Journal for the Theory of Social Behaviour 17:2 July 1987
0021—8308 $250

Regret: A Theoretical and Conceptual Analysis

JANET LANDMAN

Regret is a common, possibly a universal, human experience, a truth eloquently asserted by James Baldwin (cited in Levinson, 1978, p. 250):

> Though we would like to live without regrets, and sometimes proudly insist that we have none, this is not really possible, if only because we are mortal.

Related concepts such as depression, guilt, and shame have elicited a good deal of attention from scholars in philosophy, psychology, and other social sciences; but regret has for the most part escaped systematic inquiry, an assertion that is illustrated by the absence of the word *regret* as a keyword in psychological, psychoanalytic and sociological indexes.

Beginning in the early 1980s, however, there has been a growing interest in regret within the tradition of formal decision theory. Classical theories of decision making have maintained that we make (or should make) decisions in order to maximize our expected utility (profit, pleasure, or other favourable outcome). Modern decision theorists have begun to recognize the importance of regret in decision making; regret theories assert that choice depends not only on the probability and the value of the chosen outcome but also on the amount of regret for alternatives not chosen (e.g., Bell, ,1981; Kahneman and Tversky, 1982A, 1982B; Loomes and Sugden, 1982; Sage and White, 1983; Schoeffler, 1962).

In this article the concept of regret is defined and explicated on the basis of lexicographical, theoretical, and empirical considerations. A useful definition must be sufficiently broad as to include all the relevant phenomena and sufficiently narrow as to exclude other things. Accordingly, the dual purpose of this analysis is to identify the defining characteristics of regret and to distinguish regret from similar concepts (i.e., undoing, remorse, and guilt). In addition, some implications of this analysis for the development of a psychology of regret will be explored.

WHAT IS REGRET

Many thinkers—from the ancient Greek philsophers to modern cognitive scientists—have emphasized the role of reason in human thought and action. The stress on rationality has often been accompanied by tacit or explicit denigration of "nonrational" factors such as values, custom, and sentiment. In Book IV of *The Republic,* Plato presented the idea that the soul consists of three principles: (1) the rational element, which he called *reason*; (2) the passionate element, meaning the emotions, such as anger or love; and (3) the appetitive or concupiscent element, controlling one's desires for food, fame, money, or other gain. Far from presenting these as three equally valuable elements, Plato argued that "reason ought to rule" (Book IV, p. 354). His choice of metaphors for these psychic elements reveals the same judgment: Plato calls reason the "shepherd" and the passionate and appetitive elements "the dogs" (pp. 353–354).

Similarly, in the Aristotelian formulation, the soul is divided into two parts, rational and irrational, and the irrational part into two sub-parts, the vegetative (concerned with bodily nutrition) and the appetitive or concupiscent (concerned with non-bodily desires). Like Plato, Aristotle asserted that the irrational principle should be "amenable and obedient" (Aristotle, p. 179) to the rational principle.

Centuries later, in the hands of Freud, these became, of course, ego and id. The Freudian metaphor of horse and rider, however, revealed a greater emphasis on the conflict between reason and unreason, while retaining the idea that reason (the ego) should strive to become the master of unreason (id).

Finally, modern cognitive psychology can be described as emphasizing "psychologic" over "psychodynamics" (Abelson, 1968), if only in the interest of parsimony of explanation of human thought and action. Accordingly, cognitive psychologists discourage the over-use of vivid, concrete, imaginable, immediate, emotional, and anecdotal information and encourage the use of pallid but rational statistical or base-rate information in problem-solving and inference (Nisbett and Ross, 1980).

Notwithstanding the potency of these arguments, and certainly not to make the converse assertion that reason ought to be ruled by sentiment, it is my contention that reason and emotion not only typically play interdependent roles in thought and action, but furthermore that the proper relation of reason and emotion is one of interdependence. The mutual roles of reason and sentiment in human thought and action are particularly evident in the phenomenon of regret, an assertion to which I will now turn.

According to Webster's Unabridged Third New International Dictionary,[1] the word *regret* is of Scandinavian origin, being akin to the Old Norse

word *grata*, to weep. Examination of the lexicon reveals three slightly different meanings of regret, as follows. (1) The first definition highlights the loss of desirable entities: "to remember with sorrow or grief; mourn the loss or death of; miss poignantly." (2) The second definition of regret emphasizes unfavorable, rather than desirable, matters as the targets of regret: "to have dissatisfaction, misgivings, or distress of mind conerning; to be keenly sorry for one's mistakes." (3) The definition for the noun form discusses conditions under which regret occurs and the kinds of emotions related to regret: "sorrow caused by circumstances beyond one's control or power to repair: grief or pain tinged with disappointment, dissatisfaction, longing, remorse, or comparable emotion." As these definitions suggest, regret is a broad concept incorporating cognitive and affective aspects—the focus of the first portion of this paper.

Regret as a Cognitive Phenomenon

Regret is described in the lexicon in both emotional terms (as sorrow, grief, or pain) and in non-emotional terms (as remembering and as having misgivings, for example). The purely cognitive or judicial sense of regret might be expressed when one describes one's vague misgivings over having bought a particular car instead of another or over choosing to see one movie rather than another. These aspects of regret do not necessarily entail "warm" emotional pangs but merely "cool" cognitive processes of memory, judgment or evaluation. Hence, theoretical and empirical analyses of regret will have to take into account not only the sorrowful emotional aspects, but also the cognitive aspects.

The assumption that regret has a significant cognitive component also appears in theoretical formulations across a number of disciplines—including: (1) certain philosophical and psychological analyses of the nature of emotion and cognition in general and of regret in particular; (2) philosophical and psychological analyses of counterfactural reason; and (3) philosophical, economic, and psychological perspectives on decision making.

First, if regret is an *emotion* (a proposition suggested by the previous examination of the lexicon), it is an emotion that is largely cognitive. Indeed, certain scholars conclude that cognition is a primary component of *all* emotional experience. Bedford (1956–1957), for example, argues that emotions reflect not only (or even primarily) feelings but also assessment, and that the *principal* purpose of emotion statements is "judicial" (p. 298). (This argument implies that all emotional experience—including regret—which occurs after the development of some minimal level of cognitive functioning possesses a cognitive component, whose magnitude

may vary depending on the particular emotion being experienced, as well as on other factors.)

Turning more specifically to regret, consider the following statment: "I never feel the slightest pang of regret for what I did" (Bedford, 1956–1957, p. 299). According to a thoroughly cognitive analysis, this proposition is *not* a simple "descriptive statement about what people feel and do" (Bedford, p. 300). Instead, the statement reflects "the justification of a choice" (Bedford, p. 299) and is equivalent to saying "'My choice was quite correct (sound, justified)'" (p. 300). In other words, regret is in this view primarily a matter of critical judgment and only secondarily or not at all a matter of feelings. Although I do not concur with efforts to reduce emotions in general to matters of cool cognition alone, I believe that *regret* does entail a significant degree of cognitive appraisal. Relative to other emotions such as anger or fear, regret seems to have a higher degree of cognitive elaboration. In addition, relative to related emotions such as remorse and guilt, regret seems to be more a matter of "cool" cognitive assessment than of "warm" emotional reactivity.

