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THE COGNITIVE FOUNDATIONS OF HUMANISTIC GOVERNANCE

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THE COGNITIVE FOUNDATIONS OF HUMANISTIC GOVERNANCE

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ABSTRACT: *The debate about the kind of knowledge needed for intelligent governance is an old one, but a new perspective based on cognitive psychology has recently emerged. This perspective emphasizes evidence about the heuristics and biases that distort human judgment, particularly the so-called “availability heuristic,” in which vivid imagery leads us to overestimate the probability that a risk will actually materialize. I argue that this perspective neglects the constructive role that “availability” plays in rationality. Research in cognitive science suggests that without close attention to exactly the kind of vivid imagery that distorts probability judgments, experts may rely on an inaccurate representation of the nature of the event whose probability they seek to estimate. This essential ingredient of intelligent decision making is especially precarious in government, since public officials regularly make decisions that will affect people whose experiences they do not share. I discuss how participatory democracy and humanistic research can help counteract this bias in public decision making.*

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The role of scientific analysis in government has grown steadily for at least a century, and today our leading ideas about how knowledge should inform governance emphasize scientific ways of knowing above all others.¹ This emphasis has always had its critics, who worry that it underwrites obtuse and even dangerous decisions because it marginalizes humanistic knowledge and judgment (e.g., Berlin 1966; Oakeshott 1962). Those criticisms have sparked an important debate about the relative importance of scientific approaches to knowledge as compared with humanistic and lay approaches—ways of knowing that rely heavily on emotion, narrative, and first-person perspectives rather than the impersonal standpoint favored by science. That debate remains central to contemporary concerns about the ways of knowing that government organizations should rely on.

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A new perspective on this venerable debate has recently emerged from cognitive psychology, which has identified several predictable biases in human decision

making. This research clarifies how expertise can contribute to intelligent choice in 35
two ways. First, by identifying the kinds of decisions that we tend to make badly
when we rely on our intuitions, it identifies the contexts in which expert analysis is
most needed. Second, by clarifying the nature of the mistakes that plague these
intuitions, it clarifies the type of expertise that will be most helpful in overcoming
them. 40

This psychological perspective has particularly breathed new life into the dis-
cussion of benefit-cost analysis, which has stood out as the paradigm of scientific
decision making in government. Since the 1950s most justifications of benefit-
cost analysis have argued that it can determine which policy alternative will
maximize social welfare as defined by welfare economics, but that argument 45
relies on a utilitarian moral philosophy that many people reject. More recently,
some scholars have advanced a more pragmatic justification for benefit-cost ana-
lysis—one that defends it not as a means of maximizing the aggregate sum of
individual welfare but as a means of overcoming predictable limitations of
human cognition (e.g., Gibbard 1985; Sunstein 2000). By far the most influential 50
version of this argument comes from legal scholar Cass Sunstein, who empha-
sizes the errors generated by a mental shortcut that cognitive psychologists call
the *availability heuristic*—roughly, a rule-of-thumb that estimates the probability
that a danger will materialize based on the ease with which it can be imagined.
On this account, ways of knowing that emphasize lay perspectives and emotion- 55
ally charged imagery will often mislead regulators because they generate dis-
torted estimates of the likelihood that a risk will actually materialize. In their
place, public officials should rely heavily on the scientific discipline imposed
by benefit-cost analysis.

In this paper I will both embrace and challenge this line of argument. I will 60
embrace it by taking seriously the idea that cognitive psychology can help clarify
the ways of knowing that intelligent governance requires, and also by relying on
the general model that scholars like Sunstein have developed for drawing lessons
from psychology. But I will also challenge this line of argument by arguing that it
has relied on an incomplete reading of the psychological literature, as well as the 65
broader literature in cognitive science that encompasses it. It does so because it
emphasizes the costs of vivid imagery and emotions without attention to the
constructive role they play in rationality—not just as heuristics that facilitate
rapid approximations of objective probabilities but as resources for generating
other essential aspects of knowledge about risk. Risk analysis requires judgments 70
not only about the probability that a danger will materialize (which I will call
“probability assessment”) but also about the significance of that danger if it does
come to pass (“outcome assessment”). Although it may be true that vivid and
emotionally laden imagery tends to distort our probability assessments, such
imagery plays a constructive role—indeed an essential one—in accurate outcome 75
assessment.

Failures of outcome assessment are especially significant in contemporary
governance. In the contemporary world public managers and policymakers
often need to make decisions that have implications for distal publics whose

experiences they do not share—a challenge I will refer to as “the experiential gap.” Because of this gap, public officials may have a stylized or inaccurate understanding of the nature and significance of the events that policy aims to regulate, and if anything scientific expertise exacerbates this problem rather than alleviating it. I analyze how narrative understanding and stakeholder input can help counteract this bias in governmental decision making. In this respect I continue the tradition of humanistic and populist retorts to the advocates of scientific governance. By grounding this argument in the same cognitive science literature invoked by many recent advocates of scientific ways of knowing, I hope to provide a new theoretical basis for it.

My argument proceeds in four steps. First, I review the psychological argument for scientific risk assessment in more detail, aiming both to clarify the position I will challenge and to elucidate how it uses evidence about human decision making to analyze the nature and value of expertise. Second, I examine a broader range of cognitive science literature (including literature in psychology, neuroscience, and the philosophy of mind) that identifies the limits of scientific ways of knowing for decision making. Third, partly based on that literature, I argue that humanistic understanding and populist input play essential roles in outcome assessment. Finally, I consider how public managers and policymakers can incorporate these ways of knowing into the practice of governance by describing the role they have played a role in actual policy decisions.

COGNITIVE BIASES AND POLICY ANALYSIS

The psychological defense of benefit-cost analysis is a natural successor to the traditional economic justification for that technique (e.g., Viscusi 1992; Stokey and Zeckhauser 1978) because the behavioral decision-making literature it draws from has increasingly challenged the economic theory of decision making (Kahneman and Tversky 2000). Where the economic perspective defends benefit-cost analysis as a technique for promoting economic efficiency, the psychological perspective defends it as a technique for overcoming “the blatant irrationalities of unaided common sense,” as philosopher Allan Gibbard put it in an early statement of this perspective (Gibbard 1985, 94). Legal scholar Cass Sunstein has developed this view at length in an influential series of articles and books (esp. Sunstein 2000, 2002, 2005), arguing that benefit-cost analysis is useful because it forces us to put “‘on screen’ important social facts that might otherwise escape private and public attention” due to predictable blind-spots in our intuitive judgments (Sunstein 2000, 1060).

It is worth spelling out the details of this argument for two reasons. First, since I will draw from cognitive psychology to develop my defense of humanistic and lay knowledge, it is important to acknowledge and understand the doubts about those forms of knowledge that psychologists have raised. Second, even though I will criticize the upshot of arguments like Sunstein’s, the *way* those arguments use psychological research to analyze the role of expertise provides a useful model for my own analysis.

