

Culture puts unique spin on moral judgment

On the basis of research conducted in the United States over the past 20 years, psychologists have largely assumed that people employ a mixture of two types of moral perspectives: "justice" judgments, which revolve around rules of fairness, legal rights and reciprocation of favors, and "interpersonal" obligations, which focus on the needs of others as they arise in a particular relationship or situation. A popular theory is that women emphasize the interpersonal outlook, whereas men prefer justice judgments.

But a new study of people in the United States and India finds that at least three distinct moral perspectives exist, shaped largely by culture. The study, published in the April *JOURNAL OF PERSONALITY AND SOCIAL PSYCHOLOGY*, also disputes the gender-based theory.

"Culture seems to be a far more powerful determinant of moral perspectives than gender," asserts psychologist Joan G. Miller of Yale University in New Haven, Conn., who directed the investigation.

Miller and Yale colleague David M. Bersoff supervised interviews of 120 people from middle-class backgrounds, half in New Haven and half in an Indian city. Each group consisted of equal numbers of males and females at three age levels: third grade, seventh grade and college.

U.S. volunteers came from a Christian or Jewish background; those in India followed Hindu beliefs and customs.

Twenty middle-aged, upper-class Hindu Indians in high-prestige jobs, such as physicians, also completed interviews.

In one session, participants read descriptions of either justice or interpersonal breaches that ranged from minor to potentially life-threatening. For instance, a moderate justice breach describes a man who steals a train ticket from another man's coat pocket, adding that the victim has enough money to buy another ticket. A moderate interpersonal breach portrays a man who for selfish reasons does not deliver the wedding rings to his best friend's wedding. Volunteers rated the degree to which they accepted or rejected these behaviors and explained their reasoning.

A second session asked for ratings of conflict situations — again ranging from minor to life-threatening — in which the fulfillment of one moral obligation led to the violation of the other. For example, a moderate conflict involved a man who has to catch a train to deliver wedding rings to his best friend's wedding. His wallet and train ticket get stolen, and he has to decide whether to take a ticket from the pocket of an unattended coat

that also contains enough money for the owner to buy another train ticket.

The researchers say volunteers who preferred taking the ticket to meet an obligation to a friend endorsed an interpersonal choice; those who chose not to take the ticket made a justice judgment.

In the two sessions, Indians from both social groups strongly preferred meeting interpersonal obligations, whereas slightly more than half the U.S. sample favored justice obligations. U.S. participants treated only the justice perspective as subject to regulation and considered interpersonal decisions a matter of personal choice or values; departing from the two U.S. perspectives, Indians treated both interpersonal and justice obligations as subject to strict social rules.

The Indian responses apparently stem from the Hindu emphasis on social duties and responsibilities, the researchers argue. A cultural emphasis on individual rights and justice shapes the moral perspectives of U.S. residents, they add.

No sex differences appeared in either culture. A number of U.S. researchers have failed to document differences in the moral perspectives of men and women, Miller points out, yet some influential studies have found marked differences. However, the latter projects have not examined whether gender influences moral judgments more than culture does, Miller adds.

— B. Bower

Vitamin D: Too much of a useful thing

The adage that too much of a good thing can prove hazardous was underscored this week by a scientific report linking a spate of vitamin D poisonings to milk. A second report suggests that manufacturers routinely add too much or too little vitamin D to milk and infant formula.

Vitamin D is essential for the formation of strong bones. In children, a deficiency of this nutrient causes rickets, a deforming disease of the bone. In the United States, milk has been fortified with vitamin D since the 1930s, a policy that has greatly reduced the incidence of rickets. Two new reports in the April 30 *NEW ENGLAND JOURNAL OF MEDICINE* suggest this public health policy has a downside.

In the first report, endocrinologist Ellen W. Seely of the Brigham and Women's Hospital in Boston and her colleagues identified seven adults and a 15-month-old girl with unexplained vitamin D poisoning. Too much vitamin D results in undesirably high concentrations of the mineral calcium in the blood, which can cause fatigue, weight loss and, in severe cases, irreversible kidney and cardiovascular damage.

After reviewing the medical records of these eight people, the researchers

sent them a questionnaire asking about their intake of fortified foods such as milk and cereals. None reported taking supplemental vitamin D. After some sleuthing, the scientists traced the problem to milk produced by a local dairy. All eight people were customers of the dairy and drank from one-half to three cups of milk per day.

Analysis of the dairy's milk revealed a wide range of vitamin D concentrations. The Food and Drug Administration recommends that milk contain 400 international units of vitamin D per quart. However, at least one batch had 232,565 international units per quart.

A more extensive analysis of the Boston cases by the Centers for Disease Control (CDC) in Atlanta revealed an association between drinking the milk produced by this dairy and the occurrence of vitamin D toxicity. CDC identified 11 additional cases of vitamin D toxicity that were not included in the study led by Seely. However, the vast majority of people who drank milk from the Boston-area dairy showed no sign of ill health caused by vitamin D, says CDC's Thomas Sinks. CDC released preliminary findings from its unpublished study on April 28.

A second study reported in the same

journal set out to determine the extent of the fortified-milk problem. Michael F. Holick of Boston University's School of Medicine and his colleagues purchased 42 containers of milk and 10 cans of infant formulas from supermarkets in Massachusetts, Virginia, New Jersey, Vermont and New Hampshire.

They discovered that milk and baby formula rarely contained the amount of vitamin D stated on the label. Ten percent of the milk samples and all of the infant formula samples contained excessive amounts of vitamin D. However, most dairies added too little rather than too much of this nutrient to their milk.

Health officials believe the massive addition of vitamin D to milk probably doesn't happen often. Nancy Ridley of the Massachusetts Department of Public Health calls the Boston dairy "a rare, rare exception." She notes that this dairy added vitamin D by hand, a process that could have led to the error.

Nonetheless, such reports may lead to greater federal and state regulation of the dairy industry. "Both reports strongly indicate the need for routine, specific analyses of the vitamin D content of fortified foods by regulatory agencies," comments John G. Haddad of the University of Pennsylvania in Philadelphia.

— K.A. Fackelmann