In a similar vein, one of the chief tents of a recently developed theory of emotion (Roseman, 1979, 1982) is that emotions are aroused and distinguished by particular combinations of cognitive dimensions (motivational state, situational state, probability of outcome, agency, and legitimacy of outcome). In a series of vignette experiments, Roseman (1982) varied these five dimensions in different stories and asked subjects to rate the intensity of certain emotions—including regret—experienced by the protagonists in each story. As predicted by the theory, the attribution of emotions was significantly affected by these cognitive dimensions, providing indirect empirical evidence for the existence of a substantial cognitive component in a number of emotions, including regret.

Another line of philosophical and psychological analysis suggests that regret is a variety of reason—a subset of the larger phenomenon of induction. The process of beginning with the actual ("facts") and imagining the possible ("counterfactuals") is a type of induction in that it proceeds "from a given set of cases to a wider set" (Goodman, 1973, p. 58). In philosophy the related notion of "possible worlds" has recently received a good deal of attention as a variety of normal mental or imaginative construction (Goodman, 1973; Kripke, 1980; D. K. Lewis, 1973). Possible worlds, or counterfactual situations, are ways the world might be or might have been. For example, when two dice are thrown, only one out of a possible 36 possible worlds is actualized—e.g., a 5 and 6 (Kripke, 1980). The human ability to imagine or construct the remaining 35 possible states of being—or possible worlds— is an important form of thought currently being addressed by philosophers and others (Kah-

neman and Tversky, 1982A 1982B; Kahneman and Miller, 1986; Markus and Nurius, 1986). One implication of this perspective is that regret may be viewed as a normal, inevitable, and direct consequence of *rationality*, i.e., "a direct consequence of the capacity to recognize and to name differences . . . and the capacity to conceive multiple alternatives" (Hampshire, 1983, p. 145). In the face of less-than-satisfying forms of reality, regret is likely to occur, whereby one acknowledges that the world is less satisfactory than it might be, and imagines how it might have been better.

Kahneman and Tversky (1982B) have directly linked the idea of possible worlds to the study of regret, advancing the notion of a "stimulation heuristic" by which people are thought to construct mental models in an effort to deal with actual life outcomes, to imagine alternative past events, to predict future events, or to assess causation. Regret, according to Kahneman and Tversky (1982b, p. 206) is a "counterfactual emotion" which often serves as the impetus for the mental undoing of past events. As part of a larger program of research on decision making, these investigators have explored the following questions (among others) concerning regret and the cognitive construction of alternative possible worlds: (1) Given the same unfortunate outcome, do people experience more regret for having attained the outcome via action rather than inaction? (2) Given the same unfortunate outcome, do people experience more regret for "near misses" than for "misses by a mile"? Experimental vignette studies have produced affirmative answers to each of these research questions (Johnson, ,1986; Kahnemann and Tversky, 1982a, 1982b; Landman, in press).

Another thoroughly cognitive approach to regret are those economic decision-making models that have recently added regret to the traditional utility functions lng used to predict decisions (e.g., Bell, 1981; Loomes and Sugden, 1982; Sage and White, 1983; Schoeffler, 1962). Typically regret is defined in these models in the coolest of cognitive terms—e.g., as the difference between a payoff or outcome actually received and the maximum possible payoff or best possible outcome (Schoeffler, 1962). According to regret theories, the expected utility of choice X (the alternative chosen) is a mathematical function of the probabilty of X times the value of X minus the amount of regret for not-X (the better alternative not chosen).

The theory of cognitive dissonance provides a final example of a theoretical formulation which locates regret as a cognitive component of the process of decision making. From withiin the cognitive dissonance paradigm (Festinger, 1957, 1964; Festinger and Walster, 1964), it was noted that most but not all subjects altered their attitudes to correspond to counter-attitudinal behavior elicited in an initial phase of an experiment; in fact, some subjects evidenced *regret* for their dissonance-arousing behavior and actually chose to undo it. Within the dissonance paradigm, subjects

manifested regret through decision reversal, reversing an earlier choice (phonograph record, hair style, job placement), and selecting an alternative they had earlier rejected. Festinger and Walster (1964) report that, given the opportunity to reconsider a decision, as many as 62 per cent of subjects exhibit evidence of post-decision regret by reversing their initial decision. Of course, regret is something of a bête noir for the theory of cognitive dissonance, since it represents the opposite of dissonance reduction through cognitive manipulations. Regret represents a *failure* to rationalize or justify one's prior behavior.

In Festinger's original formulation regret was defined as a defensive operation occurring subsequent to an action or a decision and designed to avoid dissonance "by psychologically revoking the decision" (Festinger, 1957, p. 270). In 1964 Festinger revised his earlier thinking about regret, de-emphasizing the defensive and stressing the purely cognitive aspects. Festinger's later view was that regret simply results from an increase in the salience of dissonant thoughts immediately after acting or making a decision. For example, according to Festinger, upon choosing one of two alternatives, one's attention may be temporarily focused on the undesirable aspects of the chosen alternative and the desirable aspects of the rejected alternative. Hence, regret. As will be seen later, this purely cognitive account of dissonance, and thus of regret, has not received empirical support.

The decision-making literature suggests that insofar as choice is inescapable and insofar as conflict between incommensurable choices, claims, or ways of life is inevitable (Hampshire, 1983), regret may also be an inevitable, natural or "normal" part of living. Because it is not possible to "have it all," and because we *know* it, regret is a rational human experience.

Examination of the above philosophical, economic, and psychological perspectives suggests the following conclusions: (1) Regret, as perhaps all emotional activity of intact adults, has a significant cognitive component. (2) Regret is associated with higher-order cognitive processes such as critical judgment, induction, and decision making. (3) Regret is not reducible to cognition. Hence, it is necessary but not sufficient to define regret as a cognitive phenomenon.

Regret as an Emotional Phenomenon

The etymological information linking regret with weeping suggests that regret is *emotional* in nature. That regret is an emotion is also evident in the definitional allusions to distress of mind and to being keenly sorry for one's mistakes, as well as in the mention of sorrow, grief, pain, disappoint-

ment, dissatisfaction, longing, remorse, and "comparable *emotion*." The emotional sense of regret is highlighted in statements describing: grief over the loss of a loved one, as when Shelley referred to "that fair lady whom thou dost regret"; distress over a fatal accident, the outcome of an election, or over losing the lottery by a single digit; keen dissatisfaction with one's job; remorseful sorrow over harsh words uttered in a heated argument or over one's failure to remember a loved one's birthday. As these definitions and illustrations indicate, longing, sorrow, and remorse are all effective cousins of regret.

Having examined how regret is necessarily cognitive, let us now explore its emotional component, beginning first with certain generally applicable *distinctions* between emotion and thought, and proceeding to consideration of theories of emotion and of the self. First, emotion cannot be reduced to cognition, since emotion is not simply " a reasoned calculation" (Sartre, 1948, p. 51). That cognition and emotion are distinct psychological activities has been asserted by a number of theorists of emotion—for example, Leventhal (1980, p. 192), who argues that "no matter how much we enrich, analyze, or connect affects to cognition, the psychology of emotion depends on a fundamental truth: . . . emotions are not attributions."

It might be argued that emotion is not the same as cognition primarily because *arousal* is a necessary component of emotion but not of cognition. Schachter and Singer's (1962) two-factor theory of emotion, for example, incorporates both cognition and arousal as necessary elements of emotion. Similarly, Fiske (1982) distinguishes between affect (emotion) and evaluation, defining evaluations as "valenced judgments" devoid of the arousal that is sometimes considered an essential feature of emotion (e.g., Schachter and Singer, 1962; Schachter, 1964). This supposition is relevant to the concept of regret, which seems in one sense to be more like a simple evaluative cognition (i.e., a valenced judgment) and in other senses more like an emotion.

