

## Cultural Variation in Cognitive Processes From a Sociohistorical Psychological Perspective

Carl Ratner

*Humboldt State University*

Two strands of the Vygotskian sociohistorical school of psychology are compared to better understand the nature of cultural variation in cognitive processes. The "relativist" strand maintains that cognitive processes (or the form of cognition) are culturally variable. The "universalist" strand maintains that these processes manifest essential cultural uniformity despite apparent differences in performance. A review of the evidence concludes that the relativist position is more tenable.

The founders of sociohistorical psychology explicitly stated that psychological processes (or form) as well as content manifest cultural variations. As Luria put it, "The structure of mental activity – not just the specific content but also the general forms basic to all cognitive processes – changes in the course of historical development" (1976, p. 8; cf. Ratner, 1991, for a detailed exposition of this position). Contemporary followers of this school manifest some equivocation with respect to that position. In many respects these followers have contributed a great deal of thoughtful scholarship which theoretically and empirically supports Luria's cultural relativism. At the same time, there is a tendency to postulate universal cognitive processes which supercede variations. This latter view claims that sociohistorical variations in performance do not constitute different competencies. Rather, performance differences stem from differential familiarity with task demands. Once psychological tests are made ecologically sensitive, performance differences evaporate and reveal fundamentally uniform competencies. This universalist position contradicts Luria's recognition of sociohistorical differences in the processes, or competencies, themselves.

The tension between universalist and relativist strands of sociohistorical psychology warrants resolution in order to clarify just what the nature of psychological processes is. The question of the universality of psychological processes is one of the most fundamental controversies in the field of psychology.

Michael Cole's work exemplifies this tension and is an excellent subject of analysis because it lucidly articulates both the universalist and relativist positions. Cole has contributed some fascinating refinements in Luria's position. On the other hand, Cole champions a universalist orientation as expressed in his statement that "cultural differences in cognition reside more in the contexts within which cognitive processes manifest themselves than in the existence of a particular process (such as logical memory or theoretical responses to syllogisms) in one culture and its absence in another" (1988, p. 147). Through reviewing Cole's work I hope to demonstrate that his relativism is more cogent than his universalism and that his work, when properly interpreted, lends support to Luria's original position. Because Cole so keenly reflects the contradiction between relativist and universalist positions, resolving the vacillation in his work helps to resolve the general issues involved in less clearly articulated formulations.

### Cole's Relativistic Formulations

Cole and his colleagues have conducted cross-cultural research which has revealed substantial cultural differences in psychological processes. The Kpelle people of Liberia, for instance, have a vastly different sense of quantification and measurement from Americans. The Kpelle make little use of quantification and measurement, and when they do, numbers are intimately bound to particular contexts. According to Cole, Gay, and Glick's extensive study (1968), in the rare instances where the Kpelle utilize measurement, they have separate metrics for each situation and cannot transpose from "handspan" used to measure a table, to "armspan" used to measure rugs, to "footlength" used to measure a floor. The Melanesians similarly fail to dissociate quantity from quality and do not detach number from the thing being quantified. They have a word for ten coconuts ("buru") which is entirely different from the word for ten fish ("bola"). They have several distinctive notions to denote the same number ten whenever it refers to different things. "They are less interested in numerical identity and much more in the qualitative distinction between fish and coconuts" (Wald, 1975, pp. 128-129).

The Ojibwa Indians have a similarly context-bound notion of quantity. Measurement does not take the form of abstract quantitative units, but rather consists of ambiguous categories such as "long" and "small" which are specified by referring to particular objects. For example, something is "taller than the

trees" or it is further away than "the jagged rock." The Ojibwa do not have any common units applicable to all classes of linear measurement. "There is no means of bringing linear concepts of all kinds into a single unified category of spatial attributes because the units of measure expressing the distance traveled on a journey, for example, are categorically distinct from those applied to the length of a piece of string" (Hallowell, 1955, p. 206). Cognitive categories definitely exist, however they are less abstract and general than ours.

