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**STANFORD** SOCIAL INNOVATION *review*

**Research:  
Tech Clears the Air**

By Alana Conner

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BY ALANA CONNER

MANAGEMENT

## Interviewer Beware

► Her suit is Prada. Her hair is neatly coiffed. Her handshake is firm and her eye contact steady. Her body leans forward ever so slightly to show that she is interested, but not anxious. Her easy banter manages to convey her many achievements without seeming arrogant. Her replies arise after thoughtful pauses. Her compliments seem sincere.

And her next job is quite likely to be the one you are offering, suggests a new meta-analysis of several dozen studies. Combined, the studies show that hiring managers are remarkably susceptible to a job candidate's appearance, gestures, postures, flattery, and self-promotion. Alas, the study also finds that these interviewer-wooing tactics have more to do with whether a candidate gets the job than how well she performs at it.

"Many executives and managers have too much confidence in their ability to read people," says Murray Barrick, chair of the management department at Texas A&M University and the study's lead author. "They don't want to hear that self-presentation tactics are having this much impact on their hiring decisions."

"I also didn't think that our effects would be this strong," he adds.

Barrick and colleagues' study offers an antidote to the beguiling wiles of potential hires: Give them all the same structured interview. "Every question you ask should be job related, and you shouldn't ask more than 12



questions," Barrick recommends. He also suggests that employers develop a key of great, good, and poor answers that they use to score each interview. At the end of the job search, the employer should consider only the highest scoring interviewees for the job.

Just because self-presentation tactics have undue influence on hiring decisions does not mean that they are not relevant to the hiring process, Barrick warns: "How someone manages other people's impressions of them often matters on the job." So rather than treating self-presentation tactics merely as a source of bias and bad decision making, employers should explicitly rate them. "Put a number to that gut reaction," he says. "You're going to have it anyway." By consciously accounting for interviewees' self-presentation tactics, employers may then decide how much to

allow these subtle dynamics to shape their decisions. ■

Murray R. Barrick, Jonathan A. Shaffer, and Sandra W. DeGrassi, "What You See May Not Be What You Get: Relationships Among Self-Presentation Tactics and Ratings of Interview and Job Performance," *Journal of Applied Psychology*, 94, 2009.

EDUCATION

## Charters Rock Exam

► In 1988, Margaret Thatcher, the United Kingdom's famously conservative prime minister, approved a revolutionary reform: Allow secondary schools to shrug off local control and become autonomous, central government-funded entities. To convert into one of these so-called grant-maintained schools (GMs), a school had to secure the majority vote of its students' parents. By 1997, some 900 of the United Kingdom's 3,500 state-funded secondary schools had gone GM (the rough equi-

valent of a conversion charter school in the United States).

Damon Clark's father was the principal of a GM school. Two decades later, Clark is an assistant professor of economics at the University of Florida, where he has uncovered the first evidence that GM schools fare better than standard schools on national exams. "GMs increased the pass rate on their Grade 11 exams by about 5 percentage points," from a 40 percent to a 45 percent pass rate, he says. He further finds that upturns emerged as early as two years after the GM conversion and persisted eight years later, at the end of his study.

In both the United Kingdom and the United States, advocates of charter schools and their analogs contend that giving schools greater autonomy not only will strengthen the schools themselves, but also will put pressure on nearby schools to shape up or lose out on students, teachers, and funding. Yet evidence for these two assertions has been mixed, in part because of methodological issues (for example, small sample sizes, widely varying programs, and difficulty controlling for factors such as socioeconomic status) that bedevil studies of school choice.

The GM policy, however, produced a large natural experiment that eliminated several of these technical problems. In many school districts, parents' votes for or against the GM switch were quite close, creating two groups of schools—GM and regular—that were otherwise alike. Clark could then compare how these two groups performed on their Grade 11 exams, as well

as test whether GM schools goaded their nearby competitors into turning out more successful students.

