Schematic Psychology and Criminal Responsibility

Anders Kaye
SCHEMATIC PSYCHOLOGY AND CRIMINAL RESPONSIBILITY

ANDERS KAYE

I. INTRODUCTION ............................................................................ 566
II. SCHEMATIC PSYCHOLOGY .......................................................... 570
   A. The Foundations of Schematic Cognition:
      Categories, Schemas, Scripts, Stereotypes, and
      Other Knowledge Structures .............................................. 570
   B. Schematic Cognition's Influence: Perception,
      Interpretation, and Conduct ........................................... 576
      1. Accessibility .................................................................. 576
      2. Influence ...................................................................... 578
         a. Perception .................................................................. 579
         b. Interpretation ............................................................ 582
         c. Conduct ...................................................................... 586
   C. Some Surprising Features of Schematic Cognition:
      Situation-Dependence, Semi-Automation, and
      Social Construction ...................................................... 588
      1. Situation-Dependence ................................................. 588
      2. Semi-Automation .......................................................... 590
      3. Social-Construction ...................................................... 591
   D. An Illustration: Stereotyping .............................................. 593
   E. In Sum ............................................................................. 600
III. SCHEMATIC PSYCHOLOGY AND CRIMINAL RESPONSIBILITY:
    TWO CHALLENGES ............................................................. 601
   A. The Internal Challenge ..................................................... 602
      1. The Role of Sensitivity to Morally Significant
         Facts in Moral Responsibility ....................................... 602

† Associate Professor, Thomas Jefferson School of Law; J.D., University of
Chicago School of Law; A.B., Harvard College. I would like to thank Marybeth
Herald, Steve Semeraro, Ellen Waldman, and the members of the Thomas Jefferson
School of Law Junior Faculty Writing Group for their comments and feedback on the
various ideas developed here. Thank you also to June McCleod for invaluable
research assistance.
I. INTRODUCTION

Imagine that I am a young man in an impoverished neighborhood. One Saturday afternoon, as I stand in front of an apartment building with a few friends, a passing pedestrian bumps me in the chest, looks back over his shoulder, and keeps walking. I find his behavior threatening, and I react violently. In truth, the bump was just the misstep of an exhausted night-shift fry cook, the look back just an anxious glance.

Or imagine that I am a police officer working overnight in a patrol car. The police dispatcher radios that there has just been an armed robbery, and that the robber—a young black man in a winter coat—is on foot somewhere in my vicinity. Soon enough, I see a man who matches the dispatcher’s description fumbling at the door of an apartment building. I pull up to the curb, get out with gun drawn, and order him to put his hands up. He turns to face me, pulling something black out of his pocket. I find his behavior threatening, and I react violently. In truth, the black object was just his wallet; he was going to show me his green card.\(^1\)

---
\(^{1}\) The hypothetical is loosely based on widely reported accounts of the shooting of Amadou Diallo by New York City police officers in 1999. See, e.g., Michael Cooper,
If I kill the tired fry cook or the man with the wallet, should I be blamed? Should I be punished as a criminal? The standard answer to both questions is “yes.” I killed another human being, voluntarily and intentionally. What I did was wrong—life-taking violates a fundamental moral prohibition—and there was no countervailing justification present. It may be true that I believed it was the right thing to do, but my belief was not, under the circumstances, reasonable. And there is nothing to excuse my poor judgment. I was not insane, an infant, intoxicated, or otherwise mentally impaired. I did not experience an irresistible impulse, I was not so impassioned that I lost control, and I did not face the sort of pressure under which “a person of reasonable firmness” would crack. In short, I did a terrible wrong for which there was no justification or excuse. It is right for you to be indignant at what I have done and right for the state to punish me.

This is compelling reasoning, but it is not invulnerable. As moral theorists have long observed, certain considerations have the tendency to chip away at our confidence in a wrongdoer’s blameworthiness. We might revisit what was “reasonable” by trying to understand the circumstances more fully. Perhaps in the killer’s impoverished neighborhood, the failure to punish a bumper makes the bumpee look weak and puts him at risk of violence. Perhaps in certain sorts of police work it is sensible self-preservation to assume that black objects from suspects’ pockets are guns. Or we might look more closely at the killer’s psychic frame at the time of the killing. We might find there demoralizing confusion, raw fear, pent-up rage, hunger for stimulation and excitement, shame and insecurity, self-destructive and suicidal impulses, paranoid projection, and so on. As we flesh out the story with these sorts of concrete and particular details, the impulse to blame may diminish as other, competing impulses gain strength.

In this Article, I will try to chip away at the criminal’s blameworthiness from yet another vantage. I will argue that recent empirical research regarding our acquisition and use of schemas and other knowledge structures raises unexpected and
unappreciated problems for moral and criminal responsibility in cases like the ones described above. I start, in Part II, with an overview of several interrelated lines of research in contemporary empirical psychology, which I will call, collectively, “schematic psychology.”\(^2\) According to this research, we use schemas and other knowledge structures—simplified mental representations of complex real-world and imagined phenomena—to organize and sift through the potentially overwhelming flood of information our senses bring us. Indeed, such structures are fundamental to nearly all of our cognition about the world around us. Our dependence on such knowledge structures, however, has unexpected, profound, and sometimes perverse ramifications for our behavior. For one thing, such structures significantly skew our thoughts about and reactions to people and events, shaping and channeling how we feel about, interpret, and perceive them. For another, our knowledge structures are, themselves, startlingly vulnerable to both immediate and persisting environmental and social influences. Thus, schematic psychology suggests that our thoughts and choices are skewed in

\(^2\) The term schematic psychology does not appear in the literature. I use it here as a convenient shorthand to refer to several lines of research that involve or relate to our use of schemas and other related knowledge structures in normal cognition, and which (I propose) collectively generate certain problems for conventional accounts of moral and criminal responsibility.


There is some disagreement among psychologists about the proper use of the term “schema.” A broad use equates schema with “mental representation,” while a more constrained use associates the term with particular sorts of mental representation. KUNDA, supra, at 15–17. For the purposes of this Article, I adopt the broad use. By “schematic psychology” I mean psychology pertaining to our acquisition and use of knowledge structures.
surprising ways by knowledge structures that are, in turn, highly susceptible to external influence.

Part III contends that schematic psychology can fund two sorts of challenges to traditional accounts of criminal responsibility. Part III.A sets out an internal challenge. It accepts (arguendo) that traditional accounts of responsibility correctly identify the conditions that must be satisfied in order for a person to be criminally responsible and argues that schematic psychology calls into question one of these conditions. More specifically, it argues that schematic blind spots and biases impair our "moral sensitivity"—and especially our sensitivity to morally significant facts about our circumstances—more often and more profoundly than we realize. If this is true, then human actors may fail the conditions for criminal responsibility more often than we have (traditionally) imagined.

Part III.B offers an external challenge. It argues that schematic psychology itself raises hard questions about the project of attributing responsibility to individuals itself. Schematic psychology shows that our conduct is influenced in deep and unexpected ways by social and environmental phenomena, both circumstantial and constitutive. If this is right, holding us criminally responsible for our conduct raises fairness problems, not only because criminal punishment comes to seem like a lottery (produced by phenomena that the individual actor cannot control), but also because social and environmental phenomena come to seem more apt targets for the resentment and indignation usually directed at individuals who commit crimes. These fairness problems may, in turn, significantly undercut the reactive attitudes that sustain our blaming and punishing practices.

Taken together, these two challenges offer bracing new reasons to doubt the traditional justifications for holding criminals responsible. Moreover, they parallel and augment several other social-science challenges that appear to converge

---

3 Legal theorists have not yet turned their attention to whether schematic psychology has significant ramifications for criminal responsibility. More attention has been paid (in philosophy and legal theory) to a related but distinct question about the ramifications of another line in empirical psychology—situationist psychology. I have discussed situationist psychology and criminal responsibility at length. See generally Anders Kaye, Does Situationist Psychology Have Radical Implications for Criminal Responsibility?, 59 ALA. L. REV. 611 (2008).
on the same conclusion, including challenges grounded in situationist psychology and the sociology of criminogenic social conditions. In this sense, schematic psychology is doubly important. In itself, it raises new doubts about the traditional rationales for holding criminals responsible. More than that, it contributes to the momentum of the broader, cumulative challenge from the social sciences generally.

II. SCHEMATIC PSYCHOLOGY

This Part offers an overview of schematic psychology—a school of empirical research showing that human beings acquire, organize, and use information in a schematic way, which has important ramifications for our perceptions and interpretations of the world around us, for our emotions and motivations, and for our decisions and choices. Here, I will describe schemas and similar knowledge structures, discuss the influence they have on perception and interpretation, explain how schemas are activated and become influential, show how difficult it is for us to control or counteract the influence that activated schemas have over us, and say something about the extent to which our schemas are dependent on environmental and social context. The Parts that follow will consider what these features of schematic psychology mean for moral and criminal responsibility.

A. The Foundations of Schematic Cognition: Categories, Schemas, Scripts, Stereotypes, and Other Knowledge Structures

In this Article, I will use the term schematic cognition to refer to a set of related phenomena in ordinary human cognition. These phenomena all revolve around a cognitive process for organizing the enormous wealth of information we take in and retain in our daily lives. The defining feature of this process is that it reduces the unruly, constant flood of information available to our senses to schemas and other related knowledge structures—structured networks of abstract concepts, which can be stored in long-term memory and referenced to identify and understand the stimuli in our environment. Here, I start by describing the way we utilize the schema and other knowledge structures in ordinary cognition.
A human being can register an extraordinary wealth of information about her environment. For example, she can effortlessly and nearly instantly scan vast tracts of space with her eyes, registering mountains and fleas in the same split second. But merely registering such a wealth of environmental stimuli (the "'great blooming, buzzing confusion of the outer world'")\(^4\) means nothing unless she can sift through it to find the information that matters to her—to her survival, her welfare, her goals, and her tastes. We cannot "make sense" of the world around us "without some internal system for sorting through all this information."\(^5\) Unfortunately, there are significant constraints on the internal systems we use to sift all this information; for our "processing capacity" is "bounded" in obvious ways.\(^6\) As a result, in order to facilitate information sifting with limited processing capacity, the human actor relies on schemas and other knowledge structures.\(^7\) This schematic cognition is the process by which we extract the information that matters from the enormous flood of information we receive via our senses every moment of our conscious life.

Schematic cognition begins with categorization.\(^8\) In the context of human cognition, the term "category" is typically used to refer to a mental construct created by a human mind and used to organize data stored in long-term memory.\(^9\) The construct consists of a collection of "mental representations" of "abstract or concrete items that the cognitive system treats as equivalent for

\(^4\) MOSKOWITZ, supra note 2, at 173 (quoting WALTER LIPPMANN, PUBLIC OPINION 55 (1922)); see also KUNDA, supra note 2, at 17.

\(^5\) MOSKOWITZ, supra note 2, at 112. "[W]here we to utilize fully our capacity for registering the differences in things and to respond to each event encountered as unique, we would soon be overwhelmed by the complexity of our environment." Id. at 173 (quoting JEROME S. BRUNER, JACQUELINE J. GOODNOW & GEORGE A. AUSTIN, A STUDY OF THINKING 1 (Wiley 1956)); see also FISKE & TAYLOR, supra note 2, at 175.

\(^6\) MOSKOWITZ, supra note 2, at 174.

\(^7\) FISKE & TAYLOR, supra note 2, at 98 ("A schema may be defined as a cognitive structure that represents knowledge about a concept or type of stimulus, including its attributes and the relations among those attributes.").

\(^8\) Id. at 105. The term "classification" is also used here. See, e.g., KUNDA, supra note 2, at 17-18; MEDIN, ROSS & MARKMAN, supra note 2, at 318.

\(^9\) More precisely, the mental representation is called a "concept," while the items represented in the concept are called a "category." KUNDA, supra note 2, at 16; MOSKOWITZ, supra note 2, at 111. Following the common practice of social cognition textbooks, I will collapse the two terms, using "category" to describe both. See, e.g., id.
some purpose." The items in the grouping are understood to "belong together" or have a “family resemblance,” in that they all have at least some of the features associated with the category. The “internal structure of [the] categor[ y]” itself is generally “fluid” and “well described as a fuzzy set.”

The items that we include in our categories are items that we have become aware of through one process or another. Many of them, of course, are items we have perceived directly with our own senses (for example, bananas); some are items we have learned about second-hand (for example, jaguars) or simply imagined (jaguar bananas?). As we acquire experience with or knowledge about such items, we create mental representations of them and then place these representations in mental constructs containing collections of such representations organized around their distinctive characteristics. These constructs are our categories.

We use these categories to filter, sort, and understand the flood of information we receive from the world around us. As sensory information pours in, we preconsciously detect and isolate discrete phenomena—objects, sounds, smells, etc.—in our environment (a process that itself must involve some “primitive categorization”; how else, for example, is an object distinguished from a backdrop?). Once a phenomenon has been isolated, we use our categorical knowledge to identify it, comparing the phenomenon’s features to those associated with our existing categories. Through this “cue search,” we match the phenomenon with a category of items having similar features.

10 MOSKOWITZ, supra note 2, at 111 (quoting Arthur B. Markman & Brian H. Ross, Category Use and Category Learning, 129 PSYCHOL. BULL. 592, 592–93 (2003)).
11 KUNDA, supra note 2, at 51.
12 MOSKOWITZ, supra note 2, at 115. Today, a common view is that categories need not have any essential features or “defining features.” See KUNDA, supra note 2, at 28–29.
13 FISKE & TAYLOR, supra note 2, at 107; see also MEDIN, ROSS & MARKMAN, supra note 2, at 324, 326–29 (discussing fuzziness and family resemblance).
14 FISKE & TAYLOR, supra note 2, at 147; MOSKOWITZ, supra note 2, at 121 (noting that we can acquire categories for entirely imaginary things, like Superman).
15 FISKE & TAYLOR, supra note 2, at 98–99; KUNDA, supra note 2, at 17–18; MEDIN, ROSS & MARKMAN, supra note 2, at 216–17.
16 FISKE & TAYLOR, supra note 2, at 246; MOSKOWITZ, supra note 2, at 130.
17 MOSKOWITZ, supra note 2, at 113, 130.
18 Id. at 113; see also KUNDA, supra note 2, at 28–29.
SCHEMATIC PSYCHOLOGY

and make a probabilistic inference that the stimulus at issue is a member of the matching category. Given the observed features of the stimulus and the ways in which they match the features associated with the category, the stimulus is likely to be a member of the category.\textsuperscript{19} In this way, we assimilate new phenomena to pre-existing categories,\textsuperscript{20} and thus make sense of the new information received by our senses.\textsuperscript{21}

This is where the value lies in categorical thinking. Assimilating new stimuli to pre-existing categories simplifies our environment, enables us to understand the significance of the new stimuli, and to react in ways consistent with our goals. Thanks to categorization, “we do not have to be taught de novo at each encounter that the object before us is or is not a tree”;\textsuperscript{22} we do not have to reinvent the wheel each time we encounter it; instead, we can identify it on the basis of a handful of salient features. This “reduces the complexity of the environment”\textsuperscript{23} and frees up valuable “cognitive resources” for other important tasks.

\begin{footnotesize}
\begin{itemize}
\item \textsuperscript{19} KUNDA, supra note 2, at 28–36; MOSKOWITZ, supra note 2, at 113, 119, 166 (“The more features that are matched between a stimulus and a category, and the fewer the mismatches, the greater the chance the stimulus will be seen as an instance of that category.”); MEDIN, ROSS & MARKMAN, supra note 2, at 324. The probabilistic model referenced in the text has been highly influential, but there are other competing models, including the classical model and theory-based model. See, e.g., KUNDA, supra note 2, at 25–28 (classical model); id. at 36–41 (theory-based model); MEDIN, ROSS & MARKMAN, supra note 2, at 322 (classical model); id. at 340 (theory-based model). The differences between these sorts of models are significant, but they do not appear to make a difference to the analysis of responsibility offered in Part III.
\item \textsuperscript{20} MOSKOWITZ, supra note 2, at 112.
\item \textsuperscript{21} Id. at 111. In particular, categorization has enabled us to use our previously acquired knowledge to understand the flood of new incoming data. FISKE & TAYLOR, supra note 2, at 98; MOSKOWITZ, supra note 2, at 111, 121–25. Assuming that through the normal process of category construction we constructed and retained a sufficient array of useful categories containing items encountered in experience, other learning, and imagination, newly encountered stimuli can be identified and understood by comparing them to the categories we already constructed. The salient features of the current stimulus can be compared to the distinctive features of our already existing categories, and when a particular stimulus has a sufficient number of important features in common with an already existing category, it may be assimilated to that category. Categorization is placing a new stimulus into a class of familiar things. FISKE & TAYLOR, supra note 2, at 98.
\item \textsuperscript{22} MOSKOWITZ, supra note 2, at 121 (quoting BRUNER, GOODNOW & AUSTIN, supra note 5, at 12) (internal quotation marks omitted).
\item \textsuperscript{23} Id. (emphasis omitted) (internal quotation marks omitted); see also FISKE & TAYLOR, supra note 2, at 97.
\end{itemize}
\end{footnotesize}
Moreover, having placed the new stimulus within a category, we can now attribute to the stimulus a whole host of characteristics that were not evident on first perception—the features associated with the category. A stimulus categorized as a banana is now seen as something I might eat and as something that will remain in more or less one place for an extended period. In contrast, a stimulus categorized as a jaguar is seen as one that may eat me and that will not stay in one place. In this way, assimilating present stimuli to information-laden categories allows us to use prior-acquired knowledge to know more about present stimuli than we have directly perceived. It also improves our ability to react to the stimuli in ways appropriate to our goals. For example, if one of our goals is survival, our categorical knowledge about bananas instructs us to approach them in a leisurely fashion. With jaguars, our categorical knowledge alerts us that we ought to flee. We have made predictions about the likely behavior of the perceived stimulus based on the characteristics associated with its category, and we have acted accordingly.