Biases in Probability Assessment

Psychological justifications for benefit-cost analysis have examined many different heuristics and biases that guide and distort human rationality, but the availability heuristic has received the most attention. The availability heuristic was first examined by psychologists Amos Tversky and Daniel Kahneman, who defined it as a rule-of-thumb that estimates the probability of an event “by the ease with which instances or occurrences can be brought to mind” (1973, 1127). Relying on this rule-of-thumb may distort our intuitive risk assessments: We may be overly fearful of easily imagined events (such as those that are particularly vivid or emotional) because we overestimate the likelihood they will actually occur. 125 130

Early studies of the availability heuristic appeared in basic psychological research that had little direct connection to governance,² but later studies investigated how availability distorts everyday risk assessment. One found that respondents would pay more for flight insurance covering death due to “terrorism” than for flight insurance covering death due to “any reason”—presumably because the former risk was “more vivid and available” than the latter (Johnson et al. 1993, 39). Another found that subjects thought they were more likely to contract a hypothetical disease with easily imagined symptoms (such as severe headaches and muscle aches) than one with hard-to-imagine symptoms (such as an inflamed liver and a malfunctioning nervous system) (Sherman et al. 1985). Still others found that people grossly overestimate the number of deaths associated with “dramatic and sensational” events such as tornadoes and homicide but underestimate those associated with “unspectacular” causes such as asthma and diabetes (Sunstein 2002, 34).³ These studies suggest that laypeople often make very bad estimates of the magnitude of the risks they face, as they overestimate the probability of vivid and emotional scenarios such as shark attacks and underestimate the risk posed by unexciting threats like indoor radon. In Sunstein’s words, our intuitions about risk “can be a product not so much of thinking as of intense emotions, often produced by extremely vivid images of what might go wrong” (Sunstein 2000, 1070). 135 140 145 150

From this perspective, the availability heuristic undermines rational decision making by distorting our intuitive estimates of the probability that a risk will actually materialize. To make truly rational choices, government should set aside the flawed intuitions about probabilities that laypeople bring to regulatory policy, turning instead to systematic analyses of these probabilities by experts (e.g., Sunstein 2005, 126). Therein lies the virtue of a formal technique like benefit-cost analysis: Instead of relying on fallible intuitions, it directs attention towards more systematic estimates of the magnitude of the risks we face (Gibbard 1985, 111; Sunstein 2000, 1064–73). 155 160

This argument does not, of course, provide direct evidence that the use of benefit-cost analysis can overcome our cognitive biases. Instead it relies on psychological research more indirectly—by calling attention to a flaw in our intuitive judgments, and then assuming (plausibly) that scientific assessment of probabilities will be more accurate than our untutored intuitions. Psychology identifies a distinctive challenge 165

that regulatory decision making poses, even if it does not empirically validate the correct way to overcome that challenge.

FURTHER BIASES IN HUMAN RATIONALITY

This psychological argument provides an important rationale for scientific expertise in government, but it relies on incomplete accounts of both decision making and the cognitive biases that plague human rationality. First, scholars who make this argument almost exclusively emphasize the probability that good and bad events will occur (what I earlier labeled “probability assessment”) rather than the nature and value of those events (“outcome assessment”). Second, these scholars say little about another important category of cognitive biases documented in recent psychological literature—biases in our judgments about the value of an anticipated event rather than biases in our estimates of its probability. The first oversight obviously contributes to the second, since an argument that says little about outcome assessment has no occasion to analyze its distinctive challenges.

Those who make this argument would not, of course, deny that outcome assessment plays an important role in decision making. The claim that it does is elemental to the expected value theory of risk analysis that most discussions of government decision making rely on. According to that theory, decision makers should rank each possible course of action according to its expected utility, which in turn equals a weighted average of the utility of the various outcomes the alternative might generate (where the weights are the probability that each outcome will actually occur). Outcome assessment is the process of estimating the utility associated with each possible outcome. In effect, it provides a forecast about how we will experience and value those outcomes. Psychological defenses of benefit-cost analysis say little about this task.

That gap is not surprising because the heuristics and biases literature has always focused mainly on statistical intuitions (Kahneman and Tversky 1982). One reason for that emphasis is that many judgments about probability have objectively correct answers to which intuitive estimates can be compared. Outcome assessment may appear to pose insurmountable problems in this regard because the “importance” or “utility” of an outcome seems intractably subjective.

In fact, however, recent research on “affective forecasting” has overcome this limitation. As psychologists Daniel Gilbert and Timothy Wilson note, our prospective judgments about the value of an outcome can clearly diverge from our actual experience of that outcome when it finally comes to pass. More simply, *wanting* is a prediction of *liking*, so like any prediction it can be wrong (Gilbert and Wilson 2005, 179). Gilbert and Wilson coin the term *miswanting* to refer to these errors, and they review dozens of studies that demonstrate how pervasive miswanting is (Gilbert and Wilson 2005; Wilson and Gilbert 2003).

Kahneman himself has made important contributions to this line of research in joint work that examines the systematic discrepancies between *experienced utility* and *decision utility* (e.g., Kahneman, Wakker, and Sarin 1997).⁴ “Experienced

utility” refers to the actual level of pleasure and pain that an individual derives from some outcome or attribute (in Gilbert and Wilson’s terminology, “liking”). “Decision utility” refers to the weight that the outcome or attribute receives in that person’s decision making (in Gilbert and Wilson’s terminology, “wanting”). As Kahneman and his coauthors note, contemporary decision theory generally focuses on decision utility, while classical utilitarians like Jeremy Bentham focused on experienced utility. The distinction between these two concepts makes it possible to transform the classical decision theorist’s assumption that people make rational choices into a testable hypothesis: Although it is tautologically true that choices maximize decision utility, whether they maximize experienced utility is an empirical question.

In fact, the answer to that empirical question often appears to be “no.” Kahneman, Wakker, and Sarin (1997) report several psychological studies demonstrating that people systematically err in their retrospective estimates of experienced utility, which they dub *remembered utility*, and that these retrospective judgments drive future choices—i.e., decision utility generally tracks remembered utility. In particular, they find evidence that people rely on *peak-end* evaluation to estimate an episode’s overall utility: “The remembered utility of pleasant or unpleasant episodes is accurately predicted by averaging the Peak (most intense value) of instant utility (or disutility) recorded during an episode and the instant utility recorded near the end of the experience” (Kahneman, Wakker, and Sarin 1997, 381). This cognitive shortcut has several perverse consequences. For example, “the duration of experiences has little or no independent effect on their remembered utility,” and “the remembered utility of an aversive episode can be reduced by adding an extra period of discomfort that reduces the Peak-End average” (Kahneman, Wakker, and Sarin 1997, 381).

