

UNFAMILIAR PSYCHOLOGIES: APPLICATIONS OF BEHAVIORAL SCIENCE NOT COMMONLY USED IN ECONOMICS[‡]

Option Awareness: The Psychology of What We Consider[†]

By ANUJ K. SHAH AND JENS LUDWIG*

The standard economic view suggests that people will commit an action if it is worth doing (i.e., if the expected benefits outweigh the costs). Economists have shown that this simple model of behavior has substantial predictive power. But the economic model is incomplete in an important way: it overlooks how actions come to mind. Before people weigh the costs and benefits of an action, what cognitive processes lead them to think of the action in the first place?

In this paper we argue that actions are more likely to enter into consideration when they are cognitively *accessible*. Specifically, people form interpretations of the context and have beliefs about which behaviors are common and adaptive in that context. These beliefs are shaped by past experiences and expectations. This in turn influences which courses of action readily come to mind (i.e., are accessible).

We describe how accessibility depends on three psychological parameters: *automaticity*, *identity*, and *privacy*. This framework can inform new interventions, many of which might

be complementary to or more cost-effective than the standard economic levers, to change a wide range of behaviors by making certain actions more (or less) cognitively accessible. We illustrate these general ideas through several concrete examples drawn mostly from the crime domain, but we touch on other domains as well.

I. Automaticity and Reflection

In his 1992 Nobel lecture, Gary Becker described how he came up with the economic model of crime. He was late to deliver an oral exam and was trying to park.¹ He considered parking illegally near campus to save time, weighing the costs and probability of getting a ticket. In a sense, he asked, “Is it worth it to park illegally?” From there, the calculus naturally follows.

But there were other questions that could have come to mind instead. For example, he might have asked, “Since I am late, should I change the format of the oral exam so we have enough time to still focus on the key issues?” From this question, parking illegally does not even come to mind as an answer.

A large body of research in psychology suggests that our interpretations of the situation often happen automatically and are based on the situations we encounter most often (Ross and Nisbett 1991; Kahneman 2011). The assumptions we make about a situation constrain how we respond to it by affecting the alternatives we consider. In fact, sometimes only one response comes to mind based on how we see the situation.

[‡]*Discussants:* Stefano DellaVigna, University of California-Berkeley; Richard Thaler, University of Chicago.

*Shah: Booth School of Business, University of Chicago, 5807 South Woodlawn Avenue, Chicago, IL 60637 (e-mail: anuj.shah@chicagobooth.edu); Ludwig: University of Chicago, 1155 East 60th Street, Chicago, IL 60637, and NBER (e-mail: jludwig@uchicago.edu). We are grateful to Stefano DellaVigna, Hannah Furstenberg-Beckman, Sendhil Mullainathan, Aurelie Ouss, Richard Thaler, and Will Tucker for helpful discussions and suggestions. We thank the National Institute of Justice, Tom and Susan Dunn, Ira Handler, the Pritzker Foundation, the John T. and Catherine D. MacArthur Foundation, and the Robert R. McCormick Foundation for supporting our work.

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¹http://www.nobelprize.org/nobel_prizes/economic-sciences/laureates/1992/becker-lecture.pdf.

As a result, many “decisions” might not be decisions at all. For someone who cannot afford to get a ticket, parking illegally may never come to mind as an option. For someone who assumes that academic bureaucracies are inflexible, parking illegally might be the only accessible option.

We can see this psychology play out in an exercise that forms the foundation of a youth anti-violence program called Becoming A Man (BAM), developed by the Chicago nonprofit Youth Guidance. In this exercise, called “The Fist,” two participants are paired up and one of them receives a rubber ball and is told to make a fist around it. The other young man in the pair is told he has a minute to get the ball from his partner. Inevitably, the youths use physical force to try to take the ball. Afterwards, the counselor asks why no one asked for the ball (as is almost always the case). The youths say they are certain that if they asked for the ball, their partner would have disrespected or ridiculed them. The counselor notes that this is a common *assumption* that they often invoke across a range of situations. But he then turns to the first person in the pair and asks what they would have done if asked for the ball. Most say they would have just given up the ball.

Watching youths go through this exercise, it is easy to wonder what character traits might make them choose to use physical force in such a trivial context. But a different explanation is that there was no actual *moment of choice*. The youths automatically responded based on their perception of the situation. The exercise seemed to call for physical force. As a result, violence was not merely an attractive course of action; it was the only accessible one.