Damerow (1988) reports that early Babylonian arithmetic symbols were similarly context-bound. The simplest numerical notations from 8,000 B.C. (which, interestingly enough, predated written letters by some 4,000 years) — and even more sophisticated quantitative symbols which came into being around 3,000 B.C. — were all used only in specific situations. They had no general use or meaning. Some notations were used to designate discrete objects, others for objects of mass consumption, others for grain. In addition, each notational system was grounded in a different base value which minimized commutation. A further contextual delimitation was the fact that certain symbols had one meaning in one context and another meaning in a different context. Two symbols used to measure discrete objects indicated a relation of 1:10, but when used to measure grain the same symbols denoted a relation of 1:6. Among premodern people, mathematical operations as well as individual symbols remain restricted to particular domains rather than having a generic, modern form. Thus, some Dioulans of West Africa understand the commutative relationship in addition problems (e.g.,  $38 + 46 = 46 + 38$ ) but not in multiplication problems (e.g.,  $6 \times 100 = 100 \times 6$ ) [Saxe and Posner, 1983, p. 305]. The fact that premodern people conceive of quantification and measurement quite differently from us means that the form of their quantitative thinking, or their manner of processing quantitative information, is tremendously more context-bound than ours.

Cole and his colleagues similarly found that memory functions also manifest cultural diversity. Premodern people's memory is extremely context-bound in the sense of recalling material in terms of its relationships to other things. Modern people, in contrast, are able to remember de-contextualized material which has little reference to related information. This difference was reported by Cole and Bruner (1971) who found that in contrast to Americans, Kpelle rice farmers in Liberia, perform very poorly on free recall tasks: even when the words to be remembered denote familiar objects in Kpelle life, the number of words recalled is small, there is no evidence of semantic or other organization of the material, and there is little or no increase in the number recalled with successive trials. Free recall is so difficult for Kpelle that even when the words are carefully chosen as belonging to indigenous conceptual categories — which should give them an intrinsic organization and enhance recall — free recall,

clustering, and improvement over trials are minimal (Cole and Gay, 1972, p. 1077).<sup>1</sup> Kpelle memory only improved when the material was embedded in a distinctive context, that is, when free recall was no longer required. One method was to incorporate words into folk stories. Another method was to physically place objects near chairs and then ask subjects to remember the items. Because Kpelle memory requires a concrete context whereas Americans achieve excellent recall even with decontextualized material, the manner in which the two groups remember – that is, their memory processes – may be quite different.

The Kpelle even find it difficult to remember familiar material that is devoid of some concrete context. Cole and Gay speculate that perhaps such concrete cueing has spatial organization counterparts in other areas of Kpelle thought. Their hypothesis that Kpelle memory depends upon spatial cues in a way that is quite foreign to American memory is rendered plausible by research that compared memory processes in Aboriginal and Anglo children. Whereas the Aborigines remembered displays by visually recalling the spatial positions of each object, Anglos were more likely to employ verbal strategies of naming objects and describing their positions. To remember the displays, the Aborigines silently concentrated upon their fixed visual image – in contrast to the Anglos who verbally repeated their descriptions to themselves during the observation period (Laboratory of Comparative Human Cognition, 1983, p. 326). Memory processes thus evidence significant cultural variation.

A final psychological process that evidences cultural variation is logic. Cole's colleague, Sylvia Scribner (1975, 1977), reports that contemporary cross-cultural research confirms Luria's findings on logic: premodern peoples answer logical problems at a chance level of correctness. They do not understand or remember the sense of syllogisms, and their answers are based on personal experience rather than on following theoretical premises. However, success increases dramatically upon exposure to formal education (cf., Tulviste, 1979, for additional evidence).

James Hamill's (1990) research into logical reasoning among American Navajos demonstrates some distinctive logical rules that are quite foreign to white Americans. For example, the time of an event affects Navajo logical deduction in a way that it does not for whites (Hamill, chapter 6). Given a compound premise such as

“I stood (A) and I heard it (B)”

where A and B are both past tense, the premise is true when B is true, regardless of whether A is true or false. Thus, “I did not stand ( $-A$ ) and

<sup>1</sup>Interestingly enough, while American subjects evidence a serial position effect in free recall, the Kpelle subjects showed a flat curve in which early, middle, and late items were remembered equally well [poorly] (Cole and Gay, 1972, p. 1078).