Several laboratory and field experiments have supported this model. In one, subjects immersed one hand in unpleasantly cold water for 60 seconds (the short trial) and, either earlier or later during the experiment, they immersed the other hand for 90 seconds (the long trial). During the first 60 seconds of the long trial, the water was held at the same temperature as the water in the short trial, but in the final 30 seconds it was raised by 1 degree Celsius. When asked which trial they would prefer to repeat, most subjects chose the long trial, regardless of the order in which they had experienced the two trials and despite the fact that they clearly found the final 30 seconds of the long trial unpleasant (Kahneman, Fredrickson, Schreiber, and Redelmeier 1993). This perverse effect of tacking on a slightly better but still unpleasant ending onto an otherwise unchanged experience carried over to a field experiment that analyzed colonoscopies. At the time the experiment was conducted, doctors had not yet begun to sedate colonoscopy patients routinely, and some medical professionals were concerned that patients found the procedure so uncomfortable that they would refuse to return for future exams when necessary. In response, Kahneman and his coauthors conducted an experiment on 682 colonoscopy patients designed to test a counterintuitive method of improving patients’ memories of the procedure. Half the patients were randomly assigned to a treatment in which the tip of

the colonoscope was left in the patient's rectum for about one minute after the doctor had finished the exam. Patients clearly found the final minute uncomfortable but not as painful as the exam itself. On average, the experimental subjects evaluated their overall experience significantly less negatively than the control subjects did, and they were more likely to return for a colonoscopy within five years (Redelmeier, Katz, and Kahneman 2003). 255

These experiments illustrate systematic differences between decision utility and experienced utility. People apparently store crude approximations of their experiences in memory and then rely on those approximations to decide whether they want to repeat each experience. As a result, outcome assessment may suffer systematic biases when it relies on intuitive judgments about remembered experience.⁵ In many cases human beings intuitively make poor judgments about the outcomes they really want to bring about, just as they intuitively make poor judgments about the probability that those outcomes will really come to pass. 260

These errors are particularly hard to avoid in decisions about *unfamiliar* events, when the decision maker cannot even rely on imperfect memories to gauge how she would react if the event occurred (Kahneman and Thaler 2006, 223; Wilson and Gilbert 2005, 179–80). Instead, she must rely on her imagination. The danger is that she will “imagine the wrong event” (Gilbert and Wilson 2005, 179)—a caricature of the event she is actually likely to experience. Wilson and Gilbert dub this error “misconstrual,” and they argue that it is one of the most important sources of miswanting: 265

When people think about how they will feel when a future event occurs, they must first bring to mind a representation of that event. If people have experienced the event many times before (e.g., commuting to work), they can form such a representation effortlessly by recalling a prototype or exemplar of it. When people think about events they have not experienced before, such as the birth of a child, getting married, or attending a party at the house of a new acquaintance, they need to construct a representation of what the event is likely to entail... [Unfortunately,] people do not have crystal balls and the future often unfolds in ways they do not expect (2003, 354–5). 270 280 285

For example, Dunn, Wilson, and Gilbert (2003) report that students who entered a housing lottery for their dorm rooms systematically overemphasized the effect their assignment would have on their happiness, and they provide evidence that these errors resulted from misconstrual, as the students focused on the easily imagined physical attributes of their living situation more than the more difficult-to-imagine attributes of their everyday social life. 290

The crucial point is that imagining the wrong event makes it difficult to predict how well one will like that event. More broadly, “people sometimes underestimate the emotional complexity of an event or the predominant emotion they will experience, especially if they badly misconstrue what key elements of the situation will be like” (Wilson and Gilbert 2003, 401). Unfortunately, this sort of misconstrual is 295

common when we rely on unexamined intuitions to conduct outcome assessments, and these mistakes may distort our everyday risk analyses.⁶

From Wanting to Valuing

So far I have focused on straightforward forms of valuation such as “liking” and “pleasure” simply because that is what the psychological literature has emphasized. I do not mean to imply that policy evaluation can or should consider only whether people will *like* the experiences that government policies bring about. The crucial point is simply that predictions of value can diverge from the experience of value (cf. Anderson 2004, 9–10). Although psychologists have mostly focused on the types of valuing associated with utilitarianism and hedonism, the same point undoubtedly holds for other forms of valuing. Put differently, happiness is only one of many emotional reactions that we have to our experiences, and the misjudgments about happiness I have been reviewing are echoed in research about other emotions such as anger, guilt, fear, pride, shame, and love (e.g., Woodzicka and LaFrance 2001; Wilson and Gilbert 2003, 347–9).⁷

Misprediction of these emotions is important because it can contribute to moral error. Extensive literature in moral philosophy (Smith 2002; Gibbard 1990), psychology (Haidt 2001), and neuroscience (Damasio 1994; Greene et al. 2004) indicate that emotional reactions (particularly anger, guilt, and resentment) play crucial roles in moral judgment. If we lack insight into the emotional reactions that an experience or event will generate, we may have trouble arriving at a sound moral judgment about it because we will lack an essential input into moral deliberation.⁸ More strongly, that deliberation will rest on a mistake.⁹

Misconstrual in Government

The risk of misconstrual looms especially large in government because public officials often have little exposure to the lived experiences their decisions will affect. In our personal lives we generally make choices within a relatively narrow range—often, though not always, roughly within the range of experiences we have actually had. The psychological literature I just reviewed suggests that even in those cases we may make poor decisions if we rely on unexamined intuitions about the value of the relevant experiences. The problem gets even worse, however, when we need to make decisions about unfamiliar experiences. Unfortunately, public officials in a large, complex, and diverse society must continually take actions that have implications for people whose experiences they do not share, and they must continually make laws that affect lives they have not lived. In that respect, they often lack any direct experience to draw from that would help them understand how the policies they are considering would be experienced. For example, very few of the legislators and experts responsible for drafting adoption laws are themselves adopted, and very few have given up a child for adoption, so they typically have no direct experience to draw

from that can help them forecast how various regulations will be experienced by those they affect most intimately. Earlier I labeled this kind of challenge “the experiential gap.”

This separation of authority from experience exacerbates the risks of misconstrual. Even in terms of their own values—i.e., leaving aside the possibility that decision makers would reach different conclusions than the people directly affected by new laws if they construed the relevant experiences accurately—public officials are likely to miswant. In that respect, the capacity for outcome assessment is particularly precarious in government.

AVAILABILITY AS RESOURCE

*Cursed are dullards whom no cannon stuns,
That they should be as stones;
Wretched are they, and mean
With paucity that never was simplicity.
By choice they made themselves immune
To pity and whatever moans in man*
—Wilfred Owen, “Insensibility”

I have argued that the psychological defense of benefit-cost analysis relies on an incomplete account of cognitive biases. Psychologists have identified systematic biases not just in our statistical intuitions but also in our affective forecasts. Those biases carry their own distinctive challenges for rational decision making: Just as our statistical intuitions pose a threat to probability assessment, our affective intuitions pose a threat to outcome assessment—particularly when we make decisions about unfamiliar experiences.

Although in both cases psychological research provides direct evidence that our unaided intuitions sometimes mislead us, it only provides indirect evidence about the kind of expertise needed to overcome those limitations. In the case of probability assessment, research suggests that we need more systematic information about probabilities than our intuitions typically provide us. That information is an important aspect of “expertise”—knowledge about the true probability that an event will occur. Moreover, lay knowledge and the kind of vivid, emotional imagery that it often relies on clearly do *not* qualify as expertise, since those ways of knowing may undermine accurate probability assessment by activating the availability heuristic and its associated biases.

A more complete picture of cognitive biases makes it clear why this conclusion may be counterproductive. The affective forecasting literature suggests that we need more systematic information about outcomes than our intuitions typically provide us. That information, too, is an important aspect of “expertise”—knowledge about what an experience would *really* be like (as opposed to the distorted picture of what it would be like that our unexamined intuitions convey). In this section I will analyze the nature of that kind of knowledge, concluding that it consists of exactly the kind

of vivid, emotional imagery that plays the villain in the psychological defense of benefit-cost analysis.

