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Value From Hedonic Experience *and* Engagement

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Recognizing that value involves experiencing pleasure or pain is critical to understanding the psychology of value. But hedonic experience is not enough. I propose that it is also necessary to recognize that *strength of engagement* can contribute to experienced value through its contribution to the *experience of motivational force*—an experience of the intensity of the force of attraction to or repulsion from the value target. The subjective pleasure/pain properties of a value target influence strength of engagement, but factors separate from the hedonic properties of the value target also influence engagement strength and thus contribute to the experience of attraction or repulsion. These additional sources of engagement strength include opposition to interfering forces, overcoming personal resistance, using the right or proper means of goal pursuit, and regulatory fit between the orientation and manner of goal pursuit. Implications of the contribution of engagement strength to value are discussed for judgment and decision making, persuasion, and emotional experiences.

Keywords: value, motivation, pleasure and pain, engagement, decision making, emotion

What is value? Where does value come from? For centuries, these questions have been central to understanding people's motivation and decision making. Not surprisingly, there have been many different answers to these questions, including that value is the experience of pleasure and pain (for a review, see Higgins, in press). I propose that value is, indeed, a hedonic experience, but it is not only that. It is also an experience of motivational force—experiencing the force of attraction toward something or repulsion away from something. Because it is a *motivational force* and not only a hedonic experience, there can be contributions to the overall experience of value other than hedonic experience. Specifically, I propose that *strength of engagement* contributes to the *intensity* of the motivational force experience—the intensity of attraction to or repulsion from something. The hedonic properties of a value target contribute to engagement strength, but there are also other factors—separate from the target's hedonic properties—that influence engagement strength and thus contribute to the intensity of attraction or repulsion. Because their contribution derives from their effect on engagement strength, these additional factors can contribute to a value target's attractiveness or repulsiveness regardless of whether they themselves are pleasant or unpleasant. For example, the unpleasant experience of opposing an interfering force while moving toward a positive target, such as removing a barrier that is blocking the path to a goal, can intensify the target's attractiveness. It is the contribution to value of these additional sources of engagement strength that provides new insights on what is value and how it is created.

What is meant by something having value to someone? According to the Compact Edition of the *Oxford English Dictionary*, Vol. II (p. 3587) and the Webster's Collegiate Dictionary (p. 1303), to value something is to estimate or appraise it in respect of value. But what is the "value" being estimated or appraised? These dictionaries define "value" in two basic ways:

1. That amount of some commodity, medium of exchange, and so forth, that is considered to be an equivalent for something else. A fair return or equivalent in goods, services, or money. The material or monetary worth of a thing; marketable price.

2. The relative status of a thing, or the estimate in which it is held, according to its real or supposed worth, usefulness, or importance; degree of excellence.

There is considerable agreement between these dictionaries in their definitions of value. It is noteworthy that the first, primary definition of value defines the value of something as its monetary worth or marketable price. This type of definition provides a useful operational definition of "value" but it does not say what value is psychologically. What exactly is this "value" that people will exchange money for? The second definition of value as worth, usefulness, and importance—degree of excellence—is the kind of definition that is explored more deeply in this article.

Value as degree of excellence has often been treated in terms of beliefs and inferential judgments. When people talk about their personal values or the values that others hold, they usually have in mind value as people's personal standards or beliefs about what is desirable. In a clear statement of this viewpoint, Rokeach (1980, p. 262) describes values as "shared prescriptive or proscriptive beliefs about ideal modes of behavior and end-states of existence." This viewpoint emphasizes shared beliefs about both desired objectives or endstates and desired procedures or means for attaining

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and maintaining them (see Merton, 1957; Rokeach, 1973, 1979; Schwartz, 1992; Schwartz & Bilsky, 1987; Seligman, Olson, & Zanna, 1996; Thibaut & Walker, 1975; Tyler & Lind, 1992).

Value has also been conceptualized in terms of the relationship between a current state and some endstate functioning as a standard or reference point, where approaching desired endstates and avoiding undesired endstates has value. This viewpoint is found in cybernetic and control process models (e.g., Bandura, 1986; Carver & Scheier, 1981, 1990; Miller, Galanter, & Pribram, 1960; Powers, 1973; Wiener, 1948), self-concept models (Boldero & Francis, 2002; Duval & Wicklund, 1972; Higgins, 1987; James, 1890/1948; Rogers, 1961), and social comparison models (Cialdini et al., 1976; Hyman, 1942; Merton & Kitt, 1952; Tesser, 1988). There are also times when people infer what the value of something is to them by observing their own behaviors, thoughts, or feelings toward it and treating these cues as evidence for its value to them, similar to what they would do when observing the behavior of others to infer the value of something to them (Andersen, 1984; Bem, 1965, 1967; Heider, 1958; Jones & Davis, 1965; Kruglanski, 1975; Lepper, Greene, & Nisbett, 1973; Salancik & Conway, 1975; Schachter & Singer, 1962; Schwarz & Clore, 1988).

Historically, the "cognitive" sources of value that I have just described correspond to the prevalent philosophical view of value that involves using reason and reflection to create an objective basis for determining what is good or bad (Haidt, 2001; Williams, 1985). What has received less emphasis from this viewpoint is the notion of *value as experience*. Indeed, value as experience is not explicitly mentioned in dictionary definitions of value. Nonetheless, conceptualizing value in terms of experience has a long history in the psychological and philosophical literatures.

The term "hedonic," which derives from the Greek term for "sweet," means relating to or characterized by pleasure (Webster's Ninth New Collegiate Dictionary, 1989, p. 561). Historically, value experiences have been most often associated with *hedonic* experiences. From the time of the Greeks, hedonic experiences have been linked to the classic motivational principle that people approach pleasure and avoid pain. Our understanding of the subjective experience of pleasure and pain has deepened (e.g., Kahneman & Tversky, 1979), and psychologists' interest in hedonic experiences has never been greater (see Kahneman, Diener, & Schwarz, 1999).

In an early statement on the importance of hedonic experiences to value, Jeremy Bentham (1781/1988, p.1) stated: "Nature has placed mankind under the governance of two sovereign masters, *pain* and *pleasure*. It is for them alone to point out what we ought to do, as well as to determine what we shall do." Kahneman (2000) points out that the concept of utility has different meanings. One, "decision utility," is like the primary dictionary definition of value described earlier in its being an operational (i.e., behavioristic) definition—utility is inferred from observed choices. The second meaning reflects Bentham's perspective on utility as experiences of pleasure and pain and is called "experienced utility" by Kahneman.

Do animals value something as a function of whether it satisfies their biological needs or will they choose something simply because it provides hedonic pleasure experiences? There is clear evidence that animals will choose on the basis of value experiences independent of any biological need being satisfied (e.g., Berridge & Robinson, 2003; Eisenberger, 1972; Olds & Milner, 1954; Woodworth & Schlosberg, 1954; for a review, see Higgins, in press). Basic hedonic experiences have been emphasized in influential models of animal learning and performance (e.g., Miller, 1963; Mowrer, 1960; Spence, 1958), attitudes and moods (Eagly & Chaiken, 1993; Schwarz & Clore, 1996), decision making (e.g., Kahneman & Tversky, 1979; Lopes, 1987), and emotions (e.g., Diener & Emmons, 1984; Frijda, Kuipers, & ter Schure, 1989; Ortony, Clore, & Collins, 1988; Roseman, 1984; Russell, 1980; see also Spinoza 1677/1986; Wundt, 1896/1999).

In sum, hedonic experiences of pleasure and pain have been proposed by many as being basic to value. I agree that hedonic experience makes a critical contribution to value. I also believe, however, that hedonic experience is not the whole story and that there is another variable that contributes to value—*strength of engagement*.

Hedonic Experience and Strength of Engagement

In conceptualizing value, my starting point is the position of Kurt Lewin. For Lewin (1951), value is a *force* that has direction *and* strength. Lewin (1951) had in mind forces on a person's life space that were analogous to natural physical forces on objects rather than something that a person experiences. I follow Lewin's (1951) lead but postulate a *force experience* that has direction and strength or intensity. Experiencing something as having positive value corresponds to experiencing attraction toward it (i.e., trying to move in the direction toward it), and experiencing something as having negative value corresponds to experiencing repulsion from it (i.e., trying to move in a direction away from it).

Hedonic Experience and Motivational Force Experience as Distinct Sources of Value

The directional component of the value force experience (i.e., attraction vs. repulsion) is critical to the psychology of value. This is why the hedonic experiences of pleasure or pain are so important (see Kahneman et al., 1999). "Cognitive" sources of value can also influence the experience of direction. For example, shared beliefs about what is desirable and what is undesirable—both social values and personal ideals and oughts—directly determine what has positive value and what has negative value. The evidence used to make evaluative inferences also provides directional information about the positive or negative value of something (e.g., Bem's self-perception theory). But value experiences have more than direction. They also vary in strength or intensity so that the experience of attraction can be relatively weak or strong (low or high positive value), and the experience of repulsion can be relatively weak or strong (low or high negative value). The contribution of strength of engagement to the value force experience is not through an influence on direction but through its influence on the intensity of attraction or repulsion. As will be seen, the hedonic nature of a value target also contributes to value intensity through its impact on engagement strength, but it is not the only determinant of engagement strength. The purpose of this article is to highlight the contribution to engagement strength, and thus to value intensity, from sources other than the value target's hedonic properties.

Figure 1 provides a summary of the overall proposal that I develop in this article. The purpose of the figure is simply to provide a visual representation of what I propose below regarding the connections among the variables that contribute to the value force experience. I wish to note a few points about the figure.

First, not all possible relationships among the variables in the figure are shown. Only those relationships that I will emphasize and discuss below are included. For example, Figure 1 does not show an influence of strength of engagement on how the pleasure/pain properties of a value target are experienced. This should not be taken as a claim that there is no such influence. It simply means that the model is currently silent about what this influence might be. In each case, the absence of an indicated relationship in the figure should be understood in this way—the model is currently *silent* about the influence. As new research evidence is collected and the theory develops, new influences will be added to the model. The current model, for instance, shows only strength of engagement and hedonic experience as factors contributing to the motivational force experience, but other factors could contribute to this experience as well. As another example, it is likely that hedonic outcomes themselves contribute to strength of engagement, such as success or failure in a goal pursuit activity affecting subsequent strength of engagement in that activity (see, e.g., Idson, Liberman, & Higgins, 2004). As the model becomes more dynamic and considers value creation and strength of engagement over time, it will become important to consider the relationship between outcomes and strength of engagement.

Second, when an influence between variables is shown, it simply reflects the proposal that one variable has an effect on the other. No claim is being made about the precise nature of the influence, such as whether it monotonic or nonmonotonic. As we shall see, the relationship between hedonic experience and motivational force experience is not a simple monotonic relationship.

