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Volume 2 of *Studies in Cross-Cultural Psychology* is another volume primarily for the specialist. It contains eight serious and very competent papers on cognitive styles, perceptual organization, development and socialization in Israel, ecological analyses, everyday concepts of intelligence, achievement motivation, informal modes of learning and teaching in Zinacanteco, and major psychological factors influencing Japanese interpersonal relations. As part of a continuing series, it seems to be precisely what it ought to be and sets a high standard for subsequent volumes. I found the papers on Israel and Zinacanteco to be of particular interest, but the volume as a whole is highly recommended.

As an anthropologist with psychological interests, I naturally found all of these works meritorious, and I am, in general, impressed with the quality of recent cross-cultural psychology. But I am puzzled indeed over the seeming lack of interest on the part of the psychological establishment as well as over the distance that still separates cross-cultural psychologists from anthropologists. If we were to accept "psychocultural studies" as the term for the blending of cross-cultural psychology with psychological anthropology, we would have to conclude that such a merger is still some time in the future.

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On Savages and Other Children


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Hallpike, moved by the spirit of developmentalism, rushes in where even Piaget feared to tread. Where Piaget feared to tread was on the distinction between the study of collective representations and the study of individual thought processes. Hallpike has no such compunction. *The Foundations of Primitive Thought* is dedicated to the principle that "the collective representations of a society" must "reflect" the "level of cognitive development of the great majority of the adult members of that society" (p. 32), and that the collective representations of illiterate, unschooled, rural peoples are expressions of preoperational thought processes characteristic of two- to seven-year-old Western children, as described by Piaget.

Piaget's account of the ontogenesis of thought is probably familiar to many readers. Basically, Piaget (not unlike Tylor and Frazer) viewed the mind of the child as intendedly scientific. According to Piaget, the child strives to figure out what causes what in the world, strives to adapt or accommodate intelligence to the demands of reality, strives for consistency among ideas, and strives to build up or "construct" a set of canons (e.g., the propositional calculus, the principles of experimental reasoning, the rules of statistical inference) for regulating its own thought and deciding whether its own thinking is successful or unsuccessful. Piaget viewed these canons of thought as the product of "in-
dividual invention," as if each generation, indeed each individual, reconstructed the rules of thought anew; and, the mind of the child was viewed by Piaget as the "yet un
finished product" of a progressive stagelike process of "self-construction." Focusing on
the ontogenetic development of the individual mind, Piaget traced the history of this pro-
cess through four major stages of self-construction and auto-regulation (the sensori-
motor, preoperational, concrete operational, and formal operational stages). At each
stage new mental structures were said to emerge (e.g., the concept of an object, the idea
of reversibility and transitivity) and the child was said to progress from early unselfcon-
scious, concrete, undifferentiated, egocentric, context-bound thinking to later self-
reflective, abstract, differentiated, objective ("decentered") generalized thinking. Thus,
for example, the preoperational four year old was supposed to lack requisite mental
structures for constructing the perspective of others, as in the following dialogue with a
four year old: "Do you have a brother?" "Yes." "What's his name?" "Jim." "Does Jim have
a brother?" "No." (Wason 1969).

Piaget honored the distinction between collective representations and individual
thought processes. When challenged with Lévi-Strauss' analyses of kinship systems Piaget
decided to draw any inferences about the mental structures of non-Western peoples
(1970:116–117). Noting that "the way termites construct their nest does not give unequiv-
ocal information about their geometrical behavior in other situations," Piaget
argued that "the logic or pre-logic of the members of a given society cannot be adequate-
ly gauged by already crystallized cultural products . . ." (1970:117). Granting that kin-
ship systems bear witness to an advanced logic, and that "plenty of natives can 'calculate'
the implicit relations of a kinship system exactly," Piaget drew a sharp distinction be-
tween the "already regulated" "finished systems" studied by Lévi-Strauss and the kinds of
mental structures he wished to study (1970:116–117). As Piaget put it, "kinship systems . . . are not the products of individual invention (Tylor's 'primitive
philosopher'); it is long-term collective elaboration that has made them possible. They
depend, therefore, as do linguistic structures, whose power likewise surpasses the
resources of individuals, on institutions . . . what we want to know about is individual in-
ventions " (1970:117).

