TARGET ARTICLE

Prejudice and the Unfinished Mind: A New Look at an Old Failing

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Three approaches to the nature of human rationality are considered: Daniel Kahneman and Amos Tversky on decision making, David Hume on causation, and Peter Strawson on morality. All are seen as deploring the state of rational thought and despairing of the human capacity for logic. Their implicit model of the perfectly rational human is explored with the help of Mr. Spock and found to be of doubtful value considered in terms of evolutionary survival, where “prejudgment” is essential to decision making under stress. The glimmerings of this insight are found in Hume’s “therapeutic” solution to his existential dilemma, and a general argument is made—with the help of side glances at prototype theory, linguistics, categorical thinking, and archetypes—that rationality cannot be equated with “logic” as generally understood but rather consists of a series of pragmatic judgments of reality that have stood the test of natural selection. This leads to a reconstruction of the idea of “prejudice” from a negative to a mildly positive attribute, with examples drawn from Charles Lamb and Paul Robeson, and hence to the conclusion that prejudice is not a warped form of thought but that thought is a particular form of prejudice.

Dinner in Jerusalem

Just outside the Old City of Jerusalem is an area—Mishkenot Sha'ananim—beautifully restored by the generosity of Sir Moses Montefiore. It is largely inhabited by writers and artists, but it is also home to a magnificent, continental-style restaurant serving food in the classic manner. My hosts in the city told me that Henry Kissinger liked to dine there when he was in town (which was frequently in those shuttle-diplomacy days of 1974). I decided this was reference enough, and there retired with two colleagues, both psychologists, to discuss papers we had heard at the 50th anniversary proceedings of the Technion in Haifa. One of the papers had particularly intrigued me, and I invited the authors, Daniel Kahneman and Amos Tversky, to share the repast. The evening had two major surprises for me. One was the discovery, after lapping up the excellent wild duck with wild berry sauce and a halfway decent Israeli cabernet courtesy of the Rothschild family, that this was a strictly kosher establishment. Perhaps this shouldn’t have surprised me, but it did. The other was a remark, made by either Kahneman or Tversky (the passage of time tends to merge them in memory), which came at the end of the evening when, after a second bottle, we were beginning to drop our defenses and tell it like it is.

I shall keep you in suspense about the remark, which so shook me, until I have described the paper in question and why I was so fascinated with it. The authors were interested in the capacity of people to think consistently and logically, which they defined simply as being able to reach inescapable conclusions based on premises previously agreed on as absolute. In some simple cases, there is no problem. If we agree that 2 plus 2 equals 4, we have to accept that 3 plus 1 equals 4. The logic of the first implies the second. But, when we move from certainties to probabilities, it appears that our capacity for consistency and logic breaks down. The example our authors gave in their paper ran something like this. They set up an experiment with a group of people chosen from the general population. They first got them to agree on a specific premise, which they call the “law of large numbers.” It is in effect a basic principle of probability: If one has a large sample in which one item is overwhelmingly represented—say, 90%—and if an object is picked blindly and randomly from that sample, the probability of it being the overrepresented item is also more than 90%. If, for example, we have 100 golf balls in a box—90 white and only 10 black—then if we pick blindly from the box and offer you the choice of color, you will be bound to opt for white. Odds of 9:1 are pretty overwhelming, and people readily agreed that they must choose white under the circumstances.

Kahneman and Tversky then set up a neat test. The conditions were as follows: The sample was a farming community in the Midwest where more than 90% of the men were farmers. We pick a name from the census list at random. What is the occupation of the man so picked? Obviously, we must opt for “farmer”—the agreed-on principles leave us no choice. The odds are overwhelmingly, even stupendously, in this direction. If we had money on it, that is the way we would bet. But our subtle, even cruel, authors decide to put us on a mental rack. They append a description like the following to the person picked (I am doing this from memory, so the details may be a bit different, but the principle is not affected):

The person is male and well educated. He likes reading—especially serious nonfiction. He is fond of classical music and plays the piano reasonably well. His
hobbies include chess and crossword puzzles. He likes
good wine and good conversation. His favorite television
is Masterpiece Theater, and his favorite films are
foreign.

And so on in the same vein. Now this information should
not, if we have indeed accepted the law of large numbers,
affect our decision in the slightest. It does not matter what
the man's characteristics and preferences are; the chances are so
slender of not picking a farmer that we should stick to our
decision. Nevertheless, when presented with this description,
the subjects of the experiment deserted in droves and
decided that their random pick was in fact a schoolteacher or
librarian—the two most popular choices, even though these
represented only a fraction of 1% of the population in
question.

**Lunch in Evanston**

To illustrate how deep-seated is this tendency to buck
logic, I take you to another gracious meal, this one in the
charming university town of Evanston, Illinois (Thai cuisine
this time and just as delicious). The guests included a famous
BBC producer and an even more famous zoologist. These
were unusual men and certainly not of the common herd. In
fact, they were deploiting human illogicality, in the context of
a discussion of the function of religion. I thoroughly agreed
and for evidence told them the Kahneman and Tversky tale of
the illogical subjects. To my surprise, they joined the droves
of deserters and protested that what the description did was
provide “extra information” on which to base a judgment.
They presented arguments to back this up. The BBC pro-
ducer insisted that it was like telling you that the person in
question had “white, soft hands” and therefore, one sup-
poses, couldn’t be a farmer. The world-famous zoologist
gave the analogy of a box with 99 white stones and 1 black
stone. If we picked at random, yes, he said we would have to
say that the unseen stone was white. But if we were then told
that the stone was carboniferous and ignitable, we would
obviously change our minds and say we got the one piece of
coil in the box.

These are smart characters, and they made their case force-
fully. And let’s admit it, you’re nodding in agreement with
them. But consider: There is nothing in the description that is
even close to “white, soft hands,” and, even if there were, is
this cause to deny farmer status to our random pick? He could
have a skin condition and wear gloves all the time. I know
lots of farmers who always wear heavy work gloves and
whose hands are not particularly granular. As to the coal
analogy, the only thing that would count would be something
in the description that definitely ruled out farmers, like “He
has no idea how to use a tractor” or, more analogously, “He
works full time in a library,” or something such. There
is nothing like that in the description. Thus, I countered, unless
the description gives unqualified evidence that the man is not
a farmer, given your acceptance of the law, you have no cause
to conclude he is anything else. He may be a very unusual
farmer, although, again, I know a lot of farmers with pretty
refined tastes and college educations. (In fact, legally, I am a
farmer, and I have letters from the State addressed “Dear
Farmer” to prove it.) The point is, if we are to be consistent
and logical, absent conclusive evidence to the contrary,
whatever description is given, we must stick to the decision

that our random pick is overwhelmingly likely to be a farmer.
But not only do we not do so, we feel decidedly uncomfort-
able with this decision, much happier with the schoolteacher,
and tend to get, like my eminent friends, heated and argu-
mentative if the point is pressed.

Kahneman (or was it Tversky?) gave many such examples
over dinner and, shaking his head at the close of the evening,
sadly concluded: “In evolutionary terms, we are an imper-
fect creature; we have an unfinished mind.” That was my
second shock of the evening.

I had not expected a cognitive psychologist to invoke evolu-
tion, but to hear one deplore our “unevolved” condition
was even more striking. The logic was inescapable: If we are
capable of accepting logical premises, we should be capable
of acting on them. We seem incapable of doing so: We prefer
intuitive judgments to logical arguments; we are hopelessly
deficient thinking machines. It perhaps is not strange that
cognitive psychologists should have a totally logical thinking
machine as an ideal—a computer, in fact. The computer
would have remorselessly turned up “farmer” every time. It
is not burdened with human intuition; it does not get heated
and emotional; it does not prefer to base its judgments on
qualitative evidence when it has accepted quantitative
premis.

In this respect, it is a superior thinking machine. But,
one asks, how long would it survive in the real world of
human decision making?

You may perhaps think that, recollecting in anything but
tranquility, I exaggerate the position of the psychologists.
Indeed, the original conference paper has long since dis-
appeared from my files. But a portion of Kahneman’s conclu-
sions survived in print. “There is an element of incongruity,”
he wrote, “in the image of an organism equipped with an
affective and hormonal system not much different from that
of the jungle rat being given the ability to destroy every living
thing by pushing a few buttons” (in Kranzberg, 1980, p.
180). But, if that is not bad enough, he added:

Another source of danger is to be found in man’s cog-
nitive limitations, which make it quite likely that the fate of
every societies may be sealed by a series of avoidable mistakes committed by their leaders. The increase in man’s power over his environment has not been accompanied by a concomitant improvement of his ability to make rational use of that power. Crucial decisions are made, today as thousands of years ago, in terms of the intuitive guesses and preferences of a few people in positions of authority. Since our ability to predict social events is not equal to the increasing complexity of social systems, decisions that affect the lives of millions are typically made in a state of extreme uncertainty concerning their consequences. Unfortunately, our cognitive limitations are nowhere more evident than in our ability to make intelligent decisions under uncertainty. Recent advances in decision analysis and in cognitive psychology have uncovered systematic inconsistencies in our preferences for uncertain outcomes, and systematic errors in our
intuitive reasoning about uncertain events. These errors and inconsistencies appear to be essentially universal. They are not overcome by experience and are not prevented by merely trying. Their prevalence increases the likelihood of negative consequences of decisions, well beyond the lower limit that is set by the existence of uncertainty. (Kahneman, in Kranzberg, 1980, pp. 191-192)
In other words, conditions are always uncertain, and we are more or less bound to make a hash of any decisions about them. As things get more complex, this gets worse. Not a happy picture of "the human condition." And I do not exaggerate the "logical computer" solution. Here is Kahneman again:

Human engineering starts from a dispassionate appraisal of the operator's limitations and attempts to structure the environment in which he will function so as to circumvent these limitations, both by assigning some tasks to the machine [computer] and by designing man's tasks so that his limited capacity may be used to full effectiveness. (in Kranzberg, 1980, p. 192)

I used to ask students: "Suppose we had a really super computer, which could analyze perfectly all the facts we fed into it and come up with the highest level of probability possible of a Russian first strike. Would you be prepared to let it press the button, or would you prefer to leave that decision to a duly elected, but fallibly human, President of these United States?" I think I asked Dan Kahneman the same question after that memorable dinner, but, as with so many similar memorable occasions, I've completely forgotten his answer. Fruity, thy name is memory.  