Categorization is quite complex and is not limited to discrete objects, sounds, smells, or events. Rather, we generate knowledge structures for wildly diverse sorts of information. For example, we develop schemas for ourselves (I have the following features...). Likewise, we have schemas for social roles and relationships, which organize our knowledge about the set of...

---

24 KUNDA, supra note 2, at 19–20; MOSKOWITZ, supra note 2, at 173–74; see also id. at 184 (“[T]he ability to use minimal cues quickly in categorizing the events of the environment is what gives the organism its lead time in adjusting to events. . . . [S]chema use has benefits to the perceiver: Mental energy and resources are available to be put to use elsewhere.”) (internal quotation marks omitted); id. at 192 (Schematic thinking “allows us to reduce the effort we expend on some tasks so that we may increase our ability to process other tasks.”).

25 KUNDA, supra note 2, at 18; MEDIN, ROSS & MARKMAN, supra note 2, at 318; MOSKOWITZ, supra note 2, at 121–22.

26 FISKE & TAYLOR, supra note 2, at 98 (“Schemas facilitate... top-down, conceptually driven... processes, . . . heavily influenced by one’s . . . prior knowledge.”).

27 Id. at 155; MEDIN, ROSS & MARKMAN, supra note 2, at 318–19; MOSKOWITZ, supra note 2, at 123.

28 See MEDIN, ROSS & MARKMAN, supra note 2, at 215–19 (defining schema).

29 FISKE & TAYLOR, supra note 2, at 118; MOSKOWITZ, supra note 2, at 158.

30 KUNDA, supra note 2, at 51; MOSKOWITZ, supra note 2, at 161.
norms and behaviors attached to a social position. We are likely to have person and role schemas—stereotypes—for genders, races, and occupations and relational schemas for various sorts of relationships between people (parent-child, friend-friend), including behavior patterns and recurring thoughts, feelings, and motivations associated with those relationships. We also have “place schemas” and often draw on script schemas for particular sorts of situations or events that associate particular action patterns with particular environments, “dictat[ing] specific ways of behaving for specific situations.” For example (as one author suggests), we may have distinctive scripts for the sequence of steps necessary to order food from an ice cream truck versus those appropriate to a fancy restaurant. More abstractly, we also utilize an array of content-free schemas including balance, linear-ordering, and causal schema.

These sorts of knowledge structures are the basis for schematic thinking. In order to process, interpret, and react to information about the world around us with the limited processing resources available to us, we must use shortcuts. We cannot reinvent the wheel each time we see it. Instead, we create and retain knowledge structures for the stimuli we encounter or learn about. Using such structures enables us to identify and understand immanent stimuli. It also enables us to predict what other features those stimuli will have—that is, the other features in the category—and to react accordingly.

31 MOSKOWITZ, supra note 2, at 161.
32 FISKE & TAYLOR, supra note 2, at 118–19; MOSKOWITZ, supra note 2, at 161.
33 MOSKOWITZ, supra note 2, at 161.
34 Id. at 161.
35 FISKE & TAYLOR, supra note 2, at 121.
36 MOSKOWITZ, supra note 2, at 162; see also FISKE & TAYLOR, supra note 2, at 119–20; MEDIN, ROSS & MARKMAN, supra note 2, at 219–23.
37 MOSKOWITZ, supra note 2, at 162.
38 FISKE & TAYLOR, supra note 2, at 120.
39 Of course, we are not “doomed to think only categorically.” MOSKOWITZ, supra note 2, at 176; see also FISKE & TAYLOR, supra note 2, at 136. In particular cases, we can choose to attend to specific stimuli in a more detail-responsive way, and may “do so . . . when goals and circumstances dictate.” MOSKOWITZ, supra note 2, at 176. But we cannot do so at all times with respect to all stimuli; our processing capacity is not sufficient.
B. Schematic Cognition’s Influence: Perception, Interpretation, and Conduct

Schematic cognition serves a useful—indeed, essential—function in enabling us to filter, sort, and understand the flood of information we encounter in our daily lives. At the same time, however, our schemas have a surprising and significant influence on how we perceive the world and how we interpret the things we encounter in it, skewing and shaping what we see and how we understand it. Moreover, they exercise this influence in a surprisingly unpredictable way, for schematic cognition is highly sensitive to circumstance. Knowledge structures typically lie dormant in long-term memory until appropriate stimuli trigger the “retrieval” of the concept, making the concept “perceptually ready” or “accessible.” It is when a concept becomes accessible that it exercises its influence on perception and interpretation. Both these aspects of schematic cognition—accessibility and influence—play important roles in the choices and conduct of schematic thinkers.

1. Accessibility

Knowledge structures influence cognition and conduct when circumstances trigger their retrieval from long-term memory and make them accessible. This can happen in at least two ways. In some cases, a stimulus in the immediate environment—a prime—temporarily charges the knowledge structure. In other cases, recurring exposure to a stimulus renders a structure “chronically accessible.”

Sometimes, temporary or passing stimuli can charge a schema, giving the schema “a heightened state of activation” and resulting in “perceptual readiness.” This sort of temporary activation is called “priming.” The crux of the priming process

---

40 See MOSKOWITZ, supra note 2, at 390–91.
41 Id.; FISKE & TAYLOR, supra note 2, at 257.
42 MOSKOWITZ, supra note 2, at 355. Categories typically lie “dormant in long-term memory” in a “latent rather than in an active state,” unless they are “activated,” in which case they become able to “influence thought processes.” Id. (internal quotation marks omitted); see also FISKE & TAYLOR, supra note 2, at 145, 169, 257–65; KUNDA, supra note 2, at 51.
43 KUNDA, supra note 2, at 24; MOSKOWITZ, supra note 2, at 390.
44 MOSKOWITZ, supra note 2, at 387; see also KUNDA, supra note 2, at 51.
45 FISKE & TAYLOR, supra note 2, at 257; KUNDA, supra note 2, at 279–84; MOSKOWITZ, supra note 2, at 391.
is that “exposure to a concept . . . leads automatically to the retrieval of the concept, and associated concepts from memory.”

Retrieval renders the concept temporarily perceptually ready, making it more likely to exert an influence on cognition and conduct. As time passes, the primed concept will lose its “charge,” with the duration and strength of perceptual readiness depending on the strength, recency, and frequency of the prime.

Priming can occur in a variety of ways. A person can be exposed to a concept through an “encounter” with a physical example of the concept or “through its contemplation in the mind.” The actual or contemplated encounter with the concept triggers its retrieval from memory, making the concept accessible. Startlingly, a concept can be primed by even the most minimal exposure to the concept. Indeed, it is well-established that subliminal exposure to a concept can make the concept accessible: Subjects exposed to words for such a brief time that they are not conscious of seeing those words can be primed by those words; subliminal exposure to hostility related words, for example, will make the concept of hostility accessible.

Thus, environmental stimuli can make concepts accessible without our registering the stimulus and without our noting that the concept has been triggered. Moreover, the process can be direct or indirect. Direct priming involves an encounter with the concept that is ultimately made accessible, as when hearing the word “dog” makes the schema for dogs accessible. Indirect priming works through spreading activation. To use a common metaphor, the “charge” associated with the priming stimulus “spreads” through the network of concepts associated with the concept, so that hearing the word “dog” charges not only the concept “dog,” but also associated concepts like “loyalty” and “flea.” In this way, exposure to an example of one concept can

---

46 MOSKOWITZ, supra note 2, at 396.
47 See id. at 402–03.
48 Id. at 396.
49 See id.
50 See FISKE & TAYLOR, supra note 2, at 272–73; KUNDA, supra note 2, at 23, 279–84; MOSKOWITZ, supra note 2, at 415–16.
51 See KUNDA, supra note 2, at 23, 281–82; MOSKOWITZ, supra note 2, at 416.
52 MOSKOWITZ, supra note 2, at 390.
53 KUNDA, supra note 2, at 48.
54 This metaphor adopts the view, common in cognitive theory, that knowledge structures exist within associative networks—collections of nodes (consisting of concepts) linked to each other to form a network. See, e.g., KUNDA, supra note 2, at
prime not just that concept, but also other concepts closely associated with it. Priming makes knowledge structures temporarily accessible, but a knowledge structure can also move into a state of heightened or "chronic" accessibility—a state in which it is "accessible at all times and...applied wherever possible"—if associated stimuli are frequently encountered. Repeatedly "charging" the knowledge structure makes it accessible—and thus influential—over the long haul. A knowledge structure may be frequently charged either because the environment frequently presents reminders or because the knowledge structure is "self-defining" and "important" enough that the actor summons it on a regular basis (as actors do with deeply held values or long-term goals).

For example, for Americans, concepts associated with America are persistently charged by invocations and symbols of America. Likewise, concepts associated with our families and workplaces may be persistently charged by encounters with work and family. So may concepts associated with our own most central goals and motives, which we may recurringly encounter in reflecting on our choices and plans. Frequently charged concepts like these may enter a state of "chronic accessibility"—a state in which they are perpetually susceptible to easy activation by external stimuli.

2. Influence

When a knowledge structure becomes accessible, it also becomes influential in cognition and conduct. In particular, "[o]nce cued, schemas affect...what we notice" and "how we

46–51, 52; MOSKOWITZ, supra note 2, at 392 ("As one concept is charged, that charge spreads along the associative network—triggering the related concepts to which it is linked, and thus priming these associated concepts as well."). In fact, it appears that the story is even more complex; for while some concepts have excitatory links to each other (transmitting charges between them), other concepts have inhibitory links so that activating one concept actively suppresses activation of the other. KUNDA, supra note 2, at 49.

55 KUNDA, supra note 2, at 24.

56 See FISKE & TAYLOR, supra note 2, at 265–66; KUNDA, supra note 2, at 24; MOSKOWITZ, supra note 2, at 356, 379.

57 KUNDA, supra note 2, at 24.

58 MOSKOWITZ, supra note 2, at 356.

59 See id. at 379.
interpret what we notice. That is, accessible knowledge structures skew perception and interpretation.

a. Perception

At the most basic level, accessible knowledge structures shape "fundamental . . . processes of perception"—significantly influencing whether and to what extent we notice or become aware of stimuli in our environment.

One way in which they do this is by directing how we sort and filter the flood of information our senses bring us. Generally, this flood of information is stored in fleeting iconic and echoic memory—where it resides for just a brief moment. We sort this information preconsciously so that only a tiny fraction makes its way into short-term memory and consciousness. Our "decisions about what information to keep . . . occur prior to our being aware" that we have taken in the information, and thus "without any conscious reflection or awareness." Accessible concepts play a crucial role in this preconscious sorting process. An accessible schema acts as a "scanning pattern," which leaves us "ready to detect and perceive certain stimuli at the expense of others. You will note different details about a house if you are considering burgling it than if you are considering buying it; your schema for burgling involves certain expectations about what burglars do and makes you more likely to notice information relevant to a burglar's goals. Schemas are also associated with a "confirmation bias." Once a schema has been

---

60 FISKE & TAYLOR, supra note 2, at 122. "Accessible knowledge structures serve an important processing function that guides attention, encoding, and retrieval of information." MOSKOWITZ, supra note 2, at 359; see also FISKE & TAYLOR, supra note 2, at 96–142 (discussing social categories and schemas).
61 MOSKOWITZ, supra note 2, at 358; see also KUNDA, supra note 2, at 18–20.
62 FISKE & TAYLOR, supra note 2, at 99, 117–18. "What we see and what we think we have seen are determined in large part by schemas." MOSKOWITZ, supra note 2, at 155.
63 MOSKOWITZ, supra note 2, at 357.
64 Id.
65 Id. (internal quotation marks omitted).
66 Id. at 358.
67 Id. at 356 (internal quotation marks omitted).
68 Id. at 358.
69 For a discussion of this memory study using the burgle/buy perspective switch, see FISKE & TAYLOR, supra note 2, at 125; MEDIN, ROSS & MARKMAN, supra note 2, at 225–26; MOSKOWITZ, supra note 2, at 157.
70 MOSKOWITZ, supra note 2, at 178.
activated, we become more likely to recognize or assimilate information that is consistent with the schema\textsuperscript{71} and more likely to "deflect the reception of information that is counterschematic.\textsuperscript{72} For example, if you have a schema for "men" and the schema associates men with a certain traits (for example, insensitivity) you may be more likely to notice instances illustrative of those traits (for example, instances of male insensitivity) while failing to notice instances of schema-inconsistent behavior (for example, male sensitivity).\textsuperscript{73} Your schema has influenced what you have perceived and, in the process, led you to perceive the world in a way that entrenches the schema.\textsuperscript{74} Not surprisingly then, priming a category can increase recognition of category-relevant information while suppressing recognition of non-categorical stimuli. Priming people to think about soccer hooligans leaves them more likely to recognize hooligan-related words in word jumbles, but less likely to recognize hooligan-inconsistent words (for example, "friendly") in a word jumble. Likewise, a prime that evokes a negative attitude will make you "readier" to see and respond to other things associated with negative attitudes (for example, a snake prime may make you more likely to notice spiders),\textsuperscript{75} and exposure to a word that suggests happiness will make you faster to perceive other happiness-associated stimuli.\textsuperscript{76} In short, we see "not ... what is there, but what the accessible constructs in the mind make [us] perceptually ready to see."\textsuperscript{77}

These effects are especially pervasive with chronically accessible knowledge structures since the scanning patterns these structures set up persist over time.\textsuperscript{78} Subjects perceive words more quickly if the words are relevant to particular values they hold—their values supply chronically accessible knowledge structures and influence how easily they perceive quickly

\textsuperscript{71} KUNDA, supra note 2, at 163; MOSKOWITZ, supra note 2, at 175–76, 178–81.

\textsuperscript{72} MOSKOWITZ, supra note 2, at 176.

\textsuperscript{73} See KUNDA, supra note 2, at 163.

\textsuperscript{74} See MOSKOWITZ, supra note 2, at 182–83.

\textsuperscript{75} Id. at 396–97; see also KUNDA, supra note 2, at 292 (discussing affective priming).

\textsuperscript{76} MOSKOWITZ, supra note 2, at 397–98.

\textsuperscript{77} Id. at 386. We are especially likely to fall prey to this bias when we are under cognitive strain (that is, when we must devote substantial cognitive resources to a cognitive task). Id. at 175.

\textsuperscript{78} Id. at 358.
flashed words. Likewise, auto-motives—"chronically accessible goals"—make us more likely to perceive goal-relevant stimuli: If a chronic goal is triggered by some goal-related stimulus, we become quicker to perceive other goal-related stimuli (a goal-related cue makes us more likely to perceive other goal-related stimuli). More broadly, chronically accessible knowledge structures have a pervasive influence on "how a person sees the world." A person who often encounters stimuli associated with America will be more likely to notice stimuli relevant to his schema for America. A person who has a strong commitment to egalitarianism will consistently be more likely to notice opportunities for egalitarian conduct—the chronic accessibility of the schema for egalitarianism makes him chronically more likely to notice egalitarianism-relevant features of his environment.

If your social context consistently charges concepts associated with appearance, you may recurrringly notice colleagues' haircuts, rather than their ideas. And at a cocktail party, you will often notice your name being spoken across the room, even though you did not notice the rest of the conversation—your self-schema is constantly charged. In short, chronically accessible knowledge structures profoundly influence which details we notice as we survey our environment.

On the flip side, chronically accessible concepts and motives can also function as a "preconscious defense system"—a "perceptual defense" that persistently "prevent[s us]...from consciously seeing" "stimuli that are threatening to our chronically accessible goals." We can "preconsciously detect undesirable stimuli and then prevent ourselves from consciously noting" those stimuli. For this reason, it takes us longer to perceive taboo words than non-taboo words—we suppress

---

79 Id. at 358–59.
80 Auto-motives are "chronically accessible goals, motives, and needs" that influence "attention, judgment, and behavior." Id. at 360.
81 See id.
82 See id. at 360–61.
83 Id. at 356.
84 See id. at 354.
85 See id. at 360–61.
86 Id. at 379 (discussing the example suggested by Moskowitz).
87 Id. at 357 (referring to this phenomenon as the "cocktail party effect").
88 See id. at 379–81.
89 Id. at 373 (emphasis omitted).
90 Id.
Indeed, we manifest galvanic reactions to taboo words even when we are not conscious that we have seen them (as when they are flashed subliminally)—we detect them preconsciously without allowing them into consciousness. Our chronically accessible knowledge structures block conscious perception.

Schematic cognition, then, intervenes even in how we scan the world around us, steering us toward perception of some phenomena and away from perceiving others, shaping and skewing the information that supports all our practical reasoning about the world. In this sense, schematic cognition “color[s] our reality.”

b. Interpretation

Schematic thinking influences us in another, similarly profound way: It biases our interpretations of perceived phenomena.

