

New Directions in Policy Research

In this chapter we present alternative approaches to the study of public policy that are being developed in fields such as experimental and behavioral economics, evolutionary psychology, and even neuroscience. The driving force behind these developments is the claim that rational choice in both its classical and bounded variants has problems explaining a large portion of human behavior. As these two general models of human behavior underpin a good deal of the most important conceptual frameworks in public policy (e.g., incrementalism, new institutionalism, the Tiebout model, punctuated equilibrium, and virtually all of the applied analysis frameworks originating in economics, such as cost-benefit analysis and welfare economics), their development obviously has the potential to significantly shape the field of policy studies. The central research question at the heart of these new theoretical approaches is this: why do people do what they do? This is a question that strikes to the heart of all the social sciences. Is it important to public policy? The literature is at a relatively early stage of development, but the answer thus far clearly seems to be yes.

The field of policy studies, like other social sciences, has long held the view that people tend to deviate from models of complete rationality.

Where other fields such as behavioral economics, neuroscience, and experimental psychology have surpassed policy studies, however, is in building a theoretical framework for explaining such deviations. That people do not conform to traditional models of rationality is taken as a given in what are considered to be some of the most prominent policy models, e.g., incrementalism, new institutionalism, and punctuated equilibrium. What is missing is a theory for explaining such “irrational” behavior.

A quickly emerging and powerful tool for explaining deviations from the rational-comprehensive model comes from outside of mainstream policy studies. For this group of scholars, people are still capable of making rational decisions, it is just that the type of rationality is more in with what evolutionary psychologists refer to as “adaptive rationality.” The basic premise of models of adaptive rationality is that the human mind evolved in an environment of scarce resources, in which group cooperation was critical to survival. Because of this environment, humans developed a strong sense of fairness and concern for what others think. Importantly, and unlike classical rationality often used in policy studies, adaptive rationality makes room for emotional considerations and cognitive shortcuts. Some scholars question whether these shortcuts are in fact “adaptive.” Following Herbert Simon’s (1947) initial emphasis on the limitations of human rationality, Newell and Simon (1972) documented the inability of people to adapt their decision-making heuristics to new situations. Cognitive shortcuts often resulted in suboptimal decisions. More recently, Bryan Jones has also picked up on the limitations of decision-making heuristics. While accepting the premise that people are incapable of making completely rational decisions, Jones (2001) has contended that cognitive limitations prevent people from adapting appropriately to current situations. Instead, people tend to “adapt in disjointed ways” (B. Jones 2001, ix). The inability of human beings to process information in a rational manner leads to a heavy reliance on decision-making shortcuts or heuristics. For Jones, these heuristics not only represent deviations from the rational actor model but also potentially bad policy decisions. Institutions offer the key to correcting for such heuristics, and the best way to conceptualize institutional design is through an interdisciplinary approach to human behavior. For scholars such as Jones, heuristics are not adaptive, and in fact require well-structured institutions to prevent maladaptive decisions. For evolutionary psychologists, the question is not

whether these heuristics are adaptive but that such heuristics developed in response to evolutionary pressures.

Other scholars have placed strong emphasis on categorizing decision-making heuristics under the umbrella of bounded rationality. Scholars in the ABC Research Group at the Max Planck Institute for Human Development have devoted two edited volumes to the research and development of the concepts of “Simple Heuristics That Make Us Smart” and bounded rationality (Gigerenzer and Selton 1999b; Gigerenzer and Todd 2002).

Whether it is adaptive rationality or reasoning through heuristics, the point is that the rational-comprehensive model of decision making is unrealistic and incomplete. In the remainder of this chapter we discuss several heuristics, or what might better be considered well-established patterns in human decision making, that we believe have the most relevance for explaining change in the policy process and policy decision making. The list is by no means complete, nor is it exhaustive. Rather, we believe they provide good starting points for retesting existing theories as well as building new conceptual frameworks. Following this section, we discuss the role of evolutionary psychology as a potentially fruitful avenue for theory building, with a specific application to crime policy. Theoretical and empirical developments being made outside of mainstream political and policy science offer important insights for understanding the policy process; we believe it would behoove policy scholars to pay attention to such developments.

Policy Change and Social Utility

To become an issue, an idea must reach the governmental agenda. In Chapter 2 we discussed theories put forth by policy scholars about how an idea becomes an issue. For Baumgartner and Jones (1993), agenda setting is a relatively stable process, with an occasional punctuation usually sparked by a change in policy image. More recent work by True, Jones, and Baumgartner (1998; B. Jones, Baumgartner, and True 1999) has suggested that such punctuations are more widespread and occur more frequently than originally thought. For Kingdon (1995), policy change is the result of the merging of the three “streams.” At the heart of each of these explanations is a focus on policy definition. As issues are redefined, they increase or decrease the likelihood of policymakers picking up on the

issue (see Stone 2002). Despite the explanatory power of these frameworks, questions remain: what causes people to pay attention to particular issues? Why do people tend to react strongly to some policy images rather than others? Why do issues that are defined as social dilemmas do better than issues defined purely in instrumental terms?