Where No Man Has Gone Before

The ideal evolutionary model, of at least these cognitive psychologists, from which we fall short in reality, has been realized often enough in fantasy. Most of the plot of Star Trek—I mean the real Star Trek, not the overlukatve, tartyed-up modern version—rests on the inability of the totally logical Vulcan, First Officer Spock, to comprehend the intuitive thinking of his human shipmates, especially the good Captain Kirk. And yet, the story always leaves us with the moral that good intuitive thinking is really to be preferred. Spock is fine when working out strategies in the abstract, but, when it comes to dealing with the fallible human creatures who inhabit the Star Trek universe (and who all conveniently speak English), he is at a disadvantage. Kirk's intuition wins the day. Spock is like a super-useful computer, and sometimes he can be annoyingly so. When stuck in a particularly tight corner, Kirk asks rhetorically, "I wonder what our chances of survival are?" Spock without a blink answers "2,427,736 to 1, Captain." Kirk gets understandably irritated. In the new version of the show, Star Trek: The Next Generation, they have gone the whole hog and replaced the half-human Spock with the totally android Data, and, of course, Data yearns to share those endearing human imperfections with which he has not been programmed.

Thus, I wondered at the time and have wondered since if our cognitive psychologists, distressed as they might have been over the refusal of their subjects to follow their own rules, really had in mind a totally logical animal as some kind of ideal end-point of evolution—or had they perhaps missed the point? Were the defectors, including the famous producer and the famous zoologist, perhaps operating on some principle better than "logic" (the quotes obviously indicating "logic at least as they define it")? Could not they have been correct in following intuition and bucking overwhelming odds? And, if so, what principle were they following? Because we have to admit that, flying in the face of logic as they are, they are guilty of, yes, prejudice. We have to face up to this because prejudice has been getting bad press lately, and perhaps it is time for a new look at an old failing.

What is happening to the subjects of the experiment—the principle they are falling back on—is our old friend stereotypical thinking. We should perhaps be aggrieved at their defection. Especially if we are farmers, we should perhaps set up a committee to protest against the slur cast on the farming community, which suggests it is incapable of culture and refined tastes. After all, I have known a good many farmers in my time who played the piano, many who enjoyed a good wine, and at least one Southwestern farmer who had recordings of everything Bach ever wrote. Of course the reaction was a prejudice plain and simple: Farmers are conceived of as a certain type that excludes these things; ergo, this man could not be a farmer. We only have to expand the logic of this thinking a bit further and we have the whole range of social stereotypes, sexual stereotypes, and ethnic and racial stereotypes with which we are unhappily familiar. And, of course, we are righteous against all such stereotyping, are we not—all of us who knew, in our heart of hearts, that the man was not a farmer.

Let me ram this home with a more uncomfortable example. Let our sample be the population of a district in a West Coast city that is 90% homosexual. Let you pick again a name at random and agree that we must opt for homosexual. Then let me give you the description:

The man is a construction worker who likes bowling, football, and car racing. His favorite music is country-and-western; his favorite drink is straight bourbon and a Bud chaser. He is a union organizer and a member of the National Guard and the National Rifle Association . . .

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1 The original conference paper to which I refer was never, in its exact form, published anywhere, but see Kahneman and Tversky (1977), which was published shortly after. Excerpts from the papers at the conference were published in Kranzberg (1980). See Kahneman's contribution, "Human Engineering of Decisions," from which I have quoted. I should add in fairness that these conclusions have not gone unchallenged in psychology, and there is a lot of work showing that, as one commentator put it, although people may be correct at using logic, they are rarely completely out to lunch. Also, the rules used by experimenters are more often of the order 7:3 than 9:1. At 7:3, I might be prepared to ditch "farmer" in favor of "librarian." Even so, I have used this example for nearly 18 years now on highly sophisticated and intelligent people, and, out of hundreds of respondents, only a negligible number have ever agreed to "farmer" (even at 9:1) without considerable and heated argument. One argument against the Kahneman and Tversky position I have come across goes something like this: This is not really stereotypical thinking because people are in fact in possession of "sociological" information about farmers, and what they are saying is that, given this information, it is 90% probable that a person so described is not a farmer. One could only call it stereotypy if they had no—or very little—such information. This argument is problematic because one never knows really how much real information about farmers people do have (in my experience, very little). But in any case, I am not here to defend Kahneman and Tversky. They are for me "data." I'm not concerned so much that they may be open to criticism or that other work modifies their conclusions, and so on. I am concerned with the model of an "unfinished mind" desperately in need of "logical" mechanical adjuncts that they (or at least Kahneman) have pressed upon us. The degree of "logicality" can be left for the cognitive and social psychologists to squabble over. (The ubiquity of Kissinger at this period is not without its relevance to Kahneman's flight at the prospect of unbiased human observers on the man behind the mirror. One reason I wanted sophisticated companions at that dinner was to try out Lionel Tiger's description of Kissing- ger as "the shopkeeper of nations," one of the better witticisms of an otherwise dry decade.)
Need I go on? The whole logical mob of you, despite your firm commitment to observe the laws of probability, has now deserted "homosexual" in droves. Think about it. Actually, because academics tend to be more sensitive to the feelings of homosexuals than farmers, some of you will be a bit more ambivalent about this one. Think about that too.

Well, I don’t know what the conditions of evolution were on Vulcan. The canon is not consistent on this. In one version, the Vulcans evolved beyond emotion into pure logic; in another version, they so fearful the emotional parts of themselves that they suppress emotion in favor of logic in their training. Either way, they must have had a peculiar environment of evolutionary adaptation. If, for example, they never think in stereotypes but only on the merits of the individual case and according to strict induction, it is hard to see how they might have survived. Perhaps their environment was so benign that this could have happened, but again the canon implies a warlike and competitive past, so this seems unlikely. And, in such a past—so like our own (as they often stress with a smugness unbecoming creatures of pure logic)—any organism acting on pure induction would have lost out in the struggle. While Spock was consciously calculating the odds of being hit by the saber-toothed tiger springing at him—calculating its arc of approach, estimating its weight and velocity, working out its ETA (estimated time of arrival) and point of impact, and so forth—he would have been cat meat. Kirk, on the other hand, rolling swiftly to one side, yelling "Zap that tiger" and aiming with his phaser set on "kill," would have been saved, or at least would have had a better chance of being saved.

Similarly, we are at war with tribe X, and a member of that tribe in full war paint appears suddenly before us with spear at the ready. There are various logical possibilities, such as:

1. He is out to get us.
2. He is a defector from them to us, and we just startled him.
3. He really wants to surrender.
4. He is one of ours in disguise just back from a spying mission.
5. He is a supernatural entity and will not harm us.
6. He is a hallucination.

All these are interesting possibilities; they, and countless others, all could be true; but, we suspect that anyone acting on the logic of that assumption and stopping to explore them would have less chance of contributing to the gene pool than someone who acted on the first and disposed of the stranger.

But, the purist might say, in each case we are acting in terms of extreme prejudice (and isn’t it interesting that this term prefixed by to terminate with has become a spy-novel euphemism for “to kill”?). To which we can only answer—and a damn good thing too. For, in these instances, prejudice can be defined as the making of a quick decision in a survival situation. By definition, the information will be inadequate in such circumstances, and we would be obliged to act in terms of superficial indicators. In other words, we would act in terms of stereotypes. We are certainly capable of switching to that other mode of thinking: the exploration of all logical alternatives. But this is perhaps better done at night around the campfire when the clear danger is not present. And of course we might often make mistakes. The tiger might have been jumping into a tree to catch a monkey; the warrior might have been on a peace mission. Perhaps—but in the long run these mistakes would be more than offset by the survival benefits of killing enemies first and thinking about it afterward.

But let us not be led into making a false dichotomy between thinking and acting—just as we must avoid the implicit one between emotion and thinking. The brain evolved to do both and do them at the same time. Kirk is not thinking any the less than Spock when he rolls away and fires the phaser. If anything, he is thinking harder and faster—so fast that we don’t want to call it “thinking” at all. We want it to be “reflex” or “automatic,” but even if it is, it still involves thought. Kirk was presented with data; he analyzed it, and he acted on it—in a split second. He drew with astounding rapidity on a huge bank of stored information and put it into action. I doubt the computer programmer exists who could ever get close to simulating that speed of retrieval and translation into action.