I heard it (B)" is judged to be a true sentence or valid proposition. However, entirely different reasoning applies when A and B are different time periods. For instance,

"I lay (A) and I am sleeping (B)"

where A is past and B is present progressive, is true when both A and B are true. Consequently, "I did not lie ( $-A$ ) and I am sleeping (B)" is invalid. Still different temporal relationships are governed by still different reasoning:

"I lay and I will sleep"

where A is past, and B is future, is true when A is true, regardless of B. Thus, "I lay (A) and I will not sleep ( $-B$ )" is a valid proposition. In other words, the conjoiner "and" (*aadoo* in Navajo) has different logical implications depending on the tense of the component propositions.

Compounding the picture even further is the fact that Navajo has several words for "and" and they are not used interchangeably. Some of these obey certain rules and others other rules. (No one of these is equivalent to the English – "and" is not a singular universal. English has one word, Navajo has several words which function in different situations according to different rules.) The foregoing rules governing logic and temporality hold when *aadoo* is the conjoiner. But another conjoiner *doo* dictates a different logic. To wit:

"I stood (A) and (*doo*) I will hear it (B)"

where A is past, B is future, is true when A or B is true. This logical rule is quite different from the rule governing the same temporal relations (past and future) conjoined by *aadoo*!

Navajos and Westerners draw different conclusions from the same premises. And Navajo logic is keyed to particular situational factors such as time, subject, and verb form, ignored in Western logic. Westerners apply the same logical rules when two component propositions are both past tense as when one is past and one is present – "I lay and I am sleeping" are judged in the same terms as "I lay and I slept." Both of these "and" sentences are true only if both of the components are true. "I did not lie and I slept" cannot logically be consistent with "I lay and I slept" regardless of the temporality of the component conjuncts. The Navajo appeal to temporality to justify this conclusion escapes us because temporality has no such influence on our reasoning process.

While Navajos clearly do engage in logical reasoning, the reasoning process is clearly different from Westerners'. Hamill is correct in stating that, "Culture is both meaning and process. It includes ways to assign and store meanings and the methods for manipulating them" (p. 102). Moreover, the

reasoning process depends utterly on the semantic meaning, it is not in the least independent.<sup>2</sup>

All three of these psychological processes – quantification, memory, and logic – show cultural variations in the extent to which they are context-bound. In general, modern people are able to quantify, remember, and deduce information that is abstract (in the sense of being decontextualized), while premodern peoples have difficulty with such material and perform better with contextualized material. These differences indicate that quantification, memory, and logical reasoning operate differently across the populations. Cole acknowledges the importance of schooling for fostering decontextualized cognitive skills. Scribner and Cole (1973) maintain that schooling emphasizes universalistic skills and principles. These transcend the immediacy of a specific task, teacher, culture, or environment. Thus, we learn reading, writing, and mathematical skills to use in a variety of unspecified situations, whereas unschooled children learn to use practical tools for particular purposes. Education emphasizes abstract principles which are filled out by interchangeable examples, in contrast to everyday observation which builds upon particular experiences which are rarely systematized into formal principles. Cole and Scribner (1974, p. 122) also suggest that abstract, decontextualized thinking increases with the transition from isolated village life to commercialization – i.e., the exchange of people and things.

### Cole's Universalist Formulations

Cole's insightful articulation of sociohistorical psychology provides a coherent explanation of differences in social-psychological competence. However, curiously enough, he withdraws from this relativistic position. He argues instead for an essential universality in psychological competence with culture only dictating the domains in which this competence will be manifested. Cole says modern and premodern people have equal competence to think abstractly, although the areas in which this is manifested will vary. As he has stated on many occasions, "Cultural differences in cognition reside more in the contexts within which cognitive processes manifest themselves than in the existence of a particular process (such as logical memory or theoretical

