

INVESTIGATING THE **IMPACT** OF LIFE

Scholars in social psychology are developing new insights for our understanding of how humans are affected by the issues and conditions we face every day.

By Stuart Wolpert

In the broad realm of psychology, scholars investigate what is perhaps the most remarkable development of nature: the physical structure and workings of the human mind.

Within the more specific field of social psychology, researchers create new understanding of how the conditions of life affect the mind.

“All psychologists explore the human mind; social psychologists also focus on investigating the human condition—the factors outside the mind that affect it,” said Robert A. Bjork, professor and chair of the UCLA Department of Psychology.

“Whether studying the effects of stress, pain management, social networking, reproductive health, personal relationships, group behavior, or the impact of conflict on well-being,” said Bjork, “social psychologists are looking at the issues of daily life that could affect any of us, and probably affect most of us.”

An interdisciplinary field, social psychology proves to be a thriving collaborative setting to link researchers interested in the physical functioning of the brain to scholars who focus on the impact of behavior. At UCLA, 10 faculty—three are highlighted here—along with their graduate students and post-doctoral researchers form a core group that is renowned for creating new insights about the mind and the spectrum of factors—both negative and positive—that affect it.

Measuring the Impact of Stress on Health

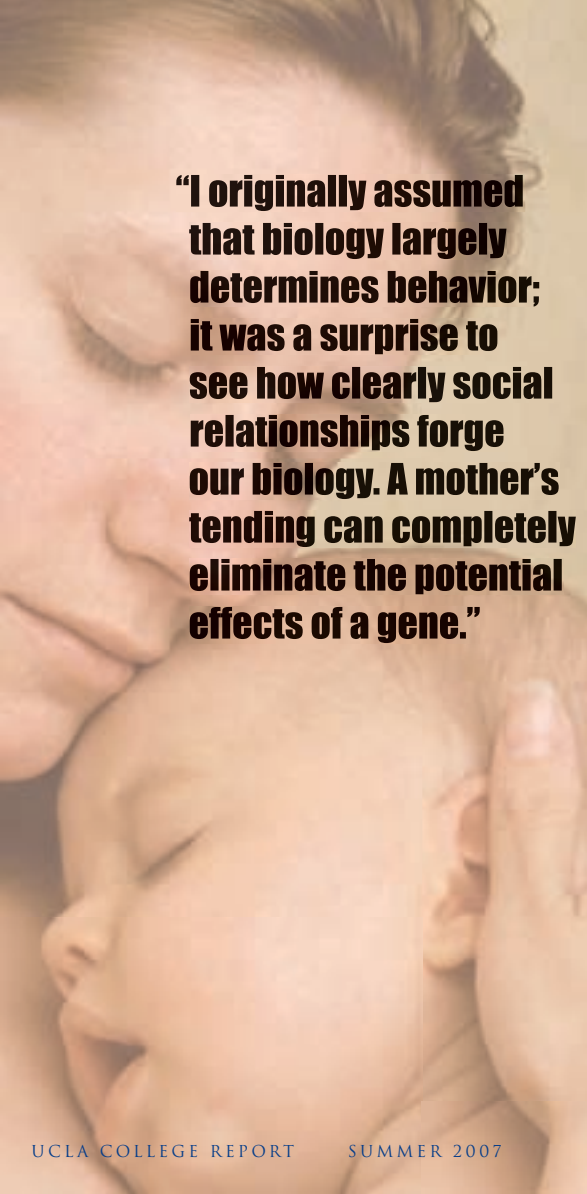
Bringing together elements of genetics, psychology, neuroscience and related fields, Professor of Psychology Shelley E. Taylor studies social relationships and how they protect against stress.

An important theme in Taylor’s work is the impact of intensely stressful negative events on people’s behavior and health, and how we cope with these events. She is the founder of this area of research, and a founder of health psychology in general.