Hallpike, in contrast, collapses the distinction between collective representations and
individual thought processes. He advocates a 50% rule which states "the mastery of a
conceptual problem must be far above the 50-percent level in adults if a notion is to be
incorporated into the collective representations of a society" (p. 61). He then notes that il-
literate, unschooled, rural people often perform rather badly on Piagetian tests. Indeed,
judging from the test results alone, Australian Aborigine adults (for example) perform as
though they lack the concept "reversibility" and believe that the amount of milk in a
short, fat bowl becomes greater when poured into a tall, thin storage container. Hallpike
takes the results seriously—they are interpreted as valid indicators of the operational level
(in this case, preoperational level) of, for example, Aborigine adults.

Hallpike also analyzes "primitive" collective representations in a variety of domains.
He examines ideas about causality, time, space, number, classification, dreams, and the
magical power of words. He notes the similarity between the structure of these collective
representations and the mental structures of two- to seven-year-old Western children, as
described in the orthodox Piagetian literature. For example, both primitives and young
children are said to be "conceptual realists," ascribing objectivity to their dreams and
refusing to grant that the name of a thing is detachable from the thing itself. Reiterating
the 50% rule, Hallpike argues that the collective representations of most non-Western
traditional peoples "do not seem to require even operatory thought" (p. 81). He goes on
to characterize the preoperational thinking of "primitive" peoples and the impoverished
environment responsible for their intellectual retardation.
The preoperational thinking of primitive peoples is described in classical developmental terms. The mental structures available to both the two- to seven-year old Western child and the primitive adult are said to be simple (versus complex), incomplete (versus complete), inconsistent (versus consistent), concrete (versus abstract), inexplicit (versus explicit), context-bound (versus context-free), egocentric (versus objective), particularizing (versus generalizing), personal (versus impersonal), complexive and associative (versus taxonomic), percept-driven (versus concept-driven), functional (versus taxonomic), temporal (versus logical), animistic (versus causal), purposeless (versus utilitarian), restricted (versus elaborated), undifferentiated (versus differentiated), tacit (versus reflective), and so forth. Primitive thought is said to be affective in tone, concrete in its imagery, infused with moral and symbolic value, and incomunicable to outsiders. Primitive peoples are said to be unaware of any viewpoint but their own, incapable of distinguishing between the logical and narrative structure of a story, unable to differentiate a word or name from its referent, unaware of the distinction between what's subjective and what's objective. Perhaps every parameter of thought ever used to distinguish the mind of the child from the mind of the adult gets put into one package and mapped onto the distinction between the mind of the primitive and the mind of the modern.

Who is the primitive? According to Hallpike, preoperational thinking characterizes people who are illiterate, unschooled, and rural. Adopting a position popular among some developmental psychologists in the late 1960s (e.g., Jerome Bruner), Hallpike argues that certain types of sociophysical environments stimulate cognitive growth. An environmental “deficit theory” is advanced. What primitive environments lack is the written word, the Western school, the city, and technology. In primitive environments there is too much reliance on the wrong attitudes towards questioning and dispute (“‘Shut up! my father explained” as Ring Lardner would have put it) and the wrong methods of teaching (observational learning in context versus explicit verbal instruction out of context). There is too much pressure toward obedience and conformity. There is too little individualism and expression of personal views. There is too much emphasis on status instead of contract. There is too little respect for efficiency and rational planning. Consequently, mental structures do not develop beyond the preoperational level.

Hallpike has many dislikes which are in fact Piaget's dislikes. He does not like universalists or relativists. He does not like innatists or learning theorists. From Hallpike's developmental perspective, the villains of anthropology are Lévi-Strauss, Durkheim, Whorf, and Leach. Each is an object of scorn.