Many of the phenomena we encounter in our moment-to-moment lives are ambiguous in some significant way. Is the tree in the distance an apple tree or a pear tree? Is her smile friendly or fake? Was that push playful or hostile? Interpreting these ambiguous phenomena is one of the central projects of daily life, and accessible schemas exert a profound influence over this interpretative project. When we encounter an ambiguous stimulus, “[t]he interpretation that is chosen can be determined simply by whatever applicable concept happens to be accessible at the moment.”

Just as an accessible knowledge structure can serve as a scanning pattern in the perceptual process, it can also become a person’s “interpretive frame.” When a schema is accessible, ambiguous stimuli may be “assimilated” to it, meaning that we interpret the item in ways consistent with the schema.

---

91 See id.
92 See id.
93 It also appears that chronically accessible goals can preconsciously suppress the activation of undesirable associated knowledge. See id. at 376–77.
94 KUNDA, supra note 2, at 19.
95 See id. (discussing the “interpretive function” of knowledge structures).
96 See id.; see also FISKE & TAYLOR, supra note 2, at 257.
97 MOSKOWITZ, supra note 2, at 389 (emphasis omitted).
98 Id.; see KUNDA, supra note 2, at 24.
99 MOSKOWITZ, supra note 2, at 389; see id. at 393.
Thus, for example, the symbol “I” is seen as a lowercase “L” rather than the number “one” if the schema for letters has been activated. Likewise, “we interpret the behavior of others . . . with the aid of what is most accessible to us,” “perceivers assimilate judgments of people they observe to match accessible constructs.” Thus, in one well-known study, subjects were given different impressions regarding the socio-economic status of a young girl—some were led to believe she was wealthy, while others were led to believe she was poor—and then shown a tape of the girl performing ambiguously on a test. When they were asked to assess her performance, subjects who had been led to believe she was wealthy rated her performance as above average, while those who believed she was poor rated her performance as below average. Their interpretations of the events they perceived were influenced by the schema (rich or poor) they were induced to apply.

Not surprisingly then, incidental primes can significantly influence our interpretations of other people’s behavior. A push is seen as hostile (rather than playful) if the schema for hostility has been made accessible by exposure to hostility primes (such as a prior encounter with a hostile person, subliminal exposure to words or images associated with hostility, words associated with a stereotype that entails aggression, or the presence of a gun). Similarly, subjects shown a handful of words associated with recklessness are more likely to interpret the protagonist of a story as reckless, while those shown a handful of words associated with adventurousness are more likely to interpret the protagonist as adventurous, and seeing a

---

100 FISKE & TAYLOR, supra note 2, at 99 (discussing this example).
101 MOSKOWITZ, supra note 2, at 396; see FISKE & TAYLOR, supra note 2, at 257.
102 MOSKOWITZ, supra note 2, at 409.
103 See id. at 179.
104 See id.
105 See FISKE & TAYLOR, supra note 2, at 124; MOSKOWITZ, supra note 2, at 179.
106 See KUNDA, supra note 2, at 22, 47.
107 See id. at 22, 47–48, 281–82; MOSKOWITZ, supra note 2, at 407; FISKE & TAYLOR, supra note 2, at 258–60 (noting hostility priming effects of subliminal exposure to words associated with stereotypes for African Americans, seeing a picture of Bobby Knight, and seeing a gun on a table). Similar results have been found when subjects interpret other sorts of ambiguously hostile behavior (such as refusing to pay the rent until the apartment has been painted). See KUNDA, supra note 2, at 282.
108 See FISKE & TAYLOR, supra note 2, at 258.
missing child poster makes us more likely to see an “ambiguous adult-child interaction” as a “kidnapping.”

“Trivial exposure to these concepts” shapes subjects’ interpretations of the protagonist’s behavior. In the same fashion, priming emotions can influence interpretation of ambiguous stimuli so that a person who is scared is likely to interpret muffled noises as frightening ones, and a person who has been exposed to words suggesting anger becomes more likely to perceive ambiguous stimuli “in a manner consistent with” anger.

Moreover, once the concept has been activated, it makes us less likely to spot more fitting categorizations: Once we have interpreted a person’s behavior as hostile, we become less likely to see it as playfully rambunctious (even if that is the correct interpretation). “[T]he likelihood that a sensory input will be categorized in terms of a given category is not only a matter of fit between sensory input and category specifications. It depends also on the accessibility of a category.”

Primed schemas sometimes have a different sort of influence on interpretation: Rather than leading to assimilation, they lead to contrast. When contrast occurs, stimuli are interpreted as different from, rather than similar to, the accessible concept. In particular, if the primed concept is “extreme” (or, perhaps, narrow and distinctive), the primed concept may come to function as a “standard of comparison” against which ambiguous stimuli pale. Thus, priming “Gandhi” may lead us to interpret

109 Id. at 259.
110 MOSKOWITZ, supra note 2, at 409; see also, e.g., KUNDA, supra note 2, at 23. More complexly, priming one category can lead to “category competition” that preconsciously suppresses information associated with another. For example, triggering the “man” stereotype for Joe may suppress associations with the “librarian” stereotype, skewing our interpretations of his conduct. See MOSKOWITZ, supra note 2, at 377.
111 See KUNDA, supra note 2, at 23; MOSKOWITZ, supra note 2, at 398.
112 See MOSKOWITZ, supra note 2, at 397–98.
113 Id. at 398.
114 See id. at 386.
115 Id. at 386–87 (quoting BRUNER, GOODNOW & AUSTIN, supra note 5, at 132).
116 See generally id. at 390, 417–30.
117 See id. at 417.
118 See id. at 418–20.
119 See id. at 427.
120 Id. at 418, 419–20. In fact, the contrast effect is even more complicated. There is some evidence that some sorts of concepts (exemplars) produce contrast effects when they are “extreme,” while others (abstract traits) produce more contrast when they are moderate. See id. at 428–29. Moreover, placing subjects under
other people as more hostile than we otherwise would have; with Gandhi in mind, most people’s hostility stands out. By the same token, priming “Dracula” may lead us to interpret other people as less hostile than we otherwise would have.\(^1\)

Chronically accessible concepts also have an important influence on how we interpret the things we notice.\(^2\) Broadly speaking, we are likely to assimilate ambiguous phenomena to chronically accessible categories, even at the expense of other less accessible but more fitting categories.\(^3\) The chronically accessible category is more easily activated; fewer feature matches are necessary.\(^4\) As Moskowitz suggests, the person raised on an apple farm is more likely to see the far-away tree as an apple tree than the person raised in the city: For the apple farmer, the apple tree category is chronically accessible and guides interpretation of ambiguous trees.\(^5\) Along the same lines, “[i]f the trait ‘hostility’ is chronically accessible”—as it might be for someone raised in an abusive household, a militaristic society, or a street gang culture—“we will be quicker to label [an ambiguous] behavior as hostile.”\(^6\) In the same vein, research on depression highlights how pervasive the interpretive influence of a chronically accessible schema can be. On one account of depression, the depressed person is someone for whom

---

1. See id. at 420.
2. See id. at 418. The contrast effect may also arise when a person becomes aware that a concept may be biasing and attempts to correct for the bias. See id. at 422.
3. These sorts of accessibility effects on interpretation—assimilation and contrast—are most likely to come into play when the primed person encounters an ambiguous stimulus. See id. at 412, 435 (noting that the stimulus being judged must be somewhat ambiguous and open to interpretation).
4. See KUNDA, supra note 2, at 24.
5. See MOSKOWITZ, supra note 2, at 386. Moskowitz quotes Bruner’s formulation: “[t]he greater the accessibility of a category, (a) the less the input necessary for a categorization to occur in terms of this category, (b) the wider the range of characteristics that will be ‘accepted’ as fitting the category in question, (c) the more likely that categories that provide a better or equally good fit . . . will be masked.” Id. (quoting Jerome S. Bruner, On Perceptual Readiness, 64 PSYCHOL. REV. 123, 129–30 (1957)).
6. Id.
7. Id.; see also KUNDA, supra note 2, at 24 (providing analogous examples involving “masculinity” and “shyness”).
a "depressive schema" is chronically accessible. The depressive schema contains an array of "negative beliefs and explanations for events." Because these beliefs and explanations are chronically accessible, they frequently color not just what the depressed person perceives (as the "lens of a negative self-concept"), but also how he interprets what he perceives, so that "[he] concludes that the world is a negative and threatening place where failure predominates."

Again, the schematic cognition that is so essential to our navigation of the world also profoundly influences our construction of that world, steering our interpretations of ambiguous phenomena in significant and unexpected ways.

c. Conduct

It should not be surprising then, that accessible knowledge structures have also been shown to influence conduct itself. "[W]e... produce social behavior, with the aid of what is most accessible to us." A colorful array of experiments illustrates this phenomenon. Subjects shown pictures of dogs were more likely to act loyally in a subsequent scenario than subjects shown pictures of cats: Through association, the dog picture primed the concept of loyalty, and priming the concept of loyalty resulted in loyal behavior (presumably, through its influence on perception, interpretation, motivation, and other constituents of conduct). In another experiment, some subjects were exposed to achievement-related words (buried in a word puzzle), while others were

128 MOSKOWITZ, supra note 2, at 381–82 (attributing this account of depression to Aaron T. Beck); see also FISKE & TAYLOR, supra note 2, at 265 (discussing the relationship between "chronic processing of negative social categories regarding oneself" and depression); KUNDA, supra note 2, at 298–99 (discussing schematic aspects of depression).

129 MOSKOWITZ, supra note 2, at 382.

130 Id. A related theory holds that people may develop optimistic or pessimistic "explanatory styles," which are "chronic tendencies to rely excessively on some dimensions of the causal calculus" when seeking to understand events. In the throes of a pessimistic explanatory style, a person will be more likely to see himself as the cause of a bad event and to see the causes of bad events as global and permanent. Such an explanatory style might be associated with "chronic accessibility for negative information . . . There is a triggering of negative beliefs, concepts, and traits, and this spreads through the associative network, providing a web of negativity for interpreting the meaning of events." Id. at 382–85.

131 Id. at 396.

132 Id. at 395.
exposed to affiliation-related words; the subjects exposed to achievement-related words acted in a more achievement-oriented way and achieved more on a subsequent task.\textsuperscript{133} Exposure to images of a professor have an analogous effect, while encountering images of a soccer hooligan lead to worse performance.\textsuperscript{134} Subjects are more likely to behave in a hostile or aggressive manner when they have looked at an exclamation point (as compared to subjects who looked at a line with a dot above it);\textsuperscript{135} viewing a picture of Bobby Knight (the notoriously aggressive college basketball coach) “primes” aggression and makes the person more likely to behave aggressively;\textsuperscript{136} subliminal exposure to pictures of African Americans increases the hostility subjects show the experimenter;\textsuperscript{137} and exposing subjects to words associated with rudeness, embedded in jumbled sentences, leads them to act more rudely.\textsuperscript{138} Subliminal exposure to words associated with competition leads people to behave more competitively and to betray each other in favor of self-interested behavior in “Prisoner’s Dilemma” scenarios.\textsuperscript{139} For some men, exposure to words associated with power increases attraction to women present.\textsuperscript{140} And exposure to ideas associated with old age causes subjects to walk more slowly.\textsuperscript{141} As these experiments suggest, it can seem as though we “automatically behave in line with traits cued by recent experiences.”\textsuperscript{142}

More subtly, subjects were more likely to solve the “Duncker candle problem” (which requires subjects to affix a candle to a wall using a box of tacks) if they were primed with phrases like “carton and eggs” than if they were primed with concepts like

\textsuperscript{133} Id. at 399.
\textsuperscript{134} Id. at 540.
\textsuperscript{136} FISKE & TAYLOR, supra note 2, at 259.
\textsuperscript{137} KUNDA, supra note 2, at 282–83, 321 (“[M]ere exposure to an African American face can suffice for other Americans to activate the construct of hostility, which, in turn, can lead them to behave in a more hostile manner.”). And all this can take place automatically, without their realizing that they have even seen an African American face. See id.
\textsuperscript{138} Id. at 270–72.
\textsuperscript{139} Id. at 270–72.
\textsuperscript{140} Id. at 259–60; MOSKOWITZ, supra note 2, at 527.
\textsuperscript{141} Id. at 285–87.
\textsuperscript{142} Id. at 539.
"carton of eggs." The former prime made disaggregation accessible, and disaggregation was essential to solving the problem (removing the tacks from the box makes it possible to tack the box to the wall as a platform for the candle). More broadly, event schemas and scripts can significantly influence how we act, fueling "mindless" scripted behavior in which scripts are "automatically triggered" and "guide the manner in which people respond[]."

Schematic thinking, then, is not just a useful mechanism for parsing floods of sensory input; it is also a mechanism that influences cognition and conduct in distinctive and significant ways. It has a profound influence on what information a person registers and assimilates, on how she interprets complex or ambiguous stimuli, on her motivations, and, ultimately, on what she does.


Our knowledge structures have further unexpected ramifications for us. For one thing, schematic cognition makes us surprisingly vulnerable to situational influences—circumstantial stimuli, including seemingly inconsequential stimuli, exert a surprising influence on what we see, think, and do. For another thing, knowledge structures often exert their influence in ways that have a semi-automatic quality—we are unlikely to recognize and have difficulty controlling their influence. Finally, knowledge structures tie us to our cultural environment in a deep and powerful way—for many of our knowledge structures are socially constructed.

1. Situation-Dependence

Schematic cognition’s susceptibility to situational influence is striking. As we have seen, knowledge structures influence

143 MOSKOWITZ, supra note 2, at 401; FISKE & TAYLOR, supra note 2, at 260. The experiment illustrates that it is possible to prime particular “mindsets” or “cognitive orientation[s]” in a way that influences subsequent behavior. MOSKOWITZ, supra note 2, at 400–01.

144 MOSKOWITZ, supra note 2, at 163. Of course, we can generally reflect on and intercede in our own scripted behavior, but scripts may provide “default value[s] . . . that specify] how one . . . behaves when nothing unusual is happening” within the script-triggering situation. Id.
cognition and conduct when they are made accessible. But "[w]hat is accessible in your mind is partly determined by what you have been exposed to in your environment," and "will change as we move from one situation to another and encounter different stimuli that retrieve different concepts from memory." Moreover, it does not take much to change what is accessible: "[C]oncepts in our minds can be triggered by events in our environment to which we have been incidentally exposed." As a result, because the frames we bring to perception and interpretation are summoned and suppressed by incidental environmental stimuli, and because those stimuli change from situation to situation, our perceptual and interpretative frames are perpetually subject to revision, as stimuli that bring up one set of schema are supplanted by stimuli that bring up another. In short, because our schemas influence us in profound ways, and because our schemas are highly sensitive to environmental stimuli, schematic cognition makes our perceptions, interpretations, motivations, and conduct surprisingly vulnerable to external influence.

The dynamics of chronic accessibility also entail significant situation dependence. Which concepts are chronically accessible is significantly influenced by our "prior interaction history with stimuli." If we live in a state in which public spaces or popular media are saturated with national symbols, concepts associated with that state will become chronically accessible. If our friends are preoccupied with intellectual achievement or physical appearance, concepts associated with intelligence or appearance will be chronically accessible. Cultural emphasis on certain goals and values can produce in us auto-motives that become chronically accessible too. Thus, culture—local or general—can have a significant influence on the menu of chronically accessible concepts, and thus on our schematic cognition.

145 Id. at 391.
146 Id. at 396.
147 Id. at 406.
148 Id. at 357.
149 See id. at 379.
150 Id. at 361–62.
2. Semi-Automation

This vulnerability is exacerbated by the difficulty we have perceiving or controlling this influence.

Much of our schematic thinking has a semi-automatic character—it happens without us knowing it and is difficult for us to intervene in.151 One of the striking things about our use of knowledge structures is how much the process occurs outside of our consciousness, unnoticed and unmediated.152 Categorization can happen entirely automatically and need not involve any conscious work: It "is the most ubiquitous and primitive cognitive activity" and "can occur without conscious awareness."153 Indeed, much of the time, categorization, and knowledge structures "operate implicitly,"154 "springing to mind effortlessly and silently."155

Along the same lines, accessibility influences us in ways we neither perceive nor control. For example, incidental stimuli can impact us, and they can do so without our being aware that they are doing so,156 either because the priming stimuli itself is unnoticed (because it is subliminal or seems inconsequential), or because we do not realize that the priming stimulus has influenced us.157 "[T]he triggering of concepts can bias what you think you see or hear and what concepts come to mind, without your being aware of the influence these concepts have."158 Similarly, chronically accessible concepts can act as "filter[s]" for scanning the world that "run on automatic pilot."159 We generally do not recognize that they are influencing us: They "exert a

151 KUNDA, supra note 2, at 265–309 (automatic cognition generally).
152 Id. at 265, 266 ("[W]e simply do not have introspective access to many processes.").
153 MOSKOWITZ, supra note 2, at 119 (attributing this view to Bruner).
154 Id. at 176.
155 Id. at 191.
156 See id. at 390.
157 See KUNDA, supra note 2, at 280.
158 MOSKOWITZ, supra note 2, at 393.
159 Id. at 357; see also FISKE & TAYLOR, supra note 2, at 265 ("[C]hronically accessible categories seem to be used without one's intention . . . and even outside one's control.").
silent influence on our judgment and behavior"\textsuperscript{160} and "direct social cognition and perception without our awareness."\textsuperscript{161}

"Chronic concepts . . . pick and select . . . information from the environment without our needing to ask them to do the job. Much like breathing, the process occurs without conscious monitoring."\textsuperscript{162} Along the same lines, when chronically accessible concepts activate the perceptual defense dynamic, "decisions" about which information will be "consciously detected and attended" are being made "without conscious awareness."\textsuperscript{163} In short, schematic thinking entails a range of automatic and semi-automatic phenomena that influence our "judgments, feelings, and behaviors"\textsuperscript{164} and that tend to operate "outside our conscious control,"\textsuperscript{165} such that we are "unable to control and monitor their execution."\textsuperscript{166}

Finally, even when we are aware that an accessible concept may be influencing us, we may find it difficult to control that influence\textsuperscript{167}—indeed, should we wish not to be influenced by a particular concept, our vigilance against it may actually make it more accessible (and thus more likely to influence us).\textsuperscript{168}

3. Social-Construction

As we have seen, our schemas are influenced by our circumstances: Circumstances activate some schemas while suppressing others, and, over the long term, circumstances make some schemas chronically accessible. But certain circumstances also influence schemas in a deeper way. In particular, social and

\textsuperscript{160} MOSKOWITZ, supra note 2, at 357; see also KUNDA, supra note 2, at 265 (noting unrecognized influences on "judgments and behavior").

