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Psychology and the Rationality of Emotion*

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Abstract

Questions addressed by recent psychological research on emotion include questions about how thought shapes emotion and how emotion, in turn, shapes thought. Research on emotion and cognition paints a somewhat different picture than that seen in traditional discussions of passion and reason. This article reviews several aspects of this research, concentrating specifically on three views of rationality: Rationality as Process, Rationality as Product, and Rationality as Outcome.

I. RATIONALITY AS PROCESS

“Rationality” is not a concept in current use in psychology. Psychologists find the term ambiguous in its meaning and value-laden. In common usage, being “rational” is assumed to be good, whereas being “irrational” or “emotional” is assumed to be bad and to lead to error. Psychological science, however, is primarily interested in understanding rather than in passing judgment on kinds of thought processes. Its goal is to describe how people think, rather than to prescribe how they should think. Hence, rather than studying “rational” and “irrational” thought, psychological accounts often focus on the “dual processes” of thought. Examples of the names given to such dual processes or kinds of thinking include, “controlled vs. automatic processing,” “systematic vs. heuristic processing,” or “rule-based vs. associative processing.” Are these just the same as “rational vs. emotional?” No, partly because they are not so value-laden. Thinking in an automatic way is neither better nor worse than thinking in a controlled way. Each has a different, but equally valuable function.

If part of the mission of this special issue is to consider whether people think rationally or not, psychology can be quite useful. It has a clear, evidence-based answer, and the answer is, “No,” people do not routinely think rationally, at least not explicitly so. That answer, of course, applies to thoughts about faith as well as to thoughts about any other topic. A major contribution of psychology in the last forty or fifty years has been the discovery of the many ways in which human thought processes are non-rational. Specifically, human thought is generally not rational because much of it is unconscious (Wilson, 2002), automatic (Bargh, 1997), emotional (Zajonc, 1980), and heuristic in nature (Tversky&Kahneman, 1974). Each of these four attributes of human thought has been the subject of much controversy, but at this point in our history, one is unlikely to find much disagreement that they do characterize

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thought. My claim, then, is that human thought, decision, and action are much more routinized, automated, and unconscious than most people realize. Moreover, this conclusion should be taken as applicable to the everyday thoughts of theologians and the clergy no less than those of other individuals.

In the 1960's, Nobel prize winner Herbert Simon (1967) noted the role of emotion in judgment and decision-making, and in the 1970's, Nobel prize winner Daniel Kahneman and his colleague Amos Tversky discovered some of the judgment heuristics that people use in everyday reasoning (Tversky & Kahneman, 1974). Much to the dismay of economists guided by "rational choice" models, it has become clear that people reason using whatever short-cuts or heuristics are available. Initially, investigators viewed such heuristic reasoning as a source of error and bias, because as a strategy for detecting heuristic use, the experiments demonstrating heuristic reasoning generally involved leading people to make errors of judgment. An example would be the "availability heuristic," in which people use the ease with which an example of some category comes to mind as a heuristic for judging its prevalence or likelihood in the world. Thus, people may overestimate the probability of dying in a car crash, for example, if they have recently heard about an instance of someone dying in a car crash; that is, to the extent that a relevant instance is readily available. Such reasoning certainly can lead to error, but an important question is whether judgment heuristics are generally beneficial or harmful.

One way of approaching this question is to examine individual differences in the tendency to rely on judgment heuristics. Do people who avoid judgment heuristics fare better or worse than those who do not? A clever investigation provided an interesting answer (Block & Funder, 1986). In this study, a sample of individuals was tested repeatedly on a variety of measures from childhood through adulthood. During one wave of data collection, the investigators included a measure of heuristic thinking. The measure involved viewing a brief video about a question and answer game. One individual was seen flipping a coin to decide which of two other individuals would be assigned to the role of questioner and which to the role of answerer. The questioner was then handed a sheet of paper with several general knowledge questions to ask. Because the questions were difficult, the person assigned the role of answerer was often unsuccessful. After the video, participants were asked to make ratings of the intelligence of the two individuals. Despite having witnessed the coin toss, and hence knowing that the roles could just as easily have been reversed, they tended to see the question-asker as more intelligent than the question-answerer.

Some participants in this experiment, however, resisted using this common judgment heuristic. If asked, most of us would probably choose to have been in the group that resisted misleading appearances and answered correctly, rather than being a member of the group that had made the heuristic error. However, that turns out to be the wrong choice. Because this was a longitudinal study covering many years, the experimenters knew a great deal about each individual, and in fact, those who engaged in heuristic thinking were also the most healthy, happy, and successful. The group that answered correctly by second guessing their own inclinations consisted of individuals found to engage in self-doubt, harbor neurotic beliefs, and generally fare less well in life.

