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How Culture Molds Habits of Thought

By ERICA GOODE

For more than a century, Western philosophers and psychologists have based their discussions of mental life on a cardinal assumption: that the same basic processes underlie all human thought, whether in the mountains of Tibet or the grasslands of the Serengeti.

Cultural differences might dictate what people thought about. Teenage boys in Botswana, for example, might discuss cows with the same passion that New York teenagers reserved for sports cars. But the habits of thought -- the strategies people adopted in processing information and making sense of the world around them -- were, Western scholars assumed, the same for everyone, exemplified by, among other things, a devotion to logical reasoning, a penchant for categorization and an urge to understand situations and events in linear terms of cause and effect. Recent work by a social psychologist at the University of Michigan, however, is turning this long-held view of mental functioning upside down..

In a series of studies comparing European Americans to East Asians, Dr. Richard Nisbett and his colleagues have found that people who grow up in different cultures do not just think about different things: they think differently.

"We used to think that everybody uses categories in the same way, that logic plays the same kind of role for everyone in the understanding of everyday life, that memory, perception, rule application and so on are the same," Dr. Nisbett said. "But we're now arguing that cognitive processes themselves are just far more malleable than mainstream psychology assumed."

A summary of the research will be published next winter in the *Journal Psychological Review*, and Dr. Nisbett discussed the findings Sunday at the annual meetings of the American Psychological Association in Washington.

In many respects, the cultural disparities the researchers describe mirror those described by anthropologists, and may seem less than surprising to Americans who have lived in Asia. And Dr. Nisbett and his colleagues are not the first psychological researchers to propose that thought may be embedded in cultural assumptions: Soviet

psychologists of the 1930's posed logic problems to Uzbek peasants, arguing that intellectual tools were influenced by pragmatic circumstances.

But the new work is stirring interest in academic circles because it tries to define and elaborate on cultural differences through a series of tightly controlled laboratory experiments. And the theory underlying the research challenges much of what has been considered gospel in cognitive psychology for the last 40 years. "If it's true, it turns on its head a great deal of the science that many of us have been doing, and so it's sort of scary and thrilling at the same time," said Dr. Susan Andersen, a professor of psychology at New York University and an associate editor at *Psychological Review*.

In the broadest sense, the studies -- carried out in the United States, Japan, China and Korea -- document a familiar division.

Easterners, the researchers find, appear to think more "holistically," paying greater attention to context and relationship, relying more on experience-based knowledge than abstract logic and showing more tolerance for contradiction.

Westerners are more "analytic" in their thinking, tending to detach objects from their context, to avoid contradictions and to rely more heavily on formal logic. In one study, for example, by Dr. Nisbett and Takahiko Masuda, a graduate student at Michigan, students from Japan and the United States were shown an animated underwater scene, in which one larger "focal" fish swam among smaller fishes and other aquatic life. Asked to describe what they saw, the Japanese subjects were much more likely to begin by setting the scene, saying for example, "There was a lake or pond" or "The bottom was rocky," or "The water was green." Americans, in contrast, tended to begin their descriptions with the largest fish, making statements like "There was what looked like a trout swimming to the right." Over all, Japanese subjects in the study made 70 percent more statements about aspects of the background environment than Americans, and twice as many statements about the relationships between animate and inanimate objects. A Japanese subject might note, for example, that "The big fish swam past the gray seaweed."

"Americans were much more likely to zero in on the biggest fish, the brightest object, the fish moving the fastest," Dr. Nisbett said. "That's where the money is as far as they're concerned." But the greater attention paid by East Asians to context and relationship was more than just superficial, the researchers found. Shown the same larger fish swimming against a different, novel background, Japanese participants had more difficulty recognizing it than Americans, indicating that their perception was intimately bound with their perception of the background scene. When it came to

interpreting events in the social world, the Asians seemed similarly sensitive to context, and quicker than the Americans to detect when people's behavior was determined by situational pressures. Psychologists have long documented what they call the fundamental attribution error, the tendency for people to explain human behavior in terms of the traits of individual actors, even when powerful situational forces are at work. Told that a man has been instructed to give a speech endorsing a particular presidential candidate, for example, most people will still believe that the speaker believes what he is saying.

Yet Asians, according to Dr. Nisbett and his colleagues, may in some situations be less susceptible to such errors, indicating that they do not describe a universal way of thinking, but merely the way that Americans think.