\textsuperscript{161} MOSKOWITZ, supra note 2, at 357.

\textsuperscript{162} Id.

\textsuperscript{163} Id. at 374. Thus, "much of our perceptual experience takes place in the preconscious and prior to our conscious awareness getting involved." Id. at 357. Along the same lines, auto-motives can be "automatically initiated," without consciousness, by "cues embedded in the context signaling that this context affords one the opportunity to pursue chronically accessible goals." Id. at 360. "[C]hronic goals lie in wait, and when appropriate contexts appear, these contexts trigger the goals . . . . The goals' chronic state . . . allows them to function . . . automatically." Id.

\textsuperscript{164} KUNDA, supra note 2, at 287–88.

\textsuperscript{165} MOSKOWITZ, supra note 2, at 356.

\textsuperscript{166} KUNDA, supra note 2, at 266.

\textsuperscript{167} MOSKOWITZ, supra note 2, at 393–94 ("Can people help having concepts . . . triggered when [tasks involving exposure to primes] are performed? Probably not.").

\textsuperscript{168} See KUNDA, supra note 2, at 299; see also MOSKOWITZ, supra note 2, at 395.
cultural circumstances play an important role in creating our schemas.

So far, we have suggested that the menu of categories we use to evaluate new stimuli are derived from prior knowledge—either experiential or otherwise learned. But this glosses over a feature of schematic thinking that will turn out to be significant for moral and criminal responsibility: Our categories are often socially constructed or “socially shared.” While one possible explanation for the shared nature of certain categories is that they are ones that naturally arise from encounters with the physical reality. A much more likely explanation is that “categories are shared because they represent various theories that people hold about the world.” These theories, in turn, “are taught to them by their culture.” “In the great blooming, buzzing confusion of the outer world we pick out that what our culture has already defined for us, and we tend to perceive that which we have picked out in the form stereotyped for us by our culture.”

To illustrate this point, consider the Whorfian hypothesis, according to which the different languages used by different groups of people lead these groups to different observations and evaluations of similar stimuli. To cite a popular example, individuals in a culture that has numerous classifications for snow are likely to categorize snow-related phenomena differently than individuals in a culture that only has one word for snow. Along a different line, consider that there can be deep ideological differences between cultures, and these deep differences can influence how individuals categorize things and events.

---

169 FISKE & TAYLOR, supra note 2, at 120; KUNDA, supra note 2, at 542 (“[D]ifferent cultures may give rise to different collective, culturally shared ways of constructing, defining, and extracting meaning from situations.”); MOSKOWITZ, supra note 2, at 117–19, 168.

170 MOSKOWITZ, supra note 2, at 117, 168; see also KUNDA, supra note 2, 515–60 (surveying important cultural influence on social cognition).

171 MOSKOWITZ, supra note 2, at 117.

172 Id.; see also id. at 168.

173 Id. at 117; see also id. at 168; FISKE & TAYLOR, supra note 2, at 120.

174 MOSKOWITZ, supra note 2, at 440 (quoting LIPPMANN, supra note 4, at 55).

175 Id. at 117.

176 Fiske and Taylor offer analogous examples (for example, some cultures have words that convey the meaning associated with the term “bohemian,” others do not). FISKE & TAYLOR, supra note 2, at 177.

177 See generally KUNDA, supra note 2, at 515–60; MOSKOWITZ, supra note 2, at 118.
For example, a substantial body of research suggests that some cultures can be meaningfully distinguished as either individualist or collectivist and that members of these two kinds of cultures categorize observed behavior in distinctive ways—individualist culture generates individual and trait centered categorizations of behavior, while collectivist culture generates categorizations that revolve around social role, social pressure, social obligations, and situation generally.\(^{178}\) Participants in an individualist culture will check stimuli against a different menu of categories than members of a collectivist culture.\(^{179}\) Or, to give yet another familiar example, cultures notoriously adopt stereotypes—race and gender stereotypes being the most obvious examples—and these stereotypes influence categorization at a basic level.\(^{180}\) The categories used by individuals in different cultures will differ tremendously, depending on which stereotypes their cultures transmit and depending on which features are included in those culturally-transmitted stereotypes.\(^{181}\) As a result, categorization influenced by stereotype will vary significantly from culture to culture.\(^{182}\)

D. An Illustration: Stereotyping

So far, we have described the basic (and sometimes surprising) phenomena that constitute schematic cognition. To flesh out the picture, this Section uses the familiar phenomenon of stereotyping to illustrate how schematic cognition works in real and common human experience.

Broadly speaking, stereotypes\(^{183}\) are schemas for groups of people.\(^{184}\) They are “expectancies about a social group”\(^{185}\) that are

---

\(^{178}\) MOSKOWITZ, supra note 2, at 118, 168. See generally KUNDA, supra note 2, 517–49.

\(^{179}\) See MOSKOWITZ, supra note 2, at 118. See generally KUNDA, supra note 2, at 349–56 (describing how ideological differences in northern and southern United States regarding honor and violence influence perceptions, interpretations, and conduct).

\(^{180}\) MOSKOWITZ, supra note 2, at 120–21; see also MEDIN, ROSS & MARKMAN, supra note 2, at 322 (noting some subcultural variations in stereotypical thinking).

\(^{181}\) KUNDA, supra note 2, at 557; MOSKOWITZ, supra note 2, at 120–21.

\(^{182}\) FISKE & TAYLOR, supra note 2, at 177 (“[T]here are important social and cultural differences in schemas. Content clearly differs . . . .”) (emphasis omitted); KUNDA, supra note 2, at 557 (“Each culture may bestow its members with distinctive ways of making sense of people.”).

\(^{183}\) See generally KUNDA, supra note 2, at 313–93; MOSKOWITZ, supra note 2, 438–79.
comprised of "beliefs about the probability that particular traits, features, characteristics, opinions, and behaviors will be observed in those people at some point during our (or someone else's) future interaction with them." They generally also include attitudes or affects—feelings associated with the stereotyped group. And while they are sometimes pernicious, stereotyping "is not always negative, and... can be functional." Indeed, "we have expectancies about every person with whom we interact," such that "no observation, inference, or interaction is free from the influence of [these] expectancies." Stereotypes then, are among the most important and ubiquitous examples of schemas.

Like schematic thinking generally, stereotyping is a device for managing information overload—"a functional response to our simply being unable to process each individual as a complex and unique stimulus." Stereotypes facilitate quick and efficient identification of the person stereotyped, support assumptions about her features, enable us to predict her behavior, and enable us to plan our own behavior accordingly. When we encounter a member of the stereotyped group (or "the symbolic equivalence of their presence"), "a host of beliefs and expectancies associated with the stereotype should be triggered." We draw on these beliefs and expectancies to understand and make predictions...

---

KUNDA, supra note 2, at 315 (stereotypes as knowledge structures); MOSKOWITZ, supra note 2, at 440, 444, 455 (stereotypes as "top-down/schema-driven thinking").

Id.; see also KUNDA, supra note 2, at 314–15.

KUNDA, supra note 2, at 315; MOSKOWITZ, supra note 2, at 444. These attitudes or affects need not have a clear or logical relation to the beliefs a person has about a stereotyped group (that is, attitude and belief need not be connected). Id. at 444, 448 (describing "aversive racism... in which people who truly uphold beliefs that oppose the old stereotypes are also latently holding negative feelings toward the group. These feelings persist despite the change in beliefs and the conscious rejection of the stereotypes.") (emphasis omitted).

MOSKOWITZ, supra note 2, at 439.

Id. at 438–39.

Id. at 442; see also KUNDA, supra note 2, at 316 (stereotyping frees cognitive resources for other cognitive tasks).

See MOSKOWITZ, supra note 2, at 441–42. Stereotypes "allow[] us to categorize and make predictions about the members of [a] category when forming impressions." Id. at 440.

Id. at 480.

Id. at 441. We are especially likely to do so under cognitive load. See KUNDA, supra note 2, at 359.
about the stereotyped person. We are using them just as we use any other schema.

Not surprisingly then, primed or chronically accessible stereotypes can have profound influence on our cognition and conduct. An accessible stereotype influences “social cognition from the earliest, preconscious stages of characterization and categorization to the more deliberate and effortful stages of impression formation.” It influences perception, “imposing a certain character on the data of our senses before the data reach the intelligence” and skewing what “grabs [our] attention.” Indeed, like other schemas, stereotypes bring confirmation bias with them; we “cling” to them, and we process “[i]nformation . . . in [a] manner that confirms the existing stereotype,” while “contradictory evidence is likely to be rejected” or “underutilize[d],” and “evidence conflicting with a stereotype may be distorted so it is seen as confirming the stereotype.”

And just as accessible schemas influence interpretation of ambiguous phenomena generally, stereotypes influence how we interpret the behavior of other human beings. As Moskowitz notes, “[m]ost [human] behaviors are open to interpretation”—a shove can be interpreted as hostile or playful, a smile as friendly or mocking. A stereotype “can . . . determin[e] which one of the many potential ways a behavior could be categorized will be the one used to describe the behavior,” for “[w]e apply

194 MOSKOWITZ, supra note 2, at 443–44.
195 Id. at 439, 455 (noting connection to accessibility).
196 MOSKOWITZ, supra note 2, at 440 (quoting LIPPMANN, supra note 4, at 65).
197 Id. at 455.
198 Id. at 455; see also id. at 472.
199 Id. at 479.
200 Id. at 484.
201 Id. at 479. “Stereotype-congruent behaviors . . . get attributed to a target person’s stable personality, whereas incongruent behaviors are attributed to the situation,” such that there is no need to alter the stereotype for the group. Id. at 486. We also engage in other maneuvers in order to preserve our stereotypes, such as attributing counter-stereotypical behavior to situational influences, id., and creating “subtypes” for group members who seem to deviate from the stereotype, id. at 472–74, 479 (noting subtypes function by positing that the stereotype remains generally true and that counter-stereotype examples merely represent a deviant sub-group).
202 KUND, supra note 2, at 316; MOSKOWITZ, supra note 2, at 455.
203 MOSKOWITZ, supra note 2, at 460.
204 Id. at 460; KUND, supra note 2, at 346–47 (“[S]everal . . . studies . . . have shown that stereotypes associated with race, social class, or profession can lend different meanings to the same ambiguous behaviors.”).
stereotypes more readily than other, competing explanations for behavior.205 Thus, if the stereotype we apply to a person characterizes her as hostile or unreliable, we will interpret her ambiguous behavior as hostile or unreliable.206 If a stereotype is primed—for example, by encountering a member of the stereotype, or hearing words associated with the stereotype, or overhearing a racial slur—evaluations of group members are steered toward the stereotype.207 “[P]eople are more likely to make an inference that confirms an expectancy they already hold” about another person’s traits.208

This is why “people label the same behavior differently, depending on the group membership of the person who performs it,”209 as a pair of striking experiments show. In Duncan’s classic experiment,210 subjects were asked to watch two people talking, and to evaluate their behavior at various points in the conversation. At one evaluation point, one conversant shoved the other. Evaluations were strongly influenced by racial stereotypes: When a Black conversant shoved a White conversant, subjects characterized the shove as violent 75% of the time, but when a white conversant shoved a black conversant, only 17% of subjects labeled the shove as violent, while 42% construed it as playful.211 In another experiment,212 subjects were presented a court transcript setting out the case against a defendant. In some versions the defendant was white, while in others he was Puerto Rican. In some, he was accused of

205 MOSKOWITZ, supra note 2, at 479.
206 See KUNDA, supra note 2, at 319–20 (describing research showing that priming a stereotype for the African-American race, which includes a hostility component, led to interpreting ambiguously hostile conduct as hostile); id. at 347 (“[E]xposure to an African American individual may spontaneously bring to mind traits such as aggressive or criminal which then influence the interpretation of ambiguous behaviors.”).
207 See, e.g., FISKE & TAYLOR, supra note 2, at 258.
208 MOSKOWITZ, supra note 2, at 460. Stereotypes cast a “stereotypic light” on the people we encounter. Id. at 455.
209 Id. at 465; see also KUNDA, supra note 2, at 346–49 (“[O]ur stereotypes can lead us to interpret identical behaviors, traits, and group memberships quite differently when these pertain to differently stereotyped individuals.”).
210 KUNDA, supra note 2, at 346–47; MOSKOWITZ, supra note 2, at 464.
211 MOSKOWITZ, supra note 2, at 464; see also KUNDA, supra note 2, at 346–47. Similar results have been found in scenarios in which one child is seen taking an eraser from another and in which one colleague is sarcastic to another. See FISKE & TAYLOR, supra note 2, at 123–24.
212 MOSKOWITZ, supra note 2, at 467–68 (describing a 1985 experiment conducted by Bodenhausen and Wyer).
a white collar crime, in others a battery. Subjects were more likely to find the defendant guilty if his crime fit his group stereotype (for example, white defendant/white collar crime; Puerto Rican defendant/battery). Moreover, subjects saw defendants as more responsible for crimes that fit their stereotypes, and thus imposed more severe punishment in these cases.\footnote{Id. at 467.} Subjects had relied on stereotypes rather than fully scrutinizing the information in the transcript.\footnote{Id. at 468 (“[Participants] processed heuristically, paying no more attention to relevant information . . . than they did to irrelevant information . . . [and ignored] information inconsistent with a stereotype.”).} Stereotypes influenced their interpretations in a fundamental way.

Stereotypes also illustrate some of the most surprising features of schematic thinking. As we have already seen, much of schematic cognition occurs without our realization. Stereotyping illustrates this nicely.\footnote{See, e.g., KUNDA, supra note 2, at 319–20 (describing Devine’s 1989 experiment in which priming with stereotype-related words activated the construct of hostility without the participant’s awareness).} The processes associated with stereotyping—activation and application of the stereotype—“can occur rather effortlessly and mindlessly (without conscious awareness or intent).”\footnote{MOSKOWITZ, supra note 2, at 480.} As a result, “stereotyping often proceeds without our awareness, biasing us in ways we would never suspect,”\footnote{Id. at 442; see also KUNDA, supra note 2, at 347.} and “the process of having the affect or attitude associated with that person triggered occurs immediately and without awareness.”\footnote{MOSKOWITZ, supra note 2, at 444.} As a result, “stereotyping often proceeds without our awareness, biasing us in ways we would never suspect,”\footnote{Id. at 442; see also KUNDA, supra note 2, at 347.} and “the process of having the affect or attitude associated with that person triggered occurs immediately and without awareness.”\footnote{MOSKOWITZ, supra note 2, at 444.}

Likewise, as we have also seen, schematic thinking can be resistant to conscious intervention—that is, it can be hard to control.\footnote{There is reason to believe that this first step in stereotyping—“stereotype activation”—is “effortless,” “mindless,” and “inevitable.” Id. at 480.} This problem has been extensively documented in the context of stereotypes. Members of a given culture will generally be exposed to and learn that culture’s stereotypes, and once this has happened, the stereotype may influence cognition even in someone who has rejected the stereotype.\footnote{KUNDA, supra note 2, at 318–19.} “[G]roup membership[s] . . . are often clearly marked by physical features that we cannot help detecting as part of basic and preconscious
perceptual processes." Detecting group membership is "sufficient for the stereotype to be triggered when we encounter a member of a stereotyped group." As a result, stereotypes can become accessible "even though we consciously reject the stereotype" and can have a profound influence on our cognition even if we disapprove of them. Even if a person rejects a "cultural stereotype," her "knowledge of that cultural stereotype does not dissipate. . . . [P]eople who find the . . . stereotype offensive . . . still have the knowledge of that stereotype stored in memory and can easily have that stereotype triggered." Thus, "regardless of whether we have egalitarian values, anti-stereotypic personal beliefs, and a dedication to fairness, a stereotype can still be triggered without our knowing it, simply because we 'know' the stereotype." Indeed, attempts to suppress stereotypes can have "ironic side effects": "Thought suppression.., leads to an even greater incidence of that thought," as thoughts we attempt to suppress become

221 MOSKOWITZ, supra note 2, at 441.
222 Id. In one view, "[t]he mere presence of a group member will automatically activate the concepts with which the group has been . . . associated. Stereotypes . . . must be triggered whenever we categorize a person as belonging to a group—the triggering is inevitable." Id. at 452. "[T]he triggering of the concept [by encountering the member of the stereotyped group] should lead to spreading activation, so that a host of beliefs and expectancies associated with the stereotype should be triggered." Id. at 441.
223 Id.
224 KUNDA, supra note 2, at 327–28 (describing Devine's thesis that activation of the negative stereotype is automatic and inevitable, regardless of one's personal beliefs); id. at 334–35 (describing experimental evidence showing that "when primed with the information that is directly related to the negative stereotype, all people will automatically activate this stereotype, regardless of their prejudice"); see also MOSKOWITZ, supra note 2, at 440–42. "[E]ven if we are not explicitly attempting to categorize a person, each person we meet is quickly and quietly placed into some primitive and broad 'box.'" Id. at 441. "Once we have placed the person in a box, an inescapable part of this categorization process is the heightened accessibility of all the information in that box, including that which we have . . . rejected." Id.
225 MOSKOWITZ, supra note 2 at 506; see also KUNDA, supra note 2, at 318.
226 MOSKOWITZ, supra note 2, at 451. "[I]f it is triggered without our knowing it, we can be biased by its accessibility even if we reject the stereotype." Id. at 451. Indeed, even when a person is "consciously working quite hard to" be "egalitarian, fair, and nonbiased," prejudiced attitudes may "come out 'through the cracks.'" Id. at 448.
227 Id. at 499; see KUNDA, supra note 2, at 345–46.
228 MOSKOWITZ, supra note 2, at 499 (emphasis omitted); KUNDA, supra note 2, 345–46. "In order not to think a specific thought, one must constantly monitor the mind to make sure that the unwanted thought is not entering consciousness. This creates the unusual demand to hold in mind, at some (preconscious) level, the very
“hyperaccessible” over time. This is not to say that stereotypic thinking is entirely beyond our control, but in real life, “conditions” typically “undermine” the kind of “effortful processing” necessary to overcome the generally invisible and semi-automatic stereotyping processes.