The results suggest that being rational may not always be the preferred mode of thought. Engaging in heuristic thinking, although it occasionally leads to error, tends to be adaptive, rather than undesirable. How could this be? The answer is simply that conscious, deliberative, logical thought is metabolically expensive. Like trying to dance by verbalizing each step aloud, relying on deliberative thought to make everyday inferences and choices is both inelegant and exhausting. Indeed, if we routinely thought in a systematic, conscious, controlled fashion, humans would never have survived as long as we have. Thinking and acting appear to be guided, much more than is generally realized, by the requirements of resource management (Proffitt, 2006). Although, exploring this topic in any detail would take us too far afield, some psychologists, following their colleagues in behavioral ecology (e.g., Krebs & Davies, 1981), have concluded that the behavior of all living things is ultimately guided by concerns about resource management, including obtaining, storing, and spending resources in the form of energy.

The behavior of fish and birds, and of mammals, including humans, for most of evolutionary history has been dominated by the need to secure food and shelter, to make alliances, and to form social arrangements that would ensure resources sufficient for survival. In humans, the brain uses twenty per cent of the glucose of the body, glucose that is primarily needed to power muscles for action. The glucose used in the brain to power thought processes is therefore precious. From that perspective, humans do not routinely think in an explicitly rational manner, because heuristic approximations are fast and efficient, and we cannot afford any more explicit rational thought than necessary.

II. RATIONALITY AS PRODUCT

More important than questions about process are questions about the products of thought. Even if our thought processes are often unconscious, automatic, emotional, and heuristic, do we nevertheless arrive at logically coherent beliefs, decisions, and actions? On the whole, it appears that we do. Like the processes taking place in our computers, our thought processes are mostly inaccessible, but we do have access to the results of our thinking, and generally we seem to have high standards for them. When we hear others being illogical, we are critical of them and find their assertions unpersuasive. And when we hear ourselves being illogical or inconsistent, we become embarrassed and motivated to rethink our position. Thus, perhaps surprisingly, emotion actually enforces standards of reason. That is, the automatic, negative affective reaction we have to incoherence and illogic motivates rational thought. The fact that people care deeply about the logic and consistency of their own beliefs and actions can be seen in the classic social psychological phenomenon of cognitive dissonance (Festinger, 1957). Relevant research showed that when people act in ways that are inconsistent with their beliefs, a state of tension or cognitive dissonance is generated, which motivates them to adjust their beliefs to make them consistent with their actions -- the process of dissonance reduction.

In order to bring such standards of rationality to bear on our thoughts, it is necessary to make them explicit, to think about them consciously, as when we express them verbally or publicly. The fact that we do routinely assess whether our unconscious, automatic, emotional, and heuristic processes have produced logical or illogical thoughts, decisions,

and actions means that our conscious and deliberative thought is able to regulate our unconscious and automatic thought.

This process can readily be seen in the domain of moral judgment. Jonathan Haidt(2001) has examined the role of emotion in moral judgment. He comes to the same conclusions about emotion and consciousness that we are proposing here. Like Hume, he proposes that moral judgment is based on emotion. Traditionally, psychologists have focused on the rational reasons that people give for their moral judgments. This tradition came from Piaget's emphasis on the stage-like development of children's reasoning, which Lawrence Kohlberg (1969) extended in his well-known studies of the development of moral reasoning.

In contrast, Haidt (2001) contends that moral judgments reflect universal, evolved, moral intuitions, and that the reasons people give for their moral judgments are frequently post hoc rationalizations or attempts to make sense of their intuitions. Through clever demonstrations, he shows how everyday moral reasoning is subservient to emotional and intuitive reactions. If one accepts his thesis, one is then led to ask what function might be served by the rational reasons we give for our actions? He proposes that articulating reasons helps expose incoherent moral positions, motivating one to persuade oneself or others to change perspectives, which may activate different intuitions or resolve conflicting intuitions. Part of our moral reasoning process, then, involves reconciling our intuition-based moral judgments with our automatic negative reactions to illogic. We have a strong need to make sense of our intuitive and emotional judgments. But such sense-making is typically a result, rather than a cause, of the moral judgments we make.

