

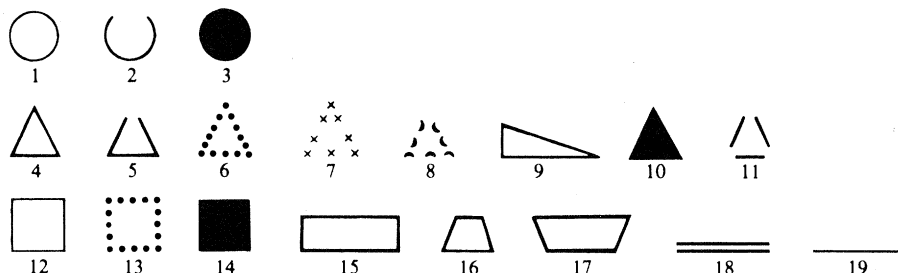
Modernizing Minds

Cognitive Development. Its Cultural and Social Foundations. A. R. LURIA. Translated from the Russian edition (Moscow, 1974) by Martin Lopez-Morillas and Lynn Solotaroff. Michael Cole, Ed. Harvard University Press, Cambridge, Mass., 1976. xvi, 176 pp., illus. \$12.50.

In 1931, Alexander Romanovich Luria set out on a field trip into the remote regions of Uzbekistan and Kirghizia. He had collaborated with L. S. Vygotsky in 1930 on a monograph on historical forces and human behavior. Simple reflexes may well be studied in the laboratory, but complex mental processes, they argued, are formed by social forces and must be studied in their cultural contexts. So Vygotsky and Luria planned a study of mental processes in a setting of social change. In the aftermath of the Russian revolution, Soviet Central Asia was experiencing collectivization, the restructuring of the economy, attempts to bring in schooling and reduce illiteracy. Luria made trips to the field in 1931 and 1932, finally bringing back evidence that seemed to say yes, the Marxist-Leninist thesis was upheld. The mind is shaped by society and it changes as society changes. Positive mental developments were taking place as a result of the social movement that had been set in train by the revolution.

Luria returned to a waning Vygotsky, who was to finally succumb to tuberculosis in 1934. He offered his findings to a Moscow community that ignored his proof of the benefits of collectivization and that reacted instead to what seemed to be a touchy argument that the Soviet national minorities were primitive in thought. A political storm was gathering that was to lead to a ban on intelligence testing in the Soviet Union in 1936 and to the suppression of psychological journals. Luria put away his findings for 40 years until, finally, in 1974, he felt able to publish them. This translation brings the work to an English-speaking audience.

Written by a proven master of the scientific case study, the book is rich in suggestive findings and observations. Vygotsky and Luria made up problems like those the modern student of culture and cognition might use. They dealt with linguistic encoding of sensory material, comparison and categorization, responses to syllogistic reasoning problems, the ability to pose questions, the ability to be self-descriptive. Luria gave the problems to peasants living in the



Geometrical figures presented to subjects by A. R. Luria. "Only the most culturally advanced group of subjects—the teachers' school students—named geometrical figures by categorical names (circles, triangles, squares, and so forth). These subjects also designated figures made up of discrete elements as circles, triangles, and squares, and incomplete figures as 'something like a circle,' or 'something like a triangle.' The subjects gave concrete object names ('ruler,' or 'meter,' for example) only in isolated instances. Subjects in the other group presented us with quite different results. . . . They designated all figures with the names of objects. Thus, they would call a circle a plate, sieve, bucket, watch, or moon; a triangle, a tumar (an Uzbek amulet); and a square, a mirror, door, house, or apricot drying-board. They treated a triangle made up of crosses as crosswork embroidery, a basket, or stars; they judged a triangle made up of little half-circles to be a gold tumar, fingernails, lettering, and so forth. They never called an incomplete circle a circle but almost always a bracelet or earring, while they perceived an incomplete triangle as a tumar or stirrup." [From *Cognitive Development*]

ancient traditions of the region and he gave them to the people of the new contexts: collective farm workers, women in training to run kindergartens or teach schools.

Again and again in his data analyses Luria contrasts the thinking of the two groups. He finds reasonable numbers of subjects. The percentage differences are consistent and persuasive. After brief experience with collective environments and schooling, people change. They use the concepts of color and form to distinguish things; they group things according to verbal categories; they can "distance" themselves from a syllogism and execute the formal deduction implied in the arguments; they can solve a hypothetical reasoning problem, even if the solution takes them away from their own experience; they are able to formulate questions that go beyond the bounds of immediate necessity.

There are many transcripts of conversations taken in the field. Not the man to deal with his subjects by marking a simple pass or fail on a scoresheet, Luria haggles with them about their answers and reports some of the negotiations verbatim. And so we meet Rakmat, age 39, illiterate peasant, who is asked about which members of the set *hammer-saw-log-hatchet* should be classified together. Rakmat argues that you need them all; you're going to use the hammer and the saw and the hatchet on the log, aren't you?

The tester tries to illuminate the problem by a parallel example. Suppose you have three adults and a child. Clearly the child doesn't belong in the group. Rakmat holds that well, yes, it

does. The adults are going to be working and they'll need the child to run errands. Finally, the tester returns to his original problem of hammer-saw-log-hatchet with one of his stock gambits, a fellow "over there" who told him the other day that the hammer and the saw and the hatchet belong together because they're tools. Rakmat, unperturbed, maintains his insistence that if you have the tools you're going to need the wood.

The theory and the data of this book are all organized around the assumption that cognitive development is a good thing but, still, the transcripts give one some sympathy for the "undeveloped" mind. Why should a set of physical objects rich in uses and associations be grouped in just one way, just because of the words one speaks about them? If you are faced with a set of hues, one the color of a brick, one the color of calf's dung, one the color of brown sugar, one the color of spoiled cotton, do you really want to just lump them all together as "brown"? Is it really such a fine thing to be able to find questions for a stranger with whom you have no serious business, to march from unreal assumptions to preposterous conclusions, to chatter about oneself?

Luria's little book is a significant addition to the current literature on cross-cultural studies of cognition. It relates cognitive development to social contexts and at the same time it offers some basis for thought about what the development consists in.

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