Recent research sheds light on the question as to whether arousal is a typical element of the experience of regret. Russell and Mehrabian (1977) had people rate a large number of emotion terms—including *regretful* and *guilty*—on the dimensions of pleasure, dominance, and arousal, dimensions commonly thought to be necessary components of emotion. Whereas *guilty* was rated as involving a significant degree of arousal, *regretful* was not. If ratings are taken as accurate measures of arousal *and* if arousal is taken as a necessary component of emotion (both arguable assumptions), then regret would be more properly described as an evaluation (a cognition) than as an emotion. But, even if regret lacks a significant degree of arousal, there are at least three reasons to retain the working assumption that regret has a significant emotional component.

First, the aforementioned dictionary definitions speak of regret as involving at minimum dissatisfaction, disappointment, or distress, and at most sorrow, grief or mourning—all emotions. Hence by definition regret is an emotion. Similarly, the fact that investigators of emotion (Russell and Mehrabian, 1977; Roseman, 1979) have included regret in their analyses suggests that this assumption has *a priori* theoretical support. More directly, regret has been described as a "counterfactual emotion" (Kahneman and Tversky, 1982b) and as a "special form of frustration in which the event one would change is an action one has either taken or failed to take" (Kahneman and Tversky, 1982a, p. 170. These characterizations lend further *a priori* theoretical support to the assumption that regret is an affective matter.

Second, it can be argued that arousal is not a necessary component of emotion (Leventhal, 1980, p. 153).[2] From this perspective, with which I am in agreement, even if regret lacks an arousal dimension, it must nevertheless be included in the emotion category since it possesses a reliable pleasure/unpleasure dimension.

Finally, perhaps it is partly due to the fact that regret is often a *self-relevant* type of evaluation that regret "feels" more like an emotion and less like a simple cognitive judgment. Unlike other cognitive activities (e.g., discrimination learning, concept formation, or memory for nonsense syllables), regret is an experience which frequently entails self-reflection and self-appraisal, and hence is an eminently personal experience.[3] According to James (1890, p. 323), one's sense of selfhood is based primarily on the "warm" type of self-concept (any self-representation that includes self-*feelings*) rather than on "cold intellectual self-estimation." Similarly, as defined by proponents of the object-relations school within clinical psychology and psychiatry, the self is an "intrapsychic structure consisting of multiple self-representations and their related *affect* dispositions" (Kernberg, 1975, p. 315, emphasis added). Furthermore, self-regard may "always reflect a combination of affective and cognitive components" (Kernberg, 1975, p. 317).

The notion of *possible selves*, which is analogous to the earlier discussed idea of possible worlds, adds to an understanding of regret. According to Markus (1982; Markus and Nurius, 1986), possible selves are cognitive/affective representations of the self in some currently unactualized state. Thus, an individual's self-concept includes not only representations about one's current actuality, but also representations of past selves (e.g., "I was a shy child") and ideas of what one could become in the future (e.g., "I hope to become a comfortable lecturer"). Insofar as possible selves are representations of longed-for (positive) or rejected (negative) aspects of the self, the process of reflecting on possible selves would seem to be an experience with the potential to arouse emotions such as regret. If

theorists such as James, Kernberg, and Markus are right that one's self-concept necessarily involves feelings, then this implies that regret concerning oneself is unlikely to amount merely to a cool "valenced judgment."

This examination of the nature of emotion in general and of regret in particular leads to the following conclusions: (1) Though reason and sentiment are more often than not intertwined, emotion cannot be reduced to cognition. (2) Despite its relatively high degree of cognitive involvement and low degree of arousal, regret is nevertheless an emotion due to its reliable pleasure/unpleasure component. (3) One reason for the undeniably emotional nature of regret is its frequent association with *self-relevant* reflection. In sum, these lines of thought support the conclusion that it is necessary but not sufficient to define regret as an affective phenomenon.

Regret As a Cognitive/Emotional Phenomenon

For Descartes, who thought a great deal about thought, human beings are defined as such not only by virtue of their extraordinary intellectual faculties, i.e., the "cogito," but also by virtue of their capacity for emotion:

> What is a thing which thinks? It is a thing which doubts, understands, [conceives], affirms, denies, wills, refuses, which also imagines and feels (1952, p. 79, brackets are translator's).

The present analysis rests on the related assumption that regret is conceptually, logically and experientially a co-constitutive product of an emotion-cognition-action whole. This is not to say either that emotion is just another cognition or that emotion is entirely other than cognition, but to assert that thought and feeling are closely interdependent activities.

Theory and research on cognitive dissonance also supports the idea that regret is a matter of reason and emotion working in concert with one another. According to Festinger (1957), immediately following a choice between alternatives, we experience conflict, due to our acute consciousness of the unattractive aspects of the chosen alternative and the appealing aspects of the rejected alternative. Since conflict is an unpleasant state, we are motivated to change the state of conflict, which we regularly do by engaging in cognitive maneuvers to justify the decision—for example, changing our original attitudes.

As previously noted, in 1964 Festinger sought to downplay this psychodynamic explanation of regret and to explain regret in purely cognitive terms, as an effect of an increase in salience of the desirable features of a rejected alternative or the undesirable features of the alternative chosen

immediately following a decision. But this purely cognitive account of regret has not been supported by data. For example, subjects who were compelled to attend to dissonant elements of their decisions evidenced not more *regret*, as the cognitive account (Festinger, 1964) had predicted, but more defensive justification (Brehm and Wicklund, 1970). Indeed, in a review of the cognitive dissonance literature, Wicklund and Brehm (1976, p. 107) reject a purely cognitive understanding of dissonance phenomena in favor of the original motivational explanation precisely because of the existence of regret: "If dissonance reduction were simply a matter of noting relevant cognitions and proceeding to a reasoned conclusion, there would never be any reason to suspect the appearance of regret." The cognitive dissonance formulation then supports the idea that regret is not merely a cool, cognitive matter, but a matter of both reason and emotion.

It remains to consider the idea that not only is regret a matter of both reason and emotion, but that it *should* be. In a symposium entitled "The Darker Side of Rationality," Dawes (1981, p. 1) described a thoroughly "rational man," Rudolph Hoess, who, as commandant of Auschwitz for three years, supervised the murder of 2,900,000 persons. Though he was awaiting execution for his crimes, Hoess felt no remorse over having seen to it that nearly 3 million individuals were murdered under his command, because he judged the program of extermination to be both rational and just. Instead, what he regretted in himself and his underlings was the experience or display of emotion (either beneficent or malevolent) as they carried out the "Final Solution". Hoess excoriates not only those Nazis who sadistically enjoyed brutalizing the "prisoners," but also those who were unable to control their "good nature and kind heart" (cited in Dawes, 1981, p. 2). Describing his own difficulty in properly "stifl[ing] all softer emotions," Hoess wrote:

> On one occasion two small children were so absorbed in some game that they quite refused to let their mother tear them away from it. Even the Jews in the "special attachment" were reluctant to pick the children up. The imploring look in the eyes of the mother, who certainly knew what was happening, is something I shall never forget. The people already in the gas chamber were becoming restive and I had to act. Everyone was looking at me; I nodded to the junior non-commissioned officer on duty and he picked up the screaming, struggling children in his arms and carried them into the gas chamber accompanied by their mother, who was weeping in the most heart-rending fashion. My pain was so great that I longed to vanish from the scene; yet I might not show the slightest trace of emotion (cited in Dawes, 1981, pp. 1 & 2).