In effect, Kirk was doing everything Spock was doing only at a trillion times the speed. And he could not have done it without a tremendous upsurge of adrenaline kicking the whole thing into action. The process could have failed, of course, and he could have stood rooted to the spot. But training to act involves thought, which cannot be separated from action. And in the course of evolution, our brains developed to achieve just such thought-action in the struggle for survival. Our ability, when recollecting in tranquility, to dissect such activity in the Spock fashion and reduce it carefully to possible alternatives, mathematical formulas, and the like, is in effect a byproduct. Removed from the need to act, we can think in this disembodied way; but that is not how our thinking evolved, and, in that sense, it is not what it is for.

The essence of stereotypical thinking is that it is fast and gives us a basis for immediate action in uncertain circumstances. But its legacy is that we are happier and more comfortable when thinking in ways that promise to ensure immediate survival than in ways that appear to threaten it. This may no longer make much sense, but unfortunately our brain doesn’t know that, or, if it can be persuaded of it, it still has a hard time bucking a system that got it to this point in the first place. Presented with the need for a quick decision, it will prefer stereotype to logic.

Backgammon in Edinburgh

Let us digress for a moment to ask a question that is at the base of all modern philosophy and that exercised another dedicated wrier and diner in Scotland and in France during the 18th century. David Hume was a charming writer and obviously a charming man, although the description by the Earl of Charlemont is scarcely flattering:

His face was broad and fat, his mouth wide, and without any other expression than that of imbecility. His eyes vacant and spiritless, and the corpulence of his whole person was far better fitted to communicate the idea of a turtle-eating Alderman, than of a refined philosopher. His speech, in English, was rendered ridiculous by the broadest Scotch accent, and his French was, if possible, still more laughable. (MacNabb, 1951, p. 9)

But this grotesque figure faced a cruel death with great dignity, literary failure with composure, and the world of
philosophy with a daring scarcely matched by anyone since. How can you not like a man who says of himself:

My company was not unacceptable to the young and careless, as well as the studious and literary; and, as I took a particular pleasure in the company of modest women, I had not reason to be displeased with the reception I met with from them. (MacNabb, 1951, p. 11)

I think we would have all liked to dine with Hume, and he would have been at home among us. Mrs. Adams, the mother of the famous architects, said of him: “He is the most innocent, agreeable, facetious man I ever met with” (MacNabb, 1951, p. 12). What a nice epitaph. Also, my own prejudices lead me to quote with glee his statement that “there cannot be two passions more nearly resembling one another than philosophy and hunting” (from his A Treatise of Human Nature, 1738/1911, II, 3, x).

Yet this innocent, by virtue of his very innocence, set the agenda for modern philosophy. He was the complete skeptic who forced us to examine our most cherished assumptions about human thinking. First among these was the assumption that there is a necessary connection between cause and effect. There are certainly connections—of contiguity in time and space, for example—but on what basis do we impute a necessary connection? All we in fact know, said Hume, is the spatial and temporal contiguity, as in flame causes heat. This is a “constant conjunction” and exists in the real world. The idea of necessary connection (or, as he would have written, connexion) exists in the mind of the observer. Hume does not, as superficial readers sometimes imply, deny that there are causes and effects in nature. He does deny that the “necessary connection” is there in nature; it is by way of an inference from natural succession and contiguity. He will have nothing to do with attempts to define forces or powers inherent in things. Gravity is an inference from the behavior of bodies in space, not a property of the bodies.

Now all this is very familiar. It is, as I said, the foundation of modern philosophy. It woke Kant from his “dogmatic slumbers” in an attempt to find the Ding-an-sich, which was a constant reality behind the appearance of things. Hume ruthlessly applied it to the idea of the “self”—to our very personal identities—and showed this too to be an inference, not a property of something called a “person.” At its most fundamental, our belief in the constancy of physical objects is a colossal act of faith.

One might suppose that Hume would have been devastated by his own skepticism, and he confessed it should have this effect:

The intense view of these manifold contradictions and imperfections in human reason has so wrought upon me, and heated my brain, that I am ready to reject all belief and reasoning, and can look upon no opinion even as more probable or likely than another. Where am I, or what? From what causes do I derive my existence, and to what condition shall I return? Whose favour shall I court, and whose anger must I dread? What beings surround me? and on whom shall I have any influence, or who have any influence on me? I am confounded with all these questions, and begin to fancy myself in the most deplorable condition imaginable, environed with the deepest darkness, and utterly deprived of the use of every member and faculty. (Hume, 1738/1911, I, 4, vi)

Such vast philosophical despair—he even invokes a metaphor of shipwreck—surely makes Hume a candidate for the first existentialist. And note that, as with Kahneman and Tversky, it is “the imperfections in human reason” that are the basis of this empiricist angst. But note also how he gets out of his difficulty:

Most fortunately it happens, that since reason is incapable of dispelling these clouds, Nature herself suffices to that purpose, and cures me of this philosophical melancholy and delirium, either by relaxing this bent of mind, or by some avocation, and lively impression of my senses, which obliterates all these chimeras. I dine, I play a game of backgammon, I converse, and am merry with my friends; and when, after three or four hours’ amusement, I would return to these speculations, they appear so cold, and strained, and ridiculous, that I cannot find it in my heart to enter into them any further. (Hume, 1738/1911, I, 4, vi)

This is scarcely a solution that would have recommended itself to Kierkegaard or the Left Bank crowd. We can be certain of nothing, said Hume, but it doesn’t matter. “A serious good-humoured disposition” will not be troubled by the fact that we have no better reason than custom to believe that tomorrow will resemble today in any respect. “If we believe,” he said, “that fire warms or water refreshes, it is only because it costs us too much pains to think otherwise.” Skepticism, in other words, is for philosophers in their studies; “honest gentlemen . . . being always employed in their domestic affairs, or amusing themselves in common recreations . . . ,” have no need of such skepticism and indeed are better off without it. (All these quotes are from Hume, 1738/1911, I, 4, vi.)

Most philosophers, of course, accept this as a charming aside from Hume. It certainly didn’t satisfy that honest German gentleman Immanuel Kant, whose massive rebuttal of Hume’s skepticism was a far remove from the “spleen and indolence” preached by the facetious Scot. But this is where I want to press the matter a little. Kahneman and Tversky’s subjects were honest gentlemen (and gentlewomen), and they too preferred to avoid the pain caused by ruthless reasoning. They followed what Hume was never afraid to call Nature with a capital N, in deserting reason for intuition, or what he would have called custom—habitual kinds of thinking resistant to skeptical incursions from clever students of probability theory. Fire does cause warmth; a man so described is not a farmer. In our philosophical moments, like the scientists or like Hume in his study, we can go into black despair at this imperfection of human reason, this evidence of the unfinished mind. In the real world of domestic affairs and common recreations, it doesn’t matter a damn.

Now Hume did not think that in proposing this way of avoiding angst he was proposing anything more than a therapy. It was not a solution to his “Why do we imagine a necessary connection between contiguous events?” problem. This imagining was simply “custom,” it was “Nature,” it was blind habit, it was just what we did. What Hume and

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2These descriptions of Hume are taken from the “Biographical Note” in MacNabb (1951, pp. 9–12).
his successors do not seem to have seen is that he was implicitly proposing a solution, but it was a solution that would have been better understood 100 years after his death in 1776, once Darwin's two major works had come off the presses, and even more so 100 years after that. The solution is simply that natural selection has programmed us to respond to constant contingency in time and space with a mental image of necessary connection because our survival depended on it. (Forgive the anthropomorphizing of natural selection here. This is just for literary effect.)

Imagine the creature that evolved without making this connection. You cannot, anymore than you can, imagine a creature evolving with total skepticism about the existence of external objects. The totally skeptical creature (our completely rational computer) would never survive. We have to make the assumption of necessary causal connection in order to survive. It is that simple. Creatures with brains that did otherwise might have existed, but they are not here to tell the tale. The philosopher in his study may have no good reason to suppose that if fire burns today it will do so tomorrow, but the first *Homo erectus* to utilize fire some million years ago had better have operated on this assumption, or the philosopher might not be here to doubt it.

Hume (1738/1911) actually teetered on the edge of this answer in a remarkable but short chapter in *Treatise*, "Of the Reason of Animals" (I, 3, xvi). He was concerned to point out that our imputation of cause and effect, as well as our imputation of continued existence of bodies, was not a result of "reasoning" or "speculation" but of "custom." He had just (in section xv) given eight pretty straightforward rules by which we judge cause and effect, and, he insisted, "our scholastic headpieces and logicians show no such superiority above the mere vulgar ..." when it comes to making such determinations. If this is so, one simple demonstration will clinch it: Animals are not capable of "subtlety and refinement of thought"; nevertheless, they operate as soundly on the principles of cause and effect as we do "for their own preservation, and the propagation of their species." He gave examples from dogs' behavior toward their masters to birds building nests. A dog avoids fire and precipices, shuns strangers, and caresses his master, he said, and does so on the basis of experience that he generalizes, exactly as we do. If this is so, then what does human "reason" add?