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<sup>2</sup>Hamill's elucidation of the intricacies of Navajo logic, and its dependence on a culturally mediated world view marks an important methodological advance. Hamill deliberately developed his methodological approach to overcome weaknesses in other research. For example, he criticizes Cole and Scribner's postivistic methodology which simply scored correct and incorrect answers to logical problems without illuminating the conceptual meanings which led to these results. Cole and Scribner of course recognized that pre-modern people rely upon personal experience to make logical inferences, however they did not elucidate the natives' world view or the intricacies of logical reasoning. The examples from Hamill's research, presented above, illustrate what such an elucidation involves.

responses to syllogisms) in one culture and its absence in another" (Cole, 1988, p. 147; Cole and Bruner, 1971, p. 870). Cole (Cole, Sharp, and Lave, 1976) likens cognitive operations to craft skills such as carpentry: all carpenters possess certain basic skills, although they organize and apply them differently. Some are good at making tables while others make dressers. In the same way, moderns think abstractly about certain things and perform well on certain kinds of abstract tests, while premoderns organize their abstract ability in other ways. Cole insists that such differences in expression must not be construed as deficits in basic competence (to abstract, for example). Invoking the carpentry analogy, Cole argues that a carpenter's failure to construct particular pieces of furniture is not due to any deficit in basic operations, simply to a lack of experience in organizing the basic operations in a particular style. He invokes an additional argument to support a universalist position. He says that abstract thinking and memory are relatively unusual for most modern people. Moderns and premoderns alike normally engage in the same contextualized, functional, empirical thought processes. Thus, whatever differences in abstraction that may distinguish premoderns from moderns are confined to unusual circumstances and are relatively unimportant. Far more important is the prevalent commonality that both groups share.

Cole's contention for a basic universality of cognitive processes rests on two arguments. The first postulates a universal competence that is organized and expressed differently. The carpentry analogy exemplifies this argument. In addition, a somewhat different argument postulates a universal competence for elementary cognitive operations that are employed in everyday, "common-sense" functioning, along with certain circumscribed, specialized, culturally variable cognitive competencies. According to the second formulation, these circumscribed, specialized operations, such as free recall and syllogistic logic, are rarely employed and they do not seriously compromise the far more common universal operations; however, they do exist as culturally bound differences in cognitive competencies. In this case, modern people do have a competence for abstract thinking that premodern people lack, even though modern people do not often use this competence and normally operate at the same context-bound level as premoderns. Whereas the first contention argues for absolute universality of competence with only differences in performance, the second argues for a virtually universal competence although admitting some minor, specialized exceptions. Although both the "absolutely universal" and "virtually universal" arguments (as we shall label them here) lead to the same conclusion of a basic universality in cognitive competence, they are not consistent arguments. Maintaining one competence which is differently expressed is quite another matter from claiming several competencies. This inconsistency is one troublesome point in Cole's formulation.

A second troublesome point is that both arguments contradict the relativist

position of sociohistorical psychology which accepts full-fledged social-psychological differences in competence. Culturally bound competencies are not limited to minor, circumscribed, specialized exceptions to a deeper, prevalent universality as the "virtually universal" argument contends (cf. Tulviste, 1991, pp. 26; 47-52; 57; who also recognizes Cole's departure from the sociohistorical position of Vygotsky and Luria). From the relativistic perspective, cognitive processes in the life world of everyday experience are as culture bound and varied as they are in specialized domains. Everyday cognitive processes are not universal. Whole sectors of the modern everyday psychological life space — color, time, number, and measurement — operate at a level of abstraction that is foreign to premodern people. Since the information that modern people encounter is more decontextualized than the material that premodern people encounter, our cognition, perception, memory, reasoning, self concept, etc. must necessarily be more abstract. The operations that process information must operate at a level of abstraction that corresponds to that material. Cognitive processes are not independent of the material they apprehend; the processes must change in order to invent and comprehend new material. As Luria (1971, p. 226) said,

Cognitive processes (such as perception and memory, abstraction and generalization, reasoning and problem-solving) are not independent and unchanging "abilities" or "functions" of human consciousness; they are processes occurring in concrete, practical activities and are formed within the limits of this activity. Not only the content, but the structure of cognitive processes depends on the activity of which it is a part. Such a conception of the close ties between separate psychological processes and concrete forms of activity calls for a rejection of the non-scientific idea that "psychological functions" are a priori data, independent of historical forms.