As Dawes points out, this chilling self-description of a rational man casts doubt on the assumption that if only reason controls emotion, worthy decisions and acts will follow. One wishes that Hoess, hyper-rational and

thereby monstrous, had anticipated his regret for the look in the eyes of the mother and had allowed this emotion to supersede what he saw as the dictates of reason. This example and the previous analysis illustrate the truth that, far from being of necessity a nefarious force, emotion can be a humanizing force. The exercise of uninhibited emotion quite obviously makes for faulty decisions and actions. But the exercise of unrelieved rationality makes for equally faulty decisions and acts. Ideally reason and sentiment are equally honorable compeers in the attempt to live well.

HOW DOES REGRET DIFFER FROM SIMILAR CONCEPTS

Examination of the lexicon indicated that regret is a member of a family of similar concepts, among which are undoing, remorse, and guilt. In the following discussion I shall attempt to clarify further the concept of regret by specifying how it contrasts with these concepts.

Regret versus Undoing

As previously noted, regret and undoing are closely related concepts, in that regret (defined, for example, as being sorry for losses, mistakes, or other events) is often associated with efforts to imaginatively cancel or nullify those losses and errors. In Webster's Third Unabridged International Dictionary, *undoing* is defined in this way: "to make of no effect or as if not done; to make null; to bring to naught; to cancel." Thus undoing is a mode of response to the experience of regret whereby one engages in mental or behavioral acts intended to cancel a regretted mistake. A classic example of undoing is Lady Macbeth's handwashing following the murder of Duncan.

In the psychoanalytic perspective, undoing is a defense mechanism "whereby the subject makes an attempt to cause past thoughts, words, gestures or actions not to have occurred" (Laplanche and Pontalis, 1973, p. 477). According to Freud, undoing represents and embodies a state of ambivalence or conflict between two opposing impulses of equivalent strength, "invariably" love and hate (Freud, 1909, p. 50). By the same token, Freudian undoing often but not always entails an individual's doing or thinking the polar opposite of an earlier act or thought.

Because Freud observed the operation of undoing in patients with obsessive neuroses more often than in patients with hysterical or other types of disorders, he came to characterize undoing as a typical defense of obsessives (see also A. Freud, 1936). In "Notes Upon a Case of Obses-

sional Neurosis" (1909), Freud reported vivid examples of undoing in his patient who has come to be known as the "Rat Man." In one instance, on the day in which his friend was to leave for holiday the Rat Man felt compelled to move a stone to the side of the road lest his friend's carriage be overturned by it later. After a few minutes, deciding that his behavior was absurd, he felt compelled to return and replace the stone to its original spot in the road.

The Freudian concept of undoing encompasses not only overt deeds but also a variety of internal acts, such as "wishes, temptations, impulses, reflections, doubts, commands, or prohibitions" (Freud, 1909, p. 78). Following Freud, Fenichel too delineates a broad conception of undoing: "something positive is done which, actually or magically, is the opposite of something which, again actually or in imagination, was done before" (1945, p. 153). Even in Festinger's formulation of regret (1957), the revoking of a decision was thought to be accomplished either behaviorally or mentally, a view that is congruent with the broad conception of undoing. Thus, undoing may take one of two forms—overt (behavioral) or psychic (mental).

Lady Macbeth's handwashing is an example of something's being done to attempt to magically expunge something which was actually done. The Rat Man's behavior is more complex. In one sense it illustrates the case in which someone does something *in actuality* to cancel something which was actually done: i.e., moving and re-moving the stolen. But in another sense, both the initial act of moving the stone out of the road and the subsequent act of undoing represent "magical" acts; both are significant only in their status as physical instantiations of symbolic personal meaning.

If undoing can take actual and mental forms, the question arises as to which is more likely. Festinger (1957) believed that deeds are more difficult to undo because it would be embarrassing to do so. Publicly performed acts are indeed not easily undone. As Lady Macbeth discovered, it was not the case that "a little water clears us of this deed"; acts can prove impossible to undo. However, is it the case that physical acts are of necessity more recalcitrant to undoing than mental acts? If someone is thinking of eating a candy bar, it may be extremely difficult to undo this thought. Thus it cannot be said that physical acts are necessarily more intransigent to undoing than mental acts.[4]

Mental undoing has been investigated recently in research on the simulation heuristic, which involves imagining possible past events, predicting future events, and assessing causation and probabilities. In a set of experiments on the simulation heuristic, Kahneman and Tversky (1982b) presented subjects with brief written scenarios about a hypothetical Mr. Jones who is killed in an automobile accident on his way home from work. The usualness of one of two elements of each scenario was

varied, so that subjects were either told that Mr. Jones had taken an unusual route home or had left the office at an unusual time. After reading a version of this scenario, subjects were asked to complete an "if only..." stem from the perspective of Mr. Jones's friends or family. The experimental instructions which operationalized undoing are as follows: "As commonly happens in such situations, the Jones family and their friends often thought and often said, 'If only...' during the days that followed the accident. How did they continue this thought? Please write one or more likely completions."

It turns out that most people undo the story by imagining a more *usual* scenario—i.e., by removing the unusual element of time or route (Kahneman and Tversky, 1982b; Landman, 1984). Kahneman and Tversky (1982b) and Kahneman and Miller (1986) explain this finding in terms of ease of simulation—i.e., given an unfortunate event or outcome, people are more inclined to mentally undo it by constructing more readily imaginable (more usual) antecedent events rather than less readily imaginable (unusual) ones.

This idea is based on what may be one of the "most natural divisions the mind is subject to" (Ozick, 1983, p. 200)—that between the usual and the unusual. Cynthia Ozick elaborates on the meaning of this distinction in an essay called "The Riddle of the Ordinary." According to Ozick, we respond to the *unusual* by:

> paying attention to it. . . it seizes us so undividedly, it declares itself so dazzlingly or killingly, it is so deafening with its LOOK! SEE! NOTICE! PAY ATTENTION! that the only answer we can give is to look, see, notice, and pay attention. . . The Extraordinary does not let you shrug your shoulders and walk away (Ozick, 1983, p. 201).

In contrast, the *usual* is taken-for-granted, safe, almost invisible:

> The Ordinary lets us live out our humanity, it doesn't scare us, it doesn't excite us, it doesn't distract us—it brings us the safe return of the school bus every day. . . (Ozick, 1983, p. 201).

Whatever the mechanism (the ease of simulation of usual events, the attention-getting nature of unusual events), research on the simulation heuristic suggests that a regrettable life event or outcome unleashes the cognitive process of mental undoing, particularly undoing of unusual antecedent events.

Freud (1911, 1925) pointed out that thought can also be viewed as a kind of hypothetical action: "judging is the intellectual action which decides the choice of motor action. . . Thought is to be regarded as an experimen-

tal action" (1925, p. 216). More to the point, as Hartman (1959) argued, *imaginative* thought—of which undoing can be said to be an example—may function as a "detour to adaptive action" (cited in Schafer, 1968, p. 89). Thus, undoing may be construed as a mental activity carried on in the service of planning for future behavior—thinking backwards in time in order to plan for the future.