Hallpike embraces Piaget's view that mental structures are individual inventions that undergo continual and progressive self-construction. Hallpike argues that adults in some societies, stimulated by literacy (etc.), push themselves further along the path of progressive self-construction. Thus, he is led, on the one hand, to attack Lévi-Strauss's universalist view that the mental structures characteristic of operational thought are equally available across populations and that all possible mental structures are already there in the mind of the young child. On the other hand he is led to attack Durkheim, Whorf, and Leach for their relativist view that thought is not an individual invention but rather the product of collective representations (including language). With a tone of arrogance and hostility that runs through much of the book Hallpike castigates Whorf's and Leach's view that reality presents itself as a “kaleidoscopic flux” or continuum, and that language and culture have a decisive influence on how we categorize the world. “It's all very well for Leach to 'postulate' that the young child perceives the world as a continuum, but how does he know? The answer is that he does not, but like so many anthropologists and philosophers, prefers to base his theories on his own home grown speculations rather than finding out from experimental psychologists what the facts of the matter really are” (p. 69). (A sophisticated and, to my mind, adequate, defense of Whorf's view that reality
ULTIMATELY, ANTHROPOLOGY IS THE VILLAIN. DECRYING THE RELATIVE LACK OF ATTENTION TO DEVELOPMENTAL PSYCHOLOGY IN THE ANTHROPOLOGICAL LITERATURE (P. 6), HALLPIKE EXALTS DEVELOPMENTALISTS (ESPECIALLY PIAGET) IN TERMS THAT WOULD SURPRISE MANY HARD-NOSED EXPERIMENTAL PSYCHOLOGISTS: "THE CONCEPTS AND GENERAL MODEL OF LEARNING AND THINKING PROVIDED BY DEVELOPMENTAL PSYCHOLOGY ARE FAR MORE PRECISE, THEORETICALLY COHERENT, AND SOUNDLY BASED IN EMPIRICAL RESEARCH THAN THE VAGUE AND CONFUSED NOTIONS HITHERTO EMPLOYED BY ANTHROPOLOGISTS AND PHILOSOPHERS . . . " (P. 32).


THE IDEA THAT CHILDREN OR ADULTS ARE CHARACTERISTICALLY PREOPERATIONAL (OR CONCRETE OPERATIONAL, OR FORMAL OPERATIONAL) HAS TAKEN A BEATING IN RECENT YEARS. IF WE EXAMINE THE ACTUAL COGNITIVE FUNCTIONING OF INDIVIDUALS ACROSS A SERIES OF TASKS OR PROBLEMS, WE DISCOVER THAT NO SINGLE OPERATIONAL LEVEL IS A GENERAL PROPERTY OF AN INDIVIDUAL'S THOUGHT. CHILDREN AND ADULTS OFTEN DO NOT APPLY THE SAME MODE OF REASONING (E.G., REVERSIBILITY) TO FORMALLY EQUIVALENT PROBLEMS (E.G., A CONSERVATION TASK) WHICH DIFFER IN CONTENT OR SURFACE CHARACTERISTICS (E.G., CONSERVATION OF NUMBER VERSUS CONSERVATION OF LIQUID QUANTITY—SEE SIEGLER 1981). BY VARYING THE CONTENT OF A TASK IT IS POSSIBLE TO ELICIT EITHER PREOPERATIONAL THINKING FROM A COLLEGE-EDUCATED ADULT (WASON 1969; WASON AND JOHNSON-LAIRD 1972) OR FORMAL OPERATIONAL THINKING FROM A FOUR-YEAR-OLD (MACNAMARA, BAKER, AND OLSON 1976). THE PERSON WHO FUNCTIONS AT A FORMAL OPERATIONAL LEVEL ON ONE TASK IS NOT TYPICALLY THE SAME PERSON WHO FUNCTIONS AT A FORMAL OPERATIONAL LEVEL ON A SECOND TASK (ROBERGE AND FLEXER 1979). INDEED, TO CITE BUT ONE EXAMPLE, ROBERGE AND FLEXER (1979) DISCOVERED THAT PERFORMANCE ON FORMAL OPERATIONAL TESTS FOR PROPOSITIONAL LOGIC AND COMBINATORIAL THINKING INTERCORRELATE A MERE —0.07 (FOR EIGHTH GRADERS) AND .17 (FOR ADULTS). THEY ARE NOT ALONE IN THEIR CONCLUSION (P. 482) THAT

IF, AS PIAGET AND OTHERS HYPOTHESIZE, FORMAL OPERATIONAL THINKING REFLECTS AN ORGANIZED STRUCTURE OF SECOND-ORDER OPERATIONS, ONE WOULD EXPECT TO FIND A BASIC CONSISTENCY IN PERFORMANCE ACROSS TASKS, PARTICULARLY FOR GROUPS OF SUBJECTS WHO WERE PRESUMABLY WELL-ESTABLISHED IN THE FORMAL OPERATIONAL STAGE. HOWEVER THE MINIMAL ASSOCIATION BETWEEN SCORES ON THE TESTS . . . PROVIDES LITTLE EVIDENCE OF THE FUNCTIONAL INTERDEPENDENCE AMONG THESE LOGICAL OPERATIONS THAT IS CLAIMED BY PROONENTS OF THE STRUCTURAL WHOLE (STRUCTURED ENSEMBLE) MODEL OF FORMAL OPERATIONS. [1979:482]