Baumgartner and Jones's punctuated equilibrium and Kingdon's streams approach do not address these questions. Instead, their interest is in describing macro-level policy change (Wood and Vedlitz 2007). What is needed is a micro-level model of policy change that focuses on how individuals process policy information, particularly information relating to policy image. B. Dan Wood and his colleagues have offered an attempt at such a model. Of particular interest is the finding that people tend to conform to the majority opinion. When presented with information about the predominant view of others on a particular issue, people tend to adjust their views to match those of their peers (Wood and Vedlitz 2007; see also Wood and Doan 2003). From a rationalist perspective, this seems illogical. Why should the views of others matter when evaluating public policy? From the standpoint of social psychology and neuroscience, however, it makes perfect sense. People tend to be hypersensitive to what others think of them (Cialdini and Goldstein 2004). Indeed, evidence from neuroscience indicates that social exclusion results in neural activity similar to that which is experienced during physical pain (Eisenberger, Lieberman, and Williams 2003). That is, the brain processes sensations experienced by social exclusion as being analogous to those experienced during physical trauma. Repercussions stemming from the loss of an existing social bond are likely to be perceived as damaging to individual fitness as are decisions to forego immediate tangible incentives (Panksepp 2003). As such, we would expect people to moderate their individual policy attitudes to match those of their surroundings. For models of policy change, this suggests policy proposals often gain traction not because of their policy appeal but rather because others find them appealing. Policymakers who are able to craft proposals perceived as enjoying mass support are therefore at a distinct advantage.

The "policy sciences" were intended to improve upon the quality of public policy as a way of improving upon the human condition. To understand the human condition, however, requires an understanding of what makes people happy. Reviewing the extant literature in neuro-

science, Rose McDermott (2004) wrote that it is not material well-being or “economic indicators” such as income that produces happiness. Instead, happiness is related to what McDermott described as “social support” (2004, 701). What does this mean for public policy? McDermott wrote,

if happiness derives from social support, government should place less emphasis on incomes and more on employment and job programs, encouraging leisure activities . . . by supporting after-school programs and public parks—and supporting marriage and other family relationships. (701)

Humans are social creatures, deriving satisfaction from interactions with others. People tend to shy away from expressing preferences that are at odds with the rest of the group. In fact, people will often incur material costs to maximize social benefits. A simple way to maximize social benefits is fitting within the group. The result is often that revealed preferences are at odds with private preferences. Kuran (1995) described this tendency as “preference falsification.” Particularly in public settings, people tend to withhold their true preferences in order to maintain a favorable reputation and avoid social ostracism.

Kuran’s notion of preference falsification is significant when considered in the context of Baumgartner and Jones’s punctuated equilibrium. Kuran’s basic argument was that people tend to have an intrinsic utility (their true preference), a reputational utility (the result of how others will react to one’s true preference), and an expressive utility (the utility of expressing one’s true preference publicly). In a public setting, the choice between maximizing reputational utility versus expressive utility tends toward the former. However, Kuran noted that this tendency leads to “hidden opposition to positions that enjoy vast public support” (1995, 335). As more people express an opinion, the pressure to maximize one’s reputational utility, at the expense of intrinsic utility, increases.¹ However, if it is revealed that what most people prefer in private is shared by others, there exists the potential for a “social explosion” (335). The premise behind punctuated equilibrium is that a change in policy image can cause a sudden change in policy. The theoretical basis for this sudden change most likely rests with people’s willingness to maximize their expressive utility. Baumgartner and Jones gave the example of nuclear scientists who privately held skepticism about the safety standards of nuclear power.

Only after the Three Mile Island accident were they willing to express these reservations publicly. In other words, once the majority opinion shifted to be more in line with their private preferences, they were willing to maximize their intrinsic utility.

Kuran's work also speaks to Kingdon's (1995) model of policy change. To achieve significant policy change, policy specialists working in the policy stream must be able to recognize the opening of a policy window in the problem or political stream. The latter stream is determined in large part by public opinion, or what Kingdon has called the "national mood." Preference falsification is potentially problematic for policy specialists in two ways: 1) the national mood may not reflect the public's true preference for policy change, leading to unwanted policy (reputational utility is more beneficial than expressive utility); and 2) the national mood is highly volatile and can change without any action on the part of the policy specialist (a focusing event increases the costs of reputational utility allowing for maximization of expressive utility).

For evolutionary psychologists and neuroscientists, the tendency to engage in preference falsification is hardwired into our brains. People tend to value being part of a group as much or more than tangible benefits they may receive from a particular policy. Existing models of policy change, however, tend to rely solely on such benefits or environmental causes. Recognizing that preference falsification is endogenous to policy change will improve our understanding of why sudden and rapid policy change occurs.