In his action theory of emotion, Schafer erects a bridge between thought and emotions which has application to the present discussion of regret and undoing. Schafer identifies three kinds of operations used to modify or to control emotions (particularly unpleasant emotions like regret): (1) refraining from acting emotionally, (2) acting to change the environment or the situation, and (3) "engaging in cognitive actions by which one transforms one's situation" (1976, p. 295). According to Schafer, although all three operations have the potential to change emotion, the second and third are the most effective in bringing about emotional change. Interestingly, these latter operations correspond precisely to the two types of undoing presently being considered—behavioral and mental. This formulation offers insight into one of the probable functions of undoing—i.e., to modulate the emotion of regret through the application of behavioral or mental treatments. More generally, mental undoing may serve the function of directing both the emotion of regret and future action pertinent to the regrettable situation.

The principal conclusion to be drawn at this point is this: imaginative thought is directly linked to both emotion and action by way of its ability to construct alternative visions of reality. If thought is at least a way of governing emotion and at most an experimental form of behavior, then the operation of mental undoing is a significant human activity in its own right, as well as a significant concomitant of regret.

Remorse versus Regret

It might be recalled that one of the definitions of regret explicitly drew a connection with remorse: "grief or pain tinged with . . . remorse or comparable emotions." Remorse itself is defined as "a gnawing distress arising from a sense of guilt for past wrongs (as injuries done to others)." Synonyms are *self-reproach* and *penitence*. Hence remorse is by definition closely related to regret—both are painful or distressing emotions having to do with an unfortunate life event or transgression.

The *distressing* quality of remorse has been expressed by Adam Smith, who referred to remorse as "of all the sentiments which can enter the human breast the most dreadful" (1759, p. 139). But empirical evidence suggests that remorse may be a less bitter experience than regret. Russell

and Mehrabian (1977) asked subjects to rate the unpleasantness of a large number of emotion words, among which were *repentant* (a synonym of penitence and thus of remorse) and *regretful*. The results indicated that repentance did not differ significantly from zero on the dimension of unpleasantness, while regret was rated as significantly unpleasant. If it is true that remorse is generally viewed as a not terribly unpleasant emotion relative to regret, this may be due to the association of remorse with religion and with the forgiveness that is presumably forthcoming as a result of remorse in a religious context.[5]

In addition to differing on the dimension of unpleasantness, regret and remorse also differ regarding one's degree of responsibility for or degree of control over the matter. It will be recalled that the lexicographical definition of regret included matters that are beyond one's control. Four centuries ago, Montaigne (1580/1936) too asserted that "repentance does not properly affect things that are not in our power; regret, indeed, does" (p. 23). In an analysis with which I concur, Thalberg (1963) argues that personal responsibility is a defining feature of remorse but not necessarily of regret, asserting that it is possible to regret events over which one has no control (e.g., a Supreme Court decision), but that one feels remorse only over one's own voluntary acts. In a similar vein, Solomon (1983, p. 349) defines remorse as the response to a state of affairs for which oneself is to blame, whereas regret is the response to "circumstances beyond my control." Indeed, for this very reason, according to Solomon, regret is an effective way to avoid remorse and guilt.

Thalberg (1963) identifies four other ways in which remorse and regret differ. Most broadly, one can regret the acts of another person but one feels remorse only with respect to one's own acts. Secondly, one can regret doing something morally innocuous or even virtuous, but one feels remorse only for acts that one considers morally wrong. An example of a morally innocuous act that may produce regret but not remorse is the commonplace one in which one is unable to attend a social event to which one was invited; in this circumstance it is ordinarily appropriate to express regret rather than remorse. It is even possible for a morally upright act to produce regret, but not remorse—e.g., having to inform a mother of her son's death (Thalberg, 1963, p. 547). Third, remorse and regret differ in that one can regret one's future actions (having to notify the mother of the death of her son) but feels remorse only over past acts.

A final distinction between remorse and regret has to do with the presence of an intention not to commit the same offense in the future—a defining feature of genuine remorse but not of regret. As Montaigne observed, one might regret that one is so constituted that one "can do no better" (1580/1936, p. 23) in the future. In addition, one may regret that it will be necessary to do something in the future that one might prefer not to

do (e.g., inform a mother of her son's death); but remorse necessitates a firm resolve not to commit the same act again.

Still other distinctions can be drawn between remorse and regret, one of which follows from certain features shared by remorse and guilt. According to Fenichel, *guilt* is the feeling that 'I have done wrong'—a painful judgment about some past occurrence which has the character of *remorse*" (1945, p. 134, emphasis added). Such cross-referencing supports the intuition that remorse and guilt are partially overlapping concepts. Nevertheless, remorse and guilt are not identical concepts. According to Freud, the term *remorse* should be reserved for the distressed reaction following an overt act (often an act of aggression), while guilt can arise not only in response to overt conduct but also "from the perception of an evil *impulse*" (1930, p. 84). The Freudian construal of remorse conforms quite closely to the lexicographical use of the term, in that it highlights the manner in which remorse is an emotional response to an actual offense. Thalberg (1963, p. 546) is in agreement with Freud's distinction between remorse and guilt, and presents a vivid example of the difference: "We can feel guilty about *intending* to take a double portion of strawberries, but nobody ever feels remorse for his unexecuted designs" (emphasis in original). Just as guilt follows not only from overt deeds but from covert ones, it makes sense to say that one may regret not only overt acts but also one's inner acts, i.e., thoughts, attitudes, wishes, or impulses. For example, an individual may come to regret his social prejudices even when he did not act on them; however, in this case, there will be no remorse because there was no overt act. (Of course, just as one is legally and morally more culpable for acts than for unexecuted intentions, it follows that the intensity of one's regret for overt acts is likely to exceed that of one's regret for unexecuted acts.)

To summarize the differences between regret and remorse: it is sensible to speak of *remorse* with respect to one's own past, voluntary, overt and morally wrong acts (or failures to act); it is sensible to speak of regret with respect to all of these circumstances but also with respect to others—e.g., (a) one's own unexecuted intentions, thoughts, wishes, impulses; (b) one's own future, involuntary, and morally innocuous or virtuous acts; and (c) the acts of others which share the foregoing characteristics. In general, remorse entails a measure of personal responsibility which is not a necessary feature of regret. Most broadly, of regret and remorse, "regret is by far the broader notion" (Thalberg, 1963, p. 547).

Guilt versus Regret

Definitions of *guilt* include the following: delinquency or failure in respect to one's duty: offense; responsibility for an offense: fault; state of

deserving punishment: deserts; the fact of having committed a breach of conduct; and the state of consciousness of one who has committed an offense. From these definitions we can conclude that guilt describes both states of being and states of mind, and both moral and legal matters.

In the foregoing discussion of remorse, the essential similarity and an important distinction between guilt and remorse as defined by Freud was delineated. Both remorse and guilt are painful responses to an awareness of one's own transgressions; but guilt has to do both with overt acts and with purely mental acts while remorse is limited to acts which were overtly effected.

With respect to their distressing nature, regret and guilt are more similar than not. Common definitions of regret evoke its painful quality, describing regret as a matter of being keenly sorry for or distressed about losses, transgressions or mistakes. Similarly, guilt is a "painful judgment" (Fenichel, 1945, p. 134). Moreover, there is empirical support for the assumption that guilt and regret are equally painful experiences. When Russell and Mehrabian (1977) had subjects rate a large number of emotion terms, among which were *regretful* and *guilty*, on the dimension of pleasure, regret and guilt were judged to be significantly and equally unpleasurable.