Thus far, we have claimed that human thought is not generally conducted deliberately or rationally in any explicit way. Indeed, it would be unwise and unworkable if we did. In fact, the genius of human thought is that despite its unconscious, automatic, emotional, and heuristic nature, we nevertheless generally arrive at rational, defensible conclusions. And when we do not, our emotional reactions to illogic, often motivate corrective action. But in addition to rationality as logically defensible inference, economists assess the rationality of decisions and actions in terms of outcomes. People act rationally when they maximize benefits and minimize costs. And the rest of us too are likely to see self-defeating choices as irrational, regardless of how deliberative they may have been. Let us turn then to a consideration of how cognition and emotion interact to achieve rational outcomes.

III. RATIONALITY AS OUTCOME

A recent news story told of a college lacrosse player who killed a former girlfriend in a fit of rage after she rejected him. Such events appear to support traditional beliefs that emotion imperils reason, and it is surely true that action in the heat of emotion can be short-sighted, sometimes tragically so. Such extreme emotion and such extreme actions are, fortunately, quite rare. Accordingly, the model of emotion suggested by such examples, however commonly believed, is misleading. But such considerations raise the larger questions of how emotion and action are related, a topic to which we turn now.

People often assume that emotion causes behavior, but anyone who has experienced a near collision when driving knows that the feelings of fear generally arrive only afterward. We

step on the brake instantly, rather than waiting for the experience of fear to tell us what to do. Such considerations imply either that emotion does not cause behavior or that some part of emotion other than conscious feelings can cause behavior. A useful account of this problem has been given by Baumeister, Vohs, DeWall and Zhang (2007), who conclude that full blown emotion generally governs action only indirectly.

Baumeister also proposes that “behavior chases emotion” (Baumeister, Vohs, & Tice, 2006). That is, actions are motivated by *anticipated* affect, meaning that we make one decision rather than another because we think it will work out better. To make choices, people often engage in mental simulations to anticipate how they will feel about likely outcomes. Decisions then chase (try to maximize) anticipated emotion.

Current emotions often provide feedback about the consequences of particular actions in particular situations. On the basis of such experiences, we can subsequently anticipate the emotional consequences of similar actions in related situations. When contemplating such actions in the future, twinges of anticipated affect can then alter our choices to maximize positive outcomes.

The process of deciding is the attempt to find the better option among alternatives, and we depend on some minimal positive affective reaction to announce the better option when it is encountered. Indeed, people usually feel comfortable exiting the decision-making process only when thinking about an option yields more positive affect than negative affect (Isen & Means, 1983). And people tend to reconsider the options again and again when none of the alternatives elicits positive affect (Cabanac, Guillaume, Balasko, & Fleury, 2002) or related experiences of cognitive fluency (Oppenheimer, 2008).

Does such a process lead to a rational outcome? It does appear to be a process that would lead to decisions that are both coherent and satisfying. Moreover, a virtue of this account is that it allows an integration of the cognitive and affective factors that we know to be involved in decision-making without forcing one to decide whether people are rational or irrational. Good decision-makers are people who are both emotionally and intellectually intelligent in that they are attuned to the affective reactions that foreshadow productive and unproductive lines of thought and action. By focusing on feelings, they can be motivated to recast the problem or reconsider available options to avoid both self-contradictory and self-defeating choices.

As an example, the behavioral economist George Loewenstein (1996) considers people who have a hard time getting up in the morning. They may set an alarm, but find it too easy to turn the alarm off and return to sleep. However, after experiencing embarrassment or other negative emotions from being late, they may be motivated to move the clock across the room when the process of setting the alarm triggers some fractional part of that embarrassment. By having the alarm across the room, they are forced to get up before turning off the alarm, rather than hoping to get up afterward—an example of intelligent action based on anticipated emotion.

In this section, then, we have pointed out that the everyday choices and decisions that we make are guided by anticipated affect. The decision process often involves a quick mental

simulation in which the possible consequences of alternative actions can be imagined and assessed. The anticipated affect that arises can then guide the choosing process. In this way, people may arrive at good and rationally defensible decisions precisely because they are guided by affective considerations. Thus, although human behavior is guided largely by unconscious, automatic processes, the affective residues of conscious emotional experiences can influence and even optimize action. These affective residues of prior emotions act as rewards and punishments to alter and update the unconscious programs that then trigger behavior automatically.

A. Emotion Stimulates Thinking

Other recent work shows how emotion also regulates action by stimulating conscious thought. We have suggested that consciousness provides a stage for comparing unconsciously produced thought with standards of rationality. That provides one rationale for why conscious cognition might be functional, but why be conscious of emotion? What are feelings for?