Policy Decision Making Is Emotional

Joseph LeDoux (1996, 2002), a leading neuroscientist, has argued that neural connections in the brain point to a significant role for emotions in decision-making processes. Focusing on the amygdala as the emotional center for affects associated with fear, LeDoux finds that neural connections between cortical areas and the amygdala are weaker than connections between the amygdala and cortical regions of the brain. In other words, whereas the cortex and neocortex are assumed to represent the cognitive, reasoning portion of the brain—serving as a filter to guide rational decision making—the amygdala, representing a focal point for affective motivations, is capable of overriding conscious, rational processes. Stated

differently, emotional processes exert a stronger influence over the process of discerning the context of external stimuli than rational processes. Indeed, as LeDoux and others (see Damasio 1994; Fessler 2002) have observed, this process often occurs unconsciously, furthering the argument that emotions serve as powerful behavioral motivations in human decision-making processes.

The two dominant frameworks of policy analysis, cost-benefit analysis and welfare economics, are designed with the explicit intent of removing emotion from the decision-making processes. Policy decisions should be made according to the estimated costs and benefits of available alternatives, with the most efficient decision (the one that minimizes costs and maximizes benefits) being implemented. From a rationalist perspective, cost-benefit analysis makes perfect sense. From a neurological perspective, this is at odds with how the brain actually works. Rather than focusing on costs and benefits, or economic rationality, the brain processes information in such a way that is more in line with “emotional rationality” (McDermott 2004).² Not only do emotions affect decision making, they tend to guide decision making, often with improvements in the overall outcome. The basic assumption of welfare economics, institutional rational choice, the Tiebout model, and their prescriptive policy derivatives such as school choice is that people are rational actors and will behave in ways that maximize their own economic self-interest. The theory of emotional rationality suggests this is the exception rather than the norm.

In short, emotional triggers drown out rational considerations. McDermott wrote, “emotion remains endogenous to rationality itself” (2004, 693). A purely rationalist approach to policy analysis is essentially asking the human brain to override itself. If emotions result in bad policy decisions, such an approach might be warranted. But, as it turns out, this is not the case. Humans are capable of making intelligent decisions. As Damasio’s (1994) research on patients with acute brain damage has demonstrated, people lacking areas of the brain associated with emotional responses are unable to engage in favorable social interactions—often exhibiting higher levels of unemployment and divorce.

That emotions guide decision making casts considerable doubt on the assumptions of “classic” policy models. Take, for example, the Tiebout model. The assumption of the Tiebout model is that people make mobility decisions based on the quality of service being provided—that people

make rational decisions based on policy outputs. The same argument holds for proponents of school choice—parental decisions about to which school to send their children are based on school outputs such as test scores. As we discussed at length in Chapter 3, the assumptions of the Tiebout model and school choice models break down when subjected to empirical scrutiny. But what is the theoretical and empirical basis for this disconnect? The neurological role of emotions gives policy scholars an endogenous variable that will boost the explanatory power of policy decision models. Policy specialists that position alternatives in the context of emotional appeals are more likely to find receptive venues than if such alternatives are discussed in purely instrumental or rational terms. In fact, there is now evidence that politicians who cater to emotions have more electoral success than those who focus on policy details, or what would be considered the “rational” part of public policy (Weston 2007). We do not deny that emotional rationality opens the door for demagoguery on the part of politicians and policy specialists. But understanding that the potential for such demagoguery exists is likely the first step in understanding ways to correct for it. To do so requires a neurological understanding of how the brain processes incoming information, whether that information be policy related or not.

People do not make decisions based on policy outputs; they make decisions on the basis of emotions and the preferences of their group, however they define “group.” For some, this might mean conforming to the preferences of their neighbors; for others the group might be the local PTA, a bowling club, or a reading group. That emotions guide the decision-making process has important implications for at least two major areas of policy scholarship: 1) agenda setting; and 2) policy analysis. Models of policy change continue to be critiqued on the grounds that they are not predictive. Yes, significant policy change can occur because of a focusing event or the merging of the three streams, but when is this likely to happen? The problem is that these models tend to be couched in a rationalist framework. If the frame of reference were shifted from economic rationality to emotional rationality, we argue, the predictive power of such models would increase. People make decisions not devoid of emotions or in a vacuum but rather with a very strong awareness of what those around them will think about their decision and with a very powerful emotional base.

Merging Policy Studies with Evolutionary Psychology

Why is the brain wired in such a way as to give social pressure and a concern for reputation within a group such prominence in decision making? Why are people so sensitive to the perceptions of others? The basic assumption of evolutionary psychology is that the human mind is a product of evolutionary pressures. The brain evolved to solve adaptive problems faced by our hunter-gatherer ancestors in the Environment of Evolutionary Adaptation or EEA (Cosmides and Tooby 1992). A main problem of the EEA was a reliable source of food. The scarcity of food resources required group cooperation and sharing to survive. A cognitive by-product of this environment was a strong tendency toward cooperation with one's in-group and a desire to maintain a favorable reputation among other group members. Scarcity of resources also created a hypersensitivity to fairness norms. A group member who hoarded food in the EEA was essentially trading a public good for his or her own selfish ends. Because such behavior likely meant death for another group member, people developed a strong disposition for detecting cheaters in social situations. According to Cosmides and Tooby, the EEA led to the development of "cheater detection module"—a behavioral predisposition for detecting cheaters in instances of social exchange.