Reason is nothing but a wonderful and unintelligible instinct in our souls, which carries us along a certain train of ideas, and endows them with particular qualities, according to their particular situations and relations. This instinct, it is true, arises from past observation and experience; but can any one give the ultimate reason why past experience and observation produces such an effect, any more than why nature alone should produce it? Nature may certainly produce whatever can arise from habit; any habit is nothing but one of the principles of nature, and derives all its force from that origin. (Hume, 1738/1911, I, 3, vi)

He goes on to elaborate this in the subsequent sections:

> Nature, by an absolute and uncontrollable necessity, has determined us to judge as well as to breathe and feel; nor can we any more forebear viewing certain objects in a stronger and fuller light, upon account of their customary connection with a present impression, than we can hinder ourselves from thinking, as long as we are awake, or seeing the surrounding bodies, when we turn our eyes towards them in broad sunshine. (I, 4, i)

Nature has left this to his choice, and has doubtless esteemed it an affair of too great importance, to be trusted to our uncertain reasonings and speculations. (I, 4, ii)

In 1738, appeals to Nature were certainly often made, but no one had much idea how it was that Nature came to "endow" creatures with such propensities. Hume offered "their own preservation and the propagation of their species," and it is obviously a very small step to the principles of mutation and selection and the obvious conclusion that, unsubstantiated as these principles are by subtle reasoning and philosophy, the power of ideas like necessary connection between cause and effect derives from their survival value to the creatures so endowed. This "uncontrollable necessity," which is as strong as seeing and breathing, is "of too great importance" to be left to the possibilities of reasoning. It has to have the automatic qualities of instinct; it must operate without the intervention of subtle thinking. Hume could offer no reason why Nature should so endow us, thus leaving himself open to attack from just those he sought to undermine. His enemies could insist that it must be a benevolent act of God intended for our preservation. We can now invoke a different sort of deity and come up with a similar answer—except that our deity is blind and lacks compassion. It is only interested in survival and not particularly interested in us. If logic serves survival, so be it; if it does not, so much the worse for logic.

Thus Hume unwittingly proposed a solution when he thought he was merely giving sensible advice on avoiding a philosophical hangover. His honest gentlemen, and the ranks of the vulgar, as well as his philosophers, did indeed operate on principles of necessity rather than of rationality. And they were absolutely correct to do so. Creatures ignoring the inner prompting to attribute causal efficacy, or assuming that objects drifted in and out of existence, or supposing that they were not the same people today as yesterday, would not have been able, to use his words, to protect themselves and propagate their species. The honest gentlemen, therefore, and even the philosopher Hume, when he was playing backgammon or enjoying the company of modest women and blindly acting on assumptions of causal necessity, was acting according to nature and entirely as he should be acting. Hume's therapy was indeed the source of his necessity and hence the solution to the problem. Equally, we must conclude that the experimental subjects were right to reject their agreed-on logical assumptions and go with their intuition: The man was not a farmer.

But is this not, to follow the logic of the argument here, to say that we are right to engage in stereotypical thinking? In a sense, yes. But to determine exactly what sense, we must explore a little further. And, as a little footnote to the philosophers, let me say that, although we can indeed go straight from Hume to Darwin without passing through Kant and collecting the synthetic a priori, it would be unhistorical to do so. I recognize this, as I recognize that Kant's thoughts on the categories of the understanding, and his very insistence on their a priori character, constitute an important stepping
stone. Konrad Lorenz put this case forcefully, and I have in fact dealt at some length elsewhere with the means by which they might have become lodged in our mental processes by natural selection. Unfortunately, this was in a book (Fox, 1983), which appeared to be about incest (it was confusingly titled The Red Lamp of Incest), and few philosophers read it. I mention this for the record. One who did read it was Willard Van Orman Quine, who commented: "Chapter 7 was gratifying for its philosophical position, so congenial to my own: the naturalistic conception of mind and the recognition of natural selection as the origin of mind and language" (personal communication, 1983).

He later elaborated a view very similar to the one put forward here regarding causation, but in his case with regard to prediction or, as he charmingly renamed it, *veridical expectation*—the expectation that similar events will have similar sequels. Of these expectations, he wrote:

> We take their fulfillment hour in and hour out as a humdrum matter of course; the occasional unexpect- edness is what we notice. Our standard of similarity, for all its subjectivity, is remarkably attuned to the course of nature. For all its subjectivity, in short, it is remarkably objective.

In the light of Darwin’s theory of natural selection, we can see why this might be. Veridical expectation has survival value in the wild. Innate standards of subjective similarity that promote successful expectation will tend to be handed down through the survival of the fittest. The tendency will have favored us and other species as well. These considerations offer no promise of future success if nature takes what we would regard as a sudden turn, but they do account plausibly for how well we have been doing up to now. (Quine, 1987, pp. 160-161)

**To Blame or Not to Blame**

Another digression, into moral philosophy this time, may help to make the point. Here I invoke another article, this time by Peter (now Sir Peter) Strawson (1962), which I read in 1963, with the prescient title "Freedom and Resentment." Articles sometimes hit you and stay with you and nag at you, the way the Kahneman and Tversky article did. I had always been puzzled by the issue of free will. In fact, it was to finish a thesis on that topic that I first ventured to those United States in 1957, only to be sidetracked from Cornell to Harvard, where I was kidnapped by anthropologists and brainwashed. But the topic continued to bother me in the irritating way the basic problems of philosophy tend to do: They are very boring, but you can’t let go of them. Of course, like any sensible philosopher, if not like the ranks of the vulgar, I was a determinist, because I could find no precise meaning to the idea that any act could be “free.” The network of causation going into any action was so complex, what sense did it make to say it was a “free” act, if by *free* one meant “uncaused” or “without influences external to itself” or whatever? There was no such act by definition. But then came the philosophical conundrum: If no act is free, then how can we attribute responsibility, and, horror of horrors, how can we ever blame anyone for an evil deed? For, without the possibility of holding people responsible for their actions so that they might be blamed for wrongdoing and punished (and vice versa), the whole structure of law and morals, to say nothing of the upbringing of children, was meaningless.

Strawson addressed just this point and, interestingly, invoked Hume on causation as his model. As far as morals were concerned, Hume had fallen back on the “moral sense” theory of his Scottish colleagues in formulating a moral system of his own, the “moral sense” being as original and natural as our intuition of causation. Darwin (1871/1901) took off from exactly this point in *The Descent of Man*, and I have tried to show in some detail where he went from there (Fox, 1989). Strawson (1962), however, wanted to compare our insistence on seeking justification for moral praise and blame to our insistence on justifying causation:

> Compare the question of the justification of induction. The human commitment to inductive belief-formation is original, natural, non-rational (not irrational), in no way something we could choose to give up. Yet rational criticism and reflection can refine standards and their application, supply “rules for judging cause and effect.” Ever since the facts were made clear by Hume, people have been resisting acceptance of them.

Strawson’s point is that, although we must accept the non-rational origin of the necessity of causal connection, this doesn’t prevent us from rational discourse about it. This, after all, is what science is about. But there is nothing (in his opinion) we can say about the principle itself. It is just there, as Hume insisted. In like manner, said Sir Peter, there is a “web” of human attitudes and feelings that are equally just there. To have moral arguments, we have to take these for granted and then argue within these given premises:

> Inside the general structure of the web of human attitudes and feelings of which I have been speaking there is endless room for modification, redirection, criticism, and justification. But questions of justification are internal to it. The existence of the general framework of attitudes itself is something we are given with the fact of human society. As a whole it neither calls for nor permits, an external “rational” justification.

Thus we may argue endlessly about the details of, for example, how praise and blame should be apportioned, but the fact that we wish to heap praise and lay blame in itself is just a given fact of what we used to call “human nature” — Strawson’s “web of human attitudes and feelings.”

He makes a psychological point in pressing his argument. Logical determinists, he said, must always maintain an “attitude of objectivity.” They must never lay blame or feel resentment, because they know that people are not “responsible” for their acts and that therefore these attitudes are illogical. Need we hark back to Spock, the ultimate determinist, who always refuses praise for doing what was logically necessary even at the risk of his own life and who is rarely—except in his half-human moments—perturbed by the wickedness of others because they are doing what they must. We lesser creatures, Strawson asserted, simply cannot sustain the “objective attitude” as a matter of psychological fact:

> We have the resource [the objective attitude] and can sometimes use it: as a refuge, say, from the strains of involvement; or as an aid to policy; or simply out of intellectual curiosity. Being human, we cannot, in the normal case, do this for very long, or altogether.
living according to rules: the essence of a truly human existence.

But it has no rational basis. It is, as Strawson was at pains to point out, not irrational but nonrational: given, original, a priori, or whatever. When we act on the authority of "ought," we are responding to an imperative that is just as much a product of natural selection as when we act in terms of cause-effect. This or that particular "ought" will be given by our particular culture, but the compulsion of "ought" itself is given with our brains and bodies. This is why the imperative is categorical. This is why the moral sense of the peasant is as definitive as that of the most refined moral philosopher. This is why Jefferson could argue that all men are created equal in a philosophical climate set by John Locke, who did not believe any such thing. 4 But the system of praising and blaming, or responsibility and resentment—the web of human attitudes and feelings itself—is simply given and beyond rational justification.

Alarms and Excursions

Strawson did not throw up his hands in horror at this, as did Kahneman, Tversky, and Hume. But one perhaps senses a kind of ennui, a sort of North Oxford resignation. "Yes, it's a mess, but it's what we've got, and we'd better learn to live with it. There are, after all, no real alternatives; we can probably muddle through." There is certainly no celebration of the situation. So, perhaps we may say that all four of our thinkers adhere to the theory of the unfinished mind. The picture painted is not so much of a fallen creature as of one who has never risen far enough. The end product should be a totally logical, totally rational, totally objective creature: a Mr. Spock—or, rather, a Commander Spock (like Strawson, he's been elevated). Insofar as we fall short of this, insofar as we cannot think logically or maintain moral objectivity for more than brief, privileged periods of rationalization, then we are imperfect creatures.