My discussion of the proposal illustrated in Figure 1 will move from right to left. To begin with, I propose that there are two distinct sources of the value experience. One source is the hedonic pleasure/pain experience of the target. As discussed earlier, it has been recognized for centuries that pleasure has associated with it an approach motivation and that pain has associated with it an avoidance motivation—the classic hedonic principle. I propose, however, that there is a second source of the value experience that does not involve the hedonic experience of pleasure or pain per se but rather involves the experience of the motivational force to make something happen (experienced as a force of attraction) or make something not happen (experienced as a force of repulsion). Although the hedonic experience and the motivational force experience often are experienced holistically, conceptually they are distinct from one another. Some activity that provides little hedonic pleasure, for example, may have a strong motivational force associated with it because it is the proper thing to do or matches shared beliefs about appropriate procedures of goal pursuit—I don't "enjoy" doing this but I feel "compelled" to do it. Empirical evidence of the distinct contributions to value from the hedonic pleasure/pain experience and the motivational force experience is provided below.

Although distinct, the hedonic experience and the motivational force experience affect one another, as noted by the bidirectional link between them in Figure 1. The precise nature of their interrelationship is not well known, however, perhaps because the literature has rarely distinguished between them as sources of

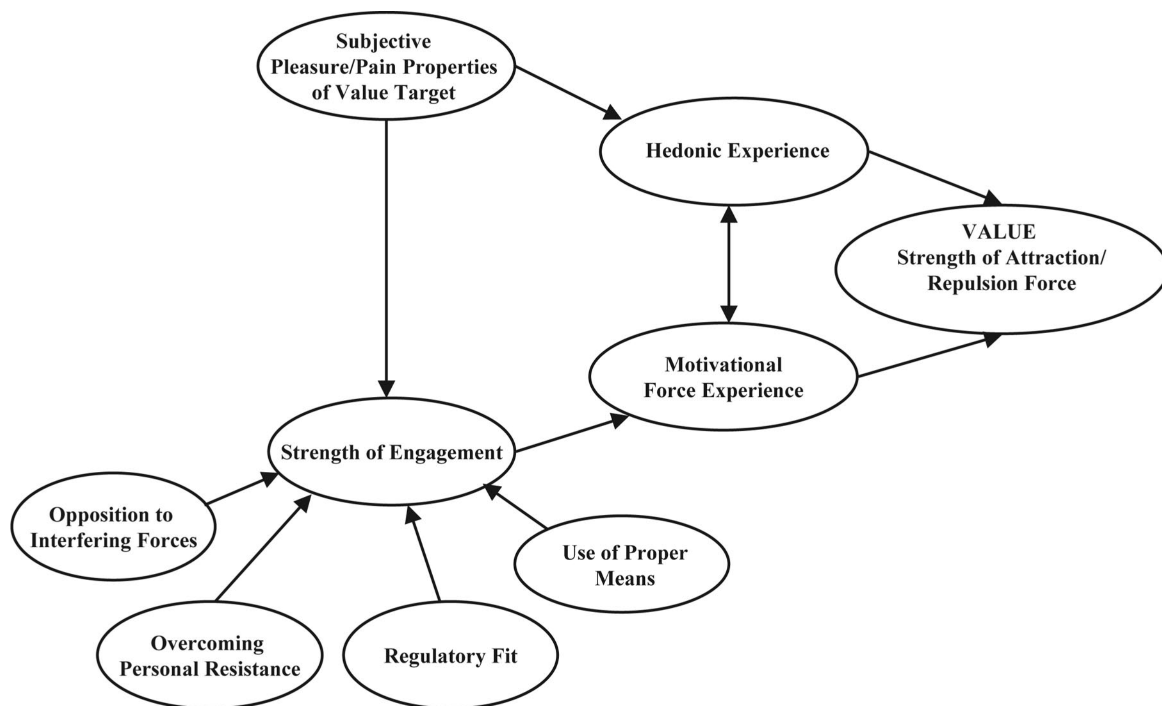

Figure 1. Illustration of proposed relational influences among variables contributing to the value force experience.

value experience. Nonetheless, it seems reasonable to postulate that hedonic experience would affect motivational force experience, with the intensity of the force to make something happen increasing as its pleasantness increases and the intensity of the force to make something not happen increasing as its painfulness increases. It is also reasonable to postulate that motivational force experience would affect hedonic experience, albeit perhaps not in a simple way. For example, when a desire to do something becomes a compulsion to do it, that is, experienced too strongly as a motivational force to make it happen, the activity might become less enjoyable. Future research is clearly needed to investigate the nature of this proposed bidirectional relation.

In sum, what is critical here is the notion that value is not just an experience of pleasure or pain but an experience of the force of attraction toward or repulsion away from something. Value involves an experience of the intensity of a motivational force and not just a directional experience of pleasure versus pain. *Although the hedonic nature of a value target contributes to the intensity experience through its influence on engagement strength, there are other sources of engagement strength that are independent of the value target's hedonic properties*. Let us now consider in more detail these various sources of the value force experience.

Sources of Hedonic Experience and Sources of Motivational Force Experience

Let us now move further left in Figure 1 to the sources of hedonic experience and the sources of motivational force experience. I begin with the subjective properties of a value target as a source of pleasure/pain hedonic experience. The subjective properties of a value target (present or anticipated), *given the current need or goal state of the perceiver*, elicit or induce pleasure or pain of varying strengths. I want to highlight that when I use the phrase "need or goal state" I am referring not only to physiological needs or drives emphasized in the traditional psychological literature but also to goals, standards, shared values, and other desired endstates (see Lewin, 1935, 1951). It has long been recognized that pleasure or pain of varying strengths to the properties of some target is not a function solely of the target's objective properties. It is the target's subjective properties that are critical. People do not simply react to some property. They assign meaning or significance to an object's property as a function of their current need or goal state and then respond to that meaning or significance (Weber, 1967). What is critical is the dynamic relationship between the specific perceiver and specific target (Lewin, 1935, 1951).

Hedonic pleasure/pain experience, therefore, derives not only from the properties of something but also from the need or goal state of the perceiver. In classic theories of learning (Hull, 1943; Miller & Dollard, 1941), for example, a distinction was made between the drive stimulus that guides the direction of movement and the perceiver's drive that energizes the movement. Discussing the perceiver's drive state, Hebb (1955, p. 249) said ". . . drive is an energizer, but not a guide; an engine, but not a steering gear." People differ chronically in the level of their energizing drive states, such as hunger, and a given person will vary in his or her energizing drives states from situation to situation or moment to moment. The guiding drive stimulus, such as food, also varies in strength as a function of the stimulus' own properties. The point I want to emphasize here is that the component of hedonic experience *itself* has an intensity factor from the guiding drive stimulus (level of food), the energizing state (level of hunger), and their interaction. Later I discuss how, separate from this hedonic intensity factor, strength of engagement makes an additional contribution to the experience of value intensity.

It is not only the perceiver's need or goal state that influences how a target's properties are hedonically experienced. It is also well known that the experience of a target's properties is influenced by the situation or context in which they are perceived (e.g., Kohler, 1929; Koffka, 1935; Lewin, 1951; for a review, see Ross & Nisbett, 1990). For example, people consider the value of something in relation to whatever factual standard is currently available or accessible to them, which can vary as a function of context (Higgins, Strauman, & Klein, 1986). The value of something can be assimilated toward or contrasted away from the context of current alternatives (Helson, 1964; Higgins & Stangor, 1988). It can vary depending on which mental account the context suggests is appropriate for calculating its value (Thaler, 1999) or on what the context suggests is normal (Kahneman & Miller, 1986) or might have happened instead (Kahneman & Tversky, 1982; Markus & Nurius, 1986; Roese, 1997).

Let us now consider the sources of motivational force experiences. As was discussed earlier, one source of motivational force experience is the pleasure/pain hedonic experience. This source has so dominanted analyses of motivation that other sources have not received serious attention. As shown in Figure 1, a novel feature of the present model is the proposal that *strength of engagement* is another source—one that contributes to the intensity, but not to the direction, of the motivational force experience.

The state of being engaged is *to be involved, occupied, and interested in something. Strong engagement is to concentrate on something, to be absorbed or engrossed with it*. Historically, strength of engagement relates to the notion that people can be interested in something independent of its hedonic valence, and that this has value implications. Perry (1926), for example, said that an object is valuable when interest is taken in it. Ziff (1960) said that "good" means answering to certain interests. Mandler (1984) noted that what makes us attend to things also invests them with value and events that are interesting may or may not be positively valued. Berlyne (1973) also distinguished "interesting" from pleasing or pleasant. Although no explicit distinction was made between pleasure/pain experience and strength of engagement, such discussions relating the value of things to being absorbed or occupied with them, independent of their valence, might have reflected an implicit appreciation for the importance of strength of engagement as a source of value independent of valence. More recently, discussions of people's experience of their life happiness or value have distinguished between value from pleasure and pain experiences and value from strength of engagement (e.g., Seligman, 2004).

What is different between the present model and these proposals is that the present model distinguishes explicitly between the impact of engagement strength on one's own personal experience of what one is doing versus its impact on the value of something else (see also later discussion of "flow"). In the present model, the critical property of engagement for value creation is the strength of the engagement rather than whether the engagement activity itself happens to be pleasant or unpleasant. It is possible, for example, to be engaged strongly in a goal pursuit of some value target despite

its being unpleasant as an activity or to disengage from the goal pursuit despite its being pleasant as an activity. What matters for value creation is the strength of the engagement, which contributes to the intensity of the motivational force experience of the value target. For instance, individuals could experience as unpleasant their opposition to forces interfering with their pursuit of a positive value target (e.g., the effort needed to remove an obstacle), but this condition of opposition, by increasing engagement strength, could intensify their attraction to the positive target. Conversely, individuals could feel positive about pursuing a goal in the right way, but this condition of regulatory fit, by increasing engagement strength, could intensify their repulsion from a negative value target.

Studies demonstrating both of the above phenomena are reviewed later. An everyday example of these kinds of effects occurs when academics review papers for potential publication. The reviewing process itself could be experienced as pleasant or unpleasant, but in either case the reviewers could be highly engaged in what they are doing. According to the present model, the reviewers' attraction to a paper they like and repulsion from a paper they dislike will be more intense under conditions that make the reviewers more strongly engaged in the review process, and this will be true both when the reviewing process itself is pleasant and when the reviewing process itself is unpleasant.

Figure 1 acknowledges that one important source of strength of engagement is the subjective pleasure/pain properties of the value target. Generally speaking, people tend to engage with something more strongly when it is pleasant than when it is painful. However, if something painful requires paying more attention to it in order to take effective action, as may occur with something threatening, then it can produce strong engagement. Future research is needed to determine the precise nature of the relationship between the subjective pleasure/pain properties of the value target and engagement strength.