Evolutionary psychology posits that individual preferences are a function of *both* the environment and what Cosmides and Tooby have called evolved "psychological mechanisms" (1992, 165). Within political science, the assumptions of evolutionary psychology are gaining traction as a useful framework for explaining political behavior. Alford and Hibbing (2004) have proposed that people are actually "wary cooperators." People will cooperate when others cooperate but will cease cooperation when others defect and will incur a cost to punish others for noncooperation. Alford and Hibbing argued that the model of the wary cooperation has important policy implications. Take, for example, compliance with tax policy. The wary cooperator model posits that we pay our taxes only because we assume others are doing the same (Alford and Hibbing 2004, 711). If it is revealed that others are cheating on their taxes by not paying, and getting away with it, the result is likely to be widespread disgust with government (this also fits with Kuran's model of preference falsification). The same holds for perceptions of welfare policy. Why does an image of a

welfare recipient not actively seeking employment provoke such strong public reactions? Because such an image sets off our cheater detection sensor—this is someone who is accepting benefits without incurring a cost. The “welfare to work” motto of the 1996 welfare reform act passed by the federal government was most likely an attempt to allay fears that the policy was simply benefiting free riders (Rubin 2002, 196); the motto served to ease the reaction of our cheater detection module. Humans seem to possess a strong disposition toward cooperation but also a high level of skepticism toward others. From an evolutionary perspective, this is a highly adaptive strategy (Orbell et al. 2004). On the one hand, it leads to optimal outcomes while at the same time preventing suboptimal outcomes as a result of being played for a sucker. In fact, the cheater detection module allows humans to remember cheaters at a higher rate than altruists (Chiappe et al. 2004) suggesting that strong reactions to the image of the lazy welfare recipient or the non-taxpayer are likely to be long-lasting.

If adaptive pressures on the mind produced similar behavioral outcomes and expressed preferences as those predicted by the rational actor model, this research could be ignored. Similarly, if the adaptive rationality led to suboptimal outcomes, the evolutionary psychology framework could be dismissed. But, as Cosmides and Tooby (1994, 329) have discussed, evolved modules, such as the cheater detection module, actually lead to decisions that are “better than rational.” For example, Gerd Gigerenzer and his colleagues have repeatedly demonstrated that people using “fast and frugal” decision-making heuristics are quite capable of making optimal decisions (Gigerenzer and Todd 1999a; see also Gigerenzer and Selton 2002). The reason: adaptive pressures have selected for optimal cognitive mechanisms, mechanisms that deviate sharply from the assumption of complete information in the rational-comprehensive model. These mechanisms are designed to efficiently and effectively solve social dilemmas, and they have important relevance for solving policy problems.

A prime example of adaptive rationality in action comes from the work of Elinor Ostrom and her colleagues on common-pool resource dilemmas. In the case of a common-pool resource, the rational actor model would predict an overuse of the resource. From a welfare economics perspective, to correct for such inefficiency requires external intervention. As we discussed at length in Chapter 3, these dilemmas can actually be solved through mechanisms other than those predicted by welfare economics or cost-benefit analyses; simple solutions such as face-to-face

communication and the threat of punishment are enough to prevent overuse and ensure cooperation (Ostrom, Walker, and Gardner 1992, 1994; see also E. Ostrom 2005). The question that is left unanswered, however, is: why are such mechanisms so effective? The theory of the “wary” cooperators and “emotional rationality” provide an answer to this question. Face-to-face communication creates a sense of group identity, which if violated, is likely to lead to social ostracism. Adaptive psychological mechanisms have created behavioral predispositions that guard against ostracism-type behavior.

As an example ingrained in the minds of policy scholars, take March’s (1994) “logic of appropriateness.” According to March’s theory, people tend to do what is perceived as appropriate for the situation. That is, people tend to base their behavior on existing institutional culture and norms. Essential to this argument is an ability to read others’ expectations and gauge what is acceptable and not acceptable within an organization. At a very basic level this is about the ability to fit within a group and identify with other group members. Evolutionary psychology and the theory of the “wary cooperators” indicate humans possess a strong capacity for doing just that. In fact, the ability to mind-read has been found to be evolutionarily adaptive and fits within the broader framework of “Machiavellian intelligence” (Orbell et al. 2004, 14; see also Whiten and Byrne 1997). The EEA mandated an ability to join groups and sustain group membership. A failure to conform to group norms meant social ostracism and most likely death. Doing what is appropriate is about figuring out how to be part of the in-group and successfully navigating in-group relationships.

Biological and cognitive factors also provide enormous explanatory power to everyday policy decisions. To take one example, consider the decision to contribute to a public good such as National Public Radio (NPR). From a purely rational perspective, at the individual level, no one should contribute; they should free ride off others’ contribution. But if everyone free rides, no one will contribute. The reality is that people do contribute, and often can be cajoled into contributing through emotional appeals or social pressure. Why? The pressure to conform with the majority opinion, the fear of being labeled a “free rider,” or not conforming to social norms in a public setting all increase the likelihood of a negative reaction from one’s peers.³ Consider other donation drives that attempt to prime the emotion of shame by asking for donations over the phone or in

person at the local grocery store. The idea is to put people in a situation that favors an emotional response, and most likely a generous response. Behavioral predispositions against violating group norms are the result of evolutionary pressures and exert a strong influence on public preferences.