Although GM schools did indeed earn higher marks, they did not spur on their neighbors, Clark shows. “This is an important finding because we don’t have a ton of great evidence regarding whether charter and voucher models drive all schools to improve,” says Sean Reardon, an associate professor at the Stanford University School of Education.

Clark also could not pinpoint exactly *why* GM schools outstripped traditional ones. One explanation is cash: Schools received some government incentives to take the GM plunge. “The money does probably matter,” concedes Clark.

“But I also found evidence that the GM schools used their newfound flexibility to make organizational changes,” he says. That evidence includes higher rates of teacher hiring and turnover. “GM and charter schools can make staff changes much more easily than traditional schools,” which must work with teacher unions and other authorities, he notes.

Reardon further cautions, however, that Clark’s research “suggests that autonomy helps schools become better, but not that it helps individual students become better.” He points out that the student composition of GM schools changed somewhat, which might have caused some of the jump in GM school performance. “Whether a given student would do better in a more autonomous school is a different question from whether schools as a whole improve,” he adds.

Nevertheless, Reardon concludes: “This a good article. Clark did his work carefully. And it’s nice to have another piece of

evidence from a different system and a different model.” ■

Damon Clark, “The Performance and Competitive Effects of School Autonomy,” *Journal of Political Economy*, August 2009.

CORPORATE SOCIAL RESPONSIBILITY

## Tech Clears the Air

► World Trade Organization protestors and other globalization foes may have one less fear to fret about. Although manufacturers in the United States are churning out more and more products, their smokestacks are belching out less and less air pollution—and not just because companies are making poor countries do their dirty work. Instead, green technologies are largely clearing the air, finds Arik Levinson, a professor of economics at Georgetown University.

“A lot of [activist] groups think of the environment vs. economics as a zero-sum game,” says Levinson. “But in this case, manufacturing grew, and the environment also improved, mostly because of technological advances” that make industries cleaner, he says.

In his fine-grained analysis, Levinson first broke down the U.S. manufacturing sector into 450 separate industries. He then tracked how much air pollution (sulfur dioxide, nitrogen dioxide

carbon monoxide, and volatile organic compounds) each industry generated between 1987 and 2001. Finally, he traced changes in air pollution to three different causes: growth, technologies that reduce air pollution (such as scrubbers, which clean the gasses passing through smokestacks), and importation (rather than domestic production) of environmentally unfriendly goods.

Levinson discovered that although U.S. manufacturers created 24 percent more goods, they emitted 25 percent less pollution. He estimates that the greening of manufacturing practices accounted for about 60 percent of this cleanup, whereas the shifting of polluting industries offshore accounted for only 10 percent.

Although this study did not explore what evoked the technological changes that spared America’s air, other research suggests that the Clean Air Acts of 1970 and 1977 spurred these innovations. Spikes in oil prices probably also inspired manufacturers to operate more efficiently, Levinson says.

Just because offshoring did not strongly affect America’s air does not mean that building factories abroad did not cloud the skies of other nations, concedes Levinson. “If Ford opens a factory in Mexico rather than in

Detroit,” he says, “the Mexican factory could very well be more polluting” than it would have been in the United States. Yet the longitudinal data needed to explore this question are lacking, he notes. “It’s also hard to test whether pollution-intensive firms respond to regulation by relocating abroad,” he says.

Without these data, environmentalists and antiglobalization activists may still have cause to worry that corporations are doing dirtier deeds overseas. But “the United States is doing great,” says Levinson. ■

Arik Levinson, “Technology, International Trade, and Pollution from U.S. Manufacturing,” *American Economic Review*, 99, 2009.

PHILANTHROPY

## Radical Grantmaking

► Many grants move innovators to build a better mousetrap. But what kinds of incentives inspire a better mouse? Not the short-term, project-focused, risk-averse funding of grantmakers such as the National Institutes of Health (NIH), suggests the tale of Mario Capecchi. Ignoring reviewers, Capecchi sunk his NIH grant into inventing “knockout mice,” which show what different genes do. These revolutionary rodents paved the way for thousands of medical breakthroughs, as well as a Nobel Prize for Capecchi.