As shown in Figure 1, the subjective pleasure/pain properties of the value target have two effects—one on hedonic experience and another on strength of engagement. The effect on hedonic experience involves both direction and strength, whereas the effect on strength of engagement involves only strength. It is likely that varying the subjective pleasure/pain properties of the value target will have different consequences for the magnitude of the hedonic experience than for the strength of the engagement. Consider, for example, alternative strategic responses to something threatening or painful, such as paying very close attention to it or looking away from it, or the classic coping alternatives of freezing, fainting, fighting, or fleeing. As value targets' threatening properties increase, the magnitude of the negative hedonic experience will increase, but engagement strength may or may not increase. High threat could produce high engagement, such as paying more attention or fighting, or it could produce low engagement, such as looking away or fainting.

I believe that it is the fact that experiencing a target's hedonic properties *is* a major source of engagement strength, but it is *not the only* source, that is critical to the thesis of the present article. Experiencing a value target's hedonic properties not only contributes to the direction of the value force experience, which strength of engagement does not, but often it is a major determinant of strength of engagement as well. It is natural for people to experience the contribution of engagement strength to value as being about their subjective response to the target's properties rather than some extraneous source of engagement strength like those shown on the bottom left of Figure 1 (the "aboutness" principle; see Higgins, 1998). This would make it likely that other sources of engagement strength would be overlooked by scholars and laypersons alike, and that the emphasis would be on hedonic experience alone. Nonetheless, there are additional sources of engagement strength that are extraneous to the value target's hedonic properties, as shown on the bottom left of Figure 1. Before beginning a more detailed discussion of these sources, I need to make three additional points.

First, although Figure 1 shows only four factors—opposition to interfering forces, overcoming personal resistance, regulatory fit, and use of proper means—this is not meant to imply that these are the only extraneous sources of engagement strength. Indeed, later I will discuss the possibility that conditions that produce arousal or activation in excitation transfer (or misattribution) studies might also increase strength of engagement in a way that is independent of the value target's hedonic properties. I will also discuss how high outcome expectancy or likelihood might also increase strength of engagement. Indeed, there may be still other sources of engagement strength that have yet to be identified. The four factors shown in Figure 1 were selected for special attention because they provide a challenge to traditional, purely hedonic conceptions of value and because the conditions that induce them are relatively well known.

Second, like the hedonic properties of a value target, strength of engagement depends on the need or goal state of the perceiver. Need or goal states play a role in strength of engagement just as in experiencing a target's hedonic properties. Third, again comparable to the hedonic properties of a value target, strength of engagement depends on the situational conditions of the target engagement, as will be seen below.

Sources of Engagement Strength Extraneous to the Value Target's Hedonic Properties

I discuss in this section four sources of engagement strength shown in Figure 1—opposition to interfering forces, overcoming personal resistance, regulatory fit, and use of proper means. Other potential sources will be discussed later.

Opposition to Interfering Forces

An important way of interacting with the environment occurs when people oppose forces that would make something happen they do not want to happen. Woodworth (1940), for example, stated that a central characteristic of people and other animals is that they exert considerable opposition or resistance to environmental forces on them in order to maintain a degree of independence. They resist wind that is trying to blow them over and gravity that is trying to make them fall. They have an active give-and-take relationship with the environment, and value "springs from the individual's ability to deal effectively with some phase of the environment (p. 396)."

When individuals oppose interfering forces, they oppose something that would hinder, impede, or obstruct a preferred state or course of action. They oppose a choice situation that would force them to select from an impoverished set of alternatives. This

opposition can create value. Lewin (1935), for example, described how it was natural for children to assert themselves in an oppositional way to an adult prohibition or command that would interfere with their free movement, thereby increasing the value of their activity. Indeed, Lewin (1935) considered such value creation from opposition to interfering forces to be a realm of fundamental psychological significance.

Value creation from opposition to interfering forces or pressure is illustrated in social psychological research on reactance theory (Brehm, 1966; Brehm & Brehm, 1981; Wicklund, 1974). Reactance theory concerns people's belief that they can significantly control their own destiny, and that they are free to act, believe, or feel as they see fit. It states that when a (subjectively important) freedom is threatened with elimination or is actually eliminated, people will react so as to protect or restore that freedom. In a study by Brehm, Stires, Sensenig, and Shaban (1966), participants listened to a taped selection from four different records for which they then provided a preference ranking. They were told that they would receive a complimentary record when the actual records arrived the next day, either randomly selected (for half the participants) or selected by themselves (for the other half). When they later arrived to pick up the complimentary record, half of the participants learned that their third-ranked record was not included in the shipment and was thus eliminated from the choice set (the Choice-Elimination condition). The participants were then asked to rate again the attractiveness of all the records. The attractiveness of the third-ranked record increased in the Choice-Elimination condition only.

According to reactance theory, the underlying mechanism for value creation in this and similar studies is a motivation to reassert or restore a freedom that has been eliminated or threatened with elimination. In addition to this mechanism, the situation might also create value in another way. The elimination of a choice alternative and the resultant pressure to make a selection from an impoverished option set interferes with participants' preferred course of action, and participants oppose this interfering force. This opposition should increase strength of engagement in what they are doing. To the extent that receiving the to-be-eliminated record as a gift was a positive outcome to the participants at the beginning of the study, that is, their initial responses to that record were positive, then the increase in strength of engagement from opposing an interfering force should increase that record's positive value. Studies testing Brehm's (1966) theory of reactance have typically involved interfering with something participants initially accept or like. An alternative situation would be to interfere with something that individuals initially dislike and want to reject. Opposition to the interference should once again increase strength of engagement, but because the initial response to the value target is negative, this time it is the negative value of the target that should increase.

There are other kinds of social psychological studies in which individuals oppose interfering forces. For example, in a study by Batson (1975), participants first publicly expressed a genuinely held religious belief and then received information that seemed to disconfirm that belief. The participants who accepted the information as accurate increased the intensity of their original religious attitudes. Once again, more than one possible mechanism could contribute to such an effect, but one possibility is that receiving disconfirming information is experienced as an interfering force, and opposition to this force increases strength of engagement. Given that the participants may be assumed to begin with a positive attitude toward their own belief, the increase in strength of engagement should increase the intensity of this positively valued belief.

One variable that can be conceptualized as an interfering force is *difficulty*. Lewin (1935, 1951) described a force that impedes or obstructs locomotion or progress to a goal as a "barrier" or "difficulty." The "difficulty" can be an actual physical object blocking progress, such as a bench blocking a child's path toward obtaining a toy (e.g., Lewin, 1935), or it can be an authority figure's prohibition of some act, or it can be the complexity of some task, and so on. As Lewin (1935) points out, psychologically such a difficulty, be it physical or social, constitutes a barrier—in our terms an interfering force.

It is important to emphasize that individuals may or may not oppose such interfering forces. Individuals sometimes choose not to engage in a difficult activity, or if they choose to engage, they may quit or give up at some point. In such cases, difficulty does not increase strength of engagement. Thus, one would not predict a simple monotonic positive relationship between difficulty and strength of engagement. One might be tempted to predict a bell-shaped relation between difficulty and strength of engagement, but such a prediction would overlook what it is about difficulty that influences strength of engagement. It is not the difficulty per se but the opposition to it that is critical. It is opposing difficulty as an interfering force that increases strength of engagement. The amount of opposition can vary. As Brehm and Self (1989) point out, the effort that people put into a task depends in part on how much effort is actually required to achieve their goal. Thus, different individuals with varying abilities will expend different amounts of effort when engaging in a task as a function of the amount of effort required in order to achieve success.

In sum, although the precise relationship between difficulty and strength of engagement is not simple, difficulty may be considered generally as an interfering force that people will sometimes oppose, and when there is such opposition to difficulty as an interfering force, then strength of engagement will increase. Under these conditions, difficulty will affect value. If the value target is positive to begin with, then difficulty will intensify its positivity; if the value target is negative, then difficulty will intensify its negativity. There are various studies in the psychological literature in which the situational conditions appear to meet these criteria. Wright (1937), for example, reports an intriguing series of studies in which access to food was made more difficult by adding a barrier. In one study, the experimenter arranged plates of the same dessert on a serving table at various distances from where the waitresses stood to pick them up to serve. As long as the distance was not too great, that is, not so difficult as to make the waitresses not bother to try, the dessert plates further away were selected more than those that were closer. Another study found that kindergarten children chose a more distant candy with a wire sieve over it instead of one closer with no sieve.

As Lewin (1935) points out, opposition to interfering forces naturally occurs when goal-oriented activity is blocked. An especially interesting form of such opposition is the Zeigarnik effect in which a task is interrupted before completion (Lewin, 1935; Zeigarnik, 1938). Consistent with the notion that opposition to goal blockage as an interfering force would increase strength of

engagement and thus enhance the value of achieving the (positive) goal, such interruption has been found to increase the attractiveness of the interrupted task (Cartwright, 1942). Mischel and Masters (1966) provide another early illustration of how opposition to interruption as an interfering force may intensity a positive value target. In their study, an entertaining movie was interrupted by projector failure at an exciting point. A confederate posing as an electrician provided different information about whether the interruption was or was not just temporary. When participants believed that the movie was unlikely to resume (i.e., their goal was blocked), they valued the movie more.

Other kinds of opposition to interfering forces that occur during goal pursuit may also create value. For example, certain circumstances surrounding an activity have the potential to disrupt (or distract one from) completing the activity. To carry out or pay full attention to the focal activity, these interfering circumstances must be opposed, and the opposition can create value by increasing strength of engagement. Importantly, the interfering circumstances may themselves be either pleasant or unpleasant. Regardless of the hedonic experience of the situational conditions themselves, as strength of engagement is increased by opposing these conditions, then the positive or negative evaluative response to the value target itself will intensify. The classic case of this is the pleasant distractor—resistance to temptation. In studies on resistance to temptation, the participants' goal is to concentrate on some focal activity and resist paying attention to an attractive but peripheral object in the situation with which they would like to engage, such as children resisting playing with a fun clown toy (Mischel & Patterson, 1978). The literature suggests that resistance is stronger when individuals are vigilant against the tempting distraction than when they are eager in pursuing the focal activity (Freitas, Liberman, & Higgins, 2002). If greater resistance to temptation creates value through increasing strength of engagement, then individuals who were vigilant in this situation should later value the focal activity more so than will those who were eager—which is precisely what Freitas et al. (2002) found.