Knowing that people are more adept at solving social dilemmas could also help to explain why people react to certain policy images in the way that they do. For example, Nelson (1984) found that child abuse was able to reach the policy agenda only after it was redefined as a social dilemma. Similarly, the issue of providing education to children with disabilities only reached the national agenda after it was defined as a social issue (Cremins 1983). From a rationalist perspective, the framing of the issue is irrelevant. Redefined as social issues, however, people are better able to understand the issues and are more open to addressing them. Although we acknowledge that policymakers can use this information to manipulate policy images in such a way as to trick citizens, we believe such an approach is still useful. In fact, as Paul Rubin (2002, 164–165) wrote, this social element is built into policy decision making. Rather than relying on policy details, elected officials regularly bring in individuals affected by a policy or issue to give their personal testimony. As Rubin noted, from a rationalist perspective this does not make sense nor should it affect the final decision. The details of the policy have not changed. Personal testimony, however, particularly on highly salient issues, gives people “identifiable” individuals who are affected by the policy (2002, 164). For those watching, the policy image has changed from an abstract problem to one with social and emotional implications. The result is that people will give more weight to one side of the argument even though the details have not changed. Consider the effect of Ryan White on the image of AIDS as a national problem, or the effect of Michael J. Fox testifying before Congress on the need for stem-cell research to help cure Parkinson’s and other diseases. These “identifiable” individuals caused a change in policy image, which, according to Baumgartner and Jones (1993), will cause a change in policy venue and the potential for a policy punctuation. When viewed through the lens of evolutionary psychology and the neuroscience of emotion, this potential makes perfect sense.

That policy images can be manipulated to serve selfish ends also has roots in behavioral economics, specifically prospect theory, the theoretical underpinnings of which are rooted in evolutionary psychology (Mc-

Dermott, Fowler, and Smirnov 2008). Tversky and Kahneman's (1981) widely cited paper on this topic essentially gives policy advocates a blueprint for manipulating policy images in such a way as to promote or hinder its success. Prospect theory states that people will be risk-averse when faced with gains and risk-seeking when faced with losses. What Kahneman and Tversky demonstrated is that preference for a particular policy solution depends on whether that solution is framed in terms of gains or losses. When presented with a health crisis, subjects in their study favored a solution that minimized risk when the solution was framed in terms of "saving" lives but favored a riskier approach when the solution was framed in terms of the number of people who would die. Although mathematically the outcome of each solution set was the same, subjects reversed their preferences due to the framing of the solutions.⁴

When the risks and benefits of a particular policy are defined in social terms, they tend to be given more weight than in statistical models. The result is potentially inefficient policy. A story depicting the ability of a single individual to cheat the system is most likely to lead to calls for more oversight mechanisms, despite the fact that the costs of such mechanisms are likely to outweigh the benefits. Such biases in decision making have important policy implications. Rubin (2002, 175) has documented the fact that during the 2000 U.S. presidential election, Vice-President Al Gore attempted to counter then-Governor George Bush's argument to privatize Social Security by appealing to people's general tendency toward the status quo and loss aversion. Since the publication of Rubin's book, President Bush again made a similar push for privatizing Social Security, and again, the tendency to overvalue loss and a preference for the status quo seems to have prevented such an overhaul, regardless of the potential benefits. In short, the adaptive rationality framework provides important insights for both policy scholars and policy elites seeking to better understand the way in which people react to policy proposals and solutions.

Putting It All Together

Public policy is an aggregation of human decisions. But what do we know about the human decision-making process? From a public policy perspective, not much. We assume policymakers have preferences and will act on

those preferences. The dominant theoretical paradigms within public policy (e.g., public choice, bounded rationality, welfare economics) tend to take preferences as a given; policymakers are assumed to be self-interested decision makers. Deviations from such predictions are assumed to be the result of environmental constraints such as institutional rules and norms. The last few decades have seen widespread rejection of the rational choice model on multiple grounds: 1) it generates untestable assumptions (Green and Shapiro 1994); 2) observed behavior in social dilemmas deviates widely from economic rationality (see Camerer, Lowenstein, and Rabin 2004), and 3) what is viewed as “overcooperation” in social dilemmas makes sense from an evolutionary perspective (Field 2004). And though attempts have been made to discard the rational actor model from public policy, such attempts tend not to stray too far from rationalist assumptions.

More notably, Bryan Jones (2001, 2003) has pushed for a renewed emphasis on bounded rationality as a model for human decision making. Although Jones agrees with evolutionary psychologists that bounded rationality is a product of human evolution, he seems less interested in explaining why people tend to deviate from the rational actor model than in redesigning institutions to account for such deviations. For Jones, preferences are taken as given, whether they conform to bounded rationality or complete rationality, and the means for achieving more efficient policy is through the manipulation of the “task environment.” The task environment is akin to institutional rules and norms. Scant attention is given the manner in which people are “bounded.” Instead, the focus is on how institutional design can correct for cognitive limitations. As Jones (2001) wrote, “People can make better decisions, individually and collectively, because of institutions” (190).