Funders who want to catalyze radical innovation should likewise not follow the NIH model, suggests a new study. Instead, they should emulate the Howard Hughes Medical Institute (HHMI) and make long-term grants, invest in people rather than in projects, and offer rich and frequent feedback.

“If you want to encourage radical innovation, it’s not all about resources. It’s about how



PHOTOGRAPH BY FOTOG/TETRA IMAGES/CORBIS

you spend those resources,” concludes Pierre Azoulay, an assistant professor at MIT’s Sloan School of Management and the study’s lead author. Azoulay and his colleagues followed the careers of 73 HHMI investigators and almost 500 of the NIH’s most promising grantees. They found that HHMI’s investigators published more high-impact papers, cited by more of their colleagues, than did NIH grantees.

Azoulay and his team then contrasted NIH and HHMI grantmaking practices. Whereas the NIH usually offers three years of funding, HHMI typically awards five-year grants. While the NIH gives grantees early critiques of varying quality, HHMI offers rich feedback throughout the grant cycle. And whereas the NIH expects grantees to meet their initial goals, HHMI encourages investigators to try new

tricks, and then helps them choose the most fruitful avenues.

Some social innovation funders independently discovered the secret ingredients of radical innovation. For instance, like HHMI, New York City-based grantmaker Echoing Green invests in people instead of projects, says president Cheryl Dorsey. “Talent matters; human capital has always been the main engine of great social movements,” observes Dorsey, whose organization has seeded such groundbreaking nonprofits as Freelancers Union and City Year. To nurture talent, Echoing Green “gives people permission to fail, and then helps them learn from their failures,” she says. Echoing Green also channels feedback from hundreds of volunteers.

Not all innovation can or should be radical, Azoulay points out. Drawing on a distinction

made by coauthor and MIT colleague Gustavo Manso, he notes that many valuable discoveries come from exploiting existing knowledge, rather than exploring new ideas. The human genome project, for instance, is “exploitation on a giant scale,” he says.

Fostering exploration and radical innovation are also more expensive and time-consuming, he says. “HHMI’s model wouldn’t scale up.”

“Of everything that the federal government spends money on,” Azoulay adds, “I’m happy about it spending money on NIH.” Yet noting how esoteric applying for government funding can be, he says, “we would prefer people to spend more time on science and less on grantsmanship.” ■

Pierre Azoulay, Joshua S. Graff Zivin, and Gustavo Manso, “Incentives and Creativity: Evidence from the Academic Life Sciences,” NBER working paper #15466, October 2009.

## EQUALITY

# How the Danes Do It

► Like any primate species worthy of its opposable thumbs, we humans like our social hierarchies. Yet too much inequality wrecks our health, rocks our politics, and chafes our social ties, find scholars across the social sciences. These same scholars also hotly debate where inequality comes from, yet arrive at little consensus.

A new study of 21 modern small-scale societies around the world, however, finds a clear pattern in the disparities: “How much inequality there is in a society depends on how inheritable the wealth is, which in turn depends on the kind of wealth that it is,” says economist Samuel Bowles, director of the behav-



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ioral sciences program at the Santa Fe Institute and one of the study's lead authors.

Specifically, parents in crop farming and herding economies tend to value and create material wealth (such as land, cows, and money), which they then pass on to their offspring. Over time, this inherited wealth accumulates in certain households, widening the gaps between the haves and have-nots.

In contrast, parents in subsistence farming and hunting-gathering economies tend to rely on and generate other kinds of capital, including embodied wealth (like height, strength, and skills) and relational might (such as social alliances and connections to powerful people). Because these riches are harder to hand off to children, horticulturalists and hunter-gatherers have more egalitarian societies.