A SECOND DIFFICULTY FOR HALLPIKE IS THAT PIAGET SEEMS TO HAVE SERIOUSLY UNDERESTIMATED THE OPERATIONAL CAPACITY OF PRELITERATE, PRESCHOOL WESTERN CHILDREN (TWO TO SIX YEAR OLDS). TWO YEAR OLDS ARE CAPABLE OF TAKING THE PERSPECTIVE OF ANOTHER (LEMPERS, FLAVELL, AND FLAVELL 1977; ALSO SEE SHATZ AND GELMAN 1973 ON PERSPECTIVE TAKING IN FOUR YEAR OLDS) AND
detecting categorical structure (Goldberg, Perlmutter, and Myers 1974); as Goldberg et al. note, children can cluster things categorically as soon as they can talk. Three year olds understand many aspects of the concept of causation (e.g., that a cause preceeds its consequence—Bullock and Gelman 1979). Four year olds are capable of transitive inference and syllogistic reasoning (Trabasso 1975) and various forms of deductive inference in propositional logic (Macnamara, Baker, and Olson 1976). By the very early school years, certainly before they are literate, children are capable of most cognitive operations. They can conserve number. They can distinguish self from other. They can distinguish among various types of rules. They understand the implications and presuppositions of such mental predicates as to "pretend," to "forget," and to "know." They are capable of reporting their feelings and they can discriminate among basic emotions almost as well as adults (see e.g., Mehler and Bever 1967; Gelman 1978; Nucci and Turiel 1978; Much and Shweder 1978; Schwartz 1981, Shweder, Turiel, and Much 1981). The evidence suggests that most mental structures are available to the five-year-old child and may well be available earlier, if only we knew how to find them. Lévi-Strauss, take heart!

Of course young children do not always, or even typically, display their operational capacities, and they are certainly very bad at talking about their mental structures; they know a lot more about causation, number, etc. than they can articulate (see Bullock and Gelman 1979). Not surprisingly, it is easy to devise tasks that confuse the young child. This can be done by exceeding the child's memory capacity or representational skills; by utilizing complex, unstructured, or ambiguous instructions; by requiring that the child articulate principles which he may know but not be able to verbalize; or by presenting the child with tasks whose successful completion requires knowledge that the child lacks (Trabasso 1975; Donaldson 1978). Young children know less than adults, and their memory capacity and linguistic skills are not up to those of an adult. This is one reason why Macnamara, Baker, and Olson (1976) search for formal operational structures in four year olds, not by asking them to verbalize the principles of mechanical equilibrium, but by seeing whether they are able to draw indirect implications of the form "p if and only if q and not r" from natural language sentences (e.g., "Mary-Jane forgot to bring the ball") embedded in stories. Lempers, Flavell, and Flavell (1977) search for a distinction between the perspective of self and the perspective of others, not by asking the two year old child to coordinate a conversation over the telephone, but by determining whether two year olds take the visual perspective of others into account when showing pictures to observers. Shatz and Gelman (1973) detect an early distinction between self and others by observing the way four year olds modulate their speech patterns and take account of the age of the listener when telling an adult (or peer or two year old) about a toy. These same listener-sensitive children do poorly on traditional Piagetian tests of egocentrism. The message of all these studies is that cognitive functioning is not independent of the details of the task. The failure of a child (or an adult) to display this or that mode of thought on this or that task is no indication that the mode of thought is unavailable—a point that Cole and Scribner (1974) have been urging on us for some time.

The message can be generalized: what one thinks about (i.e., "content") is decisive for how one thinks (Wason and Johnson-Laird 1972). To the extent that this is true, Hallpike's 50% rule takes a beating and collective representations become implicated in how one thinks. To see how the 50% rule takes a beating, one only has to apply it to literate, educated adolescents and adults in our own society. What is our "operatory level?" What limits does that level place on our collective representations? The answer to the first question is "it all depends on the task," which is equivalent to saying there is no single answer. For example, Wason (1969: Wason and Johnson-Laird 1972) presented college students with a "hypothetical contradiction" task; 90% of the students functioned at a preoperational level. Superficial qualities of the task were altered; a majority of the students func-
tioned at a formal operational level. Martoreno (1977) gave ten formal operational tasks (permutations, correlation, balance beam, etc.) to high school students. Two of 80 students performed at a formal operational level on all ten tasks. The average score for their high school seniors was below the formal operational level. However, on three of the ten tasks, more than 50% of the high school seniors performed at a formal operational level. One of these tests was “correlational reasoning.” Smedslund (1963), however, tested for correlational reasoning with a slightly different task (detecting the relationship between a symptom and a disease in the medical files of 100 patients); only 15% of his informants performed at a formal operational level.