In one study, by Dr. Nisbett and Incheol Choi, of Seoul National University in Korea, the Korean and American subjects were asked to read an essay either in favor of or opposed to the French conducting atomic tests in the Pacific. The subjects were told that the essay writer had been given "no choice" about what to write. But subjects from both cultures still showed a tendency to "err," judging that the essay writers believed in the position endorsed in the essays.

When the Korean subjects were first required to undergo a similar experience themselves, writing an essay according to instructions, they quickly adjusted their estimates of how strongly the original essay writers believed what they wrote. But Americans clung to the notion that the essay writers were expressing sincere beliefs.

One of the most striking dissimilarities found by the researchers emerged in the way East Asians and Americans in the studies responded to contradiction. Presented with weaker arguments running contrary to their own, Americans were likely to solidify their opinions, Dr. Nisbett said, "clobbering the weaker arguments," and resolving the threatened contradiction in their own minds. Asians, however, were more likely to modify their own position, acknowledging that even the weaker arguments had some merit. In one study, for example, Asian and American subjects were presented with strong arguments in favor of financing a research project on adoption. A second group was presented both with strong arguments in support of the project and weaker arguments opposing it. Both Asian and American subjects in the first group expressed strong support for the research. But while Asian subjects in the second group responded to the weaker opposing arguments by decreasing their support, American subjects actually increased their endorsement of the project in response to the opposing arguments. In a series of studies, Dr. Nisbett and Dr. Kaiping Peng of the University of California at Berkeley found that Chinese subjects were less eager to resolve

contradictions in a variety of situations than American subjects. Asked to analyze a conflict between mothers and daughters, American subjects quickly came down in favor of one side or the other. Chinese subjects were more likely to see merit on both sides, commenting, for example, that, "Both the mothers and the daughters have failed to understand each other." Given a choice between two different types of philosophical argument, one based on analytical logic, devoted to resolving contradiction, the other on a dialectical approach, accepting of contradiction, Chinese subjects preferred the dialectical approach, while Americans favored the logical arguments. And Chinese subjects expressed more liking than Americans for proverbs containing a contradiction, like the Chinese saying "Too modest is half boastful." American subjects, Dr. Nisbett said, found such contradictions "rather irritating."

Dr. Nisbett and Dr. Ara Norenzayan of the University of Illinois have also found indications that when logic and experiential knowledge are in conflict, Americans are more likely than Asians to adhere to the rules of formal logic, in keeping with a tradition that in Western societies began with the Ancient Greeks. For example, presented with a logical sequence like, "All animals with fur hibernate. Rabbits have fur. Therefore rabbits hibernate," the Americans, the researchers found, were more likely to accept the validity of the argument, separating its formal structure, that of a syllogism, from its content, which might or might not be plausible. Asians, in contrast, more frequently judged such syllogisms as invalid based on their implausibility -- not all animals with fur do in fact hibernate. While the cultural disparities traced in the researchers' work are substantial, their origins are much less clear. Historical evidence suggests that a divide between Eastern and Occidental thinking has existed at least since ancient times, a tradition of adversarial debate, formal logical argument and analytic deduction flowering in Greece, while in China an appreciation for context and complexity, dialectical argument and a tolerance for the "yin and yang" of life flourished. How much of this East-West difference is a result of differing social and religious practices, different languages or even different geography is anyone's guess. But both styles, Dr. Nisbett said, have advantages, and both have limitations. And neither approach is written into the genes: Asian-Americans, born in the United States, are indistinguishable in their modes of thought from European-Americans.

Dr. Alan Fiske, an associate professor of anthropology at the University of California at Los Angeles, said that experimental research like Dr. Nisbett's "complements a lot of ethnographic work that has been done."

"Anthropologists have been describing these cultures and this can tell you a lot about everyday life and the ways people talk and interact," Dr. Fiske said. "But it's always difficult to know how to make sense of these qualitative judgments, and they aren't

controlled in the same way that an experiment is controlled." Yet not everyone agrees that all the dissimilarities described by Dr. Nesbitt and his colleagues reflect fundamental differences in psychological process. Dr. Patricia Cheng, for example, a professor of psychology at the University of California at Los Angeles, said that many of the researchers' findings meshed with her own experience. "Having grown up in a traditional Chinese family and also being in Western culture myself," she said, "I do see some entrenched habits of interpretation of the world that are different across the cultures, and they do lead to pervasive differences."

But Dr. Cheng says she thinks that some differences -- the Asian tolerance for contradiction, for example -- are purely social. "There is not a difference in logical tolerance," she said. Still, to the extent that the studies reflect real differences in thinking and perception, psychologists may have to radically revise their ideas about what is universal and what is not, and to develop new models of mental process that take cultural influences into account.

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