Over what sorts of matters does one experience regret versus guilt? With respect to their shared objects, first of all, as discussed in the foregoing section, it seems possible to regret both overt deeds and unexecuted or entirely psychic acts; therefore regret is congruent with the broad conceptualization of guilt as entailing both overt and purely mental deeds. Second, it makes sense to speak of regret and guilt with reference both to acts and to failures to act. For example, one may regret (and feel guilty for) having robbed a bank. However, someone else may regret (but not feel guilty for) having decided *not* to join his friends in a bank robbery which successfully netted a million dollars for each participant.[6] As this example shows, it is possible to feel regret and guilt for both acts and failures to act; at the same time, regret and guilt *differ* since one can regret *not* having done something immoral but one does not feel guilty for that.

There are other differences between guilt and regret. Once again, as with remorse and regret, regret is the broader concept. One of the primary ways in which regret subsumes guilt is in terms of agency. It is appropriate to speak of regret *both* with reference to one's own free and voluntary acts (or omissions) and also with reference to acts over which one had no personal control. In contrast, guilt is limited to events over which one had some measure of personal responsiblity or control (Finagrette, 1967; H. D. Lewis, 1947; Roseman, 1979, 1982). Thus, individuals might regret a judicial decision limiting the civil rights of a minority group but feel no guilt over it because it was outside the aegis of their personal control.

Notwithstanding this distinction, there is a sense in which guilt has

been construed as a response not only to one's own offenses but also the offenses of similar others. The notion of collective guilt (Jaspers, 1947) has been advanced as a form of co-responsibility incurred by all Germans for the Holocaust offenses committed by some Germans, or more broadly as the co-responsibility of all members of a group for the acts of some members. Similarly, one can imagine collective regret whereby the members of a group share misgivings, dissatisfaction, or distress of mind over the acts of other members of their group. For example, male feminists might experience collective regret over the efforts of some men to undermine the implementation of affirmative action.

To consider the issue of personal agency and responsibility for offenses is to enter the domains of morality and legality. And herein lies a second way in which regret subsumes guilt. Philosophers have typically defined guilt as a distinctively moral emotion (Fingarette, 1967; Harvey, 1947; D. H. Jones, 1966; H. D. Lewis, 1947); and psychologists (Wicker, Payne, and Morgan, 1983) have provided empirical evidence in support of this assertion. Wicker et al. (1983) had respondents rate their own guilt experiences on a number of theory-based dimensions, among which was moral nature of the offense. In their ratings these respondents did express a direct connection between guilt and moral failings. Guilt is limited to circumstances involving an offense against a legal and/or moral precept—*or* involving something considered by the agent as constituting a legal or moral transgression. Regret, on the other hand, applies more broadly to moral and legal domains as well as to domains without moral or legal implications.

The conclusion that regret subsumes guilt with respect to the moral nature of the offense is not shared by all scholars. In Roseman's (1979) theory of emotion, regret and guilt are viewed as "opposite" emotions because they are thought to differ on just this feature. According to Roseman (1979, p. 10, Footnote 10), only guilt and not regret involves moral blame: "The difference between Regret and Guilt is like the difference between making a mistake and committing a sin or crime."[7] Solomon (1938) concurs with this distinctions, describing guilt as entailing "extreme" blame and regret as entailing no blame because it concerns circumstances beyond one's control.

Despite the prima facie plausibility of this distinction, I believe it is at variance with psychological experience, in which one can and does regret not only one's mistakes but also one's sins and crimes. Indeed, the categories are not so easy to distinguish. Was Lady Macbeth guilty but not regretful about the murder of Duncan? Was the Rat Man guilty but not regretful? I think not. I think it is more accurate to describe Lady Macbeth and Freud's patient as at once guilty and regretful than to limit the experience to one or the other emotion. In general, it seems impossible to

imagine an instance of guilt without regret, but quite possible to imagine an instance of regret without guilt.

Thus, regret is once again the broader concept. Regret cannot be limited to instances in which there is legal, moral, or psychological culpability but includes instances of legally, morally, and subjectively innocuous acts. Furthermore, unlike guilt, regret cannot be limited to one's own free and voluntary acts and failures to act but also includes the acts and omissions of others as well as deeds over which one had no control.

CONCEPTUAL AND THEORETICAL CONCLUSIONS

This consideration of regret and related concepts suggests that regret is a superordinate concept that subsumes certain defining features of remorse and guilt, but that regret can also be distinguished from remorse and regret by certain clear boundaries. In addition, regret is phenomenally associated with undoing. These conclusions conform to the results of recent research which indicates (1) that emotions tend to occur in positive or negative clusters rather than in isolation and/or (2) that people are poor at discriminating among their own related emotions (H. B. Lewis, 1971; Polivy, 1981). If the emotions of anger, depression, and anxiety typically occur together (or are reported as occurring together) (Polivy, 1983) and if the emotions of shame and guilt often occur together (or are so reported) (H. B. Lewis, 1971), then it should come as little surprise that regret, remorse, and guilt might covary.

In sum, an extended working definition of regret can be stated this way: regret is a more or less painful cognitive/affective state of feeling sorry for losses, transgressions, shortcoming, or mistakes. The regretted matters may have been sins of commission as well as sins of omission; they may range from the entirely voluntary to the accidental; they may have been actually executed deeds or entirely mental ones; they may have been committed by oneself or by another person or group; they may be moral or legal transgressions or morally and legally neutral; and the regretted matters may have occurred in the past, the present, or the future.

Among the major goals of conceptual and theoretical analysis is the pragmatic one of facilitating the testing of claims about the phenomenon in question. The present analysis contributes to this goal in a number of ways.

First, it suggests that the business of conceptual analysis itself could benefit from further empirical work. Insofar as it pinpoints areas of controversy or disagreement among scholars, the present analysis encourages others to investigate definitional disagreement empirically—for example, to discover whether most people include or exclude from their

concept of regret those losses, acts, or events which were not under their personal control. It should be possible, by means of prototype analysis (e.g., Cantor and Mischel, 1977; Rosch and Mervis, 1975) or other sorts of empirical investigation, to clarify further the boundaries separating regret from similar concepts and to clarify which are the most typical elements and objects of regret.

Second, this analysis suggests that future theory and research need to consider both the cognitive and the affective nature of regret and the possible implications of these for human thought, feeling, and action. It remains to flesh out in detail the psychology of regret—the cognitive, emotional, and situational regularities underlying the experience.

This analysis also suggests questions concerning the internal and external antecedents of regret. Can there be said to exist regretful personalities (e.g., Freud's obsessive ruminators) who exhibit a stable and cross-situational propensity to regret? Or is regret more often an effect of adverse circumstances, as implied in the work of Kahneman and Tversky?

Markus's (1982; Markus and Nurius 1986) research on possible selves points up the importance of studying self-relevant regret—e.g., the manner in which people incorporate negative past selves (regrettable aspects of the self) into their overall self-concept. For example, this research suggests alternative explanatory accounts of the link between thought and a negative affect like regret. It may be that people who remember or imagine a large number of bad selves suffer greater regret than those whose store of negative possible selves is smaller. Regret then may depend not only on the number of actual sins one has committed, but also simply on how imaginative one is. An alternative view of the relationship between negative affect and negative past selves is that negative affect recruits regretted past selves. It may be only when someone is unhappy with the present state of affairs that he or she is likely to call up a large number of negative past selves as part of his or her self-concept. Another question of theoretical interest is how self-relevant regret differs from other-relevant regret.