"Once you have private property, the whole game changes because you now have material wealth that you can transmit to your offspring," says Monique Borgerhoff Mulder, professor of anthropology at the University of California, Davis, and another lead researcher of the 23-author team. "Intergenerational transmission [of wealth] then becomes a pernicious force that perpetuates inequality," she says.

Yet economy is not destiny: Societies not only make wealth, they also create institutions that decide how to mete and dole that wealth among their people. Denmark, for instance, is a modern capitalist state built on agricultural foundations. Yet inequality in Denmark (as captured by the Gini coefficient) is similar to that of the most egalitarian hunter-gatherers and subsistence farmers. The Danes have chosen a set of institutions

that limit inequality and the inheritance thereof, explains Bowles, "including good public education, widespread access to health care, and policies that protect against low wages in some sectors."

Meanwhile, Bowles says, the United States "has adopted policies that allow parents to pass on most of their material wealth to their children." As a result, the United States is one of the most unequal capitalist nations in the world. "People do have choices," he adds. ■

Monique Borgerhoff Mulder, Samuel Bowles, Tom Hertz, et al., "Intergenerational Wealth Transmission and the Dynamics of Inequality in Small-Scale Societies," *Science*, October 30, 2009.

#### SOCIAL JUSTICE

## Long Suffering Falls Short

► When school groups visit the Nazi Documentation Center in Cologne, Germany, "teachers often think that their job is to induce guilt in their students," observes Roland Imhoff, a doctoral candidate in the department of social and legal psychology at the University of Bonn. "But pushing the guilt button may backfire," he cautions. Supporting this warning is Imhoff's dissertation, which shows that emphasizing Jews' ongoing suffering from past atrocities may actually inflame anti-Semitism rather than cool it.

"There is a widespread assumption that collective guilt has positive outcomes," notes Imhoff. Yet several theories in sociology and psychology offer a different logic: Guilt moves people not to relieve suffering, but to exacerbate it by rationalizing that the victims somehow deserve their plight. Other theories reach the same conclusion through different paths: Rather



than guilt, people's desire to believe in a just world or to maintain the status quo can lead them to despise victims. Noting these ironic misplacements of malice, the Israeli psychoanalyst Zvi Rex once quipped, "The Germans will never forgive the Jews for Auschwitz."

Imhoff and his coauthor, University of Bonn professor Rainer Banse, captured this form of anti-Semitism in a novel laboratory experiment. University students first read a passage about the Holocaust that stressed either the anguish Jews experienced in the past or the distress that Holocaust survivors and their descendants still suffer today. While allegedly connected to a lie detector, these participants then completed tasks that measured both their conscious and unconscious attitudes toward Jews. Results revealed that participants who read about Jews' ongoing suffering became more anti-Semitic, whereas those who read about Jews' suffering in the past did not.

In a control condition that lacked the bogus lie detector, however, participants who read about Jews' ongoing suffering reported far less anti-Jewish sentiment. The authors reason that, without a machine pressing them to answer honestly, these participants behaved ac-

ording to the social norm of responding to suffering with empathy, rather than according to their true attitudes. Although social norms often steer individual actions, "under certain conditions these more or less hidden attitudes will sneak out—for example, if you feel safe to say unpopular things," explains Imhoff.

One situation where people feel free to unleash their prejudices is the relative anonymity of the Internet. When science blogs first reported this study's findings, "what we feared would happen, happened," says Imhoff. "There were a lot of anti-Semitic remarks that Jews should stop whining about the Holocaust." This is not the researchers' message, however. "Telling victims just to hide their suffering and be silent is not a viable solution," he says.

Instead, Imhoff is exploring ways to work around people's psychological defenses so that they might fully empathize with victims. In one line of research, for instance, he is examining whether taking the perspectives of injured parties can short-circuit people's victim-blaming tendencies. "We need more research on the perpetrator side," he says. ■

Roland Imhoff and Rainer Banse, "Ongoing Victim Suffering Increases Prejudice: The Case of Secondary Anti-Semitism," *Psychological Science*, December 2009.