But, as we saw with Hume's therapeutic solution, the imperfections have one outstanding quality: They work. We are here; we function. We have built an ambitious science on our unwarranted induction of cause and effect; we have built many and varied societies on our unjustifiable systems of blame, praise, and retribution. Despite our brain being a wildly imperfect logic machine, despite its activity being (from a logical point of view) arbitrary and contingent, in some way or other it has ensured our survival. Logic nearly drove John Stuart Mill mad (as Hume could have told him it would), and his recovery came partly through reading Wordsworth. I like to think he read these lines from The Excursion (1814):

How exquisitely the individual mind
(And the progressive powers perhaps no less
Of the whole species) to the external world
Is fitted; and how exquisitely too—
Theme this little heard of among men—
The external world is fitted to the mind.

If the mind seems to be a logical mess, and yet it deals so successfully with the external world, then surely our conclusion must simply be that logic is not the best way of dealing
with the external world. In truth, it may even be a disastrous way of dealing with it. In "prejudging" the world in certain illogical but effective ways, we are acting in accordance with certain natural imperatives as surely as in seeing things in colors and in three dimensions. There is certainly no "logical" reason why we should do this. It is just the way natural selection panned out as a result of living an active life in trees for so long.

In the same way, logic served us no real purpose except for some synthetical propositions we can't very well ignore: for example, those of mathematics, and the law of noncontradiction. Again, individuals who didn't operate on the principle that something could not both be true and false at the same time would have had an intolerably hard time with the world. But these are principles we use in the normal conduct of everyday affairs, not the extended exercises in logic that characterize the classrooms and studies of philosophers. We may have abandoned the idea that the syllogism is the ideal type of logical thinking, but all of us still operate on some principle of rationality that is founded on the idea that rational thinking equals logical thinking. And, by logical thinking, we mean what Hume, Strawson, and Kahneman and Tversky meant by logical, even if we can't keep it up for long and in the end quickly ditch it for prejudice and stereotype.

Perhaps we should ask ourselves: Why must we burden ourselves with a model of rationality, which does not work for us? Instead of bemoaning our unfinished and imperfect state, why should we not accept that there is that Wordsworthian "fit" between mind and the world? This does not even have to mean that we have an accurate picture of external reality; it certainly does not have to mean that the world corresponds to canons of logic as we understand them. The "fit" is as arbitrary as the fit between our bodies and the world. It is just the way it is, because natural selection made it that way by a process of chance mutation and ruthless selection. As we have said, if attributing cause and effect and personal responsibility is not logical, and if refusing to act on agreed premises without conclusive contrary evidence is not logical, then we do not necessarily have to despair of our illogically—our unfinished mind—but rather we should rejoice in the fact that our prejudices do our reasoning for us in cases in which, to use Hume's words again, it is a matter too important to be left to subtle processes of reasoning and speculation.

**Reason Is as Action Does**

We shall probably have to come up with a new definition of reason itself. Reasoning, from this perspective, is not an exercise in applied logic. What reasoning may be is a complex series of intuitive leaps, the "logic" of which is that, although arbitrary and contingent, they correspond to enough of external reality to enable us to survive in it. And, they are that way because Konrad Lorenz's "great constructors" (mutation and natural selection) so shaped them as they shaped the grasping hand and the well-planted foot. From a logical point of view, the mind is a mess—a morass of prejudice and resentment—but so is the body a mess from the viewpoint of the designer of an ideal animal. Why should we expect the mind to be any different? I have always liked James Thurber's advice to "leave your mind alone." Yes, the mind operates on prejudices, but these prejudices (in the form, among other things, of a priori categories) are what got it here, so they deserve some respect. If we can learn to think in terms of our attribution of cause and effect and personal responsibility, as well as of our refusal to accept overwhelming probabilities, as prejudices—which is the thrust of all the arguments here considered—then we will have to think differently about prejudice, or stereotypical thinking, itself.

George Lakoff (1987), who has done more than any other linguistic philosopher to change (through an examination of metaphor) our notions of rational thinking, pleads for a richer view of reason based on the idea of "prototype effects" that are used in reasoning, though not in logic as it is normally understood. Among these forms of "reference point" reasoning are "social stereotypes: making quick judgments about people and situations; Typical cases: making inferences from typical to atypical cases, based on knowledge of the typical; Paragons: making comparisons, using them as models of behavior" (p. 367); and so on. Our task then should be, not to try to eradicate stereotypical thinking on some mistaken logico-rational model of human thought, but to consider what our "paragons" and "typical cases" and "social stereotypes" are and see perhaps how we can (and, realistically, how we cannot) rearrange our metaphors to make them suit our benign prejudices better.

It is surely easy for us to see that we are more comfortable with stereotypical thinking than with logically treating each case on its merits. It is something that our puritan moralizing selves bemoan daily. But if we stop to consider why we are so comfortable and how difficult it is to maintain, as Strawson saw, "the objective attitude," then we might want to rethink some of our own attitudes toward prejudice. The first reason is perhaps that such thinking is lazy. There goes that human moralizing again. People are responsible, and if they don't shape up to our logical expectations, then we use blame words. But, if we don't moralize, and if we ask ourselves why there is, in Hume's words, "more pleasure and less pains" in so thinking, then we might conclude that this is a case in which our "natural reason" is operating for us. It is saying, in effect:

1. Class these objects together on some principle of resemblance and operate on the assumption that the less familiar they are, the more they should be treated with suspicion.
2. Insofar as the properties of any of them are known, act as if the rest had the same properties.
3. If these are pleasure-producing properties, approach; if they are pain-producing properties, go into a defensive posture.
4. If they are aggressively pain-producing properties, then prepare for flight or attack.

And so it goes.

This is very rough and ready. The whole routine would be like an elaborate critical-path analysis and would indeed be like a computer program if we could work the whole thing out—there are hundreds of possible subroutines. But it is not a program for dealing with individuals on their merits. It

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3 Various recent attempts to rethink rationality suggest that this is not such an outre notion after all (Churchland, 1986; Cosmides & Tooby, 1987; Frank, 1988; Simon, 1983; Tooby & Cosmides, 1989).
deals with classes of individuals (human or otherwise) and provides us with an immediate response to an uncertain situation. Not for nothing did Kahneman and Tversky call their subsequent book *Judgement Under Uncertainty* (Kahneman, Slovic, & Tversky, 1982). When their subjects opted for “not farmer” as a response, they were operating on a program like the one I have suggested: They opted for a stereotype. And they were right to do so. In an uncertain situation (e.g., you are told that “farmers” are going to kill you but “nonfarmers” will protect you, and you are given the description offered as opposed to one of a “typical” farmer), which would you choose? (The same would go for our homosexual example.) I am not saying that prejudice is infallible; it doesn’t have to be. To win over Spockian or other strategies, it only has to stand a better chance than any alternative of getting its practitioners into the gene pool. On average it has to come out a winner, and that will do to establish it.

Of course, this becomes a real problem in modern society where we want to be right all the time and where “on average” won’t do. Bernhard Goetz (a White New Yorker who opened fire on Black youths who surrounded him in a subway car and demanded money) operated on a xenophobic racial stereotype, and who knows whether he wounded innocent young men or saved his life from potential killers? The jury gave him the benefit of the doubt (the youths did have sharpened screwdrivers on them) because, of course, we have to establish responsibility and blame. But he certainly gave us all pause, Black and White, because he drove home how much we depend on such stereotypes in uncertain situations and how deep-rooted are our responses, our fears and suspicions and hates, despite what we might wish to claim to the contrary. It struck a nerve because we all realize we were potential Bernhard Goetzes and in a similar situation might do the same thing. Does it help to know that he was really only taking us for (dare I say it?) “logical conclusion” what we all were doing when we opted for “nonfarmer” or “heterosexual”? He was the warrior of our first illustration, faced with alien warriors in a provocative situation. He chose attack. He was prejudiced. He is alive. His antagonists are in various states of disarray.

You might say that my position “justifies” Goetz, but I am a determinist as you know, and as long as I can maintain the “objective attitude” I will insist that justification has nothing to do with it. I want to understand the situation, and moralizing doesn’t help there. To say that Goetz was responding with intuitive reactions, which have had such a highly successful survival potential that they are now deeply programmed into the human response system, is not to “justify” the action but to try to understand it. If we are interested in somehow or other changing or controlling such reactions, then surely we are better off understanding them than indulging in self-satisfying moralizing. Except, of course, that if I am right, then this moralizing is as inevitable as the reaction of Goetz himself or as inevitable as our thinking of the whole thing in terms of necessary cause and effect.

I do not intend to use this as an opportunity to pontificate on what might be done about discrimination, defamation, racism, sexism, affirmative action, and the like. Indeed, I have very few suggestions of any use. The persistence of xenophobia and its resultant stereotyping obviously has very deep roots. It is there in all group-living and territorial animals (Holloway, 1974). As humans, we add our own cultural trappings. The animal rule is basically the same: Trust the familiar, suspect the unfamiliar. In the animal and early-human case, this would have been literally true. The familiar would have been “of the family,” relatives of a similar phenotype. Recognition would have been easy. In the human case, when other than family groups came into contact, some means of identifying “us” and “them” (however defined) would have been necessary. The differentiation of languages would have first served this purpose, but one doesn’t always get a chance to hear a stranger speak. So distinctive markings, scarification, paint, hairdos, and so forth would have come into play to make the distinctions obvious (and deceit a constant possibility—hence, the hatred of the spy and the passions aroused in moralistic aggression against traitors). Of course, when one crosses significant phenotypical boundaries (e.g., to other skin colors), nature again does the job for us.