Political scientist John Orbell and his colleagues (2004) have distinguished between “rationality in action” and “rationality in design.” Rationality in action is grounded in the assumptions of the rational-comprehensive model, whereas rationality in design is based on the assumption that natural selection favored the development of certain cognitive mechanisms that improve the prospect of group living. Although Jones departs from rationality in action, he is unwilling to accept the premise of rationality in design, or adaptive rationality. The “task” environment is essentially an argument that decision making is the result of exogenous factors. Endogenous factors are taken as a given. Evolutionary

psychology starts from a different premise. People are not bounded; rather, the human mind evolved certain mechanisms for solving adaptive problems. These mechanisms allow people to make good or appropriate decisions when faced with a social dilemma, decisions not normally predicted by rationalist models. Unfortunately, little effort has been made toward incorporating endogenous variables relating to cognitive and biological mechanisms into models of policy change.

Even though policy scholars have long been critical of the rational actor model (see Stone 2002), these critiques often fail to provide theoretical justification for why the rational framework should be rejected or what should replace it. Bryan Jones deserves credit for taking a more interdisciplinary approach to understanding organizational behavior and policy decision making. In fact, from our reading of the literature, Jones is the first major policy scholar not only to advocate but to utilize empirical and theoretical models based in biology and cognitive psychology. Other policy approaches, however, have been less successful than Jones. For example, post-positivist approaches seem less interested in developing a unifying framework than in preserving the notion that reality, or at least political reality, is socially constructed. Such an approach does little to advance our understanding of how people process policy information. In fact, constructivism, hermeneutics, and intersubjectivity deny that any unifying framework is possible. Under these models, humans lack any universal preferences or tendencies. As the discussion in this chapter has demonstrated, people do not come to a policy problem with an empty set of preferences. Rather, human cognitive capacities are a product of human evolution. The theory of the wary cooperator and findings from neuroscience give policy scholars a solid theoretical and empirical foundation for how the public will react to certain variations in issue definition.

To be sure, cognitive approaches to policy change are creeping into the field of policy studies. Work by Leach and Sabatier (2005) holds promise for moving beyond strictly rational or environmental explanations of policy change. Utilizing both rational choice and social psychology, Leach and Sabatier identify factors that are critical to fostering and maintaining trust among policy elites. Theoretical predictions from social psychology are more appropriate for explaining interpersonal trust than rational-choice theory. In particular, perceptions of fairness and legitimacy are better able to explain interpersonal trust than past policy outcomes. As a

whole, however, policy studies appears stuck in what Cosmides and Tooby have described as the “Standard Social Science Model.” Exogenous factors dominate models of the policy process; no attention is given to endogenous factors such as biological or psychological mechanisms. As such, the current state of policy decision-making research is largely descriptive, with little predictive power. Leach and Sabatier’s work is important because it attempts to provide a testable theory regarding the formation and disintegration of policy subsystems—one that is balanced between exogenous and endogenous variables.

One of the main drawbacks of policy research is it that lacks coherent theory-building (Sabatier 2007). When theory is criticized, such as policy stages or policy typologies, rarely is a replacement theory put forth. The preceding discussion suggests that the raw materials for constructing replacement theories are readily available; they are just located outside of the fields of policy studies and political science. The main critique of punctuated equilibrium and policy streams is that they fail to predict policy change. Emotional rationality or emotional intelligence completely reverses past models of decision making founded on rationalist assumptions. Emotions do matter, and they tend to operate a priori to rational thought. Public policies require the support of the electorate to be changed, maintained, or even adopted. Taking preferences as a given as is done with rationalist approaches leads to incorrect inferences about public policy preferences. Moreover, it is limited to a single set of covariates. Environmental variables such as institutional rules do explain a lot of what is known about policy change, but they give only one side of the explanation. If we open the “black box,” it is likely that we will increase the explanatory power of existing models of policy change as well as other policy-related models. For example, compliance with public policy tends to be grounded in perceptions of trust (Tyler 1990, 2001 Scholz 1998). Perceptions of trust are in large part based on perceptions of fairness, which, according to evolutionary psychology, are a function of evolutionary pressures in the EEA. Only by including nonrational, endogenous considerations such as emotions are we able to build a complete model of policy compliance. Simply showing that rationalist approaches are wrong is not enough. What is needed is a theory that can explain and predict how people will respond to policy images and policy outcomes. Such a theory is likely to be interdisciplinary in nature, with a strong emphasis in evolutionary psychology, neuroscience, and behavioral economics.

An Application to Criminal Justice Policy

What the above discussion suggests is that power of conceptual models in public policy can be significantly improved by accounting for emotions and evolutionary psychology. In this section we attempt to provide a policy-specific example by showing how findings from behavioral economics and evolutionary psychology have real implications for criminal justice policy. We discuss below three important insights from this research: 1) a tendency to seek retribution for unfair behavior; 2) the occurrence of criminal behavior; and 3) the inefficiency of jury trials.

