely to be continuing series than single list assignments: house tax payments for the current year, work contributions to an ongoing public project such as road- or bridge-building, a population headcount and the like.

Personal correspondence is the principal textual use of the script. Letter-writing is a ubiquitous activity which has evolved certain distinctive stylistic devices, such as conventional forms of salutation and signature. It is not uncommon to see letters passed from hand to hand in one small town, and many people who are not personally literate participate in this form of exchange through the services of scribes. Since Vai society like other traditional cultures developed and still maintains an effective system of oral contact and communication by message and “grapevine”, reasons for the popularity of letter-writing are not self-evident, especially since all letters must be personally sent and hand-delivered. Protection of secrets and guarantee of delivery are among the advantages most frequently advanced in favour of letters rather than word-of-mouth communication.

For all its popularity, letter-writing is circumscribed in ways which simplify its cognitive demands: a majority of Vai literates correspond only with persons already known to them (78 percent of literates interviewed in our sample study reported they had never written to nor received a letter from a stranger). Many factors undoubtedly contribute to this phenomenon, among which the non-standardized and often idiosyncratic versions of script characters must figure prominently, but it is significant for hypotheses about intellectual skills that written communication

among the Vai draws heavily upon shared background information against which the “figural” news is exchanged.

What about other texts? The first thing to note is that all textual material is held in private; texts are rarely circulated to be read, though on occasion and under special circumstances they might be made available for copying. Thus the relationship of Vai script literates to text is primarily as producer or writer, seldom as reader on non auto-authored work. This social arrangement has several important consequences. One is that reading is not an activity involving assimilation of novel knowledge or material; another is that existing texts reflect what people choose to write about, depending on their own interests and concepts of what writing is “for”. Many texts are of a cumulative nature — that is, they are not set pieces, but rather comprise “journals” or “notebooks”. Each such “book” might contain a variety of entries, some autobiographic (personal events, dreams), other impersonal and factual (facts of town history, for example). While not read as continuous texts, such materials are often used as important source books or data records and depending on their scope and age, may serve as archives.⁶

Some texts fit recognizable, in terms of Western literacy, genres. There are histories, for example, fables, books of maxims, parables, and advice. In at least one instance, we have been able to obtain a set of documents of a Muslim self-help organization which included a Vai-script written constitution and bylaws (see Goody, Cole and Scribner, 1977). As in the case of lists, the range of skills reflected in texts is broad: “histories” may be a collection of what were originally notes on scattered sheets of paper, assembled under one cover with no apparent chronological or other ordering; at the other extreme they might be well-organized and fluent narrations of a clan history or ambitious accounts of the origin and migration of the Vai people as a whole. While we do not know the relationship between written and oral history and narrative, and thus cannot determine whether written works are continuous or discontinuous with respect to the oral tradition, there clearly are individual texts which bear the stamp of creative literary and intellectual work. But it must be added that texts of this nature are the exception; most histories are brief, often fragmentary and written stories rare discoveries.

There are two types of text rarely found so far; Britton’s (1975) two polar types — the poetic, concerned with exploring personal

experiences and feelings, and the transactional or expository, basically concerned with examining ideas or presenting a persuasive argument.

Vai script literates are known in the community and admired for their knowledge of books. Motivations sustaining script use are not restricted to pragmatic ones; individuals will cite its utilitarian value for correspondence, records and "secrets" but will as often speak about the importance of the "book" for self-education and knowledge and for preserving the history and reputation of the Vai people. To be looked upon with respect and to be remembered in history are important incentives to many Vai journal-writers.

It is apparent from this quick review that Vai people have developed highly diversified uses for writing and that personal values, pride of culture, hopes of gain — a host of pragmatic, ideological and intellectual factors — sustain popular literacy. The level of literacy that obtains among the Vai must, however, on balance be considered severely restricted. Except for the few Arabic scholars or secondary school English students, literacy does not lead to learning of new knowledge nor involve individuals in new methods of inquiry. Basic processes of production, trade and education are little affected by the written word.

Effects of literacy

Should we conclude that these restrictions disqualify indigenous Vai literacy as "real literacy?" It clearly has social consequences for its practitioners and (we hypothesized) might have identifiable cognitive consequences as well. It seemed unlikely, however, that it would have the very general intellectual consequences which are presumed to be the result of high levels of school based literacy.

Nonetheless, this possibility was explored as part of our major survey of Vai adults at the outset of the project. In fact, we found no evidence of marked differences in performance on logical and classificatory tasks between non-schooled literates and non-literates. Consequently, we adopted a strategy of making a functional analysis of literacy. We examined activities engaged in by those knowing each of the indigenous scripts to determine some of the component skills involved. On the basis of these analyses, we designed tasks with different content but with hypothetically similar skills to determine if prior practice in learning and use of the script enhanced performance.