The coup de grace is a study by Ward and Jenkins (1965). What they discovered is that correlational reasoning is task specific and highly manipulable. They presented college students with contingency information about the relationship between cloud seeding and subsequent rainfall. When information was presented serially, on a trial-by-trial basis, as it usually occurs in the real world, only 17% of college students displayed correlational reasoning. However, when the students were presented with summary information in the form of a $2 \times 2$ contingency table without prior trial-by-trial experience, more than 50% displayed correlational thinking.

What does all this evidence on the capacities of young children and the task-specificity of intellectual functioning mean for Hallpike’s 50% rule? It seems that all sorts of mental structures are available to the human mind (the mind of the five year old and the mind of the adult). It also seems that features of the task are decisive for how we think. It appears that most people have most relevant “underlying” operational structures. It also appears that which mental structure gets applied depends on the content of the task. And it seems that the answer to the question “what percentage of these people display formal operational thinking” varies radically by task, and that one can always find some task that leads to a different answer to the question. One interpretation of the evidence is that abstract underlying operational structures are universally available. Another interpretation is that cognitive functioning depends on task-specific knowledge. Neither interpretation favors Piaget, or Hallpike.

Does our operational level place a limit on our collective representations? Given the task-specificity of cognitive functioning and the availability of diverse mental structures, I just don’t see how it makes much sense to describe collective representations as “reflections” of the operational level of a population. A $2 \times 2$ contingency table is one of our collective representations, and it is certainly a formal operational instrument. Notice the relationship of this collective representation to the cognitive functioning of individuals: as a powerful representational device for organizing and displaying correlation relevant information it makes formal operational functioning possible for a majority of the population. The $2 \times 2$ table augments the thought processes of individuals who don’t typically function at a formal operational level in other situations; it makes obvious the correlational nature of a problem (i.e., compare the conditional probabilities). The idea that collective representations regulate thought is reinforced by evidence that it is possible to “represent” correlational problems in a form that elicits preoperational thinking (confusing likeness with co-occurrence likelihood) from literate, educated Western adults (D’Andrade 1981: Tversky and Kahneman 1974; Shweder 1977). Collective representations can be decisive for how individuals think (see Lucy and Shweder 1979). Of course, some collective representations can be ranked in terms of their “power”—it helps to have a $2 \times 2$ contingency table when drawing inductive inferences. But to rank collective representations in terms of their “power” is quite different from ranking individuals in terms of their operational capacities. Whorf and Durkheim, take heart!

There is a third difficulty for Hallpike. The various parameters of thought (functional versus taxonomic, temporal versus logical, concrete versus abstract) and the various en-
environmental variables (illiterate, unschooled, conformist, etc.), all of which are supposed to tell the same story about the primitive mind, probably do not intercorrelate either developmentally or cross-culturally (see Shweder 1981b).

Pressure toward conformity, to cite one example, is not a concomitant of illiteracy. Illiterate, unschooled peoples display wide variation in pressure toward conformity and obedience; just compare Tepoztlán or the Swazi with the Siriono or Eskimo (Barry, Child, and Bacon 1959; Barry, Bacon and Child 1967). Indeed, if the cross-cultural evidence on conformity training, freedom of expression and individualism suggests anything at all, it is a basic similarity between preagricultural hunter, gatherer and fishing societies, and postagricultural societies. With respect to many aspects of culture (self-reliance training, individualism, nucleation of the family, intimacy and equality between the sexes, perhaps even dance styles) migratory foraging peoples (e.g., the !Kung bushmen) and middle-class Americans look more like each other than like various peasants of the world. With regard to pressures toward conformity, cultural evolution may well be curvilinear (pre- and postagricultural basically alike)—that curvilinear distribution bears little relationship to the distribution of literacy, schooling, and so forth. Literate, schooled, urban members of intensive agricultural societies (e.g., the Chinese) demand obedience and conformity. The Siriono, the Eskimos, upper-middle-class Americans and the !Kung bushmen do not.