Finally, this analysis raises questions about the functions of regret. Is regret a wholly futile activity, as Lady Macbeth argued to her husband following the murder: "Things without all remedy should be without regard; what's done is done"? Although on the face of it, regret would seem to be an almost un-American experience in its perverse failure of optimism, is it necessarily a negative force for personal adjustment? Are those who consciously regret thereby debilitated? Or are there potentially salutary cognitive, emotional, or behavioral sequelae to regret? As I indicated earlier, there are reasons to believe that regret is neither useless or necessarily malignant, but that there are important purposes (e.g., instruction, emotional governance, reparation, remembrance) to be served

by regret, purposes awaiting discovery and elaboration by future investigation.

It is hoped that the present conceptual and theoretical analysis will contribute further to the investigation of regret. For regret is a most distinctly *psychological* phenomenon, bridging as it does the cognitive and the emotional, the past and the present, the actual and the mental. Insofar as "time is seen to be continuous and irreversible; choices once made are made forever; a second chance cannot be the same as the first; life is progression toward death without rebirth" (Schafer, 1976, p. 36), regret is undoubtedly the inevitable, *universal* human experience Baldwin thought it to be—and for this reason alone, a singularly consequential object of study.

Janet Landman
Department of Psychology
580 Union Drive
The University of Michigan
Ann Arbor
MI 48109

Acknowledgement This article is based on a doctoral dissertation submitted to the Department of Psychology at the University of Michigan; the dissertation was awarded the Marquis dissertation award for 1984 by this department. I would like to thank committee members Melvin Manis (chair), Hazel Markus, Nancy Cantor, and Jean D. Manis for their most valuable advice. In addition, I am very much indebted to Sidney Gendin for copious critique of earlier drafts of the conceptual analysis. This work also benefited from critique by and/or discussion with Daniel Kahneman, Linda Perloff, Chris Peterson, Carolyn Phinney, and an anonymous reviewer.

NOTES

[1] All lexicographic definitions used in this article are taken from Webster's Unabridged Third New International Dictionary.

[2] Leventhal's model of emotion is a perceptual-motor model in which cognitive processing is a frequent but not necessary feature. For example, according to Leventhal, infants are capable of cognitively unelaborated emotional responses to perceptual stimuli. This type of emotional activity is an innate, automatic response to the activation of an expressive-motor system. This theory stands in clear opposition to the cognition-arousal theories of emotion (e.g., Schachter & Singer, 1962; Schachter, 1964).

[3] The fact that regret is a phenomenon requiring not only consciousness but also self-consciousness further supports the assumption that regret is not experienced by animals or human infants.

[4] This example was pointed out to me by Sidney Gendin.

[5] This explanation was suggested to me by Jean D. Manis.

[6] Sidney Gendin pointed out this example to me.

[7] The face validity of the respective analogies between regret/mistakes and guilt/sins may stem from a common association between guilt and absolution, an association which is not characteristic of regret. Thus, like repentance and remorse, guilt seems to entail the possibility of forgiveness, while regret may or may not.

REFERENCES

ALSTON, W. (1969). Feelings. *Philosophical Review, 78*, 3–34.

ARISTOTLE. *The Nichomachean ethics.* (P. Wheelwright, Trans. and Ed.). New York: Odyssey Press, 1935.

BEDFORD, E. (1956–1957). Emotions. *Proceedings of the Aristotelian Society.* London: Harrison & Sons.

BELL, D. E. (1981). Explaining utility theory paradoxes by decision regret. in J. Morse (Ed.), *Proceedings of the Fourth International Conference of Multiple Criteria Decision Making.* New York: Springer. pp. 28–39.

BREHM, J. W., & WICKLUND, R. A. (1970). Regret and dissonance reduction as a function of postdecision salience of dissonant information. *Journal of Personality and Social Psychology, 14*, 1–7.

CANTOR, N., and MISCHEL, W. (1977). Traits as prototypes: Effects on recognition memory. *Journal of Personality and Social Psychology, 35*, 38–48.

CANTOR, N., SMITH, E. E., FRENCH, R. D., and MEZZICH, J. (1980). Psychiatric diagnosis as prototype categorization. *Journal of Abnormal Psychology, 89*, 181–193.

DAWES, R. M. (1981). *Plato vs. Russell: Hoess and the relevance of cognitive psychology* (Tech. Report No. 43). Eugene: University of Oregon, Institute for Social Science Research.

DESCARTES, R. (1641). Meditations. *Great Books of the Western World.* Chicago, Illinois: Encyclopaedia Brittanica, 1952.

ERICKSON, E. (1963). *Childhood and society* (2nd ed.). New York: Norton.

FEHR, B., and RUSSELL, J. A. (in press). The concept of emotion viewed from the prototype perspective. *Journal of Experimental Psychology: General.*

FENICHEL, O. (1945). *The psychoanalytic theory of neurosis.* New York: Norton.

FESTINGER, L. (1957). *A theory of cognitive dissonance.* Evanston, Illinois: Row, Peterson.

FESTINGER, L. (1964). *Conflict, decision, and dissonance.* Stanford, California: Stanford University Press.

FESTINGER, L. and WALSTER, E. (1964). Post-decision regret and decision reversal. In L. Festinger (Ed.), *Conflict, decision, and dissonance.* Stanford, California: Stanford University Press.

FINGARETTE, H. (1967). Real guilt and neurotic guilt. In H. Morris (Ed.), *Guilt and shame.* Belmont, California: Wadsworth, 1971.

FISKE, S. T. (1982) Schema-Triggered Affect: Applications to Social Perception. In M.S. Clark and S.T. Fiske (Eds.), *Affect and cognition: The 17th annual Carnegie symposium on cognition.* Hillsdale, New Jersey: Erlbaum.

FREUD, A. (1936). *The ego and the mechanisms of defense* (revised edition). New York: International Universities Press.

FREUD S. (1930). *Civilization and its discontents.* (J. Strachey, Trans.) New York: Norton, 1961.

FREUD, S. (1909). *Three case histories.* New York: Collier, 1963.

FREUD, S. (1911). Formulations regarding the two principles in mental functioning. *General psychological theory: Papers on metapsychology.* New York: Collier Books, 1963.

Freud, S. (1925). In *General psychological theory: Papers on metapsychology.* New York: Collier Books, 1963.

GOODMAN, N. (1973). *Fact, fiction, and forecast* (3rd edition). Indianapolis: Bobbs-Merrill.

HARTMANN, H. (1939). *Ego, psychology and the problem of adaptation.* New York: International Universities Press.

HARVEY, J. W. (1947). The problem of guilt. *Explanation in history and philosophy. Aristotelian Society Proceedings.* Supplementary Volume 21. London: Harrison & Sons.

JAMES, W. (1890). *The principles of psychology* (Vol. I). New York: Henry Holt.

JASPERS, K. (1947). Differentiation of German guilt. In H. Morris (Ed.), *Guilt and shame.* Belmont, California: Wadsworth, 1971.

JONES, D. H. (1966). Freud's theory of moral conscience. *Philosophy, 41,* 34–57.