Postulating universal, everyday cognitive operations is only sustained by underestimating the extent of abstract thought in modern peoples' psychology. In fact, abstract, decontextualized thinking pervades "everyday cognition" nearly as much as it does specialized domains. Conversely, premodern everyday cognition of time, number, space, measurement, and color are context-bound in a way that is utterly foreign to modern cognition. Such major differences challenge the argument for virtual universality of cognitive processes. A dualistic dichotomizing of psychological functioning into a universal, everyday, common-sense realm juxtaposed beside a culturally-bound, specialized realm is unparsimonious and illogical. It is also, as we have seen, empirically untrue.

If virtual universality of cognitive competence is untrue, the stronger argument for absolute universality must be also. Recall that Cole recognizes differences in performance, however he contends that these reflect common underlying cognitive processes. For example, although premodern people may fail to engage in abstract thinking on certain standard tasks unfamiliar



to them, if we make the tasks familiar to them we will find that they do engage in abstract thinking. While this point is deserving of serious attention in view of the tendency to unjustly conclude differences in competence from differences in performance, I shall show that Cole overreacts to this error and commits an opposite error of interpretation: he presumes equality of competence when none has been demonstrated and even when indications suggest real differences. Cole overestimates the extent of premodern abstract thinking so that it appears similar to modern thinking when, in fact, it remains quite context-bound. We shall examine three instances of misinterpretation.

Cole (1988, p. 149) contends that premodern people employ deductive logic as well as moderns, although in different situations. He cites Hutchins who has found instances of logical reasoning employed by Trobriand Islanders in adjudicating land disputes. From this research Hutchins concludes that the Islanders employ the same kind of logical thinking and inference-drawing as Americans (Hutchins, 1980, p. 128). However, this conclusion is open to question. It is far from clear whether these instances are comparable to modern peoples' non-syllogistic inference processes. No judgment was made as to the complexity, abstractness, or extensiveness of the Trobrianders' inferences and this leaves their comparability to modern inference entirely open. Trobrianders unquestionably engage in inference-making, but whether their everyday cognitive processes are as abstract, complex, or extensively invoked as ours is uncertain. In fact, the evidence presented earlier indicates significant differences in inference-drawing. That evidence demonstrated that premodern people rely upon "empiric" personal experience whereas modern people can readily draw theoretical conclusions apart from personal experience. A close look at Hutchins' examples of the Trobrianders' success in drawing inferences reveals that the cases involved personal experience and knowledge; none of them required theoretical conclusions. The mere fact that the Trobrianders' constructed logical arguments concerning their land rights does not prove that their logical reasoning processes parallel modern peoples' reasoning. In fact, Tulviste (1979, p. 77) argues that similarities in reasoning between premodern and modern people are more apparent than real since "the seemingly theoretic explanations given by traditional subjects for their conclusions from familiar premises only too often coincide with some possible empiric explanations" (cf. Tulviste, 1991, p. 107). While Hutchins' research disposes of the pernicious myth that premodern people are incapable of reasoning, it does not prove the converse argument that premodern and modern reasoning are identical. There is good reason to believe that they are not.

A second kind of data that Cole cites in support of universal cognitive competence are Kpelle measurement techniques and concepts. As we have discussed above, Cole found Kpelle measurement to be extremely context-bound,

with different metrics for different objects. However, he argues that in dealing with their primary food sustenance, rice, "the Kpelle people displayed an articulated mathematical system and accuracy in estimating volume superior to that of educated Americans" (Cole, 1988, p. 145). In contrast to the non-commutable metrics that are applied to most domains, rice measurement consists of interchangeable units: the basic unit "cup" may be aggregated into larger units called "tins" (1 tin = 44 cups) and "bags" (1 bag = 100 cups). Thus, "At least at a rough order of exactness, an interlocking scale of units of the sort that we associate with measurement exists among the Kpelle in the case of volume of rice" (Laboratory of Human Cognition, 1983, pp. 319-320). This suggests to Cole that traditional measurement skills are comparable to modern abilities although they are manifested in different and more limited circumstances.