The !Kung are an interesting test case for Hallpike's thesis. Bl Burton-Jones and Konner (1976) conducted "seminars" with the !Kung. The seminar topic: !Kung Knowledge of Animal Behavior. Bl Burton-Jones and Konner (ibid.) characterize the !Kung in the following terms: They carefully distinguish observed data from hearsay, and they discriminate between data and theory or interpretation. They are willing to admit ignorance. They argue about generalizations. They disbelieve each other. They utilize a number of different classifications of animals and they readily move from one classification to another. One is tempted to say, "so much for Hallpike’s thesis." Let's withhold judgment for a moment. Let's examine the literacy issue.

The idea that literacy causes major changes in basic cognitive processes is one of those seductive ideas that deserves to be true, but probably is not. The idea has parasitized many fine brains including Goody’s, Greenfield’s, and Hallpike’s. Fortunately we now have a definitive account (Scribner and Cole 1981) of the effects of literacy. Most speculations about the effects of literacy on individual thought processes are either anecdotal or theoretical, or else rely on evidence in which literacy is confounded with Westernization or formal schooling. Working among the Vai, Scribner and Cole (1981) were able to separate the effects of literacy and schooling, and to examine the effects of Vai and Arabic scripts on the thought processes of unschooled but literate informants, unschooled and illiterate informants, schooled and literate informants, and so forth. Testing for differences in basic cognitive processes with special reference to abstract (versus concrete) thinking, taxonomic categorization, logical reasoning, metalinguistic knowledge, and reflective knowledge about the properties of propositions, Scribner and Cole found no support for the view that literacy per se influences "intellectual growth." The effects of schooling were complex and mixed, although they do suggest that going to school makes you more prone to articulate or "rationalize" about the nature of thought; thought itself is a topic of interest and concern in certain institutional settings (schools, bureaucracies, etc.).

Given all that I’ve said about the universal availability of underlying mental structures, the content or task-specificity of actual cognitive functioning, the inconsequentiality of literacy for the basic cognitive processes of individuals (note: literacy does, of course, have institutional consequences) and the specialized nature of schooling effects, one
should not be surprised by the cross-cultural evidence reported in Mandler, Scribner, Cole, and DeForest (1980) and in Shweder and Bourne (1982). Mandler et al. discover (contrary to Hallpike's literacy-schooling hypothesis) that the temporal sequencing of recall for story materials is basically the same for literate, schooled adults in the United States and for illiterate, unschooled children in Liberia. Shweder and Bourne (1982) document a concrete ("cases and contexts") style of social cognition among Oriyas in India. Shweder and Bourne discover that concrete social thinking among Oriyas is invariant across Oriya subpopulations who vary in literacy, schooling, and social status. They also discover that Oriyas are perfectly capable of abstract thinking on other tasks. Concrete thinking in the social domain is traced to Indian premises about the nature of the social order. A holistic, sociocentric, organic conception is described with which Oriyas understand that how they behave depends on the relationships into which they enter.1

Diverse parameters of thought do not neatly cluster and run together along some developmental path from child to adult, primitive to modern. Two decades ago Brown (1958) argued that abstraction is a feature of all minds and discussed the way that young children, emphasizing likenesses and overlooking differences, apply the same lexical item to things such as leaves, trees, and flowers, an overgeneralization from the adult point of view. Temporal thinking does not wane with development; it is a preferred mode of organization for stories (Mandler et al. 1980) and other scriptlike knowledge in everyday life (Schank and Abelson 1977). Functional thinking does not wane with development; among adults, it is a preferred form of definition for tools and body parts. Categorical thinking does not wax with development (Goldberg, Perlmutter, and Myers 1974); both young children and adults seem to rely on the same hierarchy of logico-grammatical relationships (e.g., "synonymy," "similarity," and "superordination" are preferred to "action-upon" or "common use") when making similarity of meaning judgments among pairs of words (e.g., which pair is more similar: animal-cow versus ball-throw—Flavell and Stedman 1961). Even the articulation of abstract principles (something schools seem to foster) is probably uncorrelated with operational capacity or the presence of complex mental structures. Three year olds are able to draw causal inferences without being able to say how they do it (Bullock and Gelman 1979). The Trobriand Islanders are able to engage in complex causal reasoning without having to wait around for a Trobriand textbook in inductive logic (Hutchins 1980). Indeed, one of the best ways to embarrass a linguist is to have a fluent four year old start speaking to him in the language on which the linguist has just written a transformational grammar. Parameters such as simple versus complex, temporal versus logical, tacit versus reflective, functional versus taxonomic, particularizing versus generalizing, and so forth, do not neatly covary across cultures or ontogenetic stages. The only place they really seem to go together is in Piaget's image of the ideal physical scientist.