Distracting or disrupting circumstances that must be opposed in order to carry out the focal activity may be unpleasant as well as pleasant. Opposition to such unpleasant, interfering distractors should also increase strength of engagement and create value. This view provides an alternative perspective on findings that have not traditionally been viewed in these terms. When people are in adverse or uncomfortable circumstances, such as noisy or crowded or hot rooms, they must oppose these circumstances in order to concentrate on what they are doing. When effective, such opposition to interfering forces should increase strength of engagement and increase the value of an activity that individuals have accepted to do. For example, if what people are doing is punishing others under conditions where punitive behavior is situationally normative and thus acceptable to the actors, its acceptability or positivity should increase under noisy, crowded, or hot circumstances that interfere with the activity and must be opposed. Indeed, there is evidence that this does occur (Baron & Lawton, 1972; Freedman, 1975; Geen & O'Neal, 1969). It should be noted that if the behavior was experienced as unacceptable, then opposition to the uncomfortable circumstances should have the opposite effect of making the behavior even more unacceptable or negative.

Overcoming Personal Resistance

Increased strength of engagement from opposition to interfering forces occurs when individuals want to do something and yet experience external interference when trying to do it. There are also conditions when individuals themselves initially resist doing something because it is aversive in some way, and they must overcome their own personal resistance in order to proceed with the activity. They do something despite not wanting to do it. Overcoming personal resistance also increases strength of engagement.

Value creation from overcoming personal resistance is illustrated in social psychological research testing cognitive dissonance theory (Brehm & Cohen, 1962; Festinger, 1957; Wicklund & Brehm, 1976). According to Festinger (1957), two cognitive elements, x and y, are in a dissonant relationship to one another if not-x would follow from y. According to this definition, then, the situational conditions in which people overcome personal resistance would produce a state of dissonance because the belief that doing something is aversive, y, predicts the decision *not* to do it (not-x), but instead people overcome their resistance and do it anyhow. Instead of y and not-x occurring together, which would make sense and should happen, y and x occur together. Dissonance theory concerns people's motivation to reduce such states of dissonance in order to achieve cognitive consistency (i.e., make sense of the world), and it considers the different ways that such dissonance reduction can occur.

Of special relevance to the present article are conditions under which inducing dissonance subsequently changes the value of something. Consider the classic study by Festinger and Carlsmith (1959). Participants first worked on a rather repetitive, monotonous task and then agreed to tell another student that the task was very interesting and enjoyable. This behavior is dissonant because participants say something that contradicts, or at least exaggerates, what they actually believe. The participants were promised either 1 dollar or 20 dollars to tell the student that they had found the task very interesting. Afterward, all participants were informed by the experimenter that most previous participants found the task quite interesting. Finally, the participants themselves evaluated the task. Participants who were promised 1 dollar evaluated the task more positively than those who were promised 20 dollars.

According to dissonance theory, the underlying mechanism for value creation in this and similar studies involves participants' reducing dissonance by changing their personal attitude about the task so as to make it more consistent with their misleading statement to the other student. The pressure to reduce dissonance through attitude change is greater in the 1 dollar than the 20 dollar condition because a promise of 20 dollars provides sufficient justification for having made the misleading statement, thereby allowing participants to make sense of their own behavior without having to change their attitude toward the task. In addition to this dissonance-reduction mechanism, however, the situational conditions associated with such studies might create value in another way as well. It is likely to be aversive for most of the participants to tell another student that a task is more interesting than it actually is; accordingly, participants should be resistant to making the statement. Being promised 20 dollars to make the statement, though, is likely to eliminate or greatly reduce participants' resistance. In contrast, being promised only 1 dollar is unlikely to

reduce their resistance substantially. In the 1 dollar condition, therefore, participants must overcome their own personal resistance in order to agree to make the misleading statement. By overcoming their own resistance, the participants' engagement would be stronger when they agree to make the misleading statement and also, perhaps, when they actually make the statement later. This would enhance the value of being favorable toward the task.[1]

As discussed earlier, difficulty is a variable that may be conceptualized as an interfering force or barrier, and it contributes to strength of engagement through the opposition that it can create. But difficulty is not only an interfering force. It is also an aversive property of a situation. *As an aversive condition*, difficulty can also contribute to strength of engagement through creating personal resistance to doing something that can then be overcome. When goal pursuit is difficult, as when it requires high effort to succeed, then there are high costs associated with the goal pursuit. Doing something despite such high costs imposed by difficulty (i.e., high effort requirements) involves overcoming resistance to doing something aversive. Great figures in psychology, including William James, Sigmund Freud, Kurt Lewin, and Jean Piaget, have recognized that overcoming one's own resistance is a special kind of agentic experience that relates to psychological commitment and "will" (Brickman, 1987; Deci, 1980).

When people (and other animals) knowingly face adverse or difficult circumstances to engage in some activity and continue with the activity despite those circumstances, this agentic experience of overcoming their own resistance increases the value of that activity. Lewis (1965) reports a study, for example, in which rats over several training trials were required to pull either a heavy weight (high effort) or a light weight (low effort) in order to obtain a small amount of a distinctive food reward. The weight that a rat pulled during the training phase was constant across trials. Then, during the test phase, all the rats were placed in a straight maze and were allowed to run freely to the goal area (i.e., no weight to pull) where they were rewarded each time. During this test phase, the "high effort" rats displayed a stronger preference for the food reward than did the "low effort" rats, as indicated by their running faster to the food, consuming the food faster, and consuming more of the food in a free-feeding situation when they were already satiated on another food. Similarly, Carder and Berkowitz (1970) found that rats preferred pressing a lever to obtain pellets to getting the same pellets freely available in a dish near the lever (see also Jensen, 1963).

An especially intriguing program of research inspired by dissonance theory was conducted by Lawrence and Festinger (1962). In their studies, rats needed to run up an inclined runway in order to get a food reward. There was 100% reinforcement. The incline was either 25 degrees (low effort) or 50 degrees (high effort). The value to the rats of getting a particular food reward was measured by trials to extinction after the reward was removed. Importantly, during the extinction trials, the incline remained the same as during the training, and all the rats went from 100% reward to 0% reward. Lawrence and Festinger (1962) found that the trials to extinction were *greater* for the higher incline. Moreover, despite the higher incline being more difficult during extinction, average running time during the extinction trials was *faster* for the higher incline.

The dissonance reduction mechanism proposed by Lawrence and Festinger (1962) as underlying their findings was adding positivity to the food in order to justify (i.e., make sense of) their decision to perform an aversive, high effort activity. In addition to this "dissonance" explanation, the conditions of this and other "effort justification" studies (e.g., Aronson & Mills, 1959; Axsom & Cooper, 1985; Zimbardo, 1965) suggest that strength of engagement might contribute to the outcomes of such studies. For example, consider the situational conditions of the Lawrence and Festinger (1962) study. In this study, strength of engagement could have been increased in two possible ways. One possibility is that opposition to interfering forces is involved; when actually running up the incline, the 50-degrees incline functions as an interfering force that needs to be opposed to get to the food. The other possibility is that overcoming personal resistance is involved; at the beginning of each trial, the 50-degrees incline functions as an aversive cost producing personal resistance that must be overcome to initiate the goal pursuit. The increase in strength of engagement from these two possible sources would intensify the positive response to the food.

Brickman (1987), similarly, suggested that the effort involved in the dissonance studies creates value for the activity by increasing commitment to it. The effort occurs because the participants freely choose to do some activity that has negative consequences, and the negative consequences produce resistance that must be overcome. Beyond his discussion of dissonance per se, Brickman (1987) emphasized that value is created by the experience of commitment, which involves freely choosing to do something that provides a positive experience of desiring the activity or object, combined with an awareness of the negative features of the choice for which one is responsible. Awareness of being responsible for an activity's negative features would produce resistance to doing it, which may be overcome by the positive desire to do it. Oettingen (1996), for example, reports that there are motivational benefits to individuals from combining thinking about the positive aspects of some valued endstate (e.g., love as a happy ending in getting to know someone) with thinking realistically about the negative aspects that could stand in the way (e.g., being too insecure). The realistic appreciation of the aversive conditions associated with goal pursuit could cause resistance that is overcome by the positive incentives of the endstate, and this dynamic increases the strength of engagement, which in turn intensifies the overall positive value of the goal pursuit.

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[1] It is notable that for Festinger (1957), the justification process that creates value occurs *after* choosing to do something, whereas for the present proposal, and for Brickman (1987), choosing to do something that one initially resisted doing itself creates the stronger engagement that creates value. The previous dissonance literature has found that the behaviors involved in overcoming resistance (the dissonant condition), such as what is actually written in the essays in the counterattitudinal essay paradigms, does not differ from the behaviors in the nondissonant conditions. This does not mean, however, that there is no difference in how the behaviors are experienced by the participants. According to the present proposal, the same actions would be experienced as more involving and absorbing in the dissonant condition—the participants would be more strongly engaged in the actions. This stronger engagement could then increase the value of the action. Indeed, the arousal or tension associated with the dissonant action that has been described in the literature could be related to strength of engagement, like the tension that Lewin (1935) describes for motivational forces.

Recent studies by Fishbach and Trope (Fishbach & Trope, 2005; Trope & Fishbach, 2000) on the motivation to pursue a goal that has long-term benefits but short-term costs have found that as long as the (self-imposed) short-term costs are not so great as to make engagement in the task unlikely, larger costs are more effective than smaller costs. Their findings could be interpreted as further evidence that increasing strength of engagement from overcoming personal resistance can create value. The self-imposed short-term costs are aversive and would produce resistance to pursuing the self-control goal. This personal resistance must be overcome in order to pursue the goal with long-term benefits. The larger the short-terms costs, the stronger the personal resistance, and if overcome, the stronger the engagement. This should intensify the perceived long-term benefits of the goal pursuit, thereby supporting the self-control efforts. Fishbach and Trope (2005) also found that the advantage to self-control efforts from larger short-term costs occurred only when there was no externally imposed control over the goal pursuit. This is consistent with the idea that increased engagement strength is a factor in the value creation which supports the self-control efforts. When there are external pressures or incentives or monitoring that provide an additional force to overcome resistance to doing something aversive, then people need not engage more strongly to overcome their resistance. If they do not engage more strongly to overcome resistance, then the value creation effect that supported the self-control efforts should disappear.

Creating value from overcoming difficulty might also explain why infant animals become attached to an object, including an inanimate object, even when they receive pain from that object (Cairns, 1967). Resistance to the pain involved in remaking contact with the object must be overcome in order to be close to the object. A history of overcoming this resistance would make the object valuable, as reflected in the animal's becoming attached to it. This will only happen, of course, if the infant persists in making contact with the object despite the pain received. This example raises a general point that applies equally to the previous examples of value creation from overcoming personal resistance: *difficulty will not increase value if it makes someone give up*. Resistance to difficulty must be overcome in order to increase value. An especially interesting example of increased attachment value when an animal does not give up in the face of increased difficulty has been described by Hess (1959) in his "law of effort." Ducklings had to climb over hurdles or up an inclined plane in order to follow the imprinting object. Hess (1959) found that strength of imprinting was positively correlated with the effort exerted by the ducklings in following the imprinting object. It is also notable that when animals were given meprobamate, a muscle relaxant that reduces muscular tension, then the strength of imprinting no longer related to effort required. This is consistent with the notion that experience of engagement strength is important.