However, Cole's equating the two competencies overlooks fundamental differences. The very fact that Kpelle metrics are only commutable in one domain of measurement makes their calculating skill obviously more context-dependent than Western math. How can a single, circumscribed instance of interchangeable units used by the Kpelle be compared to the wide-ranging generic, interchangeable mathematical principles of modern mathematics? To do so is to sever the rice measurement technique from the system of which it is a part. The error of such a comparison requires no comment. Kpelle quantification and measurement are isolated into local contexts in a way that is quite foreign to their modern counterparts. As with logical inference, it is certainly true that the Kpelle make some calculations in some way, but they do not calculate as we do. *That* both peoples can calculate is true; *how*, *what* and *when* they calculate differs.

Damerow confirms variation in mathematical thought processes with his historical observation that different stages in the evolution of Babylonian arithmetic entailed diverse cognitive operations. Rebuking the Piagetian notion of universal, ontogenetically derived cognitive processes, Damerow argues that socially evolving arithmetic techniques constrain the ontogenetic possibilities of cognitive development along definite sociohistorical lines. He emphasizes the "substantial influence of culturally transmitted representations on the emergence of cognitive structures in ontogenetic development" (Damerow, 1988, p. 150). Evidence from quantification and measurement makes universality of cognitive operations in this domain as implausible as it is in logical inference.

A final attempt to establish common levels of abstract thinking among premodern and modern people concerns memory processes. In the experiment discussed above, Cole and Gay (1972) finally discovered that the Kpelle subjects could enhance their recall if the stimulus material was changed from word lists to actual objects that were displayed in proximity to physical cues

such as chairs. I concluded that this confirmed the contextual nature of Kpelle memory because the subjects performed poorly in the absence of concrete cues. Cole and Gay, however, draw quite another conclusion. They maintain that the eventual success of the Kpelle demonstrates that their memory process is substantially the same as Americans' memory. It simply requires an unusual situation to elicit good retrieval. "On certain occasions, and with certain cues, the Kpelle are able to recall and organize the material in a way comparable to that which American subjects display on different occasions and with other cues" (1972, p. 1083).

As with the previous examples, Cole seems to disregard striking differences in the situation which produce similar performance. The very fact that the Kpelle require concrete cueing which the Americans do not means that in these memory tests Americans engage in free recall while Kpelle recall is context-dependent. The fact that the Kpelle required a unique set of cues in order to close the performance gap with their American counterparts means that they were not engaging in the same memory process at all. Kpelle and American performance only appears similar if the results are abstracted from the circumstances in and means by which they were achieved. This, however, leads to false conclusions because it obscures the real disparate cognitive processes involved.

### Conclusion

The foregoing reinterpretation of Cole's data suggests that his argument for absolute universality in cognitive competence does not withstand scrutiny. The assumption of one given competence which is expressed in different styles and media, is incorrect. Instead, qualitatively novel competencies are generated by diverse cultures. Modern abstract thinking is a qualitatively new skill whose level of abstraction and range of application transcends premodern forms. Rather than being analogous to basic carpentry skills that are reorganized and extended, the transition from contextual to abstract thought is analogous to simple arithmetic being superseded by calculus. Abstract thought is as qualitatively different from contextual thinking as calculus is from arithmetic. The social basis of consciousness is not confined to directing basic, general processes; it engenders new processes (Tulviste, 1979). In Luria's (1976, p. 161) words, "The facts show convincingly that the structure of cognitive activity does not remain static during different states of historical development and that the most important forms of cognitive processes — perception, generalization, deduction, reasoning, imagination, and the analysis of one's inner life — vary as the conditions of social life change and the rudiments of knowledge are mastered."

These novel processes are not confined to specialized domains, as the "virtually universal" argument stipulates, but pervade the everyday cognitive life world as well. Both the absolute and the virtual arguments for universal cognitive processes are incorrect. The argument for absolute universality overestimates the abstract ability of premodern people and presumes it to be as advanced as the modern level. The argument for virtual universality underestimates modern abstraction and presumes it to be as undeveloped as the premodern level. Uncomfortable with the competence differential between cultures, Cole elevates the abstract skills of premoderns and diminishes those of moderns. This creates the impression of universal cognitive processes and closes the competence gap.