This psychology suggests that some crime happens simply because offenders did not consider a way for the crime to not happen. More generally, behaviors across a variety of domains may sometimes happen because they are the only ones that come to mind.

This has implications for intervention: Reducing automaticity might increase the chances that people consider alternatives. To test this possibility we carried out two large-scale randomized trials of BAM in Chicago. In both studies we found reductions in total arrests during the program period by about one-third and declines in violent crimes by nearly one-half (Heller et al. 2015). We also find that a related program carried out in the Cook County

Juvenile Temporary Detention Center (JTDC) generates sizable reductions in recidivism rates.

Importantly, automatic assumptions cannot be corrected merely by thinking *harder* about a decision. Instead, people need to recognize that they made these assumptions in the first place. To appreciate this point, consider a lab experiment conducted by Shah (2015). Participants first imagined participating in the Fist exercise. They were then randomly assigned to three conditions: (i) a “think harder” condition, where they imagined different ways the exercise could play out or different people it could involve; (ii) a “think back” condition, where they identified their assumptions about the situation and thought about alternative assumptions; and (iii) a control condition, where they were given no further instructions on how to think about the situation. All participants were then asked to brainstorm ways of navigating the exercise. Participants who simply thought harder about the situation were no more likely than controls to realize that they could simply ask for the ball. But participants in the think back condition were more likely to find this solution.

This finding highlights a more general principal with broad applications. Because people often *think past* critical assumptions about the situation, only a few ways of navigating the situation are accessible. Typically, people’s assumptions are based on the situations they most commonly encounter, and so these assumptions are usually adaptive because they enable action without much cognitive effort. But sometimes people face novel situations that can seem familiar, but for which their usual assumptions can be misguided. In those moments, re-construing the situation—thinking back to those assumptions—helps generate other actions to consider (each with their own costs and benefits).

This principal looms large in other areas as well, such as medicine, where doctors see a great deal of regularity across patients. As a result, physicians might match patients to a mental template, which may prevent them from asking more open-ended questions or thinking beyond the template. For instance, when a patient comes in with ankle pain from tripping, the doctor might automatically focus on the narrow question of whether the ankle is sprained or broken—assuming this is the only diagnosis that matters. In fact, it might be useful to think back to ask whether the ankle is the only thing

wrong with the patient, or whether the fact that the patient tripped at all is itself a symptom of something else. As a particular diagnosis enters into a physician's mind, it gains momentum which makes other diagnoses *inaccessible* (Groopman 2007). Pausing to reflect on one's assumptions about the situation can make other courses of action more accessible.

II. Identity and Consistency

How we construe the situation is not the only factor that determines whether actions come to mind. Our sense of identity also constrains which actions are accessible, as a large body of research in psychology shows that people value acting consistently with how they view themselves. Someone who thinks of himself as nonviolent would be unlikely to carry a weapon even while engaging in other criminal activities where a weapon might be enormously useful (such as drug dealing or robbery). Someone who thinks of himself as a person who stands up for women would be unlikely to seriously consider an act of domestic violence in any situation, even during a heated conflict. These actions are not rejected merely because of their costs and benefits. Rather, they do not even enter into consideration because they are inconsistent with how people view themselves.

This seems to suggest a straightforward intervention for changing behavior: exhort people to take on a new identity. But research from social psychology suggests that persuading people to adopt a new identity can be difficult. Instead, it might be more effective to tell people that they *already have* a certain identity. For example, a classic experiment to reduce littering randomly assigned subjects to either persuasion or labeling conditions. In the persuasion condition, there were lectures, advertisements, and messages like "Don't be a litterbug." In the labeling condition, students were told repeatedly (by the teacher, principal, and others) that they were already a "Litter-Conscious Class" that does not do things like litter. At follow-up, the share of students who properly disposed of trash was 30 percent for controls, 30 percent for the persuasion group, and well over 80 percent for the labeling group (Miller, Brickman, and Bolen 1975). Similar effects have been observed for outcomes like scholastic achievement, self-esteem, and charitable giving. That is, labeling a

person as someone whose behavior is already commendable can be more effective than exhorting them to change their behavior.