A note on the relationship between effort and value. In my discussion of both opposition to interfering forces and overcoming personal resistance, several of my examples of positive value creation from increased strength of engagement involved increased effort. I want to emphasize that I am *not* suggesting that greater effort generally increases attraction to something. Indeed, if one were to predict a main effect, it would be more reasonable to predict that greater effort decreases attraction to something. After all, if the same benefit from some activity or outcome requires a greater effort, as in Lawrence and Festinger's (1962) rats running a steeper incline to obtain the same reward, the greater cost of the higher effort should reduce value according to the classic benefit/cost ratio perspective. Indeed, Lawrence and Festinger (1962) report that when a separate group of rats is given a direct choice between a high-difficulty and low-difficulty path to the goal, they choose the low-difficulty path. What this highlights is an important point—effort can have two countervailing effects on value. Effort can decrease value through the hedonic experience of costs, and it can increase value through strength of engagement (as long as the response to the value target remains basically positive). Beyond the particular case of effort, the general point is that *a variable can have two separate effects on value in opposite directions—one effect through hedonic experience and an opposite effect through strength of engagement*.

Regulatory Fit

When people pursue a goal they begin with some motivational orientation, some concerns or interests that direct the goal pursuit. According to regulatory fit theory (Higgins, 2000), people experience regulatory fit when their goal orientation is sustained by the manner in which they pursue the goal, and they experience nonfit when their orientation is disrupted by the manner of their goal pursuit. Individuals may pursue (approach) the same goal with different orientations and in different ways. Consider, for example, students in the same course who are working to achieve an "A." Some students have a promotion focus orientation toward an "A" as something they hope to attain (an ideal). Others have a prevention focus orientation toward an "A" as something they believe they must attain (an ought). With regard to *how* they pursue their goal, some students read material beyond the assigned readings as an *eager* way to attain an "A," whereas others are careful to fulfill all course requirements as a *vigilant* way to attain an "A."

An eager strategy sustains a promotion focus (fit), whereas it disrupts a prevention focus (nonfit). A vigilant strategy sustains a prevention focus (fit), whereas it disrupts a promotion focus (nonfit). Given these differences in what creates fit and nonfit, one would expect that people with a promotion focus would prefer to use eager (rather than vigilant) strategies to pursue their goals, and people with a prevention focus would prefer to use vigilant (rather than eager) strategies. This is, indeed, the case (see Higgins, 1997, 2000; Higgins & Spiegel, 2004). Because research on regulatory fit provides the most direct evidence of engagement strength and value creation that is independent of valence per se, it will be described more fully than the research on opposing interfering forces and overcoming personal resistance.

Regulatory fit and strength of engagement. Regulatory fit theory proposes that an actor's current orientation is sustained under conditions of regulatory fit and is disrupted under conditions of nonfit. If this is the case, then one would expect that actors' strength of engagement in a task activity would be greater under conditions of fit than under conditions of nonfit. The results of several studies support this prediction. One set of studies by Forster, Higgins, and Idson (1998), for example, examined both chronic and situational instantiations of regulatory focus orientation in the context of anagram performance. Regulatory focus was situationally manipulated by telling participants either that by finding 90% or more of the words they would earn an extra dollar

and by failing to do so they would not get the extra dollar (promotion gain/nongain framing) or that by not missing more than 10% of the words they would avoid losing a dollar and by failing to do so they would lose the dollar (prevention nonloss/loss framing). Chronic regulatory focus was measured by participants' reaction times to providing their personal hope or aspiration goals (chronic accessibility of promotion ideals) and reaction times to their providing personal duty or obligation goals (chronic accessibility of prevention oughts). Performing the task in an eager versus vigilant manner was manipulated by using an arm pressure technique (Cacioppo, Priester, & Berntson, 1993). While performing the anagram task, the participants either pressed downward on the plate of a supposed skin conductance machine that was attached to the top of the table (a vigilance/avoidance-related movement of pushing away from oneself) or pressed upward on the plate attached to the bottom of the table (an eagerness/approach-related movement of pulling toward oneself).

Participants' arm pressure while pressing downward or upward on the plate was recorded and served as the measure of engagement strength. Förster et al. (1998) found that the strength of engagement was stronger when there was regulatory fit (i.e., promotion/eager; prevention/vigilant) than when there was nonfit (i.e., promotion/vigilant; prevention/eager). As one might expect from fit yielding greater strength of engagement in the task activity, Förster et al. (1998) also found that participants in the fit conditions solved more anagrams than did participants in the nonfit conditions. Finally, a separate study used persistence on the task as a different measure of engagement strength and found that persistence was greater when there was fit than nonfit.

In another set of studies using anagram performance, Shah, Higgins, and Friedman (1998) manipulated either an eager or vigilant manner of goal pursuit by designating particular anagrams in vigilance terms (maintaining current points by solving them) or eagerness terms (adding points by solving them). As described above, chronic regulatory focus was measured by chronic accessibility of promotion ideals and chronic accessibility of prevention oughts, and framing was used to manipulate a promotion or prevention focus situationally. Shah et al. (1998) found that performance was better on the anagram task when there was regulatory fit (i.e., promotion/eager; prevention/vigilant) than when there was nonfit (i.e., promotion/vigilant; prevention/eager). In a separate study Freitas, Liberman, and Higgins (2002) manipulated regulatory focus by having participants write about either their personal hopes or aspirations (promotion/ideal priming) or their personal duties and obligations (prevention/ought priming). This priming technique for manipulating promotion and prevention orientation states has been used effectively in several previous studies (e.g., Higgins, Roney, Crowe, & Hymes, 1994; Liberman, Molden, Idson, & Higgins, 2001). Freitas et al. (2002) found that prevention focus participants did better than promotion focus participants on a task requiring vigilance against a tempting distractor.

Bianco, Higgins, and Klem (2003) also investigated the effects on performance from regulatory fit increasing strength of engagement. Instead of the fit between regulatory focus orientations and eager-versus-vigilant means, they examined the fit between people's implicit theories of a given task being either a fun task or an important task (i.e., their initial orientation toward the task) and the instructions they received to complete that task in either a fun way or an important way (i.e., the manner of completing the task). On studies of different tasks involving predictive learning, paired-associate learning, and free recall of movie scenes, they found that performance was enhanced when there was a fit (vs. a nonfit) between participants' implicit theories of task fun or importance and task instructions of fun or importance (see also Spiegel, Grant-Pillow, and Higgins, 2004).

The results of these various studies suggest that regulatory fit increases strength of engagement. According to the proposed model of value creation, if fit increases strength of engagement, then fit can increase the intensity of the value response to something independent of hedonic experience. The next section reviews several studies that have found support for this prediction.

Regulatory fit and value creation, independent of hedonic experience. Higgins, Idson, Freitas, Spiegel, and Molden (2003) tested whether regulatory fit can influence the monetary value of a chosen object. Prior to the experimental session, Higgins et al. (2003) first measured participants' chronic or habitual orientations (promotion or prevention) to pursuing goals using the same measure discussed above. When the participants arrived for the experiment they were told that, over and above the usual payment for participating, they could choose between a coffee mug and a pen as a gift. (Pretesting indicated that the mug was clearly preferred.) The manner of making the decision was manipulated by telling half of the participants to think about what they would gain by choosing the mug or the pen (an eager strategy), and telling the other half to think about what they would lose by not choosing the mug or the pen (a vigilant strategy). It should be noted that both the eager and vigilant choice strategies direct participants' attention to the positive qualities of each alternative. As expected, almost all participants chose the coffee mug. These participants were then asked either to assess the price of the chosen mug or to offer a price to buy it with their own money.

Participants in the fit conditions (promotion/eager; prevention/vigilant) gave a much (40–60%) higher price for the mug than did participants in the nonfit conditions. Importantly, this fit effect on the money offered to buy the mug was *independent* of the participants' reports of their pleasure/pain feelings after making their decision. Indeed, the manipulation of fit did not affect participants' reports of their postdecision pleasure/pain feelings (see Camacho, Higgins, & Luger, 2003, for additional evidence of a fit effect on value that is independent of pleasure/pain valence). There was also no effect of the fit manipulation on participants' perception of the efficiency (ease) or the effectiveness (instrumentality) of the means that they used to make their choice. The fit effect on monetary value remained significant when participants' perceptions of the efficiency and effectiveness of the way in which they made their choice were statistically controlled.

The results of studies by Cesario, Grant, and Higgins (2004) on evaluating the quality of a persuasive message provide additional evidence of how the fit effect on value is independent of pleasure/pain experiences. Cesario et al. (2004) measured the strength of participants' chronic promotion and prevention focus and manipulated whether a persuasive message advocating a new policy used either eager or vigilant means framing. The participants' pleasure/pain mood after receiving the message was also measured. The study found that higher pleasant mood predicted a more positive response to the message, that is, the message was perceived as being more persuasive, convincing, effective, and coherent. The study also found that, independent of this effect of hedonic mood,

fit also increased the positive response to the message. That is, regulatory fit and pleasure/pain mood each had *independent* effects on how positively people responded to the message. It is also notable that, as for the studies reviewed earlier, the conditions of regulatory fit did *not* affect hedonic mood.

Together, these studies provide strong evidence that regulatory fit can increase the attractiveness of a positive value target independent of pleasure/pain experiences. It should be emphasized that fit does not increase the value of some action or object by directly transferring a positive feeling. The effect of fit is on strength of engagement, not directly on value. Because fit increases strength of engagement, it increases the intensity of the value experience of a target, whether that value experience is attraction or repulsion. If the value target is attractive, as in the case of the mug that is chosen over the pen, then fit intensifies the experience of attraction. But if the value target were repulsive, then fit would increase the intensity of the experience of repulsion. Another study by Cesario et al. (2004) demonstrates this point. They used a persuasive message of moderate persuasive strength such that participants varied in their positive or negative reactions to the message as measured by a standard thought-listing technique. They found that the fit effect on increasing positive evaluation of the message occurred only for participants who had positive thoughts about the message. For participants who had negative thoughts about the message, fit had the opposite effect—it increased negative evaluation of the message. Idson, Liberman, and Higgins (2000; see also Idson et al., 2004) also found that when outcomes were positive, higher fit intensified the positive value experience (how good they felt about the positive outcome); and when outcomes were negative, higher fit intensified the negative value experience (how bad they felt about the negative outcome).

Pleasure/pain valence and motivational force as independent contributors to value. What value do people think they would derive from making a particular choice? The most obvious answer to this question is that people imagine feeling good about a choice whose outcome will be pleasant, and imagine feeling bad about a choice whose outcome will be painful (e.g., Kahneman et al., 1999). In addition to this hedonic contribution to the value of a choice, Idson et al. (2004) examined whether regulatory fit can contribute to the value of a choice by increasing engagement strength and strength of motivational force.