KAHNEMAN, D., and MILLER, D. T. (1986). Norm theory: Comparing reality to its alternatives. *Psychological Review, 93,* 136–53.

KAHNEMAN, D., and TVERSKY, A. (1982a). The psychology of preferences. *Scientific American, 246,* 160–73.

KAHNEMAN, D., and TVERSKY, A. (1982b). The simulation heuristic. In D. Kahneman, P. Slovic, & A. Tversky (Eds.), *Judgment under uncertainty: Heuristics and biases.* New York: Cambridge University Press.

KERNBERG, O. (1975). *Borderline conditions and pathological narcissism.* New York: Jason Aronson.

KLEIN, G. S. (1970). *Perception, motives, and personality.* New York: Knopf.

KOHUT, H. (1966). Forms and transformations of narcissism. *Journal of the American Psychoanalytic Association, 14,* 243–72.

KRECH, D. (1949). Notes toward a psychological theory. *Journal of Personality, 18,* 66–87.

LAKOFF, G. (1973). Hedges: A study in the meaning of criteria and the logic of fuzzy concepts. *Journal of Philosophical Logic, 2,* 458–508.

LANDMAN, J. (1984). *Regret and undoing: Retrospective assessment of hypothetical*

and real-life events. Unpublished doctoral dissertation, University of Michigan, Ann Arbor.

LANDMAN, J. (in press). Regret and elation following action and inaction: Affective responses to positive versus negative outcomes. *Personality and Social Psychology Bulletin.*

LAPLANCHE, J., and PONTALIS, J.-B. (1973). *The language of psychonalysis.* New York: Norton.

LEVENTHAL, H. (1980). Toward a comprehensive theory of emotion. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 13). New York: Academic Press.

LEVINSON, D. J. (with C. N. Darrow, E. B. Klein, M. H. Levinson, and B. McKee). (1978). *The seasons of a man's life.* New York: Knopf.

LEWIS, D. K. (1973). *Counterfactuals.* Cambridge, Massachusetts: Harvard University Press.

LEWIS, H. B. (1971). *Shame and guilt in neurosis.* New York: International Universities Press.

LEWIS, H. D. (1947). The problem of guilt. *Explanation in history and philosophy. Aristotelian Society Proceedings.* Supplementary Volume *21.* London: Harrison & Sons.

LOOMES, G., and Sugden, R. (1982). Regret theory: An alternative theory of rational choice under uncertainty. *Economic Journal, 92,* 805–24.

MARKUS, H. (1982, October). *Possible selves.* Paper presented at the meeting of the Society for Experimental Social Psychology, Nashville, Indiana.

MARKUS, H. & NURIUS, P. (1986). Possible selves. *American Psychologist, 41,* 954–69.

MERVIS, C. B., and ROSCH, E. (1981). Categorization of natural objects. *Annual Review of Psychology, 32,* 89–115.

MONTAIGNE, M. de. (1580/1936). Of repentance. *The essays of Michel de Montaigne.* (J. Zeitlin, Trans.). Vol. III. New York: Knopf.

NIETZSCHE, F. (1974). *The gay science.* (W. Kaufmann, Trans.). New York: Vintage Books (Original work published 1887).

NISBETT, R, and ROSS, L. (1980). *Human inference: Strategies and shortcomings of social judgment.* Englewood Cliffs, NJ: Prentice-Hall.

ORWELL, G. (1946). Looking back on the Spanish war. In *A collection of essays by George Orwell.* San Diego: Harcourt Brace Jovanovich.

OZICK, C. (1983). *Art and ardor.* New York: Knopf.

PAUL, G. A. (1947). The problem of guilt. *Explanation in history and philosophy. Aristotelian Society Proceedings.* Supplementary Volume 21. London: Harrison & Sons.

PERKINS, M. (1966). Emotion and feeling. *Philosophical Review, 75,* 139–60.

PIAGET, J. (1952). *The origin of intelligence in children.* (M. Cook, Trans.). New York: International Universities Press.

PIAGET, J. (1970). Piaget's theory. In P. H. Mussen (Ed.), *Carmichael's manual of child psychology* (Vol. I, 3rd ed., pp. 703–32). New York: Wiley.

PLATO. The Republic. *Great Books of the Western World.* Chicago, Illinois: Encyclopaedia Brittanica, 1952.

PLUTCHIK, R. (1980). A general psychoevolutionary theory of emotion. In R. Plutchik, and H. Kellerman (Eds.), *Emotion: Theory, research, and experience.* New York: Academic Press.

POLIVY, J. (1981). On the induction of emotion in the laboratory: Discrete moods or multiple affect states? *Journal of Personality and Social Psychology, 41*, 803–17.

ROSCH, E., and MERVIS, C. B. (1975). Family resemblances in the internal structure of categories. *Cognitive Psychology, 7*, 573–605.

Roseman, I. (1979, September). *Cognitive aspects of emotion and emotional behavior.* Paper presented at the meeting of the American Psychological Association, New York City.

ROSEMAN, I. J. (1982, Summer). *Cognitive determinants of emotions.* Paper presented at Emotion Research Conference.

RUSSELL, J. A., and MEHRABIAN, A. (1977). Evidence for a three-factor theory of emotions. *Journal of Research in Personality, 11*, 273–94.

SAGE, A. P., & White, E. B. (1983). Decision and information structures in regret: Models of judgment and choice. *IEEE: Transactions on Systems, Man, and Cybernetics. SMC–13*, 136–43.

SANDLER, J., and ROSENBLATT, B. (1962). The concept of the representational world. *The Psychoanalytic Study of the Child, 17*, 128–45.

SARTRE, J-P. (1948). *The emotions: Outline of a theory.* New York: Philosophical Library.

SCHACHTER, S. (1964). The interaction of cognitive and physiological determinants of emotional states. In L. Berkowitz (Ed.), *Advances in experimental social psychology.* (Vol. I). New York: Academic Press.

SCHACHTER, S., and SINGER, J. E. (1962). Cognitive, social, and physiological determinants of emotional states. *Psychological Review, 69*, 379–99.

SCHAFER, R. (1968). *Aspects of internalization.* New York: International Universities Press.

SCHAFER, R. (1976). *A new language for psychoanalysis.* New Haven, Connecticut: Yale University Press.

SCHOEFFLER, M. S. (1962). Prediction of some stochastic events: A regret equalization model. *Journal of Experimental Psychology, 64*, 615–22.

SMITH, A. (1759). *The theory of moral sentiments.* Vol. I. Basil: J. J. Tourneisen, 1793.

SOLOMON, R. C. (1983). *The passons: The myth and nature of human emotion.* Notre Dame, IN: The University of Notre Dame Press.

THALBERG, I. (1963). Remorse. *Mind, 72*, 545–55

WICKER, F. W., PAYNE, G. C., and MORGAN, R. D. (1983). Participant descriptions of guilt and shame. *Motivation and Emotion*, *7*, 25–39.

WICKLUND, R. A., and BREHM, J. W. (1976). *Perspectives on cognitive dissonance*. New York: Wiley.

WITTGENSTEIN, L. (1953). *Philosophical investigations*. (G. E. M. Anscombe, Trans.). Oxford: Basil Blackwell & Mott.

ZAJONC, R. B. (1980). Feeling and thinking: Preferences need no inferences. *American Psychologist*, *35*, 151–75.

ZAJONC, R. B. (1984). On the primacy of affect. *American Psychologist*, *39*, 117–23.