Finally, stereotyping is a powerful illustration of the social construction of our schemas. As we have seen, cultures notoriously adopt stereotypes for groups like “men” and “whites,” and these stereotypes influence categorization at a basic level. Of course, stereotypes can include information learned through personal experience with an individual or a group, but stereotypes can also have deep roots in social context. Stereotypes contain the features “that our culture has taught us a particular social group is likely to possess.” We learn them, in part, from “things others have told us about the individual/group in question,” from “various socializing agents within the culture” including “parents, teachers, religion, friends, the Internet, TV, etc.” “This process [of stereotype inculcation] begins as soon as we are able to understand speech, even before we understand abstract concepts . . . and continues throughout life.” In short, the stereotypes used by individuals in different cultures will differ tremendously depending on which stereotypes their cultures transmit. They are socially constructed.

thought that is not to enter the mind,” making the “unwanted thoughts . . . more accessible.” MOSKOWITZ, supra note 2, at 499–500.

229 MOSKOWITZ, supra note 2, at 500–01.  
230 “[T]he triggering of a stereotype may be easy, effortless, unintended, and likely to occur for most people. But it is not inevitable.” Id. at 511.

231 Id. at 512.  
232 See id. at 120–22.  
233 Id. at 438, 452.  
234 FISKE & TAYLOR, supra note 2, at 122.  
235 MOSKOWITZ, supra note 2, at 440.  
236 Id. at 439.  
237 Id. at 438. “Stereotypes . . . are culturally shared beliefs transmitted to all of us in a culture through socialization forces (for example, parents, media, peers, teachers).” Id. at 452; see also FISKE & TAYLOR, supra note 2, at 122 (“[A]utomatic stereotypic reactions to race categories are equally characteristic of high and low prejudice people (perhaps by virtue of both living with the culture’s stereotypes).”).  
238 MOSKOWITZ, supra note 2, at 452.  
239 Id. at 120–21; MEDIN, ROSS & MARKMAN, supra note 2, at 321–22 (noting cultural influences on stereotyping).
In these respects, stereotyping is a vivid and suggestive illustration of several features of schematic cognition. Like our other knowledge structures, stereotypes can exert significant influence on our perception, interpretation, memory, and conduct; their influence is itself highly susceptible to environmental triggers; we are generally unaware of and bad at controlling their effects; and we inherit them from the culture that surrounds us. Seeing these features at work in stereotyping should highlight the profound and potentially troubling role that schematic cognition plays in our moral lives, for here schematic cognition is implicated in the deepest way in our thoughts, feelings, and conduct pertaining to other people.

E. In Sum

Of course, it is not surprising to discover that human cognition does not incorporate and evenly weigh every item of data our senses bring us. We do not have unlimited processing capacity, so a system of triage is necessary. Even so, the particular triage system we employ is surprising in some of its details. Here, I have collected some of those surprising details, and I suggest that they can usefully be subsumed under the heading “schematic psychology.”

For the purposes of this Article, the salient features of schematic psychology are:

- We use schemas and related knowledge structures to organize our information about the world (including schemas for objects, people, events, and relationships).
- When accessible, such knowledge structures significantly influence what we perceive and how we interpret what we perceive (generally by steering us to perceptions and interpretations that resonate with and reinforce the accessible knowledge structure).
- Accessible schemas influence our feelings, attitudes, wants, and values—in short, our motivations.
- Accessible schemas influence our conduct.
- Schema accessibility is contingent on circumstantial primes (including seemingly inconsequential and even subliminal stimuli).
- Schema accessibility is contingent on chronic stimulation.
- Schematic cognition is generally hard for us to control (because we are generally unaware of its influence and have limited success interceding against that influence).
Schematic cognition is highly susceptible to cultural influences because cultural institutions (1) generate schemas for us; and (2) chronically stimulate some of our schemas.

Schematic psychology then, shows that we perceive and interpret people and events in our world in strange and unexpected ways. The next Part of this Article turns to one of the most fundamental questions these startling discoveries raise for the law: If schematic psychology paints an accurate picture of human cognition, are we justified in holding human actors responsible for their criminal acts?

III. SCHEMATIC PSYCHOLOGY AND CRIMINAL RESPONSIBILITY: TWO CHALLENGES

Building on Part II’s overview of schematic psychology, this Part contends that schematic psychology can fund two sorts of challenges to conventional accounts of criminal responsibility.240

Section A sets out an internal challenge. This internal challenge proceeds by using schematic psychology to show that human actors sometimes fail to satisfy a conventional prerequisite for responsibility. The prerequisite at issue is a facet of moral sensitivity, having to do with sensitivity to morally significant facts. Schematic psychology, I will argue, shows that this facet of our moral sensitivity is impaired more often and more profoundly than we generally imagine, and thus that responsibility is absent more often than we realize.

Section B takes a broader view, offering an external challenge. This Section argues that taking schematic psychology seriously should catalyze doubts about the project of attributing responsibility to individual human actors itself. The research on schematic cognition suggests that our conduct is influenced in deep and unexpected ways by cultural and environmental influences, both circumstantial and constitutive. If this is right, then holding us responsible for our conduct raises significant fairness problems—problems which undercut the reactive attitudes associated with holding individuals responsible.

240 The challenge to criminal responsibility is derivative—it takes moral responsibility to be a prerequisite for criminal responsibility.
A. The Internal Challenge

Schematic psychology paints an unexpected and startling picture of human cognition. One reason why this picture is startling is that it suggests that we are not as sensitive to moral considerations as we generally think we are. For example, due to schematic blind spots and biases, we often fail to register morally significant facts in our environments: \(^{241}\) we do not recognize that a bump is accidental (not hostile); we do not see that a black object is a wallet (not a gun); we fail to note that a man curled on the sidewalk is in peril (not sleeping off a drink). We fail to register these facts even though they are available to our senses and for reasons that seem arbitrary and unconnected to our desires, beliefs, or values.

This amendment to conventional psychology requires us to reevaluate our status as responsible actors. On the conventional view, moral sensitivity is essential to moral responsibility. Because schematic psychology shows that schematic cognition impairs the perceptual or empirical facet of our moral sensitivity, it calls into question our moral responsibility. And because it is generally held that an actor cannot be criminally responsible unless he is morally responsible, it follows that criminal responsibility, too, is threatened.

1. The Role of Sensitivity to Morally Significant Facts in Moral Responsibility

There is, of course, a long-standing and lively debate about the characteristics a person must have in order to be considered a morally responsible actor. In recent years, one influential family of theories—which I will call reasons-responsiveness theories—has suggested that morally responsible agency has two fundamental components. \(^ {242}\) One is an "executive" or volitional component—the ability to act in accord with one's reasons. The other is a "cognitive" or intellectual component—the ability to recognize reasons for acting, including moral reasons. This second component, sometimes described as "moral sensitivity,"

\(^{241}\) Even though those facts are available to our senses (as the examples in the text suggest).

\(^{242}\) See JOHN MARTIN FISCHER & MARK RAVIZZA, RESPONSIBILITY AND CONTROL (1998); R. JAY WALLACE, RESPONSIBILITY AND THE MORAL SENTIMENTS (1994); and SUSAN WOLF, FREEDOM WITHIN REASON (1990), for seminal articulations of the reasons-responsiveness theories.
entails, among other things, sensitivity to morally significant facts about one’s environment.

The central claim of the reasons-responsiveness theory is that a responsible actor should be able to recognize and act upon moral reasons. Susan Wolf says that an actor is responsible if she can “do the right thing for the right reasons,” meaning she has “the power to recognize” and “the ability to act in accordance with . . . the True and the Good.” R. Jay Wallace says she must have the capacity for reflective self-control, a capacity that entails both the ability to grasp moral reasons and the ability to act in accord with those reasons. Manuel Vargas holds that the “basic structure of responsible agency” includes “a set of capacities to recognize or detect moral considerations in the considered circumstance, and to appropriately govern one’s conduct in light of them.” Fischer and Ravizza’s influential account breaks reasons-responsiveness down even more meticulously. In their view, a person is only morally responsible for an act if the act is produced by a “moderate reasons-responsiveness” mechanism that the actor identifies with or owns. Such a mechanism is moderately reasons-responsive if it is “regularly receptive to reasons” (including some moral reasons) and “at least weakly reactive” to those reasons. Being receptive to reasons means having the “cognitive power” to recognize reasons for action when they appear, a power with both perceptual and evaluative facets.244

243 WOLF, supra note 242, at 71; see also id. at 70–78, 87–88.
244 WALLACE, supra note 242, at 7, 155–66.
246 See generally FISCHER & RAVIZZA, supra note 242.
247 Id. at 62. In typical cases, we act on a mechanism that can be described as our practical reason, but Fischer and Ravizza’s model recognizes that we might actually or theoretically act as the result of other mechanisms (for example, hypnotic commands or surgically implanted, externally controlled decision-forcing devices). It is critical to their view, however, that we evaluate an actor’s responsibility for any given act by evaluating the reasons-responsiveness of the mechanism that actually produced the act, rather than that of the agent as a whole.
248 Id.
249 Id. at 81.
250 Id. at 75.
251 Id. at 71. This ability is said to entail both perceptual/epistemic and evaluative/reflective components. It involves recognition of facts about the world, effective instrumental reasoning, and the capacity to evaluate reasons prudentially and morally. Id. at 69–73.
receptive mechanism may recognize only one or a few such reasons to act, but moral responsibility requires at least a "regularly" reasons-receptive mechanism, meaning one that recognizes a coherent pattern of intelligible reasons including at least some moral reasons. \textsuperscript{252} "[R]eactivity to reasons" means having the "executive power" \textsuperscript{253} to translate reasons into action. Moral responsibility requires at least a weakly reasons-reactive mechanism, meaning a mechanism that would translate a reason for action into a consistent action in at least one case. \textsuperscript{254}

While these accounts differ from each other in important ways, they have in common a requirement that the actor posses some degree of moral sensitivity. The actor must have "the power to recognize the True and the Good"; \textsuperscript{255} she must be able to grasp moral reasons; \textsuperscript{256} she must act on a "mechanism" that is at least "regularly' receptive to reasons." \textsuperscript{257} A person who lacks this sort of sensitivity has a disability so fundamental that it is commonly equated with mental illness—either delusional psychosis \textsuperscript{258} or sociopathy—and may excuse him from moral responsibility.

Moral sensitivity can be broken down into subsidiary components. As Vargas suggests, moral sensitivity is actually a congeries of related capacities to recognize a "highly varied" collection of phenomena. \textsuperscript{259} One facet of moral sensitivity is evaluative (or reflective) and might be described as the capacity to see "the nature of right and wrong." \textsuperscript{260} This is the capacity that enables some people to see, for example, that "other persons are ends in themselves." \textsuperscript{261} It is involved in the agent’s judgments about the significance of the phenomena in his

\textsuperscript{252} Id. at 70–71; id. at 66 (must recognize understandable reasons); id. at 73 (must have “an understandable pattern of reasons-recognition, minimally grounded in reality”); id. at 76–81 (must recognize coherent pattern of moral reasons).

\textsuperscript{253} Id. at 75. The capacity at issue has alternately and variously been described as a volitional, control, self-governance, or motivational capacity.

\textsuperscript{254} Id. at 62, 69.

\textsuperscript{255} WOLF, supra note 242, at 71.

\textsuperscript{256} WALLACE, supra note 242, at 12–13.

\textsuperscript{257} FISCHER & RAVIZZA, supra note 242, at 71 (emphasis omitted).

\textsuperscript{258} Id. at 41.

\textsuperscript{259} Vargas, supra note 245, at 6. Victor Tadros’s catalog of capacities required for moral responsibility suggests the same thing. Tadros also suggests the distinction between the “epistemic” and the “evaluative” facets of responsibility. VICTOR TADROS, CRIMINAL RESPONSIBILITY 55–56 (2007).

\textsuperscript{260} Vargas, supra note 245, at 6.

\textsuperscript{261} Id. at 7.
environment. Another facet is perceptual (or epistemic) and might be described as the capacity to "judge the morally relevant features of situations" or to register "facts about the circumstances in which an agent is considering what to do." To be a morally responsible agent, "one must ... be able to attain a clear and accurate view of the morally relevant features of the situation in which one is acting." This is the capacity that enables some people to register that "someone is in emotional pain" or to recognize a "spouse's emotions." It has to do with whether the agent registers those phenomena in the first place and seems to be implicated in Fischer and Ravizza's observation that the morally responsible agent must have "a certain kind of sensitivity to external reality." His "connection to the world is crucial to his moral responsibility.... [H]e must be ... responsive to reasons presented by the world .... [C]hanges in the external world must be reflected in changes in the agent." Thus, moral sensitivity actually entails more than one sort of sensitivity and includes not just the ability to see moral reasons, but also the ability to recognize facts relevant to the application of those moral reasons to particular situations.

---

262 WALLACE, supra note 242, at 169.
263 Vargas, supra note 245, at 6. Vargas makes the very useful points that "sensitivity to moral considerations is not a unified phenomenon," and that "[m]oral considerations may be constituted by or generated from as diverse things as affective states, propositional content, situational awareness, and so on." Id.
264 WALLACE, supra note 242, at 169.
265 Vargas, supra note 245, at 7.
266 Id. at 9.
267 See FISCHER & RAVIZZA, supra note 242, at 69–73 (discussing the receptive condition of moderate reasons-responsiveness).
268 Id. at 253.
269 Id. at 252.
270 See, e.g., WALLACE, supra note 242, at 169 ("Even if the agent retains the ability to grasp the moral principles we hold her to, she will lack the ability to apply them correctly in the situations she actually confronts.").

The views described in the text are all compatible views, meaning they start from the premise that "true" or "genuine" free will (the ability to originate one's own act) is not a prerequisite for moral responsibility. There is an alternative view, according to which "true" or "genuine" free will is required. This view, which I will call originationism, has been under attack for some time, and much of originationist literature today is devoted to defending the essential originationist premise (that responsibility requires "true" free will), but it is likely that even if originationism is correct, originationists must also further specify the features the responsible actor must have. Merely being "free" is probably not enough. For example, the responsible actor must also have abilities to see and understand morally significant facts in her
It is the latter sort of sensitivity—perceptual or epistemic
sensitivity to morally significant facts—that schematic cognition
most directly calls into question.

2. The Schematic Account Raises Questions About Our Moral
Sensitivity

Schematic psychology suggests that we are sometimes
insufficiently sensitive to morally significant facts to be morally
responsible for our acts. This is so in at least two ways. First,
accessible schemas sometimes skew our perceptual process such
that we are rendered insensitive to certain morally relevant
phenomena in our surroundings. Even though sensory
impressions of those phenomena may enter iconic memory, they
do not enter consciousness, are not encoded in long-term
memory, and therefore, cannot influence our deliberations,
choices, or actions. Second, accessible schemas sometimes
skew how we interpret ambiguous phenomena, increasing the
likelihood that we will misidentify morally relevant features of
those phenomena. As a result, we sometimes fail to perceive, or
fail to identify correctly, morally relevant facts. Both problems
are magnified by the arbitrary way in which perception and
interpretation are skewed; for our biases and misinterpretations
are radically detached from our beliefs, desires, and values. As a
result, I will argue, schematic cognition sometimes undermines
our sensitivity to morally significant facts in a way that
undercuts our moral responsibility. Indeed, it may do so far
more commonly than conventional moral psychology recognizes.

a. Schematic Cognition Skews Perception of Morally Relevant
Facts

Schematic psychology suggests that the perceptual process
that should enable us to perceive morally relevant facts in our
environment is sometimes impaired in unexpected and important
ways. Once schema and other knowledge structures become
accessible, they can make us insensitive to morally significant
facts in our environment (even when those facts are accessible to
our senses). Moreover, they skew our perceptions in ways that
we are generally unaware of and unable to control and in ways

world if we are to hold her responsible. That is, she must have some degree of moral
sensitivity.
that can be radically detached from and even in opposition to our values. As a result, we are sometimes blind to morally significant facts and blind in ways for which we are not responsible. In these situations, we may not satisfy the requirements for morally responsible agency.