Success maintains the eagerness that sustains the orientation of promotion-focused people toward accomplishment and hopes [ideals]), but it reduces the vigilance that sustains the orientation of prevention-focused people toward security and responsibilities [oughts]). When imagining successfully making a desirable choice, therefore, promotion-focused people should be more strongly engaged and experience a stronger motivational force of attraction than prevention-focused people. On the other hand, when imagining failing to make a desirable choice (i.e., imagining making an undesirable choice), prevention-focused people should be more strongly engaged and experience a stronger motivational force of repulsion than promotion-focused people. This is because failure maintains the vigilance that sustains the orientation of prevention-focused people, but it reduces the eagerness that sustains the orientation of promotion-focused people.

To test these predictions, Idson et al. (2004) modified a well-known example from Thaler (1980). All participants were instructed to imagine that they were in a bookstore buying a book for a class. The orientation toward the buying decision was framed in two different ways—a promotion "gain/nongain" framing and a prevention "nonloss/loss" framing—while keeping the desirable choice outcome (paying $60 for the book) and the undesirable choice outcome (paying $65 for the book) the same in both framing conditions. In both the promotion and prevention framing conditions, the participants were asked to imagine either how it would feel to make the desirable choice or how it would feel to make the undesirable choice on a scale ranging from "very bad" to "very good." As one would expect, the participants felt good when they imagined making the desirable choice and felt bad when they imagined making the undesirable choice. This is the classic outcome-valence effect. As predicted, however, there were also significant effects within the desirable choice condition and within the undesirable choice condition. The participants imagined feeling better in the desirable choice condition when they were in the promotion focus condition (fit) than in the prevention focus condition (nonfit). The participants imagined feeling worse in the undesirable choice condition when they were in the prevention focus condition (fit) than in the promotion focus condition (nonfit). These same findings were obtained in another study that experimentally primed either a promotion focus (ideal priming) or a prevention focus (ought priming).

The Idson et al. (2004) studies also examined whether pleasure/pain hedonic experience and strength of motivational force make independent contributions to the value experience of attraction or repulsion. In addition to measuring how good or bad participants felt about the imagined decision outcome, separate measures of pleasure/pain intensity and strength of motivational force were taken. The framing study and the priming study used slightly different measures to provide convergent validity. The priming study, for example, measured *pleasure-pain intensity* by asking the participants how pleasant the positive outcome would be or how painful the negative outcome would be; and measured *strength of motivational force* by asking them how motivated they would be to make the positive outcome happen (in the positive outcome condition) or how motivated they would be to make the negative outcome not happen (in the negative outcome condition). Both studies found that pleasure/pain intensity and strength of motivational force each made significant independent contributions to the perceived value of the imagined outcome (i.e., its goodness/badness).[2]

Regulatory fit as a source of engagement strength and as a life experience. This section has been concerned with how perceivers' experience of a value target can be influenced by a fit effect on strength of engagement. I have emphasized that fit intensifies value experience, whether that experience is attraction or repulsion. It should be noted, however, that regulatory fit is also, in itself, a quality-of-life experience for the perceiver, independent of how it intensifies perceivers' attraction to or repulsion from something else. Previous studies have found that people "feel right"

[2] Unpublished data from Idson et al. (2004) also provide support for the proposed bidirectional relation between hedonic experience and motivational force experience. Within positive and within negative decision outcomes in both studies, pleasure/pain intensity ratings significantly predicted motivational force ratings and motivational force ratings significantly predicted pleasure/pain intensity ratings (with their common relation to goodness/badness feelings being statistically controlled by including goodness/badness feelings as a covariate in the analyses).

about what they are doing when they experience regulatory fit (e.g., Camacho et al., 2003; Higgins et al., 2003), and, as part of everyday life experiences, "feeling right" from fit is preferable to "feeling wrong" from nonfit (Grant, Higgins, Baer, & Bolger, 2005; Higgins, 2000). Thus, the fit effect on the value experience of an object such as a chosen mug must be distinguished from the fit effect on the perceiver's own life experience of what he or she is doing. This article is concerned only with the former effect of fit on the experience of a value target, and in this case fit increases strength of engagement which is neutral with respect to valence—it has strength but not direction. Thus, although fit enhances perceivers' life experiences while pursuing goals, its effect on experiencing the value target can be positive or negative—it can increase the motivational force of either attraction or repulsion. Finally, it should be emphasized that this is true for the other sources of engagement strength as well. For example, opposing an interfering force can be an unpleasant personal experience, but its effect on increasing strength of engagement can intensify either attraction to or repulsion from a value target.

Use of Proper Means

Opposition to interfering forces, overcoming personal resistance, and regulatory fit are three factors that have been shown to create value by increasing strength of engagement, independent of the experienced hedonic properties of the value target. Historically speaking, all three are relatively recent discoveries. There is a fourth factor, however, that has a much longer history as captured in cultural maxims such as, "It is not enough to do good, one must do it the right way," "The end does not justify the means," "What counts is not whether you win or lose, but how you play the game," and "Never good through evil." These maxims highlight the fact that there is value in *how* goals are pursued that is independent of the value from the goal pursuit outcomes themselves. They distinguish between the value of means that derives from their instrumentality in attaining desirable outcomes and the value of means that derives from their propriety or appropriateness.

Theories of values as shared beliefs state that people assign value not only to endstates but also to ways of doing things. Rokeach (1980, p. 262), for example, describes values as "shared prescriptive or proscriptive beliefs about ideal modes of behavior and end-states of existence." Similarly, Merton (1957) points out, "Every social group invariably couples its cultural objectives with regulations, rooted in the mores or institutions, of allowable procedures for moving toward these objectives (p. 133)." The "allowable procedures" concern the acceptable ways to strive for the worthwhile things—the *proper means* that have process value in the culture (see also Rokeach, 1979; Schwartz, 1992). March (1994) provides an example of such value from proper means when he describes the value that accrues from a person using established decision rules (i.e., rules about how a decision should be made) that are appropriate to his or her situated identity.

One could conceptualize the value obtained from using proper means to make a decision as simply an additional value that derives from attaining process goals, from meeting norms and standards of appropriate conduct. There would be no additional value created for the value (outcome) target itself but simply a separate value from attaining a separate process goal. From this perspective, the decision activity itself would have extra value—both the instrumental value of leading to the choice outcome and value from meeting norms and standards of appropriate conduct. However, the choice outcome itself would not have extra value. It is also possible, however, that when people pursue goals with proper means, it is not only the process activity itself that benefits from adhering to social values. It is possible that when an activity is a proper means of goal pursuit, one engages in it more strongly. If so, then this increase in engagement strength could increase the intensity of the experienced attraction toward the goal target. In this way, the use of proper means would be another source of engagement strength and value creation that is independent of the experienced hedonic properties of the value target. There is recent evidence that this could, indeed, be the case.

There is a substantial evidence that people value means that provide a justification for their decision (e.g., Lerner & Tetlock, 1999; Pennington & Hastie, 1988; Tetlock, 1991; Tversky & Shafir, 1992). It is reasonable to assume that when a decision-making activity is perceived as justified or proper, it is engaged in more strongly. According to the present model, this increased engagement strength from using proper means when making a choice—experiencing that the way one is making a decision is right or justified—could increase the attractiveness of one's choice, including its perceived monetary value. This prediction was supported in a set of recent studies by Higgins, Camacho, Idson, and Spiegel (2005). In all of the studies, participants chose between a coffee mug and an inexpensive pen. The analyses were restricted to those participants who made the *same* choice—overwhelmingly, the coffee mug. The instrumentality of the means used to make the decision was controlled statistically and experimentally. Hedonic mood and the perceived effectiveness and efficiency of the means used were measured and statistically controlled. In different studies, participants' use of proper means to make their choice was manipulated by telling half the participants to justify their decision or to make their decision "in the right way," whereas the other half of the participants used the same means to make their choice (i.e., listing the positive and negative attributes of each choice alternative) but with instructions to perceive them as just instrumental means (i.e., they were told to think of reasons for their decision or to make "the best choice").

In every study, the perceived monetary value of the chosen mug was substantially greater when it was chosen in a proper manner. Additional findings provided support for the argument that proper means operated through the hypothesized engagement mechanism as opposed to alternative mechanisms: the effect was independent of participants' hedonic mood, and independent of their perception of the effectiveness or efficiency of the decision process; it occurred only when the justification was part of the decision-making process itself; and it was greater for participants with a stronger general belief that using proper means is important.

General Implications of Engagement Strength's Contribution to Value

I have proposed in this article that *strength of engagement* makes a significant contribution to the psychology of value beyond hedonic experience. Although the hedonic experience of a value target itself contributes to engagement strength, it is not the only source of engagement strength. Opposition to interfering forces, overcoming personal resistance, regulatory fit, and use of proper

means also can increase engagement strength and thereby increase the intensity of attraction to or repulsion from a value target. Notably, as discussed below, there are other possible contributors to strength of engagement, including ones waiting to be discovered.

The notion that not only hedonic experience but also strength of engagement contributes to creating value provides a new way of thinking about motivation generally. It provides a new perspective on psychological phenomena regarding people's emotional and self-regulatory responses to the world around them. This final section considers what is novel about the concept of engagement strength as a factor in value creation and how this concept can shed new light on some central psychological phenomena.

Strength of Engagement and "Liking" Versus "Wanting"

The distinction between hedonic experience and motivational force has a family resemblance to distinctions discussed by Berridge and Robinson (Berridge & Robinson, 2003; Robinson & Berridge, 2003). They distinguish, for example, between pleasure/pain (hedonic) feelings related to "liking" something and incentive motivations related to "wanting" something. Value as a force experience is not central to their conceptualization of value, however. Most importantly, the contribution of strength of engagement to the experience of the strength of the motivational force is not considered. More generally, the role in value creation of nondirectional, nonhedonic sources—a factor such as engagement strength—is not emphasized. Instead, their emphasis is on directional rather than nondirectional factors (see Salamone & Correa, 2002). Nonetheless, their proposal is generally compatible with the present proposal.

Salamone and Correa (2002), on the other hand, do emphasize nondirectional factors. They propose that it is important not only to distinguish motivational "wanting" from hedonic "liking," but also to distinguish two types of wanting—between wanting as "appetite to consume" and wanting as "working to obtain." They point out that, in addition to simply wanting something, there needs to be a willingness to make the effort, overcome the instrumental response costs, to do the necessary work. Salamone and Correa (2002) do not say where this additional motivation comes from, however. The present model suggests that there are several factors that can increase actors' strength of engagement with what they are doing and, independent of how pleasant or painful the engagement itself is, this increased strength of engagement will increase the intensity of the response to the value target, whether the response is attraction or repulsion.