However, evidence indicates that substantial social psychological differences do, in fact, distinguish premodern and modern cognitive functions. This is true in "everyday cognition" as well as in specialized cognitive domains. Cole's universalist interpretation of sociohistorical psychology curiously denies qualitatively distinctive forms of mental activity that Cole has acknowledged (Cole, 1988, p. 150). While Cole's caution about inferring differences in competence from differences in performance is well taken, it should not intimidate us from acknowledging differences in competence when the data have been derived from appropriate sources. Since Cole acknowledges this (Cole, 1975, p. 169; Cole and Bruner, 1971, p. 871), it is perplexing that he rejects the cultural differences in abstract thinking that his and other ecologically sensitive research reveals.

Although psychological relativism is real, this does not imply the impossibility of cross-cultural communication. There are commonalities embodied in individual cultures which make some understanding possible. These commonalities derive from common features of human society and from universal biological characteristics. For instance, the fact that all humans depend upon others for physical and psychological sustenance fosters a universal social sensibility. In addition, the fact that all societies include division of labor fosters some language and abstract thought in all people. The human cortex similarly enables all humans to remember things, develop mental symbols, comprehend complex relationships and have some sense of logical order. However, these psychological commonalities are extremely general and entail no specific characteristics. Consequently, while we are able to recognize that another culture has some social interactions, some concern for children by parents, some language, some logical sense, some abstract thinking, some way of remembering information and some sense of joy, sadness, and frustration, specific details are not conveyed in that recognition. Of course, it is possible for people to learn a good deal of other societies' customs and psychology. But this requires a thorough immersion in the culture and a willingness to acquire another world view.

Social psychological particulars are not transparently obvious to superficial observation because they are not contained in the universals which we all possess. Outsiders can be told about a foreign social psychology and thereby gain some notion of it, however they cannot really comprehend it until they enter that culture. For instance, Whorf's telling us that the Hopi Indians have a cyclical sense of time gives us some rough intellectualized concept that is derived from abstractly combining our notion of cyclical with that of time. But we cannot grasp what this is in any vivid, meaningful way. We cannot really integrate the two concepts "time" and "cycle" to comprehend *cyclical time* as the Hopis understand and experience it unless we immerse ourselves in Hopi culture and language as Whorf did. As intercourse among societies reduces social differences and augments similarities, psychological commonalities will become more specific. People will come to have similar senses of time, color, quantification, and engage in theoretic logical deduction and free recall. But for the present, social differences are so emphatic that commonalities must be abstract rather than specific.

If relativism does not preclude communication, neither does it imply skepticism about knowing the world (Geertz, 1984). The fact that different people know the world in different ways does not mean that the world is unknowable. Different approaches to the world do not negate objectivity, they reflect the creativity involved in achieving knowledge. Although viewpoints will conflict, each may contain some portion of the truth.

Moreover, certain approaches may be more truthful than others. Acknowledging this does not imply oppressing or repressing other views. It simply recognizes the beneficial cognitive processes that further comprehension, solve problems, and make life more fulfilling. The fact that certain societies have misused the claim of mental superiority to oppress others should not intimidate us from recognizing superiority where it exists. If, as Goody (1977, pp. 150-151) has said, modern scientific, logical thought is a more thorough probing into truth and gains greater control over natural forces than was achieved by premodern magical thinking, such a recognition can strengthen our resolve to avoid mysticism. We will not necessarily be driven to exterminate all those peoples who continue to believe in mysticism.

There is nothing intrinsically malevolent about recognizing advantageous differences among people. Nor does championing equality necessarily lead to treating people benevolently. Suppression has been carried out under the name of equality as much as it has been under the name of superiority. In fact, Vygotsky and Luria were suppressed under just such a democratic mantle which regarded their ideas as reactionary.

The psychological differences that divide people are real and reflect real differences in social life. If this is troubling, it can only be altered by real changes that unify social life. Psychological equality only exists to the extent

that it is supported by similarities in concrete social life. Social psychological universality must be constructed, it is not given.

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