As we have seen, schematic cognition makes our perceptual process susceptible to significant bias. In order to manage the potentially overwhelming flood of information our senses bring to us, we must sort it and filter it, discarding most of it before it reaches our consciousness.\textsuperscript{271} To do so, we utilize knowledge structures like schemas and scripts to separate the information that will be retained and noticed from the information that will be discarded. In enabling us to sort enormous quantities of information, these knowledge structures are serving a vital purpose. At the same time, however, they inevitably steer and skew our perceptions. Functioning as a scanning pattern, an accessible schema sets us up to see certain things while depressing or even blocking our sensitivity to other things. We see “what the accessible constructs in the mind make [us] perceptually ready to see.”\textsuperscript{272} This is why we are more likely to notice schema-relevant information than schema-irrelevant information and more likely to notice schema-consistent information than schema-inconsistent information. This is why we notice different facts about a house if we are thinking about it from a buyer’s perspective than we do if we are thinking about it from a burglar’s perspective and are more likely to spot hooligan-related words in a word-jumble if the schema for hooligans has been primed. In schematic cognition, accessible schemas help set our perceptual priorities, and these perceptual priorities bias what we perceive, heightening our sensitivity to some facts while depressing our sensitivity to others.

The perceptual biases intrinsic to schematic cognition can impair our sensitivity to morally significant facts in our environment. Indeed, the research on schematic cognition is rife with suggestive illustrations of this problem. Consider, for example, Darley and Batson’s famous Good Samaritan experiment, in which seminary students who were told they were late for a presentation sometimes failed to even notice a

\textsuperscript{271} MOSKOWITZ, supra note 2, at 386.
\textsuperscript{272} Id.
moaning, disheveled man they walked past (or over!) on the sidewalk. With schema for hurrying, obligations to others, or self-presentation accessible and highly charged, their scanning patterns reflexively excluded morally significant information about the stranger's suffering. Research on racial and gender stereotypes is similarly suggestive. When gender stereotypes are accessible, for example, subjects are less likely to notice stereotype-inconsistent behavior. In some cases, this will impair perception of morally significant facts. Supervisors in accounting or programming firms may fail to perceive that a female employee handles a computation problem more quickly or accurately than her male peers, and this blindness may influence morally significant decisions about professional rewards and promotions. Police officers watching crowds or cars in public places may be less likely to notice white actors' (stereotype-inconsistent) disorderly conduct or moving violations than (stereotype-consistent) disorderly conduct or moving violations by black actors, and this bias may influence morally significant decisions about stops, frisks, searches, and arrests. In cases like these, schematic cognition appears to render actors insensitive to morally significant facts.

Schematic psychology shows something more, too. In addition to showing that we are sometimes insensitive to morally significant facts, it also shows that we are often rendered insensitive to morally significant facts in ways we do not see, cannot control, and might well disapprove. As we have seen, we can be endowed with a schema without realizing it and even if we consciously reject the content of the schema. There is ample evidence, for example, that a person who strongly endorses racial egalitarianism may nevertheless absorb a full complement of racially biased stereotypes from his political culture. When such schema are activated, they may produce in us perceptual blindspots that we are unaware of and would not approve. The dynamics of accessibility magnify the problem. As we have seen, once we are endowed with a schema, it can be primed by passing and incidental environmental stimuli. A picture of Bobby Knight or Dracula plastered on a street light pole might prime the schema for hostility in us, for example. Indeed, it may do so even

---

273 The example is taken from one of the seminal experiments in situationist psychology—Darley and Batson's so-called "good-samaritan" experiment.
if we register it as an inconsequential phenomenon or even if we
do not register it at all (as when we are exposed to it
subliminally). Moreover, as we have seen, certain phenomena
have the ability to make schemas chronically accessible—and
thus perpetually influential—in ways that have no relation to our
values. For example, cultural institutions will chronically prime
schema in us whether we want them to or not. In a theocratic
state, even an atheist will have certain religious schemas
chronically accessible. In a culture where racial stereotypes are
common, even a racial egalitarian will have chronically accessible
racist schemas.

Schematic cognition then, suggests that our perceptual
priorities will often be radically independent of our values,
preferences, and desires. It is perfectly possible that, though we
would prefer to be sensitive to suffering, coincidental features of
our culture or environment have endowed us with schemas and
primed and chronically stimulated those schemas in a way that
depresses our sensitivity to suffering. Our perceptual priorities
are, to some extent, set for us, and they can be set in ways that
we would not choose or approve. It is not a stretch to say that
while we see the world through a biased lens, the bias is not our
own. Unwanted but accessible schema will influence our
scanning patterns and render us insensitive to morally
significant facts in ways inconsistent with our own values.

In some cases, this unwanted insensitivity to morally
significant facts undercuts moral responsibility. It is not that
sensitivity to morally significant facts is implicated in every act.
But in some cases, morally significant conduct is influenced by
unwanted failures to perceive morally significant facts.
Consider, for example, the seminary students who stepped over
the moaning man on the sidewalk without stopping to help. Our
first impulse is to blame them for their callousness and to hold
them responsible if the moaning man’s ailment subsequently
injures or kills him. But schematic psychology enables us to
analyze the situation more carefully. Some of the seminary
students probably noticed the moaning man but chose not to
help. Their choice seems callous, and it makes sense to hold

274 Of course, in the Good Samaritan experiments, the moaning man was an
actor and not actually in peril. Had he not been an actor, the conduct of the students
would have raised the questions discussed in the text.
them responsible for its consequences.\textsuperscript{275} Other students, however, may not have noticed him for the reason that their accessible schemas skewed their perceptions. For some of this group, the accessible schemas in play were consistent with their values. Here, we may still think it appropriate to hold the students responsible—perhaps on the grounds that they are responsible for their value-consistent failure to perceive the suffering man, and thus responsible for the consequences of that failure.\textsuperscript{276} For other subjects in the group, however, the accessible schemas in play were inconsistent with their values. These subjects should not be held responsible for their failure to register the suffering man or for any subsequent injury to him. Though they should have noticed him and should have helped him, their capacity to notice him had been disabled, and was disabled for reasons that they could not control. Schematic psychology, then, enables us to see that in some cases in which we would normally think it natural and obvious to blame and punish a person, blame and punishment are not actually appropriate; for sometimes, the strange and unexpected

\textsuperscript{275} Or if it does not, it is for different reasons than the ones explored here.

\textsuperscript{276} Why should a person ever be blamed for failing to see, hear, or smell something? One possible reason why such failures sometimes seem to have a moral valence is that we suspect that the perceiver has given some facts priority over others in the perception process—that some sort of value or choice drives the failure to register the overlooked facts. Perception is not just a passive mechanical process. The person who is surprisingly blind to morally significant facts is blind for reasons that say something about him as a moral agent. He is implicated in how his perceptual priorities are set.

Schematic psychology does appear to reinforce the intuition that we are sometimes responsible for our own failures to perceive. This is because some of our perceptual priorities are set by our own values. Because we frequently consult our values in daily life, those values and schemas associated with those values become chronically accessible. Once these value-related schemas have become chronically accessible, they influence what we perceive. A person who commits to egalitarian values is more likely to notice opportunities for egalitarian behavior. He may, for example, be more likely than others to notice the suffering man underfoot. Thus, in adopting certain values, we influence which schemas are chronically accessible for us, and thus, influence what we perceive. If this is right, then our values are at least sometimes implicated in our perceptual priorities, and it is at least sometimes sensible to praise us for perceiving morally significant facts and to blame us for failing to notice them. That is, in some cases we blame a person for a failure to perceive a morally significant fact because we think the person is responsible for disabling his own capacity to perceive that fact. Such analysis, of course, depends on the contestable assumption that we acquire or commit to values in ways that can sustain responsibility. The analysis in Section B of this Part may undermine this assumption.
machinery of schematic cognition renders us surprisingly and non-culpably blind to morally significant facts right in front of us.

Schematic psychology then, supplies a framework for challenging attributions of responsibility in some cases where we would normally be inclined to hold people responsible. Of course, the challenge suggested here does not appear to be a global challenge to moral responsibility. It does not allege that we are always surprisingly and non-culpably blind to morally significant facts. Rather, it suggests that our capacity to perceive such facts is non-culpably disabled in some particular cases. In this sense, it puts us in a position to identify a particular class of cases in which actors who appear responsible actually are not.

But we should not underestimate the significance of this threat to conventional accounts of moral responsibility, for the frequency of this impairment may be much greater than we are inclined to expect. We are generally unaware of the influence of accessible schemas on us, so we are likely to be quite poor intuitive judges of how common such impairments are. We are likely to underestimate their frequency. It is hard enough for us to imagine that such a problem is present in the Good Samaritan scenario (until we study schematic psychology), but what about the sorts of scenarios that more commonly lead to moral approbation and criminal charges? What if I am in a tussle with another person, and I fail to perceive gestures or other signals that he is trying to withdraw. I may later have trouble convincing you of my self-defense claim, in part because you will find it implausible that I failed to see those signs. Yet schematic psychology makes it plausible that, with a schema for hostility highly charged, I failed to perceive schema-inconsistent facts (such as my victim's gestures and signals of withdrawal). Along the same lines, if the exhausted fry-cook bumps me and I look up to see whether retaliation is necessary, I may fail to perceive signs, signals, or cues that the bump was unintentional and non-hostile. Or if a suspect pulls a wallet from his pocket when I order him to put his hands up, I may fail to register aspects of his posture and arm position consistent with holding a wallet and inconsistent with holding a gun. Especially in these sorts of rapidly evolving physical encounters—encounters involving significant urgency and cognitive load—we are likely to be
influenced by accessible schemas\textsuperscript{277} that we ourselves are unaware of and do not choose, and these schemas may block us from registering small details that make a big difference with respect to what we do. If bystanders and after-the-fact evaluators are not familiar with schematic cognition, they may reject our accounts of such situations as either obviously insincere or obviously unreasonable, and therefore, hold us responsible. Non-culpable insensitivity to morally significant facts, then, may play a much more pervasive role in bad conduct than we are prepared to recognize either intuitively or on the basis of personal experience.

Thus, even if this is not, formally speaking, a global challenge to responsibility, it is nevertheless a potentially significant one. Non-culpable moral insensitivity is likely implicated in some of the scenarios that give rise to bad conduct and may be implicated in many of them. It is likely a factor more often than we realize and more often than we are equipped to recognize. Our default tendency to attribute responsibility to bad actors is, then, less reliable than it seems: It fails to account for non-culpable moral insensitivity. Moreover, our confidence that actors are generally sufficiently morally sensitive to be considered morally responsible may be misplaced. In short, schematic psychology gives us reasons to doubt our judgments about moral responsibility in particular cases and reasons to question our presumption of moral responsibility generally.

b. Schematic Cognition Skews Interpretation of Morally Relevant Facts

Along the same lines, schematic cognition appears to skew interpretation of morally significant facts in a way that poses problems for moral sensitivity and moral responsibility. Once schema and other knowledge structures become accessible, they can significantly influence how we interpret ambiguous phenomena in our environment, making us less likely to accurately identify those phenomena. This interpretative bias can result in failures to properly identify morally significant facts. Moreover, such knowledge structures skew our

\textsuperscript{277} Many aspects of schematic cognition are most influential when actors make quick judgments and when actors are under cognitive load (for example, engaged in multiple cognitive operations, such as choreographing complex physical activity while evaluating a potential threat).
interpretations in ways that we are generally unaware of and
unable to control and in ways that can be radically detached
from, and even in opposition to, our values. As a result, we
sometimes misidentify morally significant facts and do so in ways
we are not responsible for. In these situations, we may not
satisfy the requirements for morally responsible agency.

Interpreting ambiguous stimuli is one of the central tasks of
our daily lives. For example, we place great importance on other
people’s words, tones, facial expressions, postures, and acts—but
all of these things are commonly sufficiently ambiguous to
require interpretation. Was that a sincere apology or a snide
mockery? Is he relaxed or bored? Interpreting such ambiguous
social phenomena plays a central role in our daily
lives.278

Interpreting ambiguous human conduct is also implicated in
many morally loaded situations, including the sorts of situations
that most commonly give rise to questions of blame and
punishment. Is the man lying on the sidewalk sleeping off some
drinks or having a medical emergency? Was that bump an
accident or an insult? Is the black object in that man’s hand
a wallet or a gun? Bernhard Goetz famously interpreted a
young black man’s smile as a signal that the young man
intended to “play with” and “maim” him.279 On the basis of
that interpretation, he tried to kill the young man. If his
interpretation was unreasonable, he was guilty of attempted
murder. If his interpretation was accurate or reasonable, he
acted in justified self-defense (so, anyway, thought the jury in his
case). It is not a stretch to say that many of our morally
significant decisions, including the sorts of decisions implicated
in the conflicts that give rise to insult, injury, and death, are
strongly influenced by our interpretations of ambiguous
phenomena.

As we have seen, however, schematic cognition makes our
interpretive process susceptible to significant bias. Just as
accessible schemas can bias the scanning patterns that structure
our perceptions, they can bias our interpretive tendencies as

278 Moskowitz, supra note 2, at 389, 412. There is very substantial overlap in
the visible cues of anger and play, fear and excitement, affection and sycophancy,
and depression and disdain. How we interpret these cues makes a huge difference
with respect to how we live our lives. It is also often implicated in the most
important choices we make.

279 See generally People v. Goetz, 73 N.Y.2d 751, 532 N.E.2d 1273, 536 N.Y.S.2d
45 (1988).
well. We are more likely to interpret ambiguous events in ways suggested by and consistent with accessible schema. Thus, schema accessibility determines whether we interpret a little girl's performance on a test as above average or below average and whether we see recklessness or adventurousness in a story about a mountain climber. This is why priming fear or anxiety schemas leads us to interpret muffled noises as frightening ones and why a person who has accessible egalitarian schemas is more likely to interpret ambiguous situations as offering opportunities for egalitarian behavior. Thus, as Moskowitz says, accessibility will make a tremendous difference to judgments of great significance like "what type of behavior did she just display—playful or aggressive?" and "what type of object is in that guy's hand—a gun or a wallet?"

Moreover, schematic psychology shows that our interpretative tendencies are quite often skewed in ways we are unaware of, cannot control, and would not approve. As we have seen, family and cultural environments can endow us with schemas we would not have chosen and even schemas that we disapprove of. Moreover, as we have seen, the things that make schemas accessible—seemingly inconsequential passing primes and persistent chronic stimuli—have no particular connection to our values or preferences. As a result, influential schema can operate in us without our awareness or approval, and our interpretative tendencies will, therefore, sometimes be radically independent of our values, preferences, and desires.

Consequently, our interpretations of morally significant ambiguous phenomena are sometimes skewed and skewed in ways we do not control and would not approve. Though we would prefer not to see innocent bumps as preludes to violence and wallets as guns, cultural influences can endow us with schemas that make us more likely to do so, and passing primes and chronic schema can magnify the likelihood that we will do so. Even if we do not wish to be inclined to see hostility, encountering a person who appears hostile can prime the concept of hostility, making us more likely to interpret other people as hostile too. A person who has been exposed to words suggesting anger becomes more likely to read ambiguous stimuli

280 MOSKOWITZ, supra note 2, at 397–98.
281 Id. at 435 (internal quotation marks omitted).
282 See id. at 407.
“in a manner consistent with” anger. Trivial exposure to these concepts makes a significant difference to how we interpret other people’s behavior. And, of course, “[i]f the trait ‘hostility’ is chronically accessible” (as it might be for someone raised in an abusive household, a militaristic society, or a street gang culture) “we will be quicker to label [an ambiguous] behavior as hostile”—that is, for example, to see a bump as an aggression. Likewise, a police officer may reject cultural stereotypes associating black men with violence, yet nevertheless be endowed with such schemas by the general political culture or police culture (or both), which are then primed or chronically stimulated by environmental phenomena over which she has no control. Along these lines, Moskowitz links Duncan’s shove experiment—in which observers tended to interpret a shove as playful when inflicted by a white person but hostile when inflicted by a black person—to the Diallo shooting, in which police saw a black man fumbling for his wallet and shot him forty-one times, purportedly construing his behavior as fumbling for a gun: “[T]he decision to shoot may be determined by the perception of threat, and the perception of threat may be determined by a target person’s group membership.” In short, schematic psychology teaches that our interpretative tendencies can be set in ways that we would neither choose nor approve, such that we misinterpret the world and do so in a way that does not reflect our choices, preferences, or values. Unwanted but accessible schema will influence our interpretive frameworks and render us unreliable interpreters of morally significant ambiguous phenomena in ways inconsistent with our own values.