One function of conscious emotion is to aid learning by drawing our attention to the most important or urgent aspects of a situation. Research indicates that a prime function of emotional arousal is to draw attention and thoughts to important (i.e., arousing) events. Some of our own current experiments examine this process. We induce arousal by having people give a short speech or put their arm in ice water for a minute or two. The anxiety of speaking and the pain of the ice water activate the amygdala and relevant hormones that consolidate into long term memories whatever is experienced at the time. That is, after a delay of several days, information that has been followed by such emotional or physiological arousal tends to be well recalled (Cahill & Alkire, 2003). In PTSD, for example, this process works too well, and people have difficulty forgetting traumatic experiences.

Such research is relevant in the present context because it indicates that rather than contaminating thought, emotion often stimulates thought, allowing for a revision of beliefs and intentions. Indeed, if it were not for emotion, people might not think as much as they do (Baumeister, et al, 2007). In the emotion of regret, for example, counter-factual thinking is stimulated concerning how a different decision might have led to different and more desirable outcomes.

Art, especially literature and drama, can serve a related function. They involve mental simulations of emotionally important situations that allow for learning by feeling vicarious emotions, rather than by having to experience full-blown emotions in real time (Mar, Oatley, Hirsh, dela Paz, & Peterson, 2006). Although Aristotle held that drama promotes the venting of emotion, the emotions from drama (and other mental simulations) appear mainly to help us regulate thought by attracting our attention to the important aspects of situations. In this way, art allows wisdom to be acquired on the cheap.

B. Cognition Shapes Emotion

A common view of emotion was evident in a recently aired public television series in the United States called, "This Emotional Life." It was an interesting series, but it was

preoccupied with promoting the very standard view that “the newer, rational brain conflicts with the older, emotional brain.” The chief evidence for this model of cognition and emotion concerned the difficulty people have in exercising cognitive control over attacks of anxiety and depression. Cognition is indeed poor at that task. But it provides a misleading model of how cognition usually affects emotion.

Research by James Gross (2001) helps correct this view. In a well-known experiment, he showed an emotional film and asked some people to resist expressing whatever emotion it produced. He asked others to keep their emotions from arising in the first place by trying to interpret the film in a nonemotional way. He found that whereas suppressing feelings is difficult and costly, people could more easily dampen emotion by reinterpreting events in a way that kept feelings from developing. The mentally taxing nature of emotional suppression was found to reduce people’s ability to remember the film they had watched, whereas reinterpreting it did not hamper memory.

The fact that cognitive reinterpretation can change and hence dampen emotion is also evident at the neurological level (Ochsner, Bunge, Gross, & Gabrieli, 2002). In brain imaging studies, benign reinterpretations of otherwise disturbing pictures were found to successfully reduce amygdala activity. Conversely, reinterpretations aimed at increasing emotional reactions also increased amygdala activity. The amygdala is often observed in such research because it reflects emotional processing. From this kind of research on emotion regulation, one can conclude that the regulation of emotion is more successful when it is instituted before, rather than after, an emotion occurs (Gross, 2001). Perhaps this effectiveness of cognition beforehand mirrors the main role of cognition in emotion more generally, which is to shape emotion as it develops, rather than to suppress it later, as traditional views would have it.

There is a range of other research that arrives at similar answers to the questions we have posed. Cognitive therapy, for example, assumes also that emotions are products of how we think, and it aims to change problematic emotions by changing problematic thoughts (Beck, 1979). Similar conclusions come from classic experiments on delay of gratification in children (Mischel, Shoda, & Rodriguez, 1989). In one such experiment, children were given a choice between eating one marshmallow immediately and waiting until later to get two marshmallows. The results showed that children can resist temptation by thinking of the tempting marshmallow in front of them, not as a delicious sweet, but as a little white puffy cloud. Again, cognitive reinterpretations of an emotionally evocative stimulus can effectively regulate emotion and hence behavior.

This dependence of emotion on thought is also seen in major theories of emotion. We have a general theory of emotion, for example, that specifies the various kinds of perceptions and thoughts necessary to elicit each of twenty-two common emotions (Ortony, Clore, & Collins, 1988). Thus, fear is displeasure at the prospect of an undesirable outcome, shame is disapproval of a blameworthy action of one’s own, anger is a combination of displeasure at an undesirable outcome and disapproval at the blameworthy actions of another that led to it, and so on. In this and related appraisal theories of emotion, cognition is seen as shaping, rather than as opposing, emotion.