Many of the marks of distinctions (the tribal totems, the mythological knowledge, songs, cries, and chants, etc.) would be laid down early and traumatically in initiation procedures designed to make fixed and lasting these diacritics of group membership. Certain even deeper and more unshakable discriminations would have been, and continue to be, laid down in early childhood during the “fear of strangers” period between 6 and 18 months. The “typical” faces laid down then as familiar will continue to be the basis of stereotyping forever after. A specialized area of the visual cortex will repeatedly sort through future faces and compare (Fox, 1989, chap. 8). Thus, all the cultural signals amplify the basic “Fear the strange, trust the familiar” response.

**Stereotypes, Prototypes, Archetypes**

You might object to such a view of human action as too much based on animal models. Surely human thinking is of a different order than animal instinct. After all, it might be argued, we can revise and reject stereotypes, animals cannot—yes if they may in some cases substantially modify—their instincts. This is surely true at some level—at the level of specific stereotypes. But whether it is true at the general level of thinking, I’m not sure. Thus Hume could reject the necessary connection of cause and effect in his study but not in his life. We can sustain the objective attitude in a clinical inquiry but not in running a society. And we can act on the law of large numbers in principle but not when faced with a specific instance. We perhaps make too much of the leap from instinct to “thought.” The core of Niko Tinbergen’s (1951) definition of instinct was “stereotyped behavior”—his very words. This had to be independent of learning and complete at first attempt. But it was stereotypy that was of the essence.

In animals that develop large prefrontal cortices, foresight, planning, and the elaboration of memory storage become more important. But, as Bregson so brilliantly showed, these features of “intelligence” have to get the same job done as instinct used to do (Bergson, 1932/1935). They cannot, therefore, depart too much from the same principles. So for “stereotypical behavior,” we substitute “stereotypical think-

<sup>Still one of the best discussions of the origins and functions of these diacritics of group membership is Herbert Spencer’s *Ceremonial Institutions*, part IV of his *Principles of Sociology* (1879). Spencer concentrated more on their role in within-group hierarchies, which is of course an important adjunct to their between-groups discriminatory functions.</sup>
The work of the psycho-philosophers of mind at the moment seems to turn on what they call “categorical perception” (Harnad, 1991). The essence of this is that perception consists not of the raw reception of sense data but rather of the moment-to-moment placing of things perceived into categories. The most obvious example is that of the phonemes of a language. These minimal units of meaning (in English consonants and vowels and in a few things like stress, juncture, and intonation) are often in fact “clusters” of actual sounds (allophones) that can be, phonetically, quite different from one another. But we “hear” the phoneme rather than the differences. Thus, the aspirated alveolar unvoiced stop /t/, as in tin, is a phoneme in English, contrasting with its voiced counterpart /d/, as in din, making for a “minimal unit of meaning.” As English speakers, we can take in all kinds of deviations from the sound “t”—glottalized, retroflex, unaspirated, labiodental, alveopalatal, and so on—but, so long as it is unvoiced, we still “hear” /t/ because that is the phoneme. In languages that do not have the voiced–unvoiced contrast and in which, for example, it is the aspirated– unaspirated contrast that is phonemic, the speakers will hear sounds fall into these two categories as opposed to our /t/ and /d/. Our /d/, for example, they tend to hear as an unaspirated /t/. Thus, when moving between languages, we tend to organize pronunciation according to our native phonemic system. This accounts for the strange phenomenon of “foreign accents.” But the point is that we do not deal with raw sounds but rather with sounds arranged into categories around a central, prototypical sound.

What is true of phonemic “perception” of language sounds is thought by some researchers to be true of all categorical thinking about the world. Another article that stuck in my head long before I appreciated its true significance was Eleanor Rosch’s (1973) “Natural Categories.” Taking off from the work on color categories, she showed how each category had a “central” or “prototypical” member and how the categories got fuzzy at the edges. Later she went on to show how this applied to all our categories. Membership in them was not all-or-none but more-or-less. Thus, experiments showed that the category of “bird,” for example, has a sparrowlike central member with owls and eagles further removed and oddities like penguins, emus, and ostriches at the fringes (Roch, 1973, 1975, 1983). Lakoff, as we have seen, expanded these observations into a new view of reason and the nature of thinking based on taking metaphorical thought seriously—and with it the basic nature of categorization in the operation of mind.

The question is how are these categories formed and what involved in this construction firmly in the organism. Indeed, their insight that such constructions arise from the interaction of organisms is a basically “ethological” position. But I wouldn’t want to push this. Curtis exempted Otto Klineberg and his intellectual heirs and successors from the accusation of too much negativity in looking at stereotypes. Klineberg suggested there was usually a “kernel of truth” in any stereotype. But the issue here is not whether stereotypes might be true or false, they can be either. To declare that they are often true while seeing them again only as a byproduct of thinking is simply to make the inverse of the same basic mistake as Lippmann or Allport (Adorno, Fromm, or others). Of all contemporary social psychological positions, perhaps the closest to the one being argued here lies in the work of Donald Campbell on evolutionary epistemology and ethnocentrism. For a popular but interestingly close-to-the-mark attempt to apply similar ideas to the “homophobic stereotype,” see Kirk and Madsen (1989).

8This phenomenon was first noticed by Edward Sapir in “La réalité psychologique des phonèmes” in Janet and Dumas (1935).
relationship do they have to the "real" world? Often this relationship is problematic, not one-to-one, as with color categories. But there does seem to be an order to color classification that is "given" and not dependent on the terms of a specific language (Berlin & Kay, 1969). It is not an order that makes any logical or scientific sense, but to an animal with color vision it is again an order that has obviously had survival value. The range of such perceptions itself depends on the range of visible light, and, as we know, this is only a tiny part of the full light spectrum. But it is enough. It could become a disadvantage, in changed evolutionary circumstances, where the ability to see, say, ultraviolet light might mean survival. But nature is concerned with ongoing adaptation, as Quine so clearly saw, not with future contingencies, and this small slice of the full spectrum has been enough for our needs so far. This logical arbitrariness, then, is generally true of our system of stereotyping and categorial perception, which in turn interacts with our system of praising and blaming to produce what we call "human behavior." It's pragmatic, not logical. It exists because it works, not because it is rational.9

It must immediately have occurred to some of you that there must be a connection between what I am saying and the Jungian concept of archetypes. For are not archetypes a kind of prototype or stereotype? Indeed they are. For us to "fear the stranger" or "love the hero" or "hate the villain," it seems it is not enough to have general emotions of fear, love, and hate; we must have general notions of stranger, hero, and villain as well. I don't want to get into the issue here of whether these archetypes are "innate" or "learned"; there are probably a bit of both, but if learned they are learned easily and quickly and early and therefore may well be subject to some basic program in the genome. They are part of our essential moralistic sorting of the world that allows the praise-blame system, the system of allotting responsibility, to work smoothly. Otherwise, we would again have to take every case on its merits, and, as we have seen, life is too short for that. We do not have the "survival time" for such a luxury.

When we put together our archetypal stereotyping and our urge to assign responsibility and blame, we get the basis of mythology and its successor, literature. For all the ink spilled in the analysis of the codes and functions of mythology, something is so obvious that it tends to get overlooked. The story is always about identifiable archetypes, and the story always has a moral. We may need the aid of psychoanalysis or structuralism or whatever to get at the specific moral, but that there is a moralizing, responsibility-assigning, praising-and-blaming function is ubiquitous, and the moralizing, however disguised, is always about villains and heroes. If this were not so, then it would be impossible to explain the persistence of all this, from the paleolithic to the present, in mass entertainment in which the customers call the tune and get the entertainment they deserve, whether it be epic poetry, religious ritual, fairy tales, morality plays, knightly romances, gothic horror stories, Punch-and-Judy shows, comic-book violence, the Western, the cop show, the A-Team, the soap opera, The Bonfire of the Vanities, or professional wrestling.10 We mess endlessly with the archetypes to render them recognizable to our times, and the content of the moralizing changes constantly, but archetypes and moralizing there will be, and that is what it is all about: stereotypical thinking and the attribution of blame.

Again I repeat my basic point: In our more lofty moments, we tend to treat our stereotypical moralizing, either at the level of logic or at the level of social action, as some kind of pathology, as evidence of the unfinished mind, as a serious defect in human nature. But if it is persistent and seemingly ineradicable, if it is lodged in the very process of thinking itself—if we must attribute necessary connection, if we must assign responsibility, if we must think stereotypically—and if we must do these things because we did them throughout evolution to survive and propagate, then how can they be defects? What we mean when we say they are defects is that we would really like ourselves to be other than we are, and we believe we can reshape ourselves not to be this way. I gravely doubt it.

As Strawson said about moral discourse, there is room for a lot of discussion within the web of human attitudes and feelings, and this is true. One thing we can do, as conscious cultural humans, is to change with definitions of the familiar. We can try to have more people fall into the familiar category. Of course, we will continue to stereotype—the familiar is automatically good—but this is a stereotyping we reckon we can live with. The problem is that it tends to reduce variety and plurality. What is to be, for example, the human prototype of the familiar? At the moment it seems to be individualistic, entrepreneurial, law abiding, tax paying, urban, White, monogamous, middle class, and male. Well, "dem's mah people," as they say, but they're not everyone's notion of the good life. And will the two sexes ever be able to overcome a perception of difference—a difference that is great enough to cause difficulties? And should they? "Vive la difference" is not an idle cry. It is what makes life interesting.