Strength of Engagement and "Flow"

When people experience strong engagement with something, they are involved, occupied, interested and attentive to it; they are absorbed or engrossed in it. This experience is related to the concept of "flow" (Csikszentmihalyi, 1975, 1990). Flow is described as an experience of involvement and concentration, and it is explicitly distinguished from mere hedonic pleasure. In these respects, there is a clear overlap between the concept of flow and the concept of strength of engagement. Nonetheless, there is a critical difference in the implications of these concepts for value creation.

The flow experience in itself is said to contribute to happiness and enjoyment. Although flow can involve strenuous physical or mental exertion, the experience itself is said to be a positive one of effortless involvement, in which the action carries one forward "as if by magic" (Csikszentmihalyi, 1990, p. 54). No such claim is made for the experience of strength of engagement. As discussed earlier, strong engagement can increase the attractiveness of attractive things but it can also increase the repulsiveness of repulsive things. This difference between flow and strength of engagement derives in part from a difference in emphasis. Discussions of the flow experience are concerned with the value of the flow experience itself for the person experiencing it, in how it affects the person's own experience of happiness or enjoyment in what they are doing. In contrast, my discussion of strength of engagement has been concerned with how engagement in what one is doing affects the value of something else, such as a coffee mug.

This raises the question of how strength of engagement affects a person's own happiness or enjoyment. There is no simple answer to this question because the answer is likely to vary according to the source of engagement strength. Each source has properties that could influence a person's happiness independent of its contribution to strength of engagement per se. As noted earlier, for example, regulatory fit is postulated not only to increase strength of engagement but also to make people "feel right" about what they are doing. Other sources of engagement strength, such as overcoming personal resistance, could produce quite different personal experiences. The exact quality of these personal experiences is unclear at this point. It is also unclear how engagement strength itself is experienced. But the quality of such personal experiences is not critical to the present model. It is enough that each source increases engagement strength, which then contributes to the experience of motivational force regarding some value target, thereby intensifying either the attractiveness or the repulsiveness of that target. This means that even when a source of engagement strength, or engagement strength itself, is experienced as unpleasant, it can intensify the attractiveness of something else; and even when it is experienced as pleasant, it can intensify the repulsiveness of something else.

The concept of flow is similar to the concept of *fluency* in that both concern relatively low effort, high engagement experiences. Fluency constitutes relatively easy processing when perceiving or remembering something, and it has been found to create positive value because it makes one feel secure or puts one's "mind at ease" (Freitas, Azizian, Travers, & Berry, in press; Winkielman & Cacioppo, 2001). "Flow" and fluency highlight the fact that there is no simple relation between effort and engagement because an experience of either high or low effort can be associated with strong engagement depending on the circumstances. In the present model, what matters is not effort per se but their strength of engagement in what they are doing. And these two factors could have separate effects. For example, fluency or flow could create a positive life experience from the personal feeling of effortlessness while also intensifying the repulsiveness of some negative target by increasing engagement strength.

Hedonic Experience and Strength of Engagement in Emotional Experiences

The idea that value is a force experience combining hedonic experience and strength of engagement has implications for the nature of emotional experiences. Theories of emotion propose that the primary function of emotional experiences is to signal or provide feedback about self-regulatory success or failure (e.g., Frijda, 1986; Mandler, 1984; Simon, 1967), and appraisal and circumplex models have both proposed a basic dimension that distinguishes between pleasant and painful emotions (e.g., Diener & Emmons, 1984; Frijda et al., 1989; Ortony et al., 1988; Roseman, 1984; Russell, 1980; Scherer, 1988; see also Schlosberg, 1952 and Wundt, 1896/1999). This is the valence or directional aspect of emotions.

In addition to hedonic experience, the second variable that models of emotional experience have emphasized is level of arousal or activation. Some models include changes in autonomic arousal or excitation as a fundamental component of emotional experience (e.g., Lindsley, 1951; Mandler, 1984; Schachter & Singer, 1962; Wundt, 1896/1999; Zillmann, 1978). Other models distinguish among different types of emotional experience in terms of their level of arousal or activation (e.g., Bush, 1973; Larsen & Diener, 1985; Reisenzein, 1994; Russell, 1978, 1980; Thayer, 1989; Watson, Clark, & Tellegen, 1988; Watson & Tellegen, 1985; Woodworth & Schlosberg, 1954; for a review, see Feldman Barrett & Russell, 1998). Although the arousal or activation dimension may be conceptualized as simply referring to the physical intensity of an emotional experience, several emotional theorists have proposed that it be conceptualized as people's experience of the strength of their motivational state, that is, their determination, effort, energy output, action readiness, and so on (e.g., Frijda, 1986; Higgins, 2001; Lang, 1995; Mandler, 1984). It has been suggested, for example, that the strength of motivation varies from hypoactivation for sadness to hyperactivation for joy (e.g., Frijda et al., 1989; Roseman, Wiest, & Swartz, 1994; Scherer, Walbott, & Summerfield, 1986; see also Mandler, 1984).

Reisenzein (1994) has pointed out that not only do different types of emotion vary in level of arousal or activation, but within a given emotion there is variation in intensity, such as feeling a little sad versus very sad. This means that given the general boundary conditions of a type of emotion being pleasant or painful, there can be variability in how pleasant or how painful it is, such as feeling a little sad being a little painful and being very sad being very painful. But whether within or between emotions, the hedonic value of emotions has generally been treated as something that varies only along the pleasure–pain dimension of the two-dimensional description of emotional experience. However, if strength of engagement contributes to the experience of value, as the present model proposes, and if the arousal or activation dimension can be conceptualized as involving strength of engagement, which the previous literature suggests it could be, then *the arousal or activation dimension should also contribute to the value experience associated with emotions*.

How might the arousal or activation dimension, when conceptualized as strength of engagement, contribute to emotional experiences? First, both cheerfulness-related emotions (e.g., "happy"; "joyful") that are high in eagerness and agitation-related emotions (e.g., "nervous"; "tense") that are high in vigilance are high strength-of-engagement experiences. In contrast, both dejection-related emotions (e.g., "sad"; "discouraged") that are low in eager and quiescence-related emotions (e.g., "calm"; "relaxed") that are low in vigilance are low strength-of-engagement experiences (see Idson et al., 2000, 2004). Second, for positive events, cheerfulness-related emotions are more strongly related to a promotion focus than to a prevention focus whereas quiescence-related emotions are more strongly related to a prevention focus than to a promotion focus; and for negative events, dejection-related emotions are more strongly related to a promotion focus than to a prevention focus whereas agitation-related emotions are more strongly related to a prevention focus than to a promotion focus (for a review, see Higgins, 2001).

Given these two sets of findings, some implications can be drawn regarding how the arousal or activation dimension, when conceptualized as strength of engagement, might contribute to emotional experiences. Consider, for example, feeling discouraged (or sad) and feeling relaxed. Although they differ greatly along the basic pleasure–pain dimension, they both involve an experience of being disengaged. Why, then, is feeling discouraged a negative emotional experience whereas feeling relaxed is a positive emotional experience? When people feel discouraged (having had a promotion failure) they experience a reduction in eagerness, whereas when people feel relaxed (having had a prevention success) they experience a reduction in vigilance (Higgins, 2001; Idson et al., 2000). It is a negative experience to become disengaged from an eager or enthusiastic state, while it is a positive experience—a relief—to become disengaged from a vigilant or guarded state. As another example, although feeling happy and feeling nervous differ greatly along the basic pleasure–pain dimension, they both involve an experience of being highly engaged. However, people who are happy (having had a promotion success) are highly engaged in an eager and enthusiastic state of accomplishing things, whereas people who are nervous (having had a prevention failure) are highly engaged in a vigilant and guarded state of doing what is necessary (Higgins, 2001; Idson et al., 2000). The quality of these different emotional states is not properly characterized simply in terms of pleasure versus pain and high versus low arousal. The value experience from high and low engagement strength, within promotion and within prevention, must be included if we are to appreciate fully the psychological quality of these different emotions.

Conceptualizing the arousal or activation dimension as strength of engagement also has implications for understanding emotional vulnerabilities. Consider, for example, the negative emotions produced by failure or negative events. If agitation-related negative emotions (e.g., tense, nervous) are high strength-of-engagement experiences related to prevention failure, then individuals experiencing these emotions might also experience more generally a heightened force of repulsion away from negatively valenced objects and activities related to prevention/loss concerns, such as becoming more concerned with potential dangers and mistakes. The negative value of such objects and activities would increase even for objects and activities that had nothing to do with producing the emotions. An extreme version of this might be the excessive or unreasonable guardedness (i.e., hypervigilance) that is associated with generalized anxiety states. In contrast to agitation-related emotions, if negative dejection-related emotions (e.g., sad, discouraged) are low strength-of-engagement experiences related

to promotion failure, then individuals experiencing these emotions might experience more generally a reduced force of attraction toward positively valenced objects and activities related to promotion/gain concerns, such as becoming less attracted to potential accomplishments and advancements. The positive value of such objects and activities would decrease even for objects and activities that had nothing to do with producing the emotions. An extreme version of this might be the lethargy or hypoeagerness that is associated with depressed states. It is notable in this regard that having no interest in doing things is a central symptom of depression.

There are implications for positive emotions as well. To take one example, consider cheerfulness-related positive emotions (e.g., happy, joyful) that are high strength-of-engagement experiences related to promotion success. Individuals experiencing these emotions might also experience more generally a heightened force of attraction toward positively valenced objects and activities related to promotion/gain concerns, such as becoming more attracted to potential accomplishments and advancements. The positive value of such objects and activities would increase even for objects and activities that had nothing to do with producing the emotions. An extreme version of this might be the unreasonable enthusiasm or hypereagerness that is associated with manic states. It is notable in this regard that excessive involvement in activities is a central symptom of mania.

According to the present model, the situational conditions found in misattribution or excitation transfer studies on value creation (Zillman, 1978) might influence value in two different ways depending on whether they not only increase arousal but also increase strength of engagement. In one case, the path would be through the experienced properties of the value target, with intensified happy responses to loving events while watching a romantic film or intensified fear responses to scary events while watching a horror film. Such intensification of the experienced properties themselves would increase the strength of the pleasure experience in the former case and the strength of the pain experience in the latter case. This is the path that most resembles how the literature describes misattribution or excitation transfer effects on value. A second path might be through strength of engagement; the experienced properties of the value target remain the same but the strength of motivational experience increases. Thus, during the film the intensity of the happy or fear responses themselves would not change but the motivational force experience of wanting the happy ending to happen or the horrible ending to not happen would increase. Given that things worked out as desired, this would increase the value of both films. It should be noted that these are not competing alternatives; both paths could contribute to increasing the experienced value of the film.