Interestingly, social labels are already common in the criminal justice system, but they are overwhelmingly negative. Juveniles are labeled as troublemakers, inmates are labeled (and sometimes isolated) as problematic, and focused deterrence strategies call in the highest-risk gangs or people to tell them that they have earned the police spotlight because they are prone to violence. These negative labels might make further offenses more accessible. Perhaps we should not be surprised that fully two-thirds of all people released from prison are arrested again within three years. Finding opportunities to use positive labels may help stem this trend.

More generally, beyond crime, labeling interventions will likely be most effective when people already exhibit the behavior to some extent because the labels will be more believable and the actions are already occasionally accessible. For example, many financial literacy programs focus on teaching and persuading people to save more. For people who are already saving a little, positively labeling those individuals as "savers" may increase the accessibility of saving more. But for those with very low incomes and others who may be consuming more than they earn, a different intervention may be needed to stimulate savings.

III. Privacy and Transparency

We all behave differently in public than in private. In fact, there are actions we would never even consider if we believed there was an audience paying attention. But other actions become more likely when there is a veil of privacy. People might be more likely to commit a crime when they believe their actions have no audience.

The usual approach to making people feel like there is an audience for their crimes is to increase the chances that there is actually an audience. The United States spends billions of dollars a year to have police patrol places where crime might happen, to field security guards, or to mount security cameras.

But, there is an interesting wrinkle in the psychology of privacy. People often experience what psychologists call an *illusion of transparency*, where they believe others can read their minds (Gilovich, Savitsky, and Medvec 1998).

The illusion of transparency removes the veil of privacy. It might therefore be possible to leverage this illusion to reduce the sense that some crimes have no audience.

In fact, it may be possible to increase this illusion without increasing actual surveillance. To do so, we can draw on the same psychology that led one fan to tell the actress Reese Witherspoon, “You’re my best friend ... and you don’t even know it.”² Knowing a lot about others may lead us to believe they know a lot about us. Having information about other people might increase the illusion that our own thoughts and actions are transparent to others.

To test this hypothesis, Shah, Furstenberg-Beckman, and Tucker (2015) carried out an experiment in which participants were asked to write four truths and one lie about themselves. Participants were then randomly assigned to one of three conditions that varied the amount of information they believed was about another study participant: no information, seeing one truth about this other person, or seeing four truths. They were then asked how likely it was that the other person could detect the participant’s own lie. Participants who were given information about the other person reported a higher probability that the other person would detect their lie (approximately 40 percent versus 27 percent in the “no information” condition)—that is, they experienced a greater illusion of transparency. In some sense, this assumption is adaptive given most situations we face. It is usually true that people whom we know well also know us well. But, in our experiment, this could not possibly be true. Instead, people overgeneralize this belief.

This insight also has implications for applications like law enforcement, which often focuses on solving and deterring crime by *extracting* information from the public. But the illusion of transparency suggests we may be able to deter crime by *providing* information to the public. That might take the form of local beat officers simply sharing a few benign details about their lives at a community meeting or out on patrol. In fact, it may not even be necessary to share a lot of information. In the experiment above, the greatest marginal increase in the illusion of

transparency occurred when providing one piece of information about the other person. The leap from anonymity to being known is much greater than the leap from being known to being known well.

More broadly, we suspect that increasing the illusion of transparency will be most effective at changing behavior when specific individuals are responsible for enforcement, but are not well-known. For example, students who skip school may not know the attendance clerks and truancy officers tracking absences. People who are filing their taxes may not know who is responsible for reviewing their returns, while firms filing annual earnings reports may not know who at the SEC inspects these results. Providing some information about those responsible for monitoring could help reduce the feeling of anonymity among those being monitored.

IV. Conclusion

The standard economic view focuses on the moments of choice that drive behavior. It assumes that people take an action when the benefits exceed the costs. To intervene on behavior, one must change the costs and benefits. But before a person can even consider the costs and benefits of an action, they have to think of that action (Gennaioli and Shleifer 2010). We suggest that cognitive accessibility is a major driver of which actions people even consider, and hence of how people behave. And the set of actions that are cognitively accessible in a given context will depend on how people construe that context.

People’s view of the context depends on one’s sense of three things: the situation, oneself, and the presence of others. Automatic assumptions about the situation, identity labels, and feelings of transparency affect how people see the context and constrain which actions come to mind. Ultimately, if we can understand the psychological parameters that lead people to even consider an action, we could design interventions that lead people to think of different possibilities.

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