---

283 Id. at 398.
284 Id. at 409.
285 Id. at 386.
286 Id. at 463–65.
287 Id. at 465.
288 Id. at 466. Fleshing out the picture further: [P]olice officers may have notions of danger... accessible while walking the beat... even the best-intentioned officers perceptually ready to see a threat in an ambiguous situation... Consider the tragic tale of Amadou Diallo... shot dead in New York City when... police officers incorrectly identified an object Diallo was reaching for as a gun. It was, instead, a wallet. The officers, perhaps perceptually ready to see danger, interpreted Diallo’s action as one that should prompt them to open fire on what turned out to be an unarmed man.

Id. at 436.
In some cases, this unwanted interpretive unreliability undercuts moral responsibility. It is not that misinterpretation is implicated in every act or that every misinterpretation is non-culpable. But in some cases, morally significant conduct is influenced by non-culpable failures to properly identify morally significant facts. Consider, for example, the seminary students who stepped over the moaning man on the sidewalk without stopping to help. Even if they did notice the man, they still faced interpretive challenges: Is the man on the sidewalk sleeping off a drink, or is he prostrate with pain? Is he mumbling or moaning? Is he curled up to keep the sun out of his eyes or doubled over in agony? If the student misinterprets the situation because he has embraced schemas disdainful of homeless people ("they're free-riding fakers"), we may be inclined to hold the student responsible for his misinterpretations and for any subsequent injuries the moaning man incurs. But if the student misinterprets the situation because he has been endowed with such schema even though he does not approve them, holding him responsible seems inappropriate. Though the student should have recognized the signs of suffering and should, therefore, have helped the suffering man, the student's capacity to accurately interpret the signs of suffering was impaired, and this capacity was impaired for reasons that he could not control. Schematic psychology then, enables us to see that in some cases in which we would normally think it natural and obvious to blame and punish a person, blame and punishment are not actually appropriate, for sometimes the strange and unexpected machinery of schematic cognition renders people surprisingly and non-culpably poor judges of morally significant ambiguous phenomena.

Schematic psychology then, supplies a framework for challenging attributions of responsibility in some cases where we would normally be inclined to hold people responsible. Again, this is not a global challenge to moral responsibility. It does not allege that we are always surprisingly and non-culpably poor

---

289 Schematic psychology makes this impulse more comprehensible. We want to blame the student in this example because we suspect that his interpretations reflect his values. We think the person who sees hostility or a gun in an ambiguous event does so for reasons that say something about him as a moral person—that his perceptual tendencies are morally significant and that he is implicated in how those tendencies are set. In some cases, then, we are inclined to think that a person is morally responsible for his own inaccurate interpretations of ambiguous stimuli.
judges of morally significant ambiguous phenomena. Rather, it suggests that our interpretations are undermined in some particular cases. But again, we should not underestimate the significance of this threat to conventional accounts of moral responsibility; for the frequency of this impairment may be much greater than we are inclined to expect. We are generally unaware of the influence of accessible schemas on us, so we are likely to underestimate the frequency of interpretive impairments. Until we study schematic psychology, it is difficult for us to imagine that such a problem is present in the “Good Samaritan” scenario. The same is true of scenarios that more commonly lead to moral approbation and criminal charges. What if a passerby accidentally bumps me, and I interpret his unintended contact as a threat? I may later have trouble convincing you of my self-defense claim, in part because you will find it implausible that I could have made such a mistake. Yet schematic psychology makes it plausible that, with a schema for hostility highly (and chronically) charged, I misinterpreted the ambiguous physical contact as a prelude to violence rather than a mundane misstep. Or what if a suspect pulls a wallet from his pocket when I order him to put his hands up, and I interpret the black object in his hand as a gun? Especially in these sorts of rapidly evolving physical encounters—encounters involving significant urgency and cognitive load—we are likely to be influenced by accessible schemas\textsuperscript{290} that we are unaware of and do not choose, and these schemas may significantly skew our interpretations of ambiguous phenomena. Thus, again, if bystanders and after-the-fact evaluators are not familiar with schematic cognition, they may reject our accounts of such situations as either obviously insincere or obviously unreasonable, and therefore, hold us responsible. Non-culpable interpretive errors regarding morally significant ambiguous phenomena, then, may play a much more pervasive role in bad conduct than we are intuitively prepared to recognize.

Even if this is not a global challenge to responsibility, it is a potentially significant one. Non-culpable interpretive bias is likely implicated in some of the scenarios that give rise to bad conduct and may be implicated in many of them. It is likely a factor more often than we realize and more often than we are

\textsuperscript{290} See supra note 277.
equipped to recognize. Our default tendency to attribute responsibility to bad actors is, then, less reliable than it seems: It fails to account for non-culpable interpretive errors. Moreover, our confidence that actors are generally sufficiently morally sensitive to be considered morally responsible may be misplaced. In short, schematic psychology once again gives us reasons to doubt our judgments about moral responsibility in particular cases and reasons to question our presumption of moral responsibility generally.

3. The Internal Challenge: In Sum

Schematic psychology then, has unexpected and strange ramifications for human moral sensitivity, and thus, for moral responsibility. While nothing in schematic psychology shows that human actors entirely lack moral sensitivity, schematic psychology suggests that our moral sensitivity is sometimes impaired in unexpected and important ways. In particular, schematic psychology suggests that our perceptual or epistemic sensitivity—our sensitivity to morally significant facts—regularly fails. It fails because the knowledge structures we rely on to sort and filter the flood of information available to our senses skew our perceptions such that we fail to see morally significant facts. And it fails because those knowledge structures bias our interpretations such that we misidentify and misunderstand those facts. Moreover, schematic psychology shows that we are generally unaware of and unable to control these influences and that they can bias our perceptions and interpretations in ways flatly inconsistent with our most deeply held values. Finally, schematic psychology suggests that such failures are considerably more common than we realize and that they may play an especially important role in situations likely to raise questions of blame and punishment—namely, situations where judgments must be made quickly while under cognitive load.

In short, schematic psychology shows that we are susceptible to non-culpable failures to perceive and identify morally significant facts and that such failures are sufficiently common and significant not only to undermine attributions of responsibility in particular cases, but to raise questions about our default assumption that most actors are responsible in most cases. Schematic psychology suggests amendments to
conventional moral psychology, and once these amendments are made, the traditional assumption that human actors are morally responsible actors is called into question. And because moral responsibility is generally considered a prerequisite for criminal responsibility, it is also no longer appropriate to make the general assumption that criminal actors are responsible for their crimes.

B. The External Challenge

Section A offers an internal challenge to our moral responsibility, contending that, on traditional accounts of responsibility, we lack some of the features necessary to be fully responsible actors. This Section takes a different tack, offering an external challenge, arguing that schematic psychology raises doubts about the project of attributing responsibility to individual human actors itself. Schematic psychology shows that our conduct is influenced in deep and unexpected ways by cultural and environmental influences, both circumstantial and constitutive. If this is right, holding us responsible for our conduct raises significant fairness problems, problems which undercut the reactive attitudes associated with holding individuals responsible.

1. Our Conduct Is Shaped by Cultural and Environmental Influences

One of the central lessons from schematic psychology is that our conduct is shaped by our cultures and environments. Of course, no one should be surprised to hear that we are influenced by our cultures and environments, but the research on schematic cognition fills out the process with surprising and provocative details. In particular, schematic psychology shows that cultural and environmental phenomena have unexpected constitutive and circumstantial influences on our perceptual priorities, interpretative tendencies, and motivations, and thus, ultimately, on our conduct.

a. Constitutive Influences on Conduct

Schematic cognition shows that culture and environment shape our conduct by shaping who we are in a deep and unexpected way. In particular, culture and environment endow us with persisting perceptual priorities, interpretive tendencies,
and motivations. They do so by providing us with complex and
diverse schema packages that play an important role in setting
our long-term perceptual priorities, interpretive tendencies, and
motivations, and by chronically stimulating certain schema so
that those schema become chronically accessible and exercise a
persisting influence on our perceptions, interpretations, and
motivations.

As we have seen, the research on schematic cognition
suggests that we are schema sponges—that is, we absorb
complex and comprehensive packages of expectations, attitudes,
desires, and values from the culture and environment around
us.\textsuperscript{291} American political culture has long transmitted race and
gender stereotypes. Some cultures transmit an individualistic
orientation, while others transmit a collectivist orientation (with
ramifications for how culture members understand an enormous
range of issues in their lives, from relationship obligations to
responsibility attributions). Our cultures may endow us
with schemas for various important relationships (father-son,
husband-wife, friend-friend), for common events (buying ice
cream from an ice cream truck, ordering food off a menu at a
restaurant), and even for the structure of a "good story."\textsuperscript{292} It is
not a stretch to say then, that each of us carries a heavy
endowment of culturally transmitted schemas.

Indeed, there are likely to be multiple competing sources for
schema endowment in the environment. For example, there may
be many subcultures within the dominant culture (regional,
community-based, professional, etc.) and such subcultures may
transmit at least some (if not many) schema that differ from the
dominant culture's schema package.\textsuperscript{293} Exposure to these

\textsuperscript{291} As we have also seen, this process often proceeds in a way that is resistant or
immune to our intervention. We are often unaware that we are absorbing schemas,
making it impossible for us to mediate the absorption process. Moreover, even when
we are aware of the process, we have significant difficulty intervening: It is not easy
for us to avoid absorbing schemas. Indeed, we are so "absorbent" that we are likely
to assimilate schema that we do not endorse and even schema that we consider
repulsive. In short, we are voracious sponges for schema. As a result, we are likely to
carry a significant endowment of environmentally transmitted schemas.

\textsuperscript{292} See FISKE & TAYLOR, supra note 2, at 120.

\textsuperscript{293} See KUNDA, supra note 2, at 517, 549–56 (noting that in the United States,
southern and northern cultures have traditionally transmitted different conceptions
of threats to honor). \textit{Id.} at 557 ("Distinctive patterns of making sense of people may
also emerge between men and women, between Jews and gentiles, between African
subcultures presumably further diversifies a person’s schema package. Likewise, we each participate in families and peer groups that may develop and transmit their own distinctive schema packages, just as cultures do. Moreover, we are likely to develop schemas experientially, as part of the process of understanding the things that happen to us (even if our culture supplies no schema for tigers, we will develop a schema for tigers if we encounter a few). Misfortunes, for example, may feed pessimistic schemas and, ultimately, depression itself. Persistent life conditions, such as poverty or community violence probably inculcate other analogous schemas. In short, culture, sub-cultures, families, peer groups, distinctive experiences, and persisting environmental phenomena work collectively to endow us with deep and complex schema packages.

This endowment of culturally and environmentally transmitted schemas has profound constitutive significance, for it is the raw material from which many of our persisting and characteristic perceptual priorities, interpretive tendencies, and motivations will be drawn. Culturally and environmentally transmitted schemas are often complex knowledge structures. They incorporate empirical components (claims about what things in the world are), affective components (associating people, objects, and events with feelings and attitudes), and normative components (attaching moral valences to people, objects, events, and states of affairs). When such a complex knowledge structure is activated, it can influence not only what we perceive and how we interpret stimuli, but also our beliefs, expectations, attitudes and feelings, and even our desires, goals, and values. Thus, when culture and environment endow us

---

294 See MOSKOWITZ, supra note 2, at 381–85 (on depressive schemas).
295 FISKE & TAYLOR, supra note 2, at 264–65 (“Persistent differences in what is primed by one’s typical situation may lead to individual differences in what is chronically primed . . . . Dimensions that are frequently accessed or permanently primed may become central aspects of one’s personality . . . .”); see KUNDA, supra note 2, at 287 (noting that we have “idiosyncratic pattern[s] of automatic associations to different situational cues,” and that these patterns may be “at the very core of our personality”).
296 Note that this cultural endowment may not result in a single, unified character or personality. While a package of culturally transmitted schemas may contain an array of personality components, these components may be a hodgepodge, rather than a coherently organized package. Indeed, it is perfectly possible
with schemas, they create in us potential perceptual priorities, interpretive tendencies, and motivations.

Culture and environment also have the power to tap these potentials and to turn them into persisting features of who we are. As we have seen, a person who carries a schema is liable to be influenced by that schema, but such influence will not materialize unless the schema is rendered accessible. And, as we have seen, some environments make some schema chronically accessible. For example, cultural institutions—government, church, schools, etc.—persistently articulate, refer to, or invoke preferred schemas. Leaders, preachers, and teachers repeat them. Public displays—banners and signs, public art and advertising—refresh them. Media (news, television, movies, literature) incorporate them into the reports and stories they disseminate. Family members and peers echo them back and forth. Through these and other similar mechanisms, a political culture not only inculcates preferred schema, but also persistently stimulates those schema, making them chronically accessible, and thus, chronically influential in perception, interpretation, and motivation. In this way, a nationalistic political culture will make patriotic schema chronically accessible, while a theocratic political culture will make religious schema chronically accessible. Patriarchal cultures will chronically stimulate certain schema about sex roles, materialistic cultures stimulate certain schema about possession and wealth, macho or militaristic cultures stimulate certain schema about power and violence. Some cultures will chronically stimulate schema pertaining to achievement; some will consistently trigger conceptual frameworks revolving around physical appearance. Political cultures then, do not just endow us with schemas, they also make those schemas chronically accessible, and thus, persistently influential in determining what

---

that some components will fit uneasily or even conflict with each other. Such incoherence or conflict may never become apparent, however, because incoherent or conflicting schema elements may not be rendered accessible at the same time. One schema may be accessible and influential at time X, while another is accessible and influential at time Y. Indeed, this possibility lines up well with another line of empirical research, known as situationism, which shows that we are strikingly susceptible to environmental influences on our conduct and that (on one interpretation) we do not have consistent “characters” across situations at all.
we perceive, how we interpret ambiguous stimuli, and what we are motivated to do.\textsuperscript{297}

In short, culture and environment can have a profound influence on "who we are." First, they endow us with a complex and comprehensive package of schemas, providing the raw material from which many of our persisting and characteristic perceptual priorities, interpretive tendencies, and motivations are drawn. Second, they play a profound role in determining which schemas are chronically accessible, and therefore, persistently influential in our daily lives.\textsuperscript{298} In this way, they influence "who we are."

In shaping these aspects of "who we are," they also exercise a significant influence over what we do. Because chronically accessible schemas have a persisting effect on perceptual priorities, interpretive tendencies, and motivations, they inevitably influence our conduct. We will not stop to help a suffering man if we do not see that he is suffering, and some culturally and environmentally transmitted schema may make us persistently less likely to see that he is. We are more likely to react violently to a bump if we perceive it as hostile and some culturally and environmentally transmitted schema will produce in us a tendency to see it as such. Both helping behavior and aggression are likely to be influenced by our values and desires, and culturally and environmentally transmitted schema may have a profound influence on just which values and desires we

\textsuperscript{297} Of course, political culture isn't the only source of chronic stimulation: Other features of our environment can serve similar functions. It is surely true that subcultures, peer-cultures, and family-cultures can repeatedly stimulate schema. Indeed, ongoing exposure to any sort of environmental phenomenon should have this potential: Frequent encounters with tragedy and tigers should chronically stimulate schema associated with tragedy and tigers. There are several different vectors for chronic environmental stimulation of endowed schema, and thus, several different ways in which the environment can shape our persisting perceptual priorities, interpretative tendencies, and motivations. See FISKE \& TAYLOR, supra note 2, at 264 (noting that variations in people's "typical situation[s]" can lead to "individual differences in what is chronically primed for different people," and thus, in how people interpret each other).

\textsuperscript{298} Note that this is not just a matter of endowing us with schemas and then making those same schemas chronically accessible. It is possible, for example, that cultures chronically stimulate only a subset of the schemas they transmit. Likewise, it should be possible for a culture to chronically stimulate a schema it did not inculcate—for example, in a person who acquired the schema while living in another culture or from a non-cultural source (personal experience, a non- or counter-cultural source, etc.).
have. Thus, schematic cognition makes us susceptible to constitutive environmental and cultural influences at several levels, and these influences, in turn, can have a significant impact on our conduct.

b. Circumstantial Influences on Conduct

Schematic psychology also highlights that passing environmental phenomena can have a temporary but important influence on our conduct. Such phenomena do not determine “who we are,” but they do temporarily influence our perceptions, interpretations, and motivations, and thus, temporarily influence what we do.

As we have seen, a person who carries a schema is liable to be influenced by that schema if that schema is rendered accessible. It is when schema become accessible that they become scanning patterns for perception and frameworks for interpretation, and it is then that they shape our expectations, attitudes, feelings, desires, goals, and values. Thus, schemas exercise their influence over us when they have been properly triggered. We have also seen that some environmental and cultural circumstances chronically stimulate schema, and thus, make those schema chronically accessible. But sometimes features of our circumstances have a more limited impact, making schema temporarily accessible. As the research on schematic cognition shows, passing, temporary stimuli can prime schema for us. Momentary exposure to stimuli triggers schema about or associated with those stimuli. Indeed, even subliminal stimuli, not consciously registered, can trigger schema in this way. Even if they are not chronically stimulated, such schema may become temporarily accessible.