Among the cornerstones of Taylor’s work is a theory she developed that explores the usefulness of “positive illusions” in our everyday lives—research that attests to the powerful ability of the human mind to interpret threatening events in ways that protect health. Taylor’s research showed that positive self-illusions can defend people against emotional threats or traumas, protecting not only their psychological well-being but also their physical health. Optimism and social support have biological and psychological benefits, especially in times of stress.

“Shelley’s insightful and provocative thinking about positive illusions contrasted with prevailing views of how perceptions affect individuals,” said Bjork. “She suggested that mentally healthy perceptions incorporate optimistic errors and biases, which facilitate mental health. This concept has had a profound impact on psychology; her research on this subject has produced a fundamental shift within the psychology profession.”

As part of the ongoing development of this line of research, Taylor is the



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author of the book, *The Tending Instinct: How Nurturing Is Essential to Who We Are and How We Live*, for which she analyzed more than 1,000 mental health studies. Among her many conclusions is the idea that tending to others is part of the basic biology of humans—as natural, Taylor said, as searching for food or sleeping.

“I originally assumed that biology largely determines behavior,” Taylor said, “and so it was a tantalizing surprise to see how clearly social relationships affect our underlying biology—even at the level of genes.

“Chief among these social forces are the ways in which people take care of one another and tend to one another’s needs,” Taylor said. “An early warm and nurturing relationship is as vital to development as calcium is to bones.”

In her book, Taylor addressed the role that genetic makeup and tending plays in determining our behavior.

“The genome is like an architect’s first plan for a house—a rough projection of how a person may turn out,” Taylor said. “The plan is revised during the course of the building process. This is what happens when genes meet the environment in which they find expression, and tending is a large part of this environment.

“From life in the womb to the surprisingly resilient brain of old age, the social environment molds and shapes the expression of our genetic heritage until the genetic contribution is sometimes barely evident. A mother’s tending can completely eliminate the potential effects of a gene; a risk for a disease can fail to materialize with nurturing, and a genetic propensity may lead to one outcome for one person and the opposite for another, based on the tending they received.”

Taylor also studies the benefits of social support, as well as gender and cultural differences in the use of social support for managing many kinds of stress. She explores the skills that people use for anticipating stressful events and for minimizing their effects and when they occur. She is especially interested in how people proactively head off stressful events through planning, goal setting, and mental stimulation.

Taylor’s research on stress and coping has shown that men and women use very different methods for coping with

Matthew D. Lieberman



stress, with women drawing more heavily than men on their social relationships. She and her colleagues also published the first study that analyzed more than a decade of research that shows how a family’s social environment influences physical and mental health.

The research team found strong evidence that children who grow up in “risky families” often suffer life-long physical health problems, including some of society’s most common serious ailments, such as cancer, heart disease, hypertension, diabetes, obesity, depression and anxiety disorders, as well as early death.

Taylor and colleagues, including Matthew D. Lieberman, UCLA associate professor of psychology, found that a harsh early childhood environment may adversely affect how threatening information is processed in the human brain—the first evidence that functioning in the regions in the brain involved in the detection of threatening information and regulation of emotional responses to these threats works differently in people from “risky families,” (homes marked by conflict, anger and aggression, that are emotionally cold, unsupportive and where children’s needs are neglected).

Exploring the Power of “Social Information Processing”

Lieberman, whose research is supported by the National Science Foundation and the National Institute of Mental Health, is one of the founders of social cognitive neuroscience. He uses innovative techniques for brain imaging that combine neuroscience with social psychology research. Using Functional Magnetic Resonance Imaging (fMRI) at UCLA’s Ahmanson-Lovelace Brain Mapping Center to examine brain activity and neuropsychology, Lieberman’s approach focuses on how the human brain carries out social information processing, and how the brain supports social experience.

Lieberman studies how, when we interpret our social and emotional world, we use both automatic responses, which occur spontaneously; and high-level, controlled, deliberative responses—and which regions of the brain are involved in each kind.

Lieberman and his colleagues examine how conscious thought can disrupt emotional processing that is automatic and non-conscious. They have shown that the amygdala—an almond-shaped structure in the brain that serves as an alarm to activate a cascade of other biological systems to protect the body in times of danger—becomes less sensitive when the prefrontal cortex, critical for language and logical reasoning, is activated.

These studies complement Lieberman’s research that extends into observations of social intuition. Lieberman



Shelley E. Taylor



Janet Tomiyama (left) and Traci Mann

believes that the basal ganglia—which are associated with motor control, emotions and learning—are also critical for interpreting social subtleties, such as making sense of facial expressions and tones of voice, even though we are not aware we are doing so.

Lieberman's work has revealed intriguing findings about the brain's capacity for dealing with pain. For example, one of his studies showed that patients with chronic abdominal pain who received placebos instead of real painkillers experienced not only improvement in their symptoms, but also showed physical changes in their brain structures as well.

"We wanted to see how belief in the placebo leads to the change in pain symptoms," said Lieberman. "This study helped answer that question, and also identifies a pathway from a region of the brain associated with placebos, and with thinking about emotional experience, to a region closely linked to the outcome of diminished pain."

"We actually see physical changes in the brain that correspond closely to changes in symptoms that the patients report," said Lieberman, who won the American Psychological Association's Distinguished Scientific Award for Early Career Contributions to Psychology.

In another innovative study, Lieberman and Naomi I. Eisenberger, an assistant professor of psychology at UCLA, showed that two key areas of the brain appear to respond to the pain of rejection in the same way as physical pain, and that physical and social pain may be more similar than we realized. Eisenberger and Lieberman used fMRI to monitor brain activity in UCLA undergraduates while the students played a computer ball-tossing game designed to provoke feelings of social exclusion.

Regulating Personal Behavior: Success or Failure?

Traci Mann, UCLA associate professor of psychology, focuses her research on how people regulate their own behavior that affects their health. Mann studies basic mental processes that predict when people will succeed or fail at controlling health-related behaviors: eating, smoking, lying

and aggressive behavior.

Mann also looks at how individual factors, such as optimism, and social factors, such as peer influence, can predict changes in health behavior. With her graduate students, Mann studies factors that affect body image, ways to prevent women from feeling threatened by unattainable media images, and the factors that affect how people feel about their bodies.

In a study published in the *American Psychologist* earlier this year, Mann, graduate student Janet Tomiyama and former UCLA graduate students reported that for most people, dieting alone is not an effective way to lose weight and keep it off.

Mann and her co-authors conducted the most comprehensive and rigorous analysis of long-term diet studies; they analyzed 31 long-term studies on dieting.

"What happens to people on diets in the long run?" Mann asked. "Would they have been better off to not go on a diet at all? We decided to dig up and analyze every study that followed people on diets for two to five years.


"We concluded most of them would have been better off not going on the diet at all. Their weight would be pretty much the same, and their bodies would not suffer the wear and tear from losing weight and gaining it all back."

People on diets typically lose substantial weight in the first six months of most diets, the researchers found. However, up to two-thirds of people on diets regain more weight than they lost within five years, and the true number may well be significantly higher.

"You can initially lose five to ten percent of your weight on any number of diets, but then the weight comes back," Mann said. "We found that the majority of people regained all the weight, plus more. Sustained weight loss was found only in a small minority of participants, while complete weight regain was found in the majority. Diets do not lead to sustained weight loss or health benefits for the majority of people."

Said Tomiyama, "Several studies indicate that dieting is actually a consistent predictor of future weight gain."

If dieting doesn't work, what does?

"Eating in moderation is a good idea for everybody, and so is regular exercise," Mann said. "Exercise may well be the key factor leading to sustained weight loss. Studies consistently find that people who reported the most exercise also had the most weight loss." 

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