Communication skills

Since letter-writing is the most common use to which Vai script is put, it is reasonable to look here for specific intellectual consequences. In the psychological literature, written communication is considered to impose cognitive demands not encountered in face-to-face oral communication. In writing, meaning is carried entirely by the text. An effective written communication requires sensitivity to the informational needs of the reader and skill in use of elaborative linguistic techniques. We believed it reasonable to suppose that Vai literates' experience in writing and receiving letters should contribute to the development of these communicational skills. To test this proposition, we adapted a communication task used in developmental research (Flavell, 1968). With little verbal explanation, subjects were taught to play a simple board game and then were asked to explain the game without the board present to someone unfamiliar with it.

We compared a full range of literate and non-literate groups, including junior high and high school students, under several conditions of play. Results were quite orderly. On several indices of amount of information provided in an explanation, groups consistently ranked as follows: high school students, Vai literates, Arabic literates, and non-literates. Vai literates, more often than other non-student groups, provided a general characterization of the game before launching into a detailed account of rules of play. If there is anything to the notion that what is acquired in a particular literacy is closely related to practice of *that* literacy, the differential between Vai and Arabic literates is exactly what we would expect to find: on the average, Vai literates engage in letter-writing more frequently than Arabic literates. It is interesting, too, that both Vai and Arabic letter-writing groups were superior to all non-literate groups.

Memory

We were also able to show specific consequences of Qur'anic learning. Regardless of what level of literacy they attain, all Arabic literates begin by learning to recite passages of the Qur'an by heart, and some spend many years in the process. Learning by memorization might promote efficient techniques for learning to

memorize. To test this possibility, we employed a verbal learning task (Mandler, 1969) involving processes that our observations indicated matched those in Qur'anic memorization. In this task, a single item is presented on the first trial and a new item is added on each succeeding trial for a total of 16 trials and 16 items. The subject is required to recall the words in the order presented. Our comparison groups were the same as those used in the communication experiment. English students again ranked first, but in this task, Arabic literates were superior to Vai literates as well as to non-literates in both amount recalled and in preservation of serial order. If this superiority were simply the manifestation of "better general memory abilities" on the part of Qur'anic scholars, we would expect Arabic literates to do better in *all* memory tasks, but this was not the case. When the requirement was to remember and repeat a story, Qur'anic students did no better, and no worse, than other groups. When the requirement was to remember a list of words under free recall conditions, there were no significant performance differentials. Superiority of Arabic literates was specific to the memory paradigm which shadowed the learning requirements of Qur'anic school.

Language analysis

In a third domain, we were again able to demonstrate the superiority of Vai literates. Vai script is written without word division, so that reading a text requires as a first step the analysis of separate characters followed by their integration into meaningful linguistic units. Our observations of Vai literates "decoding" letters suggested that this process of constructing meaning was carried out by a reiterative routine of sounding out characters until they "clicked" into meaningful units. We supposed that this experience would foster skills in auditory perception of semantically meaningful but deformed (i.e. slowed down) utterances. Materials consisted of tape recordings in which a native speaker of Vai read meaningful Vai sentences syllable by syllable at a two-second rate. The task was to listen and to repeat the sentence as well as to answer a comprehension question about it. Vai literates were better at comprehending and repeating the sentence than Arabic literates and non-literates; and Vai literates with advanced skills performed at higher levels than Vai literates with

elementary skills. Comparisons of performance on repetition of sentences in which words, not syllables, were the units showed no differences among literate groups but a sizeable one between all literate and non-literate populations. The comparison of the two tasks isolates skill in syllable integration as a specific Vai script related skill.

Taken as a group, these three sets of studies provide the strongest experimental evidence to date that activities involved in reading and writing may in fact promote specific language-processing and cognitive skills.

Implications

Our research among the Vai indicates that, even in a society whose primary productive and cultural activities continue to be based on oral communication, writing serves a wide variety of social functions. Some of the pragmatic functions we have described are by no means trivial, either in indigenous terms or in terms of the concerns in economically developed countries for the promotion of “functional literacy” skills. Vai literates routinely carry out a variety of tasks using their script which are carried out no better (and perhaps worse) by their English-educated peers who have completed a costly twelve year course of school study. The record keeping activities which we described briefly in earlier sections of this paper provide the communities within which the literates live with an effective means of local administration. The fact that court cases were once recorded in the script and that religious texts are often translated into Vai as a means of religious indoctrination suggest that uses of writing for institutional purposes are fully within the grasp of uneducated, but literate, Vai people.

While the bulk of activities with the Vai script may be characterized in these pragmatic terms, evidence of scholarly and literary uses, even rudimentary ones, suggest that non-schooled literates are concerned with more than the “immediate personal gain” aspects of literacy. We could not understand in such narrowly pragmatic terms the effort of some Vai literates to write clan histories and record famous tales nor the ideological motivations and values sustaining long years of Qur’anic learning.

Of course we cannot extrapolate from Vai society to our own, but it is reasonable to suppose that there is at least as wide a range

of individual aspirations and social practices capable of sustaining a variety of writing activities in our own society as among the Vai. Since our social order is so organized that access to better-paying jobs and leadership positions commonly requires writing skills, there are even more powerful economic and political incentives at work to encourage interest. It seems premature to conclude that only schools and teachers are concerned with writing and that writing would perish in this era of television if not artificially kept alive in academic settings.