Social norms have a strong effect on individual behavior (Cialdini and Trost 1998; Cialdini and Goldstein 2004). People tend to conform to the expectations of others. The strength of a particular norm can be assessed by the level of compliance, particularly in the absence of others, as well as the degree to which others are willing to punish others for failure to comply with the norm. We noted earlier that evolutionary pressures support the development of a mental module for detecting cheaters, particularly violators of fairness norms. Experimental and neurological evidence also indicates a strong desire to punish such cheaters.

In laboratory settings, people tend to exhibit a strong desire to punish others for unfair behavior, even at substantial costs to themselves.⁵ In fact, this tendency is so strong that it is evident for third parties, or individuals unaffected by the outcome (Fehr and Fischbacher 2004), persists even when allowing for a substantial increase in monetary stakes (Cameron 1999; Fehr, Fischbacher, and Tougareva 2002), and extends across cultures (Henrich et al. 2001). The latter point suggests punishment for unfair behavior is a universal behavioral characteristic. The desire to punish also has strong biological roots. Brain activity associated with unfair offers in two-person bargaining scenarios tends to be located in the anterior insula, an area of the brain considered to be the source of negative emotional states (Sanfey et al. 2003, 1756). The decision to punish, however, is reflected in areas of the brain commonly associated with anticipated satisfaction (de Quervain et al. 2004). Notably, this brain activity occurs only when subjects are allowed to “effectively punish,” where punishment reduces the payoff of the noncooperator (de Quervain et al. 2004, 1254). In short, people tend to have a very negative emotional reaction to unfair behavior but a very positive reaction to punishment. Such anticipated satisfaction explains why individuals are willing to incur the

short-term costs of punishing free riders with full knowledge that there will be no future payoffs for the punishing individual.⁶

This extreme sensitivity, both behaviorally and neurologically, to injustice begins to explain why people are quite willing to file grievances for even the smallest deviation from what they perceive as fair, perhaps also explaining why people are willing to go to court over what may seem like trivial matters. Others have also noted that despite its ineffectiveness as a deterrent mechanism, the public remains quite supportive of the death penalty, a position that defies rational explanations based on outcomes or efficiency but fits with evolutionary theory favoring a strong preference for swift and immediate justice (Alford and Hibbing 2004, 711). The desire to punish for violation of fairness norms can also be an efficient policy mechanism because it is able to solve common-pool-resource dilemmas in the absence of an external authority (Ostrom, Gardner, and Walker 1994).

That evolutionary pressures favor a cheater detection module is suggestive of a long lineage of cheater or criminal-type behavior. Criminologists are now beginning to accept evolutionary explanations for the occurrence of criminal behavior. In the EEA, high status was a means to reproductive success. One way to gain status was to dominate other group members. That status-seeking is particularly prominent among males suggests males will be more prone to dominating tendencies such as physical aggression. Anthony Walsh (2006, 255), a criminologist, has written that “Non-evolutionary theories cannot account for why men everywhere and always commit far more criminal and antisocial acts than females.” On a less extreme scale, that people tend to cooperate in social dilemmas also presents an opportunity for deception (Walsh 2006). In fact, in laboratory settings people tend to be more concerned with appearing fair than actually behaving fairly (Smith 2006), what some have labeled “Machiavellian intelligence” (see Whiten and Byrne 1997; Orbell et al. 2004). Humans possess a strong tendency to cooperate, but also a strong tendency to exploit others’ cooperation if such exploitation can go undetected, a strategy that would have been advantageous in an environment of small groups and scarce resources.

Finally, consider the method in which justice is delivered. Jury trials are the essence of incorporating “identifiable” individuals. We noted earlier in the chapter that biases in information processing result in more weight

being given to social or emotional cues, particularly when policies are associated with identifiable individuals (Rubin 2002). In a jury setting the identifiable individual is sitting in the same room as the jury and in relatively close proximity. Such a setting essentially ensures that less weight will be given to statistical models, with an overreliance placed on personal testimonies. In a sense, jurors are put to the ultimate test; they are placed in an environment that stimulates neurological activity shaped by evolutionary pressures to be the best response to social dilemmas, and they are asked to ignore such influences. Indeed, Rubin (2002, 176–180) finds evidence that such jury bias may in fact lead to overcompensation in damage payments. Because jury settings ignore social and biological pressures, they create an environment ripe for bad policy decisions.