You will perhaps counter, "We don't want people to be the same, we just want them to tolerate differences." But that isn't true. "We" don't want to tolerate differences of which "we" don't approve—if you like, differences "we" are prejudiced against, such as cannibalism, devil worship, lynchings, abortion, smoking, infibulation, censorship, gun clubs, polygamy, blood sports, flag burning, bigotry, child molestation, pornography, integration, or wearing animal furs. The list is endless. And those campus puns who thunder that they will not tolerate intolerance are in danger of emulating

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9 Because I claim that the brain/mind is "pragmatic," am I not just reinventing Pragmatism? This has been urged, but I don't see it. Certainly in the Dewey-James-Peirce sense, this is not Pragmatism. There's a theory of truth or meaning. Mine is a suggestion of a theory of rationality rather than truth. For example, for Dewey "truth" resided in the interplay between organism and environment, and I have suggested the same thing for rationality. But my interplay is over millions of years of evolution, and its product is certain basic innate modes of thought. For James and Dewey, the interplay was of ideas with the world in which, for various utilitarian reasons, some ideas won out over others. The winners were the "true" ideas. I am not talking about this kind of "truth" at all. The "pragmatism of the mind" here is an evolutionary product, not an evolutionary analogy. For the latter, the best modern example is in Richard Dawkins's (1976) The Selfish Gene, with his notion of competing "memes" in a struggle for existence. Like James, he is inclined to find the "God meme" a prime example of an ideological survival of the fittest. He is perhaps reinventing Pragmatism. I am not. There is actually a great deal in the psychology of William James that is relevant to this argument, but the Pragmatic theory of truth is not it.

10 See Stevens (1983) for one of the more sophisticated and up-to-date discussions of archetypes, which takes account of, for example, hemispheric lateralization theory. See Twitchell (1989) for a history of violent entertainment.
PREJUDICE AND THE UNFINISHED MIND

the Cretan liar, with the same contradictory results. What we are really saying is that our set of prejudices, which are good prejudices, must replace your set of prejudices, which are not.

Is there then nothing to be done? Of course not. There is much we can do to make people live in more civilized concern with one another if that is what we want. We can punish them for not doing so and reward them for cooperating. The praise—blame system can be quite effective. We can make it clear that certain intolerant behavior will not itself be tolerated, without fear of being self-contradictory. We simply define what is acceptable and insist on conformity to it. But what we cannot do is change the established, physiological, stereotypical basis of thinking itself. We are locked in stereotypical—prototypical thinking and cannot live outside it. We are not, through tolerance education, sensitization seminars, attitude change programs, consciousness-raising sessions, or anything else going to get rid of that fact.

What we will do is substitute one set of overt prejudices—of which we approve—for another. I say overt because we really do not know (even after 60 years of diligent effort by social psychologists) to what extent we change basic attitudes as opposed to changing verbal expressions of them. And perhaps we have to settle for the latter. Don’t say the wrong things and don’t do the wrong things or you’ll have to go join another club. And why isn’t that enough? Probably because that old blame-laying Adam (and Eve) won’t let us alone. That particular prejudice urges us to treat those with other prejudices as responsibly evil people rather than just people going through their own stereotypical paces. And our puritanical moralistic tradition insists that we “convert” them: that we make them over into good people, like ourselves.

Imperfect Sympathies Revisited

But most of the time we are not dealing with “offensive prejudice”—with taking the battle to the enemy without waiting for provocation. Most prejudice, like the very a priori of our basic thinking processes, is defensive. It says, “Fear the strange initially, and only revise your opinion if the acts warrant it.” It does not usually say “Go out and get the stranger first.” This latter usually depends on a lot of social orchestration, and we can certainly do a lot to control that. But we should not confuse prejudice in this offensive sense with mere dislike of other groups or even just with a lack of interest in them. And we should not confuse it with a mild discomfort in dealing with other groups. All these defensive prejudices are normal, and it is hard to imagine how we could ever produce human beings free of them. The whole point of this argument has been to show that we have no choice but to think in stereotypes. That is what a lot of basic thinking is. What is more, we are “comfortable” with such stereotyping, and our better selves only deplore the fact when some particular stereotype lacks social approval or conflicts with our current moralistic stereotyping. As long as it does not, we are happy to sink into it. Thus, in certain circles, “All big corporations are polluters” would not be challenged, whereas “All gay men are untrustworthy” would evoke horror. In other circles, of course, this would be reversed. You know who I mean.

Let me take a literary “case history” of mild, defensive, even fairly benign “prejudice” from a writer who actually sets out to lay his “imperfect sympathies” bare. We can do this without too much discomfort because the essay was written in early 19th-century England, and this is far enough removed in time and place for us not to take it too seriously. What is more, we have to go out of our own time to find such an example. It is something to ponder that such a charmingly honest portrayal of genuine feeling would not be publishable today, even though it is, as I am trying to show, essentially nonaggressive and concerned, not with invidious judgments, but with mere discomfort at cultural differences such as we all feel. This gentlest of essays on prejudice, “Imperfect Sympathies,” appeared in Charles Lamb’s Essays of Elia in 1823 (see Kent, 1889).

Lamb was a gentle soul who cared for his intermittently mad and matricidal sister (with whom he wrote the Tales From Shakespeare), worked hard as a clerk at the East India House, and was the best friend of Coleridge for all his difficult life. He never harmed another soul, although he had a sharp wit and could deliver a good verbal riposte when required, despite his stutter. Coleridge, when speaking of sermons, asked him in all innocence, “Charles, did you ever hear me preach?”—to which query Lamb unhappily replied, “I n-n-never heard you do anything else.” When a fussy lady pestered him with questions about how he liked the “little ones,” he replied with annoyance, “B-b-b-boiled, madam.” He could be a bit disconcerting—after all, he spent some time, like his sister, in the madhouse, and, when he met the great Wordsworth, whom he revered, he was so moved he shook him not by the hand, but by the nose, and cried out “How d’ye do, old Lakey poet?” When as a small child his sister took him round a graveyard to read the lapidary inscriptions, he asked her, “Mary, where are all the naughty people buried?” But I ask you, how could one not like such a harmless, quirky, agreeable fellow?

He began by quoting Sir Thomas Browne, in the Religio Medici, who claimed to have no national or other prejudices. Well, said Lamb, we are not all such perfect beings:

I confess that I do feel the differences of mankind, national or individual, to an unhealthy excess. I can look with no indifferent eye upon things or persons. Whatever is, is to me a matter of taste or distaste; or when once it becomes indifferent, it begins to be disrelishing. I am, in plainer words, a bundle of prejudices—made up of likings and dislikings—the veriest thrill to sympathies, apathies, antipathies. In a certain sense, I hope it may be said of me that I am a lover of my species. I can feel for all indifferently, but I cannot feel towards all equally. (Kent, 1889, p. 380)

This applies in particular to one national group:

I have been trying all my life to like Scotchmen, and am obliged to desist from the experiment in despair. They cannot like me—and in truth, I never knew one of that nation who attempted to do it. There is something more plain and ingenuous in their mode of proceeding. We know one another at first sight. (p. 380)

He then described with exquisite accuracy the constitution of the “anti-Caledonian” (i.e., English) mind, which is

11The descriptions of Lamb are taken from “A Prefatory Memoir” in Kent (1889, pp. 3–26).
“suggestive merely,” and its total failure to mesh with the literal Scots mentality, which “stops a metaphor like a suspected person in any enemy’s country” (p. 381). He ended with his despairing story of attending a party where a son of the recently deceased Robert Burns was expected. In his daffy English fashion, he dropped the remark that he wished the guest could have been, not the son, but the father. Four Scotsmen started up at once to inform him “that was impossible, because he was dead” (p. 381).

We can laugh a little at that still, I hope, because it is far from us in place and time; it is gentle and playful in its characterization; no one is hurt or insulted. But even so, Lamb is creating a national stereotype here, and he acted on it. He steered clear of Scotsmen, fearing the worst from such encounters. We might be a little more uncomfortable when Lamb comes to Jews. And we must remember that in the 18th century Jews in general were as distinct in their dress, speech, manners, religion, customs, and the like as are, for example, the Hasidim from the rest of the population today. It was about this visibly distinct subculture that Lamb was talking:

I have, in the abstract, no disrespect for Jews. They are a piece of stubborn antiquity, compared to which Stonehenge is in its nascent. They date beyond the pyramids. But I should not care to be in habits of familiar intercourse with any of that nation. (p. 382)

He certainly recognized the “centuries of insult, contempt and hate” that had been visited upon the Jews and fully understood why they must have hated the Christians. What he disliked is what he saw as the hypocrisy of pretending it could be otherwise; of “affected civility” between those who know they are irretrievably different from one another. “The spirit of the Synagogue is essentially separative,” he said. Jews are concerned with emphasizing their differences. It is what being a Jew is about. And that is how it should be. Either we should all convert one way or the other or stay separate, was his conclusion. He did not mind dealing with Jews at the ‘Change for “the mercantile spirit levels all distinctions, as are all beauties in the dark” (p. 382). He admired this mercantile spirit and insisted that he had “never heard of an idiot being born among them” (p. 382). “Some admire the Jewish female-physiognomy. I admire it—but with trembling. Jael had those full dark inscrutable eyes” (p. 382).