An alternative possibility is that institutionalized learning programs have thus far failed to tap the wide range of "indigenous" interests and practices which confer significance on writing. Ethnographic studies of writing in different communities and social contexts — in religious, political and fraternal groups — might help broaden existing perspectives.

Our research also highlights the fact that the kind of writing that goes on in school has a very special status. It generates products that meet teacher demands and academic requirements but may not fulfill any other immediate instrumental ends. Is this an unavoidable feature of writing instruction?

When we look upon school-based writing within the context of popular uses of writing found among the Vai, we are also impressed by what appears to be the unique features of the expository or essay type text. In what non-school settings are such texts required and produced in our own society? Although developmental models of writing place such texts at the "highest stage" of writing ability, we find it difficult to order different types of texts and writing functions to stages of development. Our evidence indicates that social organization creates the conditions for a variety of literacy activities, and that different types of text reflect different social practices. With respect to *adult* literacy, a functional approach appears more appropriate than a developmental one. The loose generalization of developmental models developed for work with children to instructional programs with adolescents and adults is certainly questionable.

With respect to intellectual consequences, we have been able to demonstrate that literacy-without-schooling is associated with improved performance on certain cognitive tasks. This is certainly important evidence that literacy does "count" in intellectual terms, and it is especially important in suggesting *how* it counts. The consequences of literacy that we identified are all highly specific and

closely tied to actual practices with particular scripts; learning the Qur'an improved skills on a specific type of memory task, writing Vai script letters improved skills in a particular communication task. Vai literates and Arabic literates showed different patterns of skills, and neither duplicated the performance of those who had obtained literacy through attendance at Western-type English schools.

The consequences we were able to identify are constrained by the type of practices common in Vai society. We did not find, for example, that performance on classification tasks and logic problems was affected by non-school literacy. This outcome suggests that speculations that such skills are the "inevitable outcome" of learning to use alphabetic scripts or write any kind of text are overstated. Our evidence leaves open the question of whether conceptual or logical skills are promoted by experience with expository text; in fact if our argument that specific uses promote specific skills is valid, we should expect to find certain skills related to practice in written exposition. The challenging question is how to identify these without reintroducing the confounding influence of schooling.

Perhaps the most challenging question of all, is how to balance appreciation for the special skills involved in writing with an appreciation of the fact that there is no evidence that writing promotes "general mental abilities". We did not find superior "memory in general" among Qur'anic students nor better language integration skills "in general" among Vai literates. Moreover, improvements in performance that appear to be associated with literacy were thus far only observed in contrived experimental settings. Their applicability to other domains is uncertain. We do not know on the basis of any controlled observation whether more effective handling of an experimental communication task, for example, signifies greater communication skills in non-experimental situations. Are Vai literates better at communicating anything to anybody under any circumstances than Arabic literates or non-literates? We doubt that to be the case, just as we doubt that Qur'anic learning leads to superior memory of all kinds in all kinds of situations. There is nothing in our findings that would lead us to speak of cognitive consequences of literacy with the notion in mind that such consequences affect intellectual performance in all tasks to which the human mind is put. Nothing in our data would support the statement quoted earlier that reading and writing entail

fundamental "cognitive restructurings" that control intellectual performance in all domains. Quite the contrary: the very specificity of the effects suggests that they may be closely tied to performance parameters of a limited set of tasks, although as of now we have no theoretical scheme for specifying such parameters. This outcome suggests that the metaphor of a "great divide" may not be appropriate for specifying differences among literates and non-literates under contemporary conditions.

The monolithic model of what writing is and what it leads to, described at the beginning of this paper, appears in the light of comparative data to fail to give full justice to the multiplicity of values, uses and consequences which characterize writing as social practice.

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Notes

1. The narrative text is also a common prototype, but we are leaving aside for the time being approaches to creative writing which have largely been initiated and developed outside the public school system.

2. These were carried out by Michael R. Smith, an anthropologist from Cambridge University.

3. Because this phenomenon is rarely encountered in our own culture, we tend to peg our "basic skills models" of writing very closely to the particular characteristics and structure of a single orthographic system and assumptions of pre-writing fluency in the language represented. As Fishman (1975) suggests this was the case with bilingualism, studies of multiscrypt-using communities might well enlarge the framework in which basic research on literacy is conducted. For accounts of other non-industrial societies with a number of simultaneously active scripts, see Gough (1968); Tambiah (1968); Wilder (1972). Schofield (1968) reminds us that between the 16th and 19th centuries in England, early instruction in reading and writing was conducted with texts in English while higher education was conducted in classical Latin.

4. Public functions of Vai script appear to be declining as English becomes mandatory for administrative and judicial matters.

5. Gelb (1952) presents an interesting argument that social origins of non-pictorial writing systems are to be found in the use of individualized symbols as brands of ownership.

6. It is reported (Scribner, field notes) that an entire Vai community in Monrovia was able to retain its right to disputed land because an elderly kinsman had recorded in his book the names of the original deed-holders.

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