Arousal/activation level has been considered to play a role in motivation and evaluative responses beyond emotional experiences per se. One source of increased arousal/activation is people acting in the presence of others as compared to acting alone (Zajonc, 1966). To the extent that the increased arousal from coaction increases strength of engagement, the greater strength of engagement in the presence of others would increase the value of the initial response to the situation (presumably the dominant response). If so, then the perceived monetary value of a choice would increase when it is made in the presence of someone else than when it is made alone. This could also contribute to group polarization effects where dominant attitudes become enhanced following group interaction (Myers & Lamm, 1976). Strength of engagement also increases as distance from a goal decreases—the classic "goal looms larger effect" (Forster et al., 1998; Lewin, 1935; Miller, 1944). This suggests that the goal itself has more value as one approaches it. If so, then individuals might assign a higher monetary value to a goal as they move closer to it (controlling for expectancy and time of attainment).

Strength of Engagement and Arousal

I have suggested that in some cases, such as the emotional experiences described above, the arousal being discussed could involve engagement strength, with what is described as higher arousal being a state of higher engagement strength. It is important to emphasize, however, that I am *not* suggesting that the variable of arousal *is* the variable of engagement strength, although there are some similarities between these variables. The most significant similarity between my proposed concept of engagement strength and the concept of arousal as it has been treated in the literature, especially the concept of general or undifferentiated arousal (e.g., Berlyne, 1960; Duffy, 1951; Hebb, 1955; Schachter & Singer, 1962), is that they are both conceptualized as nondirectional factors than can intensify motivational responses. Without being experienced as pleasant or painful per se, or as a force of attraction or repulsion per se, they can intensify those experiences. This is a significant historical similarity. It should also be noted that not enough is yet known about either arousal or strength of engagement to make a definitive claim about their interrelation. Nonetheless, it is important to emphasize that my proposed model of psychological value does not equate the two.

One critical difference is that when the concept of arousal has been described in the literature, no direct relationship between arousal and engagement has been asserted. Indeed, if anything, an independence between arousal and engagement has been suggested. For example, according to the literature, how aroused an animal is at any particular point and whether it is engaged in what it is doing at the moment is not the same. An excellent recent paper by Aston-Jones and Cohen (2005), for instance, describes both a high phasic activation level associated with facilitating task-relevant behaviors and engagement with the current task (exploitation), and a high tonic activation level associated with distractibility and disengagement with the current task (exploration). As another example, the "flow" experience, involves high engagement, but Csikszentmihalyi (1975) reports that "flow" can occur when people are relaxed (i.e., relatively low arousal) and it can be disrupted when people become anxious (i.e., relatively high arousal). Finally, something that increases arousal, such as a loud noise, could be distracting and thereby reduce engagement in a current activity, or it could be opposed as an interfering force and thereby heighten engagement in a current activity. The precise interrelation between arousal and engagement strength is an important question for future research.

Strength of Engagement and Expectancy/Likelihood

Like value, expectancy (including *likelihood* and *probability*) is a major concept in motivational and decision science. In both expectancy-value models and subjective utility models, expect-

ancy is considered a major determinant of the worth or utility of a choice (for a review, see Ajzen, 1996). Generally speaking, when a choice has positive outcomes, increasing the expectancy of the outcomes increases the attractiveness of that choice; and when a choice has negative outcomes, increasing the expectancy of the outcomes increases the repulsiveness of that choice. Earlier I discussed evidence from studies on regulatory fit demonstrating that a fit way of making a decision (compared to a nonfit way) may increase the attractiveness of a choice independent of outcome expectancies (i.e., the perceived effectiveness or instrumentality of how the decision was made). This shows that the effect of strength of engagement on value creation does not depend on engagement strength increasing the expectancy of a positive outcome. However, this does not preclude the possibility that there is a different kind of relationship between expectancy and strength of engagement. It is possible that expectancy not only influences worth or utility in the cognitive calculus manner suggested by traditional expectancy-value and subjective utility models, but it also does so through influencing strength of engagement.

As the expectancy of attaining outcomes increases, the outcomes might be experienced as more real (i.e., less imaginary) or as having less psychological distance, which could increase strength of engagement. According to the present model, this increase in strength of engagement would intensify the attraction to positive value targets (associated with positive outcomes) and intensify the repulsion from negative value targets (associated with negative outcomes). Future research should investigate this potential route for how expectancy might affect value. It should also be noted that, according to this account, expectancy and value would have one factor in common with respect to choice commitment—strength of engagement.

Strength of Engagement and Value Creation More Generally

In this article, I have emphasized the implications of engagement strength for value creation in relation to the four factors of opposing interfering forces, overcoming personal resistance, regulatory fit, and use of proper means because these factors have received the most direct empirical attention. There are other implications of engagement strength for value creation that should at least be noted, however. Let me now briefly consider some of these implications.

Persuasion from increasing attention to or involvement with a message. It is not possible here to review the vast literature on the persuasion effects of increasing message recipients' attention to and/or involvement with a persuasive message (for an excellent review, see Eagly & Chaiken, 1993). Generally speaking, the impact on persuasion from attending more to a message or being more involved with a message has often been conceptualized in terms of increased engagement having an information processing or cognitive response effect that affects persuasion. In classic "information processing" models of persuasion, for example, attention to the message is important because it affects the likelihood that the persuasive information in the message will be learned (e.g., McGuire, 1969). Issue involvement, or the extent to which a message topic is personally relevant, is said to increase people's motivation to engage in thinking about the message, and its effect on persuasion depends on whether it produces more favorable thoughts or more unfavorable thoughts (e.g., Petty & Cacioppo, 1979). In addition to such cognitive effects, it is also possible that the situational conditions that strengthen engagement with a message by increasing attention to or involvement with the message also affect persuasion because the force experience of attraction to or repulsion from the message advocacy is intensified by the increased engagement strength. That is, conditions that increase attention to or involvement with a message might have effects similar to those found by Cesario et al. (2004) when regulatory fit increased strength of engagement with a persuasive message.

Cooling a hot object and other coping strategies. Abstraction is a well-known method of self-control, whether it is used to resist temptation or to deal with emotionally painful events (Mischel, Cantor & Feldman, 1996). These methods are thought to reduce or "cool" the arousing or "hot" reaction to the target object or event. That is, it is the arousal or energizing drive state of the perceiver (Hebb, 1955) that is thought to have changed, which, as was discussed earlier, should reduce hedonic experience. It is also possible that these methods affect strength of engagement, which then affects the experience of attraction or repulsion to the target object or event itself. By reducing strength of engagement, an attractive target would be experienced as less attractive, and a painful target would be experienced as less painful. From this perspective, any method, and not just abstraction, that could reduce strength of engagement, would be effective in resisting temptation or dealing with painful events. More generally, strength of engagement as a property of different coping strategies needs to be considered when determining their function. As was discussed earlier in the article, freezing, fainting, fighting, or fleeing as responses to a threatening target vary in strength of engagement, which in turn could affect the intensity of the repulsion from the target. It would be useful, therefore, to consider not only how a particular coping response impacts hedonic experience, but also how it influences strength of engagement.

Value change over longer periods and hedonic forecasting. Experimental studies tend to examine value change over a relatively short period, such as a change in how some object is evaluated during a single experimental session. When thinking about longer periods, an interesting question arises. When a target's value changes over time, how much of that change is due to a change in the hedonic experience of that target versus a change in how strongly that target is engaged? This question could be considered at an individual level or at a broader societal level. At the societal level, for example, a technological change, such as the introduction of instant messaging (IM), could change the ways in which people engage with one another. The actual hedonic experience of either face-to-face or IM interactions might not change, but the relative value of these two forms of interaction might change because greater engagement in IM-ing over time could increase its value as a form of interaction. From this perspective, any institutional change that changed the strength of people's engagement in different activities would change what it is that a society values, including even higher level "societal values" that involve activities in which people engage, such as democracy. At the individual level and a shorter time frame, there are also implications for people's abilities to anticipate what they will value in the future. When people make decisions in the present that have consequences for their future, they try to anticipate or predict the value of making a particular choice. According to the literature

on hedonic or affective forecasting (e.g., Loewenstein & Schkade, 1999; Mellers, 2000; Wilson & Gilbert, 2003), the forecast involves people inferring or imagining the pleasure or pain they would feel in the future from the consequences of a choice they made now. But if value in the future will be determined by both hedonic experience and engagement strength in the future, it is not sufficient to predict their future hedonic experience. It is also necessary to predict engagement strength in the future. This could be especially difficult because engagement strength might be even less stable over time than hedonic experience.

Object cathexis. The concept of "cathexis" was central to Freudian psychoanalytic theory, but it has been criticized as being difficult to understand or translate into a meaningful psychological variable (Loevinger, 1976). It is notable that Freud did not use this term but instead referred to "besetzung," which stands for occupation (military) and putting something into place. The term "engagement" has the same meanings, and thus it would be possible to reconceptualize "cathexis" as strength of engagement. By so doing, psychoanalytic ideas, such as object cathexis and transference, could be reconsidered in terms of strength of engagement creating value—increasing both attraction and repulsion. For example, recent experimental research on transference has demonstrated the important role of basic mechanisms of information processing in transference (Andersen & Berk, 1998). What has received less research attention is the possibility that when a "significant other" representation is activated when interacting with someone, the actual engagement with that person itself becomes stronger so that attraction to or repulsion from that person is intensified (depending on whether the initial response to that person is generally positive or negative).

Conflict and engagement strength. Conflict has been described mostly from an hedonic viewpoint, both with respect to the types of conflict—approach–approach, avoidance–avoidance, approach–avoidance—and with respect to the psychological state itself—a state of unpleasant tension or arousal (e.g., Berlyne, 1960; Brickman, 1987; Lewin, 1935, 1951; Miller, 1944). What has not been considered is how conflict relates to engagement strength. There is more than one possible relationship between conflict and engagement strength.

In a series of studies testing "activity engagement theory" (see Higgins, Lee, Kwon, & Trope, 1995; Higgins, Trope, & Kwon, 1999), participants engaged in either two liked activities or two disliked activities, and the two activities were presented to them either simultaneously (the conflict condition) or successively (the no-conflict condition). In the simultaneous condition, the two liked activities represented an approach–approach conflict, and the two disliked activities represented an avoidance–avoidance conflict. According to "activity engagement theory" (see Higgins et al., 1995, 1999), there is unique information gained when participants switch back and forth between activities in the simultaneous condition that influences the perceived value of the activities through an inferential mechanism. In addition to this mechanism, however, the situational conditions associated with these studies could also change value by influencing strength of engagement. Compared to the successive condition in which participants can concentrate on one activity at a time, the constant switching back and forth between activities in the simultaneous condition is disruptive and thus is likely to decrease engagement strