“Collective Effervescence”

What Makes Teams Tick

Many of the most pressing issues of our time—climate change, economic inequality, human rights—require interdisciplinary solutions. Yet facilitating collaboration among individuals from disparate fields can often be challenging. A recent study on what contributes to successful interdisciplinary work has found that the “emotional aspect” of such collaborations is at least as important as their intellectual aspect.

The study, by professor of sociology Michele Lamont, lecturer on education Veronica Boix Mansilla, and Kyoko Sato, now a lecturer at Stanford, closely examined nine interdisciplinary networks funded by the Canadian Institute for Advanced Research, the MacArthur Foundation, and the Santa Fe Institute. These networks all brought together scholars from at least three disciplines; their research topics ranged from brain development to urbanization. Drawing on documents, observation, surveys, and interviews, the authors concluded that the markers of successful interdisciplinary collaborations include not just an intellectual, but also emotional and interactional elements, and they proposed a “shared cognitive-emotional-interactional platform” for evaluating such projects.

Lamont said the findings may appear counterintuitive. “Instead of thinking that the emotional and the interactional corrupt the cognitive,” as the issue has often been framed in the literature, she explained, the authors view the first two dimensions “as interacting with knowledge production and as empowering.” Success-

“Right Now

1992 to 2011 to compare households just above and below the cutoff for SCHIP, both before and after the program began in 1997, Olds found that the self-employment rate among SCHIP-eligible households rose by 23 percent versus those households that weren’t eligible. The rate of new business starts rose by 13 percent among households that qualified for the program, and the survival rate of new businesses rose by 8 percent. The largest growth was in newly incorporated businesses, many of which were substantial and successful enough to contribute to the family bank account: income from self-employment increased 16 percent relative to other wages.

Olds’s other 2014 paper, on “Food Stamp Entrepreneurs,” found a similar link between business starts and eligibility for the Supplemental Nutrition Assistance Program (SNAP), which expanded in the mid 2000s when its requirements were loosened. Newly qualified households were 20 percent more likely to start a business, and the number of incorporated businesses rose 16 percent among those who were newly qualified.

Those findings were familiar to Olds—as a child growing up in Anchorage, Alaska, he lived them. Money was tight: his stepfather worked a steady but low-paying job as a dental assistant, and his mother did a series of odd jobs, including as a secretary and a doula; she is now a nurse. They lived paycheck to paycheck. But when he was six, his parents launched a business, a training school for dental assistants, which they ran successfully before selling it a decade later. "It was one of those family businesses where everybody pitches in," he says. On Saturday mornings, the family would go to Costco and get muffins for the students; in the afternoons, he and his two sisters would serve as mock patients so students could practice taking x-rays and fitting dental dams.

At the time, Olds didn’t think much about it. “I just knew this was what we did on Saturdays, and this was why I couldn’t play with my friends.” But as he got older, he thought about the risk his parents had taken (“None of this was guaranteed,” he says) and the money they’d had to save. They didn’t take out a loan. “I started thinking, how did they save that money?” He recalled the years early on when the family was on food stamps and he and his sisters got healthcare through Medicaid.

“If you can guarantee entrepreneurs some kind of a floor...then they’re more willing to take on a risk. That’s very important to firm-creating and economic growth.”

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Successful collaboration requires the construction of a group identity, “a sense of ‘us.’”

The team’s work, she explained, has helped lead to changes in the courtroom. The collaboration produced an influential article quoted in the landmark 2005 Supreme Court decision that outlawed the death penalty for juvenile offenders.

Kyoko Sato said that what distinguished this group were the positive interational and emotional features that facilitated dialogues among participants ranging from legal officials to experts in psychology, public health, and education. “They really liked each other,” she said, “and they were also all bonded in a collective mission to make a difference in the juvenile-justice system.”

Howard Gardner, Hobbs professor of cognition and education at the Graduate School of Education, who has led a study on interdisciplinary collaboration in the past, called the paper an “ambitious” and “creative synthesis” of various kinds of data. “I don’t know of any study that looked at longstanding networks over a significant period of time,” he said. “This is not the type of question that you can answer simply by doing a lengthy online survey; it doesn’t lend itself to large-scale ‘big-data’ methods.” His own research on successful collaborations yielded similar people-centered findings that emphasized factors such as the rigorous selection of team members and good leadership. “People need to like each other,” he said. “Nobody wants to work for years on something if he or she doesn’t like the other people.”

The major takeaway from the study, Lamont said, is that researchers should choose their collaborators carefully, assessing not just intellectual contribution, but also emotional intelligence and personality. “The days of the titans who dominated their disciplines at Harvard and elsewhere may be obsolete one day,” Lamont said, “because the key to innovation is now often collaboration.”

Why Sex Succeeds

Why pair up to procreate? Biologists have long wondered why so many organisms go to so much trouble to create offspring, when asexual reproduction fulfills the evolutionary goal of passing on as many genes as possible to the next generation.

During the last century, scientists developed two main theories. The “Red Queen” hypothesis says that DNA-sharing, because it speeds up evolution, allows organisms to stay one step ahead of parasites and other pathogens by evolving to outsmart their attacks. (The phrase comes from the Red Queen’s remark in Through the Looking Glass: “Now here, you see, it takes all the running you can do, to keep in the same place.”) The second theory, “Plucking Rubies,” suggests that recombining genes in each generation preserves beneficial mutations; at the same time, harmful mutations are selected out of the gene pool.