But if cognition regulates emotion, so also does emotion regulate cognition. Part of our research, for example, concerns the influence of affect on thinking (e.g., Clore & Huntsinger, 2007). Some of this research on emotion and cognition examines how moods and emotions help regulate how we think. For example, on some tasks it may be better to attend to the forest, but on others, better to attend to the trees. That is, some problems require taking a global or big picture perspective, while others require analysis and attention to detail. It turns out that our feelings in any given moment direct our mental processes, so that in happy states, people more readily adopt a global focus, whereas in negative states, (e.g., sadness) they more readily focus on details (Gasper & Clore, 2002). In a similar way, positive affective reactions encourage our reliance on whatever beliefs and assumptions we already hold, whereas negative reactions tend to inhibit the use of existing beliefs and motivate a search for new information. A similar logic was evident in John Dewey's (1916) prescriptions for education when he cautioned that learning could occur only when students are confronted with problems for which their existing knowledge is inadequate.

Here again, evidence suggests that rather than inevitably obstructing thought, emotion often motivates thought. Moreover, to touch base with our earlier discussion of the role of mental resources or energy in thought, our current research is showing that people think efficiently when their moods and emotional reactions activate the style of thought that fits the demands of a task. In contrast, when emotion-triggered abilities conflict with task demands, performance requires extra metabolic energy. Ordinarily, our affective reactions help optimize our thinking to fit the tasks that we face, which helps optimize energy use. Again, rather than being in opposition to cognition, affective reactions provide useful feedback about how one is coping with events.

I have argued that the time-honored view that higher mental processes are a lid on the boiling cauldron of emotion is a poor characterization of their relationship. A review of the evidence in this section shows that whereas cognitive processes do often dampen emotional power, they do so primarily by interpreting or situating the emotional reaction, thereby constraining its meaning. Emotional control generally comes not from suppressing but from shaping or directing emotion. Moreover, this shaping and directing can also make emotion more rather than less powerful, as we see next.

C. Cognition and the Power of Emotion

We have been discussing the interplay between emotion and cognition and how initial affective reactions can become full blown emotions as they are directed by interpretation. The general idea is that cognition shapes low level, primitive, affective reactions (which simply indicate that something is good or bad in some way) into more precise and elaborated emotions (e.g., sadness, anger, shame, love, and so on). Cognitive interpretations *constrain* the possible meanings of affect, signaling in what way something is good or bad and how urgent or important it is. Such cognitive constraints on affective meanings have many implications. For example, we know that someone who is afraid is looking forward to the prospect of an undesirable outcome of some kind, whereas someone who is sad is looking backward to some undesirable outcome that has already happened. But a more important

implication is that the power and impact of emotions ultimately depend on the object of the emotion (Clore & Huntsinger, 2009).

When the cause or object of an affective reaction is not salient, so that the reaction has a diffuse focus, we generally refer to it as a mood. In contrast, when the cause or object of an affective reaction becomes clear, then the affective reaction develops a specific focus, and we refer to it as an emotion (Clore & Ortony, 2008). Before a specific emotion develops, the affective reactions that are their bases are quite malleable. Their power and impact depend on the objects that give them shape and direction. Most importantly, the intensity of any emotional reaction depends on the magnitude of the implications that appear to hang in the balance. Rulers and politicians are well aware of this principle when attempting to spark public emotion. Thus, for example, the recent American president George W. Bush, referred to the struggle against terrorism as, “A war between good and evil. ... a war to save the world.”¹ Similarly, Serbian nationalists defended their fight against the independence of ethnic Albanians of Kosovo in 2008, saying, “What the West must understand is that we are not just defending Serbia, we are defending Europe against Muslim aggression” (Sengupta, 2007, p. 2).

Moral and religious leaders also frame their messages expansively in order to intensify their emotional and motivational impact. Indeed, the church developed over many years an arsenal of ultimates to fortify its prescriptions (e.g., the fate of one’s immortal soul; the assertion that God will be pleased or angered, and so on). Not only does the intensity of emotion depend on the importance of the object, but also objects that are symbolic, that have uncertain implications, and that are shrouded in mystery are sometimes even more powerful. This extra power appears to derive mainly from the fact that uncertainty about outcomes makes it difficult to shift one’s attention and focus elsewhere (Wilson & Gilbert, 2008).

We have indicated that affect is some registration of goodness or badness, and that specific emotions involve cognitively-constrained affect. Emotions then involve a specific goodness or badness of a specific outcome, action, or object in a specific situation. An important implication is that the power of affect and emotion depend on how they are constrained by cognition. Let us consider such implications further.

One implication concerns psychotherapy. Much of psychotherapy involves changing unconstrained affect in the form of moods into specific emotions (Clore & Colcombe, 2003). Moods are vague affective states that are unconstrained by any particular object and hence are unclear in their meaning. Examples include states of depression and anxiety. The goal of psychotherapy is often to help the client situate his affect, to find its object, so that the person can engage in useful, problem-focused coping, rather than in emotion-focused coping (e.g., excessive drinking, eating or sleeping), which is often counter-productive (Lazarus, 1966). Thus, persons may be empowered once the specificity of their emotions constrains their general distress to be about something in particular.

¹President George W. Bush, war, 2001 Remarks to State Department Employees. <http://www.sourcewatch.org/index.php?title=Evildoers>

A related benefit from the cognitive constraints on the meaning of affect can be seen in the Zen Buddhist therapy for pain. I am told by a practitioner that the treatment consists of having the person in pain focus directly on the pain, indicating in detail exactly how and where it hurts. One might think that focusing on the pain would make an injury more distressing, but it turns out that constraining the pain in this way, although it does not reduce the pain itself, greatly reduces distress by making the pain nothing more than what it is.

In contrast, certain forms of meditation, although they first involve focusing on a specific object, such as the beauty of a flower, have as their goal to experience some attribute, such as beauty or truth or love or power in a way that is unconstrained by any specific object. The process takes practice, but since God is generally thought of as unconstrained love, beauty, and power, being able to experience these attributes without the constraint or interpretation imposed by a specific object can be a religious experience.

These observations show that the power of affect depends on how cognition constrains its meaning. Just as various therapies may be enhanced by constraining the meaning of affective reactions, some religious experiences may be enhanced by unconstraining their meaning. Here again we see that cognition exercises control over emotion, not by conflict or suppression, but by shaping, situating, contextualizing, and changing its meaning.

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SUMMARY OF POINTS

In summary, in this article, we have made the following proposals:

- i.** In terms of process, humans do not generally think rationally, to the extent that “rationality” implies arriving at beliefs, opinions, and decisions through explicit reasoning or controlled logical processing.
- ii.** Whereas human thought does not generally follow rational, logical processes, the unconscious, heuristic, and associative processes that we do follow nevertheless tend to lead us to defensible conclusions.
- iii.** People hold themselves to a high standard of coherence and rationality so that thinking explicitly about one’s beliefs and defending them to others allows them to be assessed against logical standards.
- iv.** Contrary to popular belief, it is emotion that then enforces this rational standard, because people react negatively to their own and others illogic, which motivates the revision of thoughts and beliefs to be more coherent and logical.
- v.** An important criterion for decision and action is anticipated affect; the anticipation of whether a decision alternative will lead to a good outcome or not. But people also demand that decisions and actions be reasonable, so that they generally give reasons for what they do to ensure that their actions do not appear unreasonable. Whereas the reasons given may be consistent with the actual causes, such post hoc constructions are not necessarily the actual causes of decisions and actions.
- vi.** People do entertain reasons and mentally simulate decisions to detect whether any red flag of negative affect is raised. Finding that one’s reasons are defensible is empowering, whereas finding them incoherent is aversive. In this way, emotion enforces reason.
- vii.** Rather than suppressing or controlling emotion, as is often supposed, the power of cognition in emotion lies in the fact that emotions are cognitively-shaped affective reactions. Thus, whereas general affective reaction signal that something is good or bad in some way, specific emotions signal what aspect of a situation is good or bad and in what way.
- viii.** The power and impact of emotions depend on the magnitude of their objects. Political and religious leaders often demonstrate their knowledge of this fact by couching their messages in ultimate terms so that much appears to hang in the balance. As a result emotional and motivational intensity is enhanced.
- ix.** Much of the power of emotion lies in how the possible meanings of affect are constrained by cognition. For example, successful therapies often constrain the meanings of affective reactions to apply to specific objects, whereas some religious practices function by unconstraining the meaning of affective reactions so that they are experienced as transcending worldly objects.

- x. The overarching message in all of these comments is that, rather than thinking of emotion and cognition as horses pulling in different directions, we should think of them as strands of a single rope, made strong by their being thoroughly intertwined.