By making a schema temporarily accessible, a fleeting stimulus can have a significant impact on our conduct. Once triggered, the schema will skew perceptual priorities, alter interpretive tendencies, and activate particular motivations. Passing a poster of Bobby Knight brings hostility schemas to the surface, making us more likely to see others as hostile and to react as though they were and making us more likely to act hostilely ourselves. Passing a poster of Mother Teresa brings up schema for compassion, influencing how we see and react to others, and influencing how we are motivated to act ourselves. Seeing a dog makes us more likely to act loyally; a reminder of
“mom” makes us more likely to perform well on a test. These seemingly inconsequential and coincidental encounters with momentary, passing features of the environment dictate which schemas are accessible, and thus, which perceptual priorities, interpretive tendencies, and motivations are at play in the processes that lead to our conduct. Though they do not shape “who we are,” they influence—for a short time—what we do.

Thus, schematic psychology shows that we are susceptible to passing, temporary influences on our conduct. Even fleeting exposure to a stimulus can temporarily trigger associated schema. This in turn, influences our perception, understanding, and motivation and, inevitably, our conduct itself.

c. In Sum: Constitutive and Circumstantial Influence

Two themes from schematic psychology converge then, in showing that our conduct is deeply susceptible to influence by culture and by the environment generally. At one level, culture and environment have a profound constitutive influence, endowing us with schemas and making some of those schemas chronically accessible, thereby shaping our personalities, influencing what we see, how we interpret what we see, what we want and value, and, ultimately, what we do. At the other level, culture and environment play a circumstantial role in determining our conduct; for fleeting and passing features of culture and environment can temporarily prime schemas, and thus, give those schemas temporary sway over our perceptions, interpretations, motivations and, ultimately, our conduct. Schematic psychology then, highlights some of the significant and unexpected ways that culture and environment influence what we do.

2. Fairness Concerns That Undercut Reactive Attitudes
   Associated with Holding Responsible

If this is right, then holding us responsible for our conduct raises concerns of fairness, concerns that may significantly undercut the reactive attitudes associated with holding individuals responsible.

Many of the most influential accounts of responsibility tie responsibility to the reactive attitudes—reactions like resentment and indignation that we experience when en-
countering antisocial or criminal conduct. As P. F. Strawson explained in the seminal *Freedom and Resentment*, these reactive attitudes fund our intuitions about moral responsibility. Indeed, several influential accounts of responsibility treat these reactive attitudes as the best evidence of the features an actor must have in order to be held responsible; we only experience resentment and indignation toward actors with certain characteristics, so these characteristics must be prerequisites for moral responsibility. For example, reasons-responsiveness theories, which are currently very influential in responsibility theory, are commonly tied to the reactive attitudes.

While the reactive attitudes are sometimes portrayed as inevitable and invulnerable, most theorists recognize that the reactive attitudes associated with responsibility attributions can be undercut or transformed by information about the actor. Gary Watson provides a classic illustration in *Responsibility and the Limits of Evil: Variations on a Strawsonian Theme*. There, he first presents a description of a brutal murder (drawing on contemporary newspaper accounts) and observes that the reactive attitudes the murder evokes support attribution of responsibility in exactly the way that Strawson suggested. Reading the graphic description of the callous and senseless killing, we feel intense indignation. The feelings seem non-negotiable, and in their light, holding the killer morally responsible for the killing seems not just right, but inevitable.

---

299 For seminal accounts of our reactive attitudes and their role in attributions of moral responsibility, see Peter Strawson, *Freedom and Resentment*, in FREE WILL 72 (Gary Watson ed., 2d ed. 2003), and WALLACE, supra note 242, at 18–83. For Strawson, resentment is a typical reaction to a malevolent act against oneself; indignation is a typical reaction to a malevolent act against another. See Strawson, supra, at 77, 84.

In the discussion that follows, I do not assume that the reactive attitude account of responsibility is the best one. Rather, I use the reactive attitude framework because it provides a helpful language for bringing out situationism’s threat to responsibility.

300 See Strawson, supra note 299, at 72–93.

301 See id. at 89–93.

302 See, e.g., FISCHER & RAVIZZA, supra note 242, at 1–8; WALLACE, supra note 242, at 62–83.

303 See, e.g., FISCHER & RAVIZZA, supra note 242, at 1–8.


305 See id. at 236–39.

306 See id. at 238.
But Watson then goes on to tell us more about the killer, filling in his personal history (again, drawing on contemporary newspaper accounts). As he reveals, the killer himself was the victim of awful cruelty and abuse throughout his childhood. Family members recall that the heartless and brutal killer was once a love-starved child, fruitlessly begging his heartless and brutal parents for affection and attention, getting back hatred and violence instead.\(^{307}\) Fleshing out the story, Watson observes, has an impact on our reactive attitudes. Though the killer’s awful personal history does not entirely disintegrate the indignation we feel about the killing he has committed,\(^{308}\) it does introduce a second powerful strand of reactions that take us in a very different direction, causing us to question responsibility attribution, and thus, making the case for responsibility attribution more ambiguous and less inevitable.\(^{309}\)

Some of these reactions have to do with intuitions about what is fair. Seeing so clearly that the killer’s brutality can be traced to brutality inflicted on him by his parents, we realize that blaming him is a little like him blaming him for his father’s sins.\(^{310}\) Likewise, seeing that he had no say in the conditions that made him brutal—that they were, for him, the most awful sort of lottery and that “it could have been me” if the dice had fallen differently—we realize that our resentful reactions would allow luck to determine who will be blamed and punished.\(^{311}\) These discoveries lead us to questions about the fairness of blaming and punishing the killer: Isn’t it unfair to punish him for his father’s sins; isn’t it unfair to let luck determine which of us (him or me) is punished?\(^{312}\) And these fairness questions, in turn, undercut the resentment and indignation that made blame and

\(^{307}\) See id. at 239–42.

\(^{308}\) See id. at 242, 244. Or so maintains Watson. My own view is that such personal history may, in some cases, completely dissolve resentment and indignation. Because my own view is more controversial, however, I do not advance or rely upon it in this Article. Instead, I build upon Watson’s more moderate view of this issue.

\(^{309}\) See id. at 242–43.

\(^{310}\) See id. at 243–44. The idea is not, of course, that he is being punished without having done anything himself but that his punishment is a consequence of acts—performed by his father—over which he had no control.

\(^{311}\) See id. at 245.

\(^{312}\) I have developed an analogous argument for the findings of situationist psychology (another line of contemporary empirical psychology). See generally Kaye, supra note 3.
punishment seem so natural. Our impulse to blame is at least partially deflated or defused by the discovery of these fairness problems.\textsuperscript{313} The reactive attitudes that support responsibility attributions, then, may be vulnerable. They may be diminished by certain sorts of information about the person to whom we are reacting.

Watson’s piece highlights the significance of a certain sort of personal history for our reactive attitudes. The discovery that a wrongdoer was himself the victim of brutal formative experiences, Watson shows, raises concerns about the fairness of blaming and punishing the wrongdoer, and these fairness concerns undercut or work against resentment and indignation. Schematic psychology brings out another aspect of personal history that both parallels and supplements Watson’s discussion of brutal formative experiences. This research does not revolve around brutal formative experiences, but it does point to parallel fairness concerns and may, therefore, undercut resentment and indignation in analogous ways.

In particular, this research shows how environment and culture can have surprising constitutive and circumstantial influences on what we do. As we have seen, environment and culture (including subcultures and peer and family cultures) have deep constitutive influence on us. They endow us with complex and comprehensive packages of schemas, and these schemas have the potential to profoundly influence our perceptual priorities, interpretative tendencies, and motivations. Moreover, as we have seen, environment and culture chronically stimulate some of these schemas, making them chronically accessible, and thus, persistently influential in our perceptions, interpretations, and motivations. Taken together, endowment and chronic stimulation can have a significant influence on who we are and, ultimately, on what we do. At the same time, environment and culture have a significant circumstantial influence. Passing and even subliminal stimuli can temporarily trigger schema such that those schema then exercise a temporary influence over perception, interpretation, and motivation, and thus, conduct. Thus, when a stranger bumps into us on the

\textsuperscript{312} See Watson, supra note 304, at 244–46. While Watson shows that these fairness problems undercut resentment and indignation, he does not think that encountering these fairness problems entirely dispatches those reactive attitudes. See id. at 242, 244.
street, our reaction is mediated by schema endowed by and made accessible by our environments and cultures. When a suspect pulls a dark object from his pocket, environment and culture are implicated in what we see, how we interpret it, and how we are motivated to react.

Seeing these constitutive and circumstantial influences at work may have important implications for our attitudes towards actors who do bad things, and thus, ultimately, for responsibility; for they raise some of the same fairness concerns that Watson's brutal formative experience example raised. As Watson's example did, schematic psychology highlights the extent to which blaming or punishing a person for a bad act is punishing him for "another's sins." This is especially so when a person's act is the product of culturally endowed and culturally stimulated schema. In these cases, we might say, schematic cognition seems to show culture working through us, cultivating in us perceptual, interpretive, and motivational tendencies that channel us to act in ways consistent with culturally propagated schema. If so, it is not clear why reactive attitudes should affix to the individual actor, as opposed to his culture. In the relationship between the actor and his culture, the actor seems much more the puppet, while the culture is much more the puppeteer. To blame and punish the actor then, seems misguided and perverse—a willful blindness to the sources of the conduct. Watson's example suggests that this is a concern about fairness and that this fairness concern undercuts the reactive attitudes associated with responsibility attribution.

Likewise, as Watson's example did, schematic psychology highlights the extent to which blaming or punishing a person for a bad act is punishing him for his bad luck. Environment and culture endow us with schema and stimulate those schema in ways that we cannot control. The particular content of our schema endowment is a matter of luck: It depends upon which

---

As Kunda suggests:

[Diifferent cultures may give rise to different collective, culturally shared ways of constructing, defining, and extracting meaning from situations . . . As individuals follow the dictates of their respective cultures, fulfilling the culturally dictated patterns of thought, feeling, and behavior, they ultimately reinforce the very culture that had given rise to these patterns in the first place. As you think and act in accordance with your culture, you support and reproduce it.

KUNDA, supra note 2, at 542.
culturally approved schema we are exposed to, which subcultures, peer-cultures, and family-cultures we are placed in, and which environmental and social conditions we are thrust into. Likewise, the particular configuration of schema that is accessible for us at any given time is a matter of happenstance—of which chronic stimuli we have been exposed to and which fleeting environmental stimuli have primed us. Thus, our perceptual priorities, interpretative tendencies, and motivations are generated in important ways by a process that is largely beyond our control and largely unmoored to anything we can say is truly “ours.” They are generated, in a sense, by lottery. As Watson’s example suggests, this raises a fairness concern that may undercut the reactive attitudes associated with responsibility attribution. Blame and punishment are terrible burdens for the blamed and the punished: The instinct that they should not be distributed by a roll of the dice is a compelling one with a significant capacity to neutralize the reactive attitudes associated with responsibility attribution.

If worries about luck and the realization that “it could just as well have been me”\textsuperscript{315} raise fairness concerns and if these fairness concerns can undercut resentment and indignation, then schematic psychology may well undermine the reactive attitudes that fund responsibility attributions, highlighting the ways in which they may be misdirected or arbitrary. Seeing the constitutive and circumstantial influence of environment and culture on schema endowment and accessibility, we may shift our attention away from the bad actor and toward the phenomena that shape his perceptions, interpretations, and motivations. Our reactive attitudes toward people who do bad things are reconstituted as reactions to the environmental and cultural influences that control their schemas. In this way, schematic psychology diverts the volatile energy fueling our reactive attitudes so that it attaches not to the bad actor, but to the environmental and cultural phenomena that drive his schematic cognition.

If this is right, schematic psychology does more than merely suggest we lack some quality necessary for responsibility. It raises more fundamental concerns about conventional accounts of responsibility. In schematic psychology’s light, we see how

\textsuperscript{315} See \textsc{Watson, supra} note 304, at 245.
conventional accounts of responsibility, focusing entirely on what qualities the responsible actor must have, overlook the significance of his relationship to the world around him. Resentment and indignation become more complicated, and we worry that they are misdirected and arbitrary. The reactive attitudes that ground our responsibility attributions are undermined.

As I have argued elsewhere, arguments like these, showing how personal history undermines attribution of blame, parallel and supplement another sort of argument already in circulation in criminal theory—the argument that "rotten social background" should reduce or defeat criminal responsibility. As Watson's piece highlights, learning about a wrongdoer's history of personal suffering and struggle tends to undermine our "normal" resentful and indignant attitudes toward him, especially when that background involves abuse and suffering during formative years. The argument developed here makes an analogous but more subtle point, identifying another distinct vector along which personal history might influence our reactive attitudes. Schematic psychology suggests that there is an entire universe of experiences—both formative and fleeting—that can influence us without any hint of brutality or coercion.

This supplements Watson's insight in an important way. While Watson draws our attention to a narrow and rare phenomenon in human experience, schematic psychology describes a ubiquitous one. Likewise, while Watson's discussion describes an easily spotted and recognized phenomenon, schematic psychology describes formative and fleeting influences that may be so subtle or mundane appearing that they go entirely unnoticed. Moreover, while Watson's discussion highlights a formative influence that is intuitively easy to grasp (violence begets violence), schematic psychology puts a spotlight on processes that seem, in some ways, quite alien. Schema history information then, describes an aspect of personal history that rotten background information omits, an aspect that is more unexpected and less intuitive than typical rotten background information. As a result, schema history may challenge the reactive attitudes associated with responsibility attribution in

316 See, e.g., id. at 244 (demonstrating this phenomenon with regard to knowledge of a wrongdoer's history).
ways that rotten background does not, and the two together may undercut those attitudes more thoroughly than rotten background can on its own. In this sense, schematic psychology does not just rehash familiar rotten background arguments; it supplements and broadens their central insight. In so doing, it may significantly strengthen our sense that personal history can dramatically undercut the reactive attitudes associated with responsibility attributions.

Schematic psychology then, elicits substantial fairness concerns in holding persons responsible for their bad acts. These fairness concerns have the potential to undercut the reactive attitudes associated with responsibility attributions and to supplement other challenges to those reactive attitudes. In this way, schematic psychology offers new ammunition to support the old argument that, given the deep involvement of culture and circumstance in each human act, the practice of holding persons responsible is unsustainable.

IV. CONCLUSION

Schematic psychology’s findings are both illuminating and disturbing. Although they help us understand some of the most interesting phenomena in human cognition, they also undercut conventional moral psychology in several important ways. Our reliance on knowledge structures, while serving a vital purpose, also assures that our understanding of the world is biased in startlingly fundamental ways. Our knowledge structures silently and significantly influence our motivations and our interpretations of ambiguous events. They even influence the most fundamental process in our cognition about the world—our perception of it. Moreover, they generally do so in ways that we are unaware of and cannot control and in ways that can be in tension with, or even in outright conflict with, our preferences and values. In short, as so many other lines in contemporary empirical psychology do, schematic psychology shows that we do not think the way we think we do, that we are susceptible to biases and errors in ways we generally do not realize, that we are driven by motivations we do not recognize, and, thus, that we are not who we think we are.

Schematic psychology also brings out another pervasive theme in contemporary empirical psychology: Namely, that we are in a very deep sense creations of the world around us.
Our knowledge structures give us our distinctive and characteristic perceptual biases, interpretive tendencies, and motivational profiles—but we receive much of our knowledge structure endowment from culture, environment, and contingent experience. Accessibility determines just which of the knowledge structures in our endowment is active at any given time, but accessibility depends on the various chronic stimuli and passing primes presented to us by our environment. So many of the things I think about when I think about what makes me “me”—my distinctive perspectives and expectations, preferences, and motivations—are constructed by cultural and environmental influences that I generally cannot see and cannot control.

“We are not who we think we are.” “We are creations of the world around us.” These are insights that have ramifications for moral and criminal responsibility. In this Article, I have attempted to bring some of these ramifications out. I have suggested that schematic psychology supports an internal challenge to conventional accounts of responsibility by raising the possibility that we sometimes lack the moral sensitivity required for moral responsibility, that we are not responsible for this deficit, and that it happens much more frequently than we realize. I have also suggested that schematic psychology supports an external challenge to conventional accounts of responsibility by aggressively eroding the reactive attitudes associated with responsibility attribution—and doing so in a way that reinforces and expands other challenges to those reactive attitudes.

Neither challenge, I think, constitutes a complete challenge to responsibility. Indeed, each can be understood to leave room for holding persons responsible, morally and criminally. The internal challenge suggests that we sometimes lack a capacity necessary for responsibility but leaves open the possibility that we have that capacity at other times. The external challenge erodes the reactive attitudes associated with responsibility but may not entirely disintegrate those reactive attitudes.

But this does not mean that the challenge from schematic psychology is fruitless. On the contrary, as I have suggested, the challenge from schematic psychology should not be looked at in a vacuum; for it is a challenge to responsibility that works in concert with others. For example, as my discussion has explained, the schematic challenge parallels and supplements
the set of sociological and psychological insights that are said to motivate rotten social background challenges to responsibility. It also complements other responsibility-eroding insights that I have not discussed here, including some grounded in other areas of empirical psychology, such as situationist psychology.\footnote{See generally Kaye, supra note 312.} Even if none of these challenges individually presents a complete challenge to responsibility, they cover substantial ground together. More than that, cumulating their impact highlights the likelihood that further research will further flesh out the challenge.

If this is right, then schematic psychology gives us good reason to reconsider our commitment to contemporary accounts of moral and criminal responsibility. In the light of schematic psychology, they lose some of their luster. It becomes apparent that they rest on an inaccurate moral psychology and that, as a result, they entail significant problems of fairness.