The fourth difficulty with Hallpike's thesis is a curious one. Throughout the volume, similarities between the ideas of a people and the supposed operational capacity of the child are interpreted as matters of causation (remember the 50% rule). This looks to me like magical thinking—a pattern of inference that Hallpike might describe as preoperational. Predicates such as "differentiated" (versus undifferentiated), "abstract" (versus concrete), "subjective" (versus objective), and so forth, are quite useful for describing and comparing ideas. Thus, for example, Jimmy Carter's boycott of the Moscow Olympic games might be described as a "failure to differentiate" sports from politics. In 1980, at least with respect to that issue, America looked far less differentiated than, say, Kenya. Piaget uses the same predicate ("failure to differentiate") to describe the mental structures of the preoperational child. Does this mean we can gain insight into Jimmy Carter's rather calculated merging of power and athletics from studying children's minds? I doubt
it. "Similarity" is not "causation" and similar effects do not necessarily have the same cause.

Consider the case of "dreams" and the case of "word magic." Hallpike notes a similarity between the dream concepts of many primitive peoples and the dream concepts of the preoperatory child—both the savage and the young child view dreams as "objective" and "external in origin," not as "sets of images generated within the head of the dreamer" (pp. 158, 415). On the basis of the similarity (p. 51) Hallpike claims that, with the exception of an occasional "highly intelligent informant," primitives are preoperational in their thinking and hence not "capable of recognizing the subjective basis of dreams . . . " (p. 419). What a remarkable claim! Shweder and LeVine (1975) have examined children's dream concepts among the Hausa. Many Hausa adults believe that dreams are objective and external in origin; this is not believed by most Hausa eight-to-ten-year olds. By the time Hausa children are eight years old they believe that dreams are probably "hallucinations," unreal but externally located. By the time they are ten years old they believe dreams are mere "fantasies," unreal and internally located. Any Hausa ten year old is capable of arriving at this belief (presumably) on his own. Later, however, as adults, Hausa children change their minds. Adult theory tells them that their ten-year-old understanding of dreams (which, of course, is our adult understanding of dreams) was inadequate—that dreams are a type of "vision" giving access to an external, objective numinous realm of the soul and its wanderings. Hausa are not only capable of a "subjectivist" view of dreams. They entertain that viewpoint as ten year olds, and reject it!

Hallpike also notes that children are "unable to distinguish names and words from their referents" and that, similarly, primitives believe that words and names are "indissociable" from the things they denote. For Hallpike, the similarity is suggestive of preoperational thinking in the savage adult (pp. 52, 384). The hazards of reasoning from similarity are most obvious in this case: the study of theories and ideas is not the same as the study of mental capacities (what the native or child is "able" or "unable" to do) even if the same predicate ("indissociation of name and referent") can be applied to both. Consider an interview with Vai informants conducted by Scribner and Cole (1981:141-142). Sembe and Aamah, two Vai informants, are asked whether one can interchange the names of the sun and the moon. Aamah argues: "Anything that God creates we cannot change. We cannot change a man into a woman." Sembe retorts: "They are not going to change a man into a woman. They are going to change the name." Aamah retorts: "I can't agree. You never named a woman 'Sembe' and I cannot change the name of the moon to the sun." Later Aamah comments as follows: "There are two things in the world. A thing can be and a thing can be talked about. The thing that is cannot be changed. Anything that God created, His talking, the names He gave to things, cannot be changed." Aamah is asked whether you can buy a soft drink with the name "dime." Aamah replies: "I can buy a soft drink with the money itself, but not with the name." (Whether he laughs at the probe is not reported.) As Scribner and Cole note, Aamah recognizes that names and things are independent concepts but rejects on theological grounds the idea that names are arbitrarily assigned or should be dissociated from their referents (much as we would hesitate to name our firstborn son "Sara"). Very little insight into this Vai "theology" is gained by tellings us what Piaget said young children are "unable" to do. Indeed, it seems to me that "theologies," premises, constitutive rules and all other nonrational (not to be confused with irrational) ideas are beyond the scope of a developmental analysis (Shweder 1981a). To compare Aamah's view of words with our secular view is like comparing cubism with impressionism. Aamah's view is neither better nor worse per se. It is neither more advanced nor less advanced. It's just different.