Conclusion: Answering the Call for New Theory

Theoretical developments being made outside of mainstream political and policy science offer important insights for understanding the policy process. Over the last twenty years, numerous scholars have written of the need for better policy theory (Sabatier 1991b, 1999, 2007; Hill 1997). Though progress has been made in terms of criticizing initial attempts at theory, such as policy stages and policy typologies (see Chapter 2), a unifying approach to policy change is still lacking. In this chapter we suggest several new directions for policy theory, especially for human decision-making models that make use of insights from neuroscience, behavioral economics, and evolutionary psychology.⁷ Several consistent themes emerging from these fields seem to have clear implications for policy theory. First, perceptions of others matters. The human brain evolved in an environment of scarce resources that necessitated group living for survival. As such, people tend to be highly sensitive to fairness norms and highly cognizant of their reputations with others. This translates into a strong desire to conform to the majority opinion as well as a strong skepticism toward policies perceived to favor cheaters. Second, people do not process information in a manner consistent with the rational actor model that serves as the basis for many existing theories of public policy. Instead, people rely on heuristics and particularly emotions. Despite rationalists' fear that emotions result in suboptimal decision making,

physiological and experimental evidence indicates that people do reason using emotional and other heuristics, and that such reasoning tends to result in outcomes that are “better than rational.” Third, an overreliance on exogenous or environmental variables ignores the powerful influence of endogenous variables on information processing. Advances made in the fields of neuroscience, cognitive psychology, behavioral economics, and evolutionary psychology contribute to our understanding of how the public reacts to policy processes and policy outcomes. They also give policymakers insight into how to increase public awareness of an issue. For example, images that activate the cheater detection module can potentially be utilized by policymakers seeking to increase opposition to a particular policy.

An interdisciplinary approach to public policy theory is not new. Simon (1985) advocated for a more psychological understanding of policy-making theory, and more than fifty years ago, Harold Lasswell (1951b) argued that the “policy sciences” should be grounded in interdisciplinary theory. More recently, in his 2008 presidential address to the American Political Science Association, Robert Axelrod advocated the need for more interdisciplinary research. Policy scientists have relied too heavily on environmental explanations of policy change. Bryan Jones’s (2001) intended rationality model, despite borrowing from cognitive psychology and biology, gives disproportionate weight to institutional rules. We are not calling for discarding such variables; rather, we ask that psychological and biological variables be given equal weight. Without straying too far into the nature versus nurture debate, we argue that the field of policy studies is ready for more nature to balance with the nurture. Despite physiological evidence, social scientists have been reluctant to include emotions as primary influences on human behavior. Indeed, the debate between rational, cognitive processes and emotional, or affective, influences, has assumed multiple forms: “passions vs. reason” (Frank 1988), “emotion vs. reason” (Damasio 1994), and “emotional vs. rational” (Marcus, Neuman, MacKuen 2000), to name a few. However, as scholars have recognized the value of interdisciplinary findings, particularly those from evolutionary biology and neuroscience, models of human behavior are increasingly being advanced that theoretically and empirically account for the role of emotions in decision-making processes.

The field of public policy makes a lot of assumptions about human decision making. Policy scholars, however, are not experts on the way hu-

mans process information. To compensate, assumptions are built into policymaking models about how policymakers *should* make policy decisions. Not only are those assumptions about human decision making wrong, they are at complete odds with how the brain actually works. To make accurate policy prescriptions requires broad knowledge of human behavior. Great strides have been made over the last couple of decades in understanding the human decision-making process. In particular, neuroscience, behavioral economics, and evolutionary psychology are at the forefront of answering the question: why do people do what they do? These disciplines have already made great advances toward developing theories for replacing the rational actor model as an answer to this question. Policy scholars ignore these advances at their own peril. Future work in policy theory would be wise to heed Lasswell's advice for a truly interdisciplinary approach to the field of policy studies.

Notes

1. That people respond to social pressure has been known in the field of political behavior for some time (see Huckfeldt and Sprague 1987; Kenny 1992; Schram and Sonnemans 1996). Yet, there have been few attempts to incorporate this theoretical framework into models of policy change.

2. Daniel Goleman (1995) has referred to the primacy of emotions and its role in optimal decision making as "emotional intelligence."

3. For example, publicly revealing violators of the norm of voting has been found to significantly increase voter turnout (Gerber, Green, and Larimer 2008).

4. Research in behavioral economics also points to problems with attempting to make policy evaluation decisions on the basis of consistent preferences. As it turns out, people assign different utilities to decisions on the basis of whether they have experience with the decision. Known as "experienced utility," people who have experience with a decision or policy are more likely to avoid errors in assigning utility than people who have no such experience (Kahneman and Sugden 2005; Kahneman and Thaler 2006). Because of such cognitive biases, Kahneman and Sugden (2005, 175) have advocated for a "day reconstruction method" for assessing utility in which preferences are deliberately recalled on an "episodic" basis. This is done to avoid the tendency to focus on a particularly salient experience with the policy in question, a tendency known as "focusing illusion." Like the theory of preference falsification, experienced utility demonstrates the weakness of assuming consistent preferences as is done in the rational-comprehensive model.

5. See Nowak, Page, and Sigmund (2000) and Guth and Tietz (1990) for evidence in two-person bargaining scenarios. See Fehr and Gächter (2000) for evidence in a public goods game.

6. See Smirnov (2007) for a discussion of this literature as it relates to political science.

7. See Crawford and Salmon (2004) for an initial attempt at bridging public policy and evolutionary psychology.