We should note that there is nothing here, as there is nothing in his discussion of Scotsmen, that can be remotely described as “rascist.” He was talking all the time of cultural differences. He never slandered the “blood” of other groups or said they are racially inferior. Far from it. His description of the Scots mentality does not rank it with respect to the English, for example. It is as with the Jew and the Christian: They are different; they are incompatible. He did not want to mix with them or pretend to have to like them. It is the same with Quakers. And again we should remember that sharp differences of speech, dress, custom, and so on marked off the Quakers of his day. He was full of reverence for Quaker ways, he was in awe of Quaker rectitude, but, he had to admit, he could not like Quakers. “I must have books, pictures, theatres, chit-chat, scandal, jokes, ambiguities and a thousand whim-whams, which their simpler taste can do without” (p. 383). We might compare a modern romantic idealization of Amish life, which goes along with a horror of having to live it. This whole tenor of Lamb’s honest confession comes out with respect to Negroes:

In the Negro countenance you will often meet with strong traces of benignity. I have felt yearnings of tenderness towards some of these faces—or rather masks—that have looked out kindly upon one in casual encounters in the streets and highways. I love what Fuller beautifully calls—these “images of God cut in ebony.” But I should not like to associate with them, to share my meals and my goodnights with them—because they are black. (p. 383)

We must again remember that Africans would have been many times stranger to Lamb in those days than Scotsmen, Jews, or Quakers. But here again, despite his “yearnings of tenderness,” again his almost awe, he did not want to associate with them. Because they were Black. Throughout the essay, he was simply trying to illustrate the impossibility of the lofty tolerance of Browne. He did not hate any of these other groups; on the contrary, he admired, was in awe of, and respected many things about them. But they were too different, and he could not like them “as to live with them.” Browne, in his smug metaphysical moments, might have felt totally free from prejudice, he said, but mere mortals think otherwise. Lamb’s disarming honesty, and the very benignity of his attitude even to wildly different cultural groups, emphasizes the point that being uncomfortable with the different is not the same as ethnic or religious hatred. It can be quiet and inoffensive, even humorous and kindly.

But even if it is not, we must accept that people have a God-given right to dislike other individuals or other classes of people on whatever basis they choose. They even have, in this country, a constitutional right to say so. Other people will think they are wrong. Fine. Let’s argue. I have written at length to try to set right some erroneous thinking about race differences. I doubt I have changed many attitudes, but I have helped reduce the armory of arguments used by the other side. Thus, if a White student tells me that he does not like Blacks because they are genetically inferior, then I can point out to him that such a belief makes no sense and why. But if he says he does not like Black people because they are Black and persists in this attitude even if told it is inappropriate, and so on, then I have really no useful argument against it. Like and dislike are not open to proof and disproof. I can disagree, but that is all.

But even if people have a right to cling to their dislikes despite the evidence, they do not have a right, to repeat a well-worn but still brilliant example, to shout “Fire!” in a crowded theater. It is sometimes difficult to sort this out, but we have to try. We cannot prevent or cure dislike. What on earth are we to say to Charles Lamb to change his mind? And what right do we have to do so? Our very act of prevention is an expression, often fanatical, of dislike in itself. But as long as we get to make the rules, we can prevent provocative expressions of dislike such as might lead to physical or mental injury. We are prejudiced in favor of a certain kind of world, so let’s go for it. But not because we are trying to compensate for a deficiency in human nature. (Lamb certainly had his problems, but morally, compared to any of us, in what way was he a deficient human being?) Rather, we are building on human nature to bring about a self-correcting mechanism whereby we try not to replace stereotypical
thinking—we can't do that—but to edge out unwanted stereotypes and replace them with those we approve.

At the same time, we are constantly trying to make the unfamiliar more familiar—our only real strategy to beat stereotypical thinking at its own game. Most Jews that I know are really not very different from me in most significant respects. In this sense, my situation is very different from Lamb's, and those ethnic or religious groups he found strange I find relatively familiar. However, although middle-class, intellectual, nonreligious Jews are so familiar to me as to be perceived essentially "the same," I do still have, like Lamb, difficulties with the Scots. There may be a moral here. Perhaps if I had gone to Edinburgh and not to Harvard I would be singing a different tune. Perhaps if we could have got Lamb together with Hume over a good dinner and a game of backgammon, he might have felt differently about the Scots.

Lamb's difficulties with Africans, for example, stemmed from a total lack of familiarity with any one of them. I was brought up in part of that same country (England) equally devoid of Africans. I never knew any intimately until I was an undergraduate, and then they were exclusively Black colonial intellectuals. But I am leaping ahead. In my youth, however, I was not without a stereotype of Black people. And this category had a central member—a prototype or paragon—who was well enough known to this audience: Paul Robeson. In our household, he was a hero and rightly so. My image of him is always as Othello in his roles. He is Othello much as Sean Connery is James Bond. Any others are strained imitations or conscious attempts to be different (yes, even Lord Olivier). My father had a nice bass voice and knew all the Robeson songs, which he taught to me. My mother had seen and heard him in person at Harrogate and never stopped talking about it. We watched his films, however bad they were as films (I didn't know that then) as many times as we could get to see them. The moment my voice broke, I began practicing "Old Man River." In my fantasies, I was the young district officer in Sanders of the River, and Robeson/Bosambo was my friend. My sadness was that I could never be Bosambo.12

Around this beautiful prototype of the Black man swirled a Kiplingesque cast of noble savages. There were the great Fuzzy-Wuzzies of the Nile whom Kipling celebrated for they did the unthinkable:

So 'ere's to you, Fuzzy-Wuzzy, at your 'ome in the Sudan,
You're a pore benighted 'eathen but a first-class fightin' man
'An' 'ere's to you Fuzzy-Wuzzy, with your 'ayrick 'ead of 'iff——
You big black boundin' beggar—for you broke a British square!

12A fine biography of Robeson is Duberman (1988). It is excellent in describing Robeson's primary value of loyalty. He would not, even though he was never a member, do anything to discredit the U.S. Communist Party, despite the terrible cost to himself. And this was because when the civil rights movement (as it later came to be called when it became a popular cause for well-heeled White liberals) was at its lowest ebb—when his people were at their most discouraged—it was only the Party and a few unions that stood by them unconditionally. His loyalty to the U.S.S.R. was of the same order. It was not ideological; it was something Kipling would have recognized and applauded. It was an expression of the almost superhuman humanity of this extraordinary human being.

... which was more than Napoleon's cavalry, even led by the redoubtable Ney (the bravest of the brave), ever managed!

Then there were the frightening and victorious Zulus whose impi did the same at Isandlwana with assegai and shield against rifle and cannon. And there were my favorites, the Ashanti, whose king did not sit but rested his elbow on a golden stool and whose warriors, again with reckless bravery, defied the British guns. My father was an old soldier, and an old Tory, but he would never hear any disrespect for these people. (The same was not true for the Gandhian agitators whom he had, to his great distaste, to put down in India.

"Nonviolent resistance" was simply an obvious oxymoron to an old soldier who had fought hand-to-hand against the Pathans on the North West Frontier.) And, always at the center was Robeson, with the constant sound of spirituals from scratchy 78s on a wind-up gramophone.

The first Black men I ever met were military police near a U.S. airforce base in Norfolk during World War II. I was perhaps 8 or 9 years old and had strayed near the base into a forbidden zone. These two kind soldiers took me home to tell my mother that I shouldn't go there, for my own safety. They were so tall (I had never seen such tall men), and they had beautiful uniforms and large guns in white holsters, and they were soft spoken and impeccably polite. (I had never heard my mother called "ma'am" before.) I asked them in awe if they knew Paul Robeson. "Sure son," they said laughing, "we know him." I was in ecstasy for weeks. I tell this personal anecdote because I think it was for me a matter of tremendous good fortune that my stereotype of Black people was thus formed. When I see a Black face on campus, I see a potential Robeson, not a potential mugger. And I find that my experience has been the opposite of most of my White (American, liberal, Northern friends. The central item of the stereotype is the crucial one.

But we can't be everywhere with everyone, and, as long as perceivable differences exist, we can only hope constantly to revise our stereotypes in a more favorable direction, not try to outlaw what is evidently not a disease of the mind but part of its basic constitution. We have to come to terms with the idea that prejudice is not a form of thinking but that thinking is a form of prejudice. Then we can deal with it more or less rationally. This may not seem as grand an objective as "abolishing racism and sexism" or something such, but I suspect it is a more achievable one and, in a real sense, a more human one. And being human is the only job opening we're offered.

Notes

This essay has been germinating for many years—ever since Ernest Gellner at the London School of Economics in the 1950s made an otherwise lazy undergraduate read Hume closely in the original. Parts of it have been delivered as lectures over the past 30 years, but the opportunity to bring it all together was presented by Felix Browder and Renée Weber in the Rutgers Distinguished Lecture Series in the spring of 1990. I thank both of them for their comments and encouragement and the audience at that lecture for its lively questions—which were largely concerned with my alleged misreading of Mr. Spock. Peter Klein and Bruce Wilshire made particularly pertinent comments (not about Spock). Michael Lewis and Robert Storey read the essay and, although disagreeing with me a good deal, nevertheless helped
me to improve it. The readers for *Psychological Inquiry* made their valuable contributions. Because they were social psychologists, some of them wanted me to write what would have amounted largely to a survey article on the "prejudice and stereotype" literature, which I have obviously resisted doing. The reasons are obvious from the text, and, in any case, useful surveys appear in the various editions of the *Handbook of Social Psychology* over the years. I, of course, exempt all commentators from any responsibility for errors and wrong conclusions, which are entirely and, no doubt perversely, my own. This is an essay that is almost designed for disagreement. I can only say I have benefited from the often tough criticism of the colleagues I have mentioned, while sticking to my guns on several contentious points.

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