Hallpike actually knows better than his "thesis" reveals. Occasionally he wavers. We get glimpses of another Hallpike, but only glimpses. Thus, after being told that collective
representations (including language) are the "manifestations of the cognitive processes of the average adult member of the society" (p. 58), we are told that collective representations are part of a social environment which may assist cognitive growth (p. 58) and that primitive languages are capable of being used for higher levels of thought (p. 77). Thus, after arguing that primitives lack concrete and formal operational mental structures, Hallpike grants that "some hierarchical structuring is displayed in all primitive taxonomies" (p. 175) and that operatory thinking probably occurs in the kinship domain (p. 224). Thus, after interpreting cross-cultural Piagetian test data as a kind of neutral X ray into the underlying mental structure of the primitive mind he agrees that the content, familiarity and response format of a task are decisive for how you think (pp. 193, 208) and that slight variations in a task (e.g., using a sentence substitution design rather than a free associational design) can give you different portraits of the mind (p. 208). (He might have added that any "test" presupposes a store of background knowledge which probably is not equally distributed across cultures, and that native understanding of the pragmatics of the test-taking situation is not to be presupposed.)

None of the implications of these insights gets integrated into the main thesis of the book. How could they be integrated? The thesis would have to be narrowed or abandoned. They are passing remarks, but they do indirectly resurface in the sentimental ending to The Foundations of Primitive Thought. Toward the end of the book, almost as if to exorcise himself of the spirit of developmentalism, Hallpike tries to "defend" primitive concepts of nonmaterial causality (souls and ghosts and witches). He argues that spiritual beliefs might be objective, accurate reports about paranormal phenomena (pp. 476, 479). And, don't get me wrong, he says. Primitives may have simple mental structures, but their ideas are not necessarily mistaken. Primitive thought may even be profound (p. 491). By the conclusion we have moved from Piaget to parody. To my amusement, Hallpike's Piagetian tome on the deficiencies of primitive environments and the intellectual retardation of the primitive mind ends by ridiculing Sidney Webb for his arrogant "ethnocentrism" and by chastizing formal operational thinkers for their failure to understand or appreciate the mind of the primitive.

In summary, Hallpike's thesis is seriously flawed. It underestimates the operational capacity of young children, exaggerates the global generality of stagelike cognitive functioning, misjudges the relationship between the content of thought and the structure of thought, and gratuitously assumes that diverse environmental variables (literacy, pressure toward conformity, etc.) and diverse parameters of thought (abstract versus concrete, functional versus taxonomic, etc.) all vary together. By trying to reduce cross-cultural differences in people's ideas, theories, presuppositions, and collective representations to differences in underlying mental capabilities, Hallpike has not only rushed in where even Piaget feared to tread. Moved by the spirit of developmentalism, he has savaged the mind of the primitive.

NOTES

1 On the advantages of concrete, context-sensitive thinking in the social domain, see Mischel (1968) and Shweder (1979).

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Women in Development


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These three books are the most recent of the growing number of works addressing the impact of technological and sociocultural change on women. Whether in industrialized or industrializing societies undergoing rapid change, it is now well documented that women face specific problems related to the changes imposed (directly or indirectly) on their roles and statuses in various societies. During the past ten years, numerous ethnographic monographs and edited collections have focused on the effects of socioeconomic change on women (e.g., Elmendorf 1976; Jones and Jones 1976; Schuster 1979; Bledsoe 1980; Mattielli 1977; Raphael 1975; Rohrlich-Leavitt 1975; and Etienne and Leacock 1980). Since 1968 there have been cross-culturally based studies that present baseline data for and theoretical arguments related to research and policymaking for the integration of women in development (e.g., Sullerot 1968; Boserup 1970; Tinker and Bramsen 1975; Buvinić 1976; Boulding et al. 1976; Boserup et al. 1977; and Huston 1978, 1979).

With this record, why is it still true that "[much development planning] often takes a curious 'as if' stance—as if women were like men, as if all women were alike, or as if women did not exist at all" (Papanek in Dauber and Cain, p. 215)? In cases where women's roles, statuses, needs, and potentials are given special consideration, is there any evidence that development has fewer adverse community impacts, and are the desired