I make this argument by turning from cognitive psychology to the broader literature in cognitive science, particularly the aspects of that literature connected with the philosophy of mind, epistemology, and neuroscience. Along the way, I will consider related ideas in literary theory, as well as some tentative evidence from the affective forecasting literature itself. 380

The Nature of Knowledge about Outcomes 385

Biases in outcome assessment result from processes like misconstrual, in which we imagine an inaccurate image of the event or experience whose value we are considering. If there is a way to improve our reasoning in this respect, it must involve helping us to bring to mind more clearly what the experiences will actually be like through vivid depictions of the events and experiences at stake. 390

Philosopher Peter Railton has made a version of this argument about the role of vivid imagination in informal risk analysis:

What does it take to get someone to listen to reason? Consider someone engaged in a risky activity—smoking, drug-taking, roller-blading without a helmet, excessive dieting, etc. We might give such a person good arguments and good evidence. And such a person might be excellent at logic, and under no illusions about the reliability of the relevant statistics. Yet these might not alter behavior without enlisting the help of the imagination, which might—in response, say, to the suffering of an acquaintance, or a vivid portrayal in fiction or film—furnish the individual with a personal sense of ‘what it would really be like’ to suffer the associated disabilities (2005, 276). 395 400

This basic idea is an old one, familiar particularly from arguments about the importance of art in cultivating our sensibilities (e.g., Nussbaum 1998). Literary critic Arthur Lane expressed it by arguing that the value of poetry lies in its ability to “communicate a felt reality to those who, by accident or by choice, are cut off from this reality” (1972, 24). Similarly, literary critic Robert Langbaum championed the role of poetry—particularly what he calls the “poetry of experience” that emerged in the 19th century—in enabling its readers to “see into the life of things.” It does that by “restoring to the facts a concreteness they have lost in the process of becoming facts, of being abstracted from their original human and historical situations” (Langbaum 1957, 134). 405 410

Journalist Bill Moyers gave this idea a policy-oriented twist in a recent address delivered at West Point. Criticizing decision making about the Iraq war, Moyers provocatively claimed that “people in power should be required to take classes in the poetry of war” because “poets with their empathy and evocation open to bystanders what lies buried in the soldier’s soul” (Moyers 2006).¹⁰ He went on to suggest that this vicarious experience overcomes the governance challenge 415

I identified earlier—the separation of authority from experience that can contribute to misconstrual—noting that he “could only name three members of Congress who have a son or daughter in the military.” Obviously the experience of soldiers themselves only captures one dimension of the “outcomes” that intelligent decision about war should consider, but that observation highlights a reason to pursue *more* humanistic understanding, not less.¹¹ The important point is that the battlefield experience comprises an irreducible and fundamentally important part of the experience of war that serious policymakers should consider. Moyers went on to worry that the enthusiasm for scientific forms of expertise has marginalized this more humanistic form of insight in government decision making. Reflecting on his experience as an advisor in the Johnson administration during the Vietnam war, Moyers concludes: “The talk of war was about policy, strategy, numbers and budgets, not severed limbs and eviscerated bodies,” and decision making remained “divorced from realities on the ground” (2006).¹²

Political theorist Robert Goodin (2000) recently advanced a similar claim about the need for humanistic insight in public policymaking. Goodin described *empathetic understanding* as a fundamental problem of deliberative democracy, since citizens must make policy choices that impinge on the lives of other citizens whose experiences are unfamiliar to them. He went on to argue that art, literature, drama, and other cultural artifacts make an essential contribution to the empathetic understanding that is needed.

These authors emphasize the importance of vivid, concrete, and typically emotion-laden imagery for understanding and for intelligent choice. Picking up on Railton’s language, we could say that intelligent choice requires knowledge not only about the probability that various consequences will come to pass but also about what it would be like if they did. The kind of concrete imagery that often appears in poetry and literature provides this ability to “see into the life of things.” Such imagery carries special importance for decision makers suffering from the experiential gap.

The Limits of Scientific Understanding

It is not easy to say what this vivid appreciation of the nature of an experience consists of, but it may be helpful to contrast it with scientific understanding. To do that I will try to explain why scientific accounts of a phenomenon provide an inadequate basis for correcting the errors of misconstrual. The fundamental obstacle runs very deep, and it is best analyzed in the corners of cognitive science grounded in philosophy rather than those grounded in empirical psychology.

I have discussed the task of outcome assessment in the terms of expected utility theory, but that way of speaking may mask a fundamental difference between outcome assessment and probability assessment. While probability assessment relies on the kind of objective information embodied in scientific expertise, in many cases intelligent outcome assessment must rely on inherently subjective information. Here I am using the terms “objective” and “subjective” in the sense that the philosopher Thomas Nagel used them in an influential series of essays on an inescapable limitation of scientific understanding (esp. Nagel 1973, 1979, 1989). In Nagel’s account, a

basic ideal of science directs us to strive for objectivity by “reducing our dependence on individual or species-specific points of view towards the objects of investigation.” That is, objectivity demands a description of each phenomenon “not in terms of the impressions it makes on our senses, but in terms of its more general effects and properties detectable by means other than the human senses.” That ideal, however, runs into fundamental limitations when we try to apply it to experience itself: 465

It is possible to follow this path [when we examine the external world] because although the concepts and ideas we employ in thinking about the external world are initially applied from a point of view that involves our perceptual apparatus, they are used by us to refer to things beyond ourselves—towards which we *have* the phenomenal point of view. Therefore we can abandon it in favor of another, and still be thinking about the same things. Experience itself, however, does not seem to fit the pattern. The idea of moving from experience to reality seems to make no sense here. . . . Certainly it *appears* unlikely that we will get closer to the real nature of human experience by leaving behind the particularity of our human point of view and striving for a description in terms accessible to beings that could not imagine what it was like to be us. If the subjective character of experience is fully comprehensible only from one point of view, then any shift to greater objectivity—that is, less attachment to a specific viewpoint—does not take us nearer to the real nature of the phenomenon: it takes us farther away from it (Nagel 1974, 444–5). 470 475 480

Nagel initially advanced this argument as a contribution to the philosophy of mind, registering a caution about the strategy of physical reductionism emerging in the early years of cognitive science (cf. Nagel 1971). Later he broadened the idea to make a more general epistemological point: “Not all reality is better understood the more objectively it is viewed. Appearance and perspective are essential parts of what there is, and in some respects they are best understood from a less detached standpoint” (1989, 4). Insofar as the outcomes relevant to a policy choice include human experiences, Nagel’s conclusion about the limitations of the objective point of view apply to any reasonable attempt to comprehend them.¹³ 485 490

This difference between subjective knowledge and objective knowledge has been discussed extensively in feminist epistemology. Philosopher Cora Diamond, for example, illustrated the boundaries of scientific understanding with a playful example from meteorology: “Science seeks the laws governing tornadoes; it does not seek to convey *what it is like* to be in a tornado,” she notes. “Similarly, or so it is argued, the search for genuine scientific knowledge of social life can properly ignore the characteristic experiences people would have as actual participants in the form of social life knowledge of which is being sought” (Diamond 1987, 1006). She went on to suggest the same duality in useful knowledge about war that Moyers invoked: “Why should we not find valuable a history of war informed by experience and imagination and [also] including much impersonal knowledge of it?” (p. 1012). 495 500

Nagel and Diamond stress the limits that the (otherwise desirable) commitment to objectivity places on scientific achievement, but it makes no difference whether we call the kind of understanding that this commitment excludes “scientific.” The important point involves the ways of knowing that public organizations need to rely on to make intelligent decisions. From that perspective it is clear that the objective forms of knowledge required by science provide only some of the guidance we want—at best, guidance relevant to the task of probability assessment and to some aspects of outcome assessment. If Nagel is right, they cannot even in principle provide complete guidance about outcome assessment. We want to know the probability of tornadoes, but we also want to know the nature of the havoc they wreak. The latter question does admit to some degree of objective analysis (in the sense of “objective” just explained): We can learn the probability of physical damage to various structures; the probability of injury; and so on. But at some point the ability of objective knowledge to capture what we are interested in must give out. At that point, objective knowledge must be supplemented by irreducibly subjective understanding of experience. In a case like the risk of tornadoes, the irreducibly subjective component of outcome assessment may not loom very large. But in cases like war and adoption it probably does.

This thought captures the core of truth contained in the apparently sentimental resistance to scientific reduction in policymaking and other fields of human endeavor. It does not imply that scientific analysis is irrelevant to intelligent decision making but that scientific analysis cannot exhaust the relevant considerations. It must be supplemented by the sort of vivid, subjective, emotional sense of what an experience would be like that I have been discussing.

The Neurophysiology of Subjective Feeling

Recent neuroscience illustrates this conclusion dramatically. In his widely discussed research about the role of emotional experience in rational choice, neurologist Antonio Damasio recounts several cases of patients with damage to the ventromedial sector of the brain’s prefrontal cortex. These patients make deeply and obviously flawed decisions, and although the explanation for their irrationality remains uncertain, Damasio himself speculates that the problem is that they cannot attach emotional significance to the outcomes they are considering (1994, 219). In my terms they suffer a complete and selective deficiency in outcome assessment, and they do so because their understanding of the relevant outcomes lacks the emotional character that partly constitutes the subjective point of view.

Damasio’s most-developed portrait focuses on Elliot, a thirty-something former businessman who had suffered a benign brain tumor that doctors surgically removed, taking damaged parts of his prefrontal cortex along with it. Although his intellectual capabilities remained unaffected—he could pass a variety of intelligence and personality tests, had excellent factual knowledge and logical reasoning skills, enjoyed perfect memory for dates and names, and could converse intelligently about world affairs—Elliot lost his ability to connect emotions and other evaluations

with his thoughts about past events and future possibilities. As a result, he became detached and unemotional, even when recounting the tragedy of his own life (1994, 44). Most important, Elliot's emotional deficit undermined his capacity to make rational choices: His life began to unravel, as he made disastrous decisions about his financial and personal affairs. Damasio himself concluded that "the cold-bloodedness of Elliot's reasoning prevented him from assigning different values to different options, and made his decision making landscape hopelessly flat" (1994, 51). Damasio summarizes the point with an aphorism: "We might summarize Elliot's predicament as *to know but not to feel*" (1994, 44–5).

A case like Elliot's helps to clarify why the psychological defense of benefit-cost analysis may be seriously misleading. That defense rests on the idea that scientific analysis operates as a bulwark against the irrational influence of strong emotions. Prefrontal patients like Elliot vividly illustrate the opposite danger. In Damasio's own words, it may be true that "emotions and feelings can cause havoc in the processes of reasoning under certain circumstances," but it is equally true that "the *absence* of emotion and feeling is no less damaging, no less capable of compromising the rationality that makes us distinctively human" (1994, xvi).

In a case like Elliot's, the problem is that the mind loses the ability to develop an emotional reaction to the experiences that memory or imagination places before it. I have tried to stress a different point: Those of us who *do* have the mental capacity to gauge the emotional significance of potential experiences can only exercise that capacity effectively if we have access to richly imagined depictions of those experiences. Thus where Damasio argues that a deficiency in our capacity to evaluate images of absent events will undermine intelligent choice, I have suggested that stripping those images of the vivid details that inform emotional judgment will produce the same result. In either case, the ultimate problem is that our mental representations of the relevant possibilities lack the irreducibly subjective character that accurate outcome assessment requires. In that respect, availability serves as a resource as well as a bias.

The Psychology of Subjective Feeling

Like Sunstein's claim that benefit-cost analysis can overcome biases in our statistical intuitions, my argument that humanistic ways of knowing can overcome biases in our affective forecasts has made only indirect use of evidence from psychology. Psychological research has identified an importance bias in our intuitive decision making, but it provides no direct evidence about how we can overcome that bias. In suggesting that humanistic understanding provides part of the solution, I have relied more on philosophical analysis of the kind of knowledge that affective forecasting requires than on direct evidence from psychology.

Nevertheless, the little direct psychological evidence that does exist is consistent with my argument. I am aware of two studies that directly test potential strategies for improving affective forecasts. The first is a study reported by Kahneman (2000, 703–4) about perceptions of happiness among lottery winners and paraplegics. That study found that most people fail to appreciate the extent to which lottery

winners and accident victims eventually acclimate to the changes in their life fortunes but that subjects who knew a lottery winner or paraplegic personally forecasted such people's happiness much more accurately. In this analysis, vicarious experience apparently made it possible to imagine more accurately what it would be like to be a paraplegic or lottery winner. A second study asked subjects to predict how happy they would be the day after their favorite football team lost a big game (Wilson, Wheatley, Meyers, Gilbert, and Axsom 2000). Most respondents dramatically overestimated the impact of the loss on their happiness, apparently because their intuitive affective forecasts focused on the loss itself to the exclusion of all other considerations. Some subjects, however, were asked to complete a "future diary" that itemized the activities they would carry out throughout the day, and those who did so made much more accurate affective forecasts. In this respect, a deliberate attempt to imagine the relevant experience improved the subjects' affective foresight substantially compared with others who relied on unreflective intuitions. In both cases, subjective understanding—the vicarious experience conveyed by others or a personal effort at imagination—improved affective forecasts.

HUMANISTIC GOVERNANCE

I have argued that humanistic ways of knowing—those that rely on a vivid, emotional, and ineffably subjective understanding of what an experience is like—play an essential role in truly rational choice. Along the way I have tried to identify the aspects of outcome assessment that escape both the unaided intuition of public officials burdened by the experiential gap and the scientific forms of expertise typically provided to them. That analysis lays a theoretical foundation for understanding the importance of humanistic and populist understanding in governance.

How can public officials incorporate humanistic ways of knowing into their decision making? I cannot outline here a full-blown alternative to the technique of benefit-cost analysis that scholars like Sunstein invoke as the upshot of their own arguments. I will try, however, to suggest at a general level how two broad governance tools—civic engagement and expert policy research—might incorporate humanistic ways of knowing. The tools themselves are familiar, but my argument puts their value in a distinctive light. For that reason it suggests both new justifications for these techniques and new perspectives on how public officials should use them.

Civic Engagement and Humanistic Ways of Knowing

The argument I have developed suggests one natural way of thinking about the role of civic engagement in governance. Because public officials often suffer from the experiential gap, they run a large risk of misconstrual. Civic engagement can be understood as one way of trying to overcome this obstacle to intelligent governance. In that respect, it aims to promote not just the responsiveness but also the rationality of public policy.¹⁴

To make this contribution, civic engagement not only may but *must* make room for the sort of vivid and emotional accounts of personal experience that are often marginalized in public deliberation. As Francesca Poletta and John Lee have shown, such input often gets relegated to side conversations outside the core of public deliberation about policy choices, since participants assume that it is “politically unserious” (2006, 701). Discussions of the availability heuristic in the policy analysis literature may reinforce that assumption by suggesting that vivid storytelling distorts reasoned assessment of policies. My argument challenges this perspective by clarifying the essential contribution that humanistic ways of knowing make to rational decision making. In doing so it provides new reasons to agree with those who defend the value of narrative, storytelling, and emotional expression in public deliberation (e.g., Sanders 1997; Young 1997). 635 640

Consider a widely discussed example of populist input into regulatory decision making: the EPA’s participatory process for developing air pollution standards for inorganic arsenic in the mid-1980s. One set of regulations defined emissions standards for copper plants that processed high-arsenic copper ore. As it turned out, those standards would apply only to the Asarco copper plant in Tacoma, Washington. To get help thinking through the conflict between the plant’s economic benefits and the health risks it posed, the EPA orchestrated an extensive process of public consultation in developing the regulations. 645 650

What role can public input of this sort legitimately play in government decision making? The answer to this question is not always obvious, and at the time many critics complained that the EPA was abdicating its responsibilities by turning the decision over to the public. The argument I have developed, however, suggests a clear rationale for civic engagement that helps to make sense of the role that public input actually played in the Asarco case. 655

The most striking contribution of the public forums was the wide range of health and safety concerns that area residents nominated—a stark contrast to the narrow focus on lives at risk among the EPA’s technical experts. According to Esther Scott’s account of the event, which informed many later discussions of this episode: 660

“The personal nature of the complaints and questions made a striking counterpoint to the presentations of meteorological models and health effect extrapolations,” wrote Gilbert Omenn, [who] had been hired by EPA to observe and help evaluate the workshops. People asked about the symptoms of arsenic poisoning, about other health effects from arsenic, about the advisability of eating produce from Vashon Island gardens. One person asked whether it would be necessary to remove a foot of dirt from her garden to make it safe (and who would pay for it); another wanted to know what effect arsenic emissions would have on animals. Ruckelshaus, who had received a personal report on the Vashon Island workshop, later recounted that, after EPA health experts finished their presentation, “A woman got up in the audience and said, ‘Last week, my dog ate some spinach and dropped over dead. Did he die of arsenic?’” 665 670 675

There were more sobering moments as well, Ruckelhaus noted, as when “another woman got up and said, ‘Will my child die of cancer?’” (Scott 1988, 8).

The literature about the availability heuristic suggests that these vivid and emotional accounts are dangerous because they threaten rational thinking about risk. In the Asarco case, however, they helped to clarify the full range of outcomes potentially threatened by arsenic pollution. The need for that clarification arises out of the experiential gap and the risk of misconstrual it generates—biases that are clearly evident in the discrepancy between the EPA experts’ narrow focus on the number of human lives at stake and the much wider range of concerns invoked by residents (including the risk of miscarriage, threats to animals, and the pervasive changes in everyday life that residents made to protect themselves and their families from environmental pollution). This subjective picture of what it is like to live under the threat of arsenic pollution provides a more complete basis for outcome assessment.

I do not mean to argue that all forms of civic engagement make policy more rational. Although I have shown how vivid narratives can contribute to public deliberation, my argument also highlights the potential for public input to mislead policymakers unless it is carefully handled. Vivid first-hand reports of what an experience is really like can help decision makers overcome the experiential gap, but the affective forecasting literature suggests that even these first-hand reports can misfire. Just as our unexamined statistical intuitions often miss the mark, our unexamined affective intuitions may also suffer from systematic biases.

As Shawn Rosenberg has argued, cognitive limitations like these pose an important challenge to public deliberation. Since our intuitions often mislead us, our spontaneous contributions to public deliberation may be problematic. Thus “deliberation cannot be conceived simply as an open arena for the free and equal exchange of views” (2007, 355). Instead it should be viewed partly as a “remedial institution” (2007, 347). For example, deliberative forums should “provide incentives and information that foster specific thinking strategies” in order to overcome the biases that plague our unaided intuitions (2007, 346–7).

The responsibility for shaping public deliberation in these ways often falls to public managers. In earlier work (Thacher 2001) I argued that the public managers who oversee civic engagement have an important role to play in improving what John Dewey called “the methods and conditions of debate” (Dewey 1927, 208). They do that (I argued) in three ways: By presenting relevant factual information, by reaching out to absent publics, and by framing the discussion around the question of the public good (Thacher 2001, 11). Here I mean to add a fourth managerial responsibility—the need to encourage participants to reflect on their affective intuitions. Managers carry out this responsibility by trying to evoke a clear, valid, and broadly representative set of stories about what it would be like to live with the problem a policy tries to address. That direction is necessarily vague, but it provides a broad overview of one important component of civic engagement practice. Future

research should try to identify and richly describe the kinds of managerial practices that fulfill this responsibility. 720

From this perspective, the lesson of the affective forecasting literature is not that outcome assessment is hopeless any more than the lesson of the literature about our statistical intuitions is that probability assessment is hopeless. In both cases, the point is that it takes concerted effort to overcome the biases that often infect our thinking. With respect to outcome assessment, evidence that subjects who completed systematic future diaries made better affective forecasts than comparable subjects who didn't gives reason for hope that this effort can pay off. Such evidence suggests that there is room for public managers to improve the contribution that civic engagement makes to outcome assessment. 730

Humanistic Policy Research

Civic engagement cannot always evoke the full cross-section of experiences relevant to a policy choice because not everyone participates in public deliberation. In earlier work (Thacher 2001) I suggested that public managers can cope with this problem partly by focusing the participants' attention on the question of which decision will serve the public interest rather than on which decision will serve each individual's self-interest. But it is often impossible to identify the public interest without a clear understanding of the experiences of absent groups. For example, according to contractualist political theory, a policy is usually illegitimate if it imposes an unfair burden on a member of the polity. But to determine whether a burden is unfair, policymakers need to know something about the nature of that burden as experienced by the people who bear it. It may therefore be impossible to make a valid judgment about what decision would serve the public interest without the benefit of the perspective of those affected by the policy, and the problem of absent publics' returns. 735 740 745

In these cases policymakers need to overcome the experiential gap—i.e., to gain some understanding of the experiences of relevant absent publics. My earlier discussion of the limits of scientific understanding suggests that this need typically cannot be met by scientific expertise alone. Instead, it requires a humanistic approach to policy research that has no place in the technical and quantitative approaches that currently dominate the field. 750

Historian Alice O'Connor (2007) recently drew attention to an alternative approach to policy research that may sometimes satisfy this need. Examining older approaches to social research from the Progressive era, O'Connor described a series of studies of working class life in Pittsburgh funded by the Russell Sage Foundation from 1907–1908. The Pittsburgh Survey aimed to clarify the nature of the human problems that industrial workers faced in their lives and workplaces. For example, in *Work Accidents and the Law*, one of three volumes the study produced, Crystal Eastman described the consequences of workplace accidents for factory workers and their families. Her portrait included statistical tables describing accident rates, but it also drew emotional portraits of individual cases, drawing on photographs and personal interviews in a manner that is foreign to contemporary risk assessment. 755 760

Eastman's portraits emphasized how the harms of work accidents encompassed not only physical injury and lost pay but also "the special cloud that always threatens the worker in dangerous trades . . . the constant dread, the shock, the grief and longing" that his family experienced. She went on to illustrate vividly the human costs to working families of injury and death. *Work Accidents and the Law* was hardly a work of poetry, but it served the same function of "restoring to the facts a concreteness they have lost in the process of becoming facts, of being abstracted from their original human and historical situations" (Langbaum 1957, 134). By doing so it made a contribution to outcome assessment that more single-mindedly scientific approaches to risk analysis ignore.

A more detailed example from U.S. adoption policy illustrates how this type of policy research can inform a major policy debate. During the middle part of the 20th century, a wave of adoption agencies, vital statistics offices, and state legislatures decided to restrict the right of adopted adults to access their adoption records and original birth certificates, which are sometimes the only sources of information about the identity of an adoptee's biological parents.¹⁵ Whether or not this policy change could be justified turns partly on the nature of the burden that adopted adults were being asked to bear.¹⁶

Despite the importance of that consideration, policymakers apparently made the decision to seal records without any detailed understanding of what that decision would mean for adopted adults (Carp 1998, 138–41; Samuels 2001, 397). At least three factors contributed to this blind spot. First, adopted adults played little direct role in policy deliberations about this change. At the time, there may simply have been too few adopted adults to form a significant political force—the surge in adoption did not come until the end of World War II, and children adopted then had not yet reached adulthood—and adopted adults may still have experienced too much stigma to organize as such. (It was usually assumed, rightly, that most of them had been born out of wedlock, and it is difficult today to appreciate how much stigma that status still carried as late as the 1950s.) Second, adoption agencies rarely maintained contact with adoptees after their placement as infants—historian Wayne Carp goes so far as to say that from the agencies' perspective "there were no *adult* adoptees" at all (1998, 141)—so adoption professionals had no easy way of learning what family history information meant to adopted adults. Finally, the professional and social scientific literature from this era contained no sustained discussions of the lived experience of adoptees (Carp 1998, 98; Samuels 2001, 397). Together these three factors meant that (in Carp's words) "the mental and the experiential world of the adult adopted person was unknown" (1998, 141). In particular, the policymakers and adoption professionals who decided to seal adoption records had no basis for understanding what sealed birth records meant to adopted adults. In this respect, the sealed records episode vividly illustrates the experiential gap.

That gap was not overcome until the publication of John Triseliotis's 1971 book, *In Search of Origins: The Experiences of Adopted People*. The book was based on interviews with several dozen Scottish adoptees who had sought out information about or contact with their birthparents. (They were able to do that

because Scotland was one of the few jurisdictions in the Anglo-American world that had never sealed birth records.) Triseliotis asked his interviewees what it was like to grow up as an adopted person, why they had decided to try to learn about their biological parents, and what that information meant to them. In that respect, *In Search of Origins* provided one of the first sustained glimpses into the minds of adopted adults.¹⁷ 810

Triseliotis's research ended up playing a major role in British adoption policy. At the time, the British legislature had asked a committee headed by Sir William Houghton to review the laws governing access to adoption records throughout Britain. When the Houghton Committee began its deliberations, England and Wales (unlike Scotland) both barred access to adoption records. The Committee set out with no intention of opening records in England and Wales and an inclination to recommend closing them in Scotland. First, however, it asked Triseliotis to "investigate the circumstances under which adoptees made use of the access provision in Scotland" (Triseliotis 1984, 44). When its final report came in, the Houghton Committee recommended opening records throughout Britain, citing Triseliotis's research as a major influence on its decision. Ultimately the British legislature accepted the Committee's recommendation and opened records nationwide. 820 825

My point in this brief discussion is not to make an empirical claim about the influence *In Search of Origins* had on the Houghton Committee, since the historical record needed to make such claims is thin. Instead I mean to make a (necessarily qualified) normative point: That there is a *prima facie* reason to believe that Triseliotis's research was relevant to the Committee's deliberations, in the sense that the committee might well have been justified in recommending open records based on the kind of humanistic understanding of the adoptee's perspective that *In Search of Origins* provided. The research was relevant because it helped to clarify what it is like for an adopted adult to have access to information about her biological family. Without that first-person perspective, which was all but unavailable to public officials before *In Search of Origins*, it was impossible to understand the nature of the burden sealing records would impose on adopted adults. As a result, it was impossible to evaluate the fairness of sealed records policies. In this respect, humanistic policy research can help to inform policy deliberations like those conducted by the Houghton Committee by providing access to first-person perspectives.¹⁸ 830 835 840

CONCLUSION

The psychological defense of benefit-cost analysis put a new twist on the old theme of scientific government. In this paper I have tried to put a similar twist on an opposite and equally old theme—the need for populist and humanistic alternatives to scientific government. In particular, I have tried to provide a basis for that theme that draws from the same psychological literature invoked by recent defenses of scientific government, as well as related bodies of scholarship in cognitive science. Those literatures suggest that truly rational choice often requires vivid and 845 850

emotional images of the outcomes at stake in a decision. Otherwise, we may fall back on stylized representations that systematically distort our outcome assessments.

This conclusion suggests that we should be skeptical of the argument that emotionally rich portrayals of events and experiences will undermine rational decision making. That argument rightly points out the danger that emotional imagery carries for valid probability assessments, but it ignores the essential role that emotional imagery plays in outcome assessment. This second component of rational choice is especially precarious in government because of the experiential gap, which exacerbates the risks of misconstrual. 855

In this respect, the cognitive science literature helps to clarify the value of humanistic ways of knowing for intelligent governance. Civic engagement and humanistic policy research represent two important ways of incorporating that kind of knowledge into government decision making. Both can help public officials gain insight into the lived experience that their decisions will affect. In the process they can help to reduce the risks of misconstrual associated with the experiential gap. 860 865

The cognitive science literature also highlights the distinctive challenges that these efforts must grapple with. For example, although the first-person accounts provided through civic engagement can help public officials overcome the experiential gap, not all first-person accounts are created equal. Our unexamined intuitions about the nature and value of our past experiences sometimes rest on a caricature of what those experiences are really like. The public managers who convene and shape civic engagement processes have a responsibility to encourage participants to scrutinize the narratives that people share. We are the experts on our own experiences, but it sometimes takes concerted effort to access our own expertise. Future research should seek to clarify in more detail than I have been able to muster here how public managers can discharge this important responsibility. 870 875

There are undoubtedly many other challenges involved in using humanistic ways of knowing to improve government decision making. Here I have focused on the challenges involved in ensuring that individual narratives provide a faithful picture of what a subjective experience is really like, as well as the reasons why these pictures matter for rational choice. By itself that analysis cannot answer the important question of when such narratives will persuade, influence, or even make sense to their intended audience.¹⁹ In particular, some social psychologists and rhetoricians have suggested that narratives may be persuasive not because they are truthful but because of other factors—for example, because of their familiarity to the audience or the social position of the storyteller. Future research on the role of humanistic ways of knowing in governance needs to clarify the challenges posed by those findings and the techniques that public managers can use to cope with them. 880 885

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NOTES

1. Here I use the phrase “ways of knowing” intuitively. For a more theoretical account, see Feldman et al. (2007). I will leave the relationship between their conceptualization and my own analysis of humanistic and scientific understanding as an open question. 895

2. One experiment asked a randomly-selected group of subjects to estimate how many words in a typical novel would end in “-ing” and then asked a different group to estimate how many words would have “n” as their penultimate letter. The first group gave an estimate three times as large as the second: The ease of bringing “-ing” words to mind and the difficulty of doing so for “-n-” words led subjects to misestimate their relative frequencies so badly that the results were simply illogical (Tversky and Kahneman 1973). 900

3. In these examples, people apparently rely on their ability to imagine an event to estimate its probability, but Sunstein has argued that in some cases people ignore probability altogether—a phenomenon he dubs “probability neglect” (2002: 46). For example, one study found that the greater the detail used to describe an event, the less attention people pay to information about the probability that it will occur (Hendrickx, Vlek, and Oppewal 1988), while another found that changes in probability had much less influence on “affect-rich” gambles (such as a chance to avoid an electric shock) than on “affect-poor” gambles (such as a chance to avoid a \$20 penalty) (Rottenstreich and Hsee 2001: 189). In the text I will not distinguish between probability neglect and the availability heuristic. For both, the bottom line is that “vivid examples can make people overreact to small risks” (Sunstein 2002: 2). 905 910

4. Sunstein mentions one aspect of this line of research in passing (2002: 66), but he does not consider its distinctive implications for the nature and value of expertise. 915

5. As Kahneman and his coauthors repeatedly note, the discrepancy between remembered utility and experienced utility raises the interesting and difficult question of which one government should try to maximize. I will sidestep this question here, however, for reasons suggested in footnote 8.

6. Slovic gives a simple example in a discussion of teenage smoking. Noting that “appreciating the risks of smoking means appreciating the nature of the consequences as well as the probability of those consequences,” he suggests that biases in the former area may be substantial: “I have seen no evidence to show that young people have realistic knowledge of what it would be like to experience lung cancer, chronic obstructive pulmonary disease, or any of the other fates awaiting smokers that many would consider ‘worse than death’” (Slovic 2000: 365). 920 925

7. In fact some of the psychological work in this area is not about emotions at all. Quite apart from the concern that “utility” provides a limited metric of value, the Benthamite tradition tends to erase the useful distinction between sensations (such as pleasure and pain) and emotions (such as happiness and sadness). Any athlete—not to mention the Marquis de Sade—knows that pain need not imply unhappiness. 930

8. I do not mean to claim that an accurate prediction of one’s emotional reactions is sufficient for intelligent moral judgment, partly because the emotions we experience when we *do* find ourselves face-to-face with the relevant event may themselves be inappropriate (see, e.g., Gibbard 1990). This point suggests an objection to my argument: Although I have shown that prospective judgments of value may diverge from the experience of value, the latter rather than the former may be at fault. This objection is implausible in cases where mispredictions result from misconstrual. Thus while I do not claim that reasonably-accurate emotional predictions are sufficient for intelligent moral judgment, they are often necessary. (Smith 2002: 22, 188–189 discusses exceptions.) 935 940

9. While I have approached the topic differently, my argument runs parallel to Elizabeth Anderson's (2004) analysis of how emotional experiences provide evidence for value judgments. The psychological evidence I have reviewed supports her claim that those experiences (e.g., liking something) are in fact independent of what they are supposed to provide evidence for (e.g., wanting it). 945

10. As Moyers notes, the soldier and war poet Wilfred Owen, who provides the epigraph to this section, advocated for this role of poetry. "I came out in order to help these boys," Owen wrote. "Directly by leading them as well as an officer can; indirectly, by watching their sufferings that I may speak of them as well as a pleader can." 950

11. In 1930 Douglas Jerrold attacked anti-war fiction like *All Quiet on the Western Front* for providing a biased and partial account of military conflict. But as Roger Lane argues, literature of that sort makes an irreplaceable contribution by filling a crucial gap in our understanding of war (1972: 26–7). We cannot understand war from *All Quiet on the Western Front* alone, but neither can we do without something like it. 955

12. A half-century ago Lionel Trilling argued that this bias in government decision-making was pervasive and deeply-rooted. "We must understand that organization means delegation, and agencies, and bureaus, and technicians," he wrote, "and that the ideas that can survive delegation, that can be passed on to agencies and bureaus and technicians, incline to be ideas of a certain kind and of a certain simplicity: they give up something of their largeness and modulation and complexity in order to survive" (1950: xii). 960 Here I mean to argue that the particular types of "modulation and complexity" that the experiential gap destroys make it especially difficult to carry out appropriate outcome assessments.

13. Gilbert (2005: 36) illustrates the relevance of Nagel's argument to the affective forecasting literature. 965

14. Political theorists have worried about the tension between rationality and democratic responsiveness for many years—at least since Rousseau's pessimistic comments about the "blind multitude" (1987: 162). Here I aim to add one more suggestion to the long line of analyses that consider how this tension can be alleviated.

15. Before this period, most states barred the general public from accessing adoption records and original birth certificates, but adopted adults usually did not lose the right to access these records until the 1950s or even later (Samuels 2001: 378–81; Carp 1998: ch. 4). The term "original birth certificate" refers to an idiosyncratic feature of the vital records system for adoptees. In most U.S. states, the court that authorizes an adoption asks the registrar of vital statistics to issue a new birth certificate that updates the child's surname and the names of her parents. The vital statistics office then places her so-called "original birth certificate" under seal. 975

16. It also presumably depends on the positive motivation for sealing records, but that motivation is surprisingly difficult to trace. Contemporary commentators often assume that sealed records were designed to protect birthparent privacy or perhaps the parental autonomy of adoptive parents, but the relevant historical record is fragmentary and ambiguous (e.g., Samuels 2001: 393; Carp 1998: 111). Since the point I want to make does not turn on this issue, I will not pursue it here. 980

17. It is difficult to summarize his findings briefly, but Triseliotis clearly showed that adoptees rarely searched for family history information out of either idle curiosity or an ill-founded belief that biology is destiny, as many people apparently assumed (Samuels 2001: 397). Instead the search for origins often involved an attempt to fill in the type of historical narrative about the evolution of the self that all of us try to construct. To that end, many of Triseliotis's interviewees sought to learn the answers to questions such as where they were 985

from, why they were put up for adoption, and what their lives might have been like if they had 990
been raised by their biological parents.

18. Of course, a decision to retroactively open adoption records raises a host of additional 995
considerations, notably what that decision would mean to a birthmother who gave up a child
for adoption on the understanding that her identity would remain secret and then organized
the rest of her life based on that promise. Those considerations, too, should be explored
through humanistic policy research, this time focused on the birthmother perspective. Insofar
as the considerations that such research uncovers would weigh against those derived from the
adoptee perspective, policy would need to reconcile the conflicts among them. The fact that
humanistic policy research may uncover such conflicts is hardly a weakness of the approach;
scientific policy research often surfaces conflicting policy considerations as well. Policy 1000
research aims to make policy choice more informed, not to make it easier.

19. This gap has disciplinary roots. Since my argument is grounded in cognitive psychol- 1005
ogy and cognitive science, it rests on an individualistic perspective. Ultimately, however, pub-
lic decision-making is a collective endeavor, so no individualistic perspective can provide a
complete understanding of government decision-making. To clarify the challenges involved
in integrating humanistic ways of knowing into this collective context, it will be necessary
to turn away from individualistic fields like cognitive psychology to fields that focus on group
dynamics like social psychology and rhetoric.

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