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The influence of emotions on beliefs

Nico H. Frijda, Antony S. R. Manstead, and Sacha Bem

Emotion theory has changed quite dramatically during the last three decades. To a large extent this change has been due to a keen interest in the role of cognition in emotion. We have seen the emergence of "cognitive emotion theory" (e.g., Lazarus, 1991), which has in turn stimulated a considerable body of research. Within this theory, beliefs are viewed as major antecedents of emotions, a point that is particularly emphasized by what is known as "appraisal theory" (e.g., Scherer, 1999). According to appraisal theory, emotions result from how the individual believes the world to be, how events are believed to have come about, and what implications events are believed to have.

Beliefs thus are regarded as one of the major determinants of emotion, and therefore an important part of the study of emotion can properly be seen as falling under the umbrella of cognitive psychology. Oddly enough, however, the reverse direction of influence in the relation between emotion and cognition has received scant attention. This is in itself rather odd, because one might easily regard emotions as being among the determinants of an individual's beliefs. They can be seen as influencing the content and the strength of an individual's beliefs, and their resistance to modification. Indeed, such an influence has traditionally been considered to be one of the most important things to be said about emotions. Spinoza (1677/1989) defined emotions as "states that make the mind inclined to think one thing rather than another." The influence of emotions upon beliefs can be viewed as the port through which emotions exert their influence upon human life. Beliefs fueled by emotions stimulate people to action, or allow them to approve of the actions of others in political contexts. That is why Aristotle provided a detailed discussion of emotions in his *Rhetorica*. Emotion arousal was viewed as essential in persuasive formation of judgment. "The orator persuades by means of his hearers, when they are roused to emotion by his speech; for the judgments we deliver are not the same when we are influenced by joy or sorrow, love or hate" (*Rhetorica* I, II.5).

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The notion that emotions determine beliefs was a common assumption during much of human history, and probably still is. It was the starting point of the views of human well-being in Epicurean and Stoic philosophy. Facing up to one's fear of death allows one to correct the beliefs that such fear has generated, argued Lucretius, as well as the beliefs, the *phantaseia*, from which the fear had sprung (Nussbaum, 1994). This is why Seneca condemned emotions such as anger. ''Reason herself, to whom the reins of power have been entrusted, remains mistress only so long as she is kept apart from the passions: if once she mingles with them and is contaminated, she becomes unable to hold back those whom she might have cleared from her path. For when once the mind has been aroused and shaken, it becomes the slave of the disturbing agent'' (Seneca, *De Ira*, I, viii.1).

In most discussions of the relations between emotion and cognition, the emphasis has been on the assumption that the former distorts the latter. For Kant, emotion was an illness of the mind. Unreason as a consequence of emotions makes regular appearances in philosophical as well as common-sense discourse. During the first half of the twentieth century psychology tended to focus upon this issue. Young (1943) conceived of emotion as a disturbance of organized behavior and thought; so did Hebb (1949) in his early work. At the same time, the influence of emotions upon the content of beliefs represented one of the dogmas of psychoanalytically inspired thought. Both interpersonal beliefs and scientific views were often seen as the outcomes of emotional responses to the issues or persons at hand. Social views were readily seen as self-serving distortions of available information, as in the studies of the authoritarian personality (Adorno, Frenkel-Brunswik, Levinson & Sanford, 1950) and psychological interpretations of cultural beliefs (Whiting & Child, 1953).

Then the interest in emotional influences upon beliefs receded. In part, this was due to the rise of cognitive psychology. According to this view, many of the biases of judgments, in individuals as well as social groups, could be explained by the operation of general cognitive strategies and principles. In this view, cognitive operations carry the roots of biases within them. One product of this orientation was the work of Kahneman and Tversky (Kahneman, Slovic, and Tversky, 1982) on heuristics in thought; another was the discussion of biases in social judgments by Nisbett and Ross (1980). Indeed, explaining the occurrence of beliefs that deviate from objective evidence in terms of cognitive processes is an alternative to an explanation in terms of emotional factors.

That the role of emotions in judgments and beliefs is nevertheless plausible is brought home by considering a few pertinent facts. One of

these is the sheer resistance of beliefs to being modified by informa-
tion. When it comes to issues of emotional importance, convincing
someone to change his or her existing beliefs appears to be a virtually
hopeless undertaking. As Abelson (1995: 25–26) wrote,

> Throughout my academic career I have been fascinated by the
> capacity of holders of very strong attitudes to resist persuasive
> attempt at change. Public figures and ordinary folk alike often cling
> tenaciously to beliefs and attitudes that we, as know-it-all academics,
> are convinced are wrong-headed. Whether the attitudes concern life
> after death, gay rights, a perceived conspiracy to take over New
> Jersey, or whatever, we can argue until blue-faced without budging
> our State Representative or our Uncle Walter an inch.

The near-impossibility of arriving at a mutual understanding when
there is disagreement on matters of emotional investment is evident in
marital discord and in political and religious conflict. Kosovars and
others are horrified by oppression, lack of self-determination, and
murder. Serbs are indignant about terrorists who want to tear apart
their country, and who lay claims to their own historically sacred
ground. Televised discussions between people with opposing views
on such issues tend to fall flat because the arguments cherished by one
side are regarded as meaningless by the other side, and vice versa.

Why might emotions have these effects on beliefs? These effects are
in fact central to the place of both emotions and beliefs in human
functioning. It can be argued that they are in no way restricted to
belief distortions. They are at the heart of what beliefs are about. The
eighteenth-century empiricist David Hume characterized beliefs
(''reason,'' in his terminology) as ''perfectly inert'' and never able to
''either prevent or produce any action'' (Hume, 1739/1969: 509). The
impulse comes not from reason but from passion, he held. Modern
emotion theorists have broken with the tradition of the combat of
passion and reason that formed, in part, the context of Hume's ideas.
We can nevertheless appreciate the proposition that thinking, no
matter how well articulated, is not sufficient for action (Brand, 1984).
On the other hand the definition of Alexander Bain and the pragmatist
philosophers, that ''a belief is that upon which a man is prepared to
act,'' is generally accepted; thoughts without actions are in vain.
Although beliefs may guide our actions (Armstrong, 1973), they are
not sufficient to initiate action. No matter how rational your thoughts
about helping the needy may be, you need an emotional impulse
before you actually volunteer to help. Emotions are prime candidates
for turning a thinking being into an actor.

The proposed influence of emotions on beliefs is part of the broader
issue of the psychological function served by emotions. The general

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function of emotion is seen as the ''management of action'' (Oatley, 1992: 24). Not every mental state exercises the same influence on action. We suggest that the link with action is stronger in the case of emotions than it is in the case of beliefs; and that it is stronger in beliefs than it is in knowledge. In the philosophical tradition *belief* is distinguished from *knowledge* by reference to the truth value and claim to objectivity of knowledge: ''True'' knowledge is distinguished from ''mere'' belief. Psychology is less interested in this question of *de iure*, the question of the justification of a proposition; it is more concerned about the question of *de facto*, the psychological reality. Thus whether Dracula exists or not is less important for psychology than the fact that Rachel believes and hopes that he will pay her a visit tonight. If there is a difference between knowledge and belief that is of psychological significance, it is the way in which they vary with respect to preparing the individual to act. To have a belief is not so much to claim to have true knowledge as to take a ''risk'' (see Fiedler and Bless, in this volume) and be prepared to take action. This implies that beliefs should be more emotion-sensitive than knowledge.

These considerations, and the examples given earlier, demonstrate that examining the influence of emotions on beliefs is not merely a matter of academic concern. The influence is important for understanding action. We suggest that participation in political violence or, at least, support for violent movements by one's votes, one's budget allocations, or one's emotional support, is facilitated by the firmness of one's beliefs regarding the states of the world motivating those actions, and that such firmness of beliefs is fed by the emotions connected to those states of the world. For instance, one would expect an appraisal of the severity of the threat with which one is confronted to be generated and/or enhanced by the degree of fear evoked by the event that elicited the fear in the first place. In our view the way in which beliefs are influenced by emotions is therefore highly relevant to the understanding of socio-political events such as intergroup hostility and violence.

There thus are good reasons for thinking that emotions influence beliefs, and for examining the issue. An important prerequisite for doing so is to define the terms ''emotion'' and ''belief'' in such a way that they can be treated as distinct and separate phenomena. This task is not unproblematic, since emotions and beliefs are both mental states. They share certain qualities and they can be distinguished in terms of other attributes but, like all mental states, they are closely intertwined. Mental states evoke other mental states and together they form such an intricate web that distinctions can become blurred. Yet, both emotions and beliefs can be characterized with sufficient clarity

to distinguish them. Emotions can be defined as states that comprise feelings, physiological changes, expressive behavior, and inclinations to act. Beliefs can be defined as states that link a person or group or object or concept with one or more attributes, and this is held by the believer to be true. The general proposal thus is that emotions can awaken, intrude into, and shape beliefs, by creating them, by amplifying or altering them, and by making them resistant to change.

There is, however, hardly any empirical research on these issues. As alluded to above, there is much discussion of the effects of cognitions upon emotions, but very little discussion of the effects of emotions upon cognitions. We know little about the scope of such effects: how far they reach, how deep they go. We know almost nothing about the conditions under which these effects occur, or – given what was said above with regard to the cognitive origins of biases in beliefs – whether such effects even exist. To the extent that they do exist, there is little insight into how they come about. ''Self-serving beliefs'' is a term that has been used quite often by psychologists but, apart from the vacuous lore of repression, there is little theory to account for the phenomenon of beliefs that are self-serving.

These were the major reasons that we as editors had for marshaling this overview of theory and research on the emotion–belief relation. The origins of this volume are to be found in a 1995 workshop organized by the Institute for Emotion and Motivation at the University of Amsterdam, with the support of EPOS and the Kurt Lewin Institute (respectively graduate schools in experimental psychology and social psychology). The contributions to the present volume are for the most part elaborations of contributions to that workshop.

The book begins with two general theoretical treatments of the way in which emotions influence beliefs. The first of these is by Gerald Clore and Karen Gasper. The essence of their argument can be stated quite simply: emotions provide information and guide attention. In general, these two attributes of emotions are functional, but they can also lead the individual astray. Thus when an affective state has no obvious ''object,'' the information provided by the affective state can be misattributed to other, substitute objects. These misattribution effects are most likely to occur in conjunction with mood states, it is argued, precisely because mood states typically lack an obvious ''object.'' However, the informational and attentional effects discussed in the second half of Clore and Gasper's chapter are ones that should (they argue) occur in conjunction with emotions proper. Circumstances that are accompanied by similar emotions, suggest the authors, are likely to be categorized in similar ways, opening up the possibility of conflation of these circumstances. Furthermore, emo-

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tional intensity directs the breadth of attentional focus, while emotional quality directs the direction of attentional focus. The general conclusion is that beliefs buttressed by emotion direct attention towards belief-relevant information.

Nico Frijda and Batja Mesquita's chapter is based on the premise that emotions can lead to new beliefs and strengthen existing beliefs. The idea that emotions can create new beliefs arises from the notion that an emotion entails an appraisal based on currently salient concerns. This "temporary" appraisal entailed in an emotion can turn into a long-term belief when an emotion turns into what the authors call a "sentiment." By this they mean a latent representation of someone or something that is of personal concern. For example, someone does something that hurts our interests. To the extent that we are inclined to think that the outcome of the action was intentional, we may form a negative sentiment about the person in question, which in turn will affect the way in which we interpret this person's future behavior. Turning now to the belief-strengthening properties of emotions, the authors point out that strong beliefs are ones that are central to one's concerns; concerns, of course, are deeply implicated in the emotion process. Thus the experience of emotion is a signal to the individual that his or her concerns are at issue, and the more intense the emotion, the more important these concerns are likely to be. In this way all the beliefs that are underpinned by the concerns(s) in question are likely to be strengthened by the experience of emotion. The authors go on to trace these effects of emotions to features of the processes of belief formation in general.

The notion of sentiments is pursued by Keith Oatley in Chapter 4. Like Frijda and Mesquita, he uses this term to refer to relatively long-lasting affective states, mainly dispositions towards other people. Examples are warm affection, despondency, and antipathy. The function of these sentiments, he argues, is to structure our relationships with other people or with certain objects, all the time influencing what we believe about these people or things. These sentiments, he goes on to argue, are the basis of distributed cognition, by which he means cognitions that are distributed socially (i.e., between people), spatially (i.e., between an individual and the external world), or temporally. Much of what we do in our everyday lives, Oatley suggests, involves one or other of these forms of distributed cognition. Each form is facilitated by a sentiment, and this sentiment is associated with certain beliefs. For example, the sentiment of warm affection towards others facilitates socially distributed cognition, but also carries with it an inclination to trust the other person concerned, and to accept what he or she tells us. Without such a sentiment, it is argued, we would not

believe sufficiently in the trustworthiness of the other person in order to be able to cooperate.

The next two chapters in the book address the relation between affective states and the processing of social information. In Chapter 5 Joe Forgas draws on his own Affect Infusion Model to argue that the way in which affect influences cognitive processes, including belief formation and maintenance, is dependent on the type of processing that prevails. According to Forgas, it is primarily what he calls ''constructive, substantive'' processing that allows affectively primed thoughts and associations to be incorporated into the formation of beliefs. One way in which affect influences beliefs is via mood-congruent biases: we are more likely to notice, encode, remember, and make use of information that is congruent with a prevailing mood state. Other forms of processing, which Forgas calls ''controlled, directed processing'' are impervious to the influence of affect. Such processing is often triggered by having a specific motivational goal, and one such goal might be affect regulation. It is suggested that affect infusion and affect regulation might operate in a homeostatic relation, such that when a certain threshold of affect has been reached via infusion processes, regulation processes are initiated. Thus the critical link, in Forgas's view, between affect and belief is the kind of information processing strategy that is used in a given situation.

In their chapter, Klaus Fiedler and Herbert Bless develop a complementary line of theoretical argument. Starting with Piaget's well-known distinction between assimilation and accommodation, these authors argue that the ''top-down'' process of assimilation is one that is characteristic of positive, appetitive situations, whereas the ''bottom-up'' process of accommodation is more typical of negative, aversive situations. Consistent with this reasoning, they go on to suggest that positive affective states are supportive of assimilative tendencies, whereas negative affective states should trigger accommodation processes. Beliefs, goes the next part of the argument, belong to the domain of assimilation, the result being that positive affective states support the formation of new beliefs or the elaboration of existing ones, whereas negative affective states (which stimulate accommodation processes) may encourage the individual to update his or her beliefs in the light of new evidence. The authors report an impressive body of evidence consistent with these theoretical proposals.

Michael Eysenck's chapter is also concerned with information processing, but his focus is specifically on anxiety. He argues that there are several biases associated with anxiety: attentional, interpretive, and memorial. Particularly important, he suggests, is the way in

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which the emotional disposition of trait anxiety interacts with the emotion of state anxiety. His general argument is that those who are highly trait anxious are cognitively biased in such a way that they believe their environment to be more threatening than it is. Eysenck summarizes the findings of various studies that demonstrate that such biases are especially prevalent when a highly trait-anxious person is also high in state anxiety. Those who are low on trait anxiety but high on a measure of defensiveness are referred to as ''repressors.'' These individuals exhibit a different set of biases that lead them to minimize threat.

In Chapter 8 Eddie Harmon-Jones describes one of the better known theoretical frameworks within which the influence of emotions on beliefs can be explained, namely Festinger's theory of cognitive dissonance. The essence of the theory is that a perceived discrepancy between two or more cognitions gives rise to an uncomfortable tension-like state that motivates the individual to seek ways of reducing this discrepancy. After reviewing the key elements of dissonance theory, Harmon-Jones describes the main paradigms that have been established for testing the theory, before turning to experiments that have explicitly tested the role played by emotion in reducing the discrepancy between cognitions. The reviewed research supports the notion that cognitive discrepancy produces negative affect, and that this in turn motivates attempts at discrepancy reduction. One way in which discrepancy can be reduced is through belief change.

In the final chapter of the book, Margaret Clark and Ian Brissette focus on interpersonal relationships. They argue that we need to take account of the context of a social relationship in order to understand the way in which emotions are experienced, expressed, and interpreted. ''Communal'' relationships are ones in which emotions are likely to be experienced and expressed to a greater extent than in other forms of relationship. This is a result of the feelings of mutual responsibility that characterize communal relationships. There are some obvious parallels here with Oatley's notion of sentiments that afford cooperative relationships. It follows from Clark and Brissette's argument that if emotions are freely expressed and experienced in the context of social relationships, these emotional expressions and experiences should have an impact on the individual's beliefs about the other person and about the relationship.

We hope that this volume will help to convince those working in the neighboring subdisciplines of cognitive, social, clinical, and emotion psychology that the impact of emotion on beliefs has been unduly neglected in the past, and that the existence of this book will excite

their intellectual curiosity and thereby stimulate further theorizing and research on the way in which emotions can influence beliefs.

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2

Feeling is believing: Some affective influences on belief[1]

Gerald L. Clore and Karen Gasper

''Winter Light'' is the name of a film by the Swedish film-maker Ingmar Bergman. In it he depicts life in a remote Swedish village in the depths of winter. One of the unhappy characters in this village becomes obsessed with the ''Red Chinese'' and the inevitability of nuclear war. Throughout the film, the sun barely shines over the horizon, the snowy landscape is barren, and the interpersonal climate is equally cold. There are plenty of reasons for depression very close to home, but this character believes that he is depressed about something thousands of miles away. And in the end, he kills himself, and he does so, he says, because of the ''Red Chinese.''

Two important attributes of emotional feelings are that they provide information and guide attention. These attributes appear to be generally functional, but they can also go awry. When they do, they produce very different, indeed opposite, effects. The suicide of Bergman's character illustrates both. First, when affective states lack salient objects; the information they provide may be misattributed to substitute objects, and second, when affective states do have salient objects, they may lead one to an overly narrow focus of attention.

In this chapter we discuss the ways in which moods and emotions might influence beliefs. The first half of the chapter discusses seven basic principles underlying our research on general mood, and the second half builds on these principles focusing on how specific emotions may affect beliefs. There is insufficient research on emotions and belief to derive well-supported principles. Instead, generalizing what we have learned from mood research, we propose hypotheses about how the informational and attentional properties of emotion influence the establishment and maintenance of beliefs.

Mood and information

We believe that affective feelings serve an important feedback function (Clore, Wyer, Dienes, Gasper, Gohm, & Isbell, in press; Wyer, Clore, & Isbell, 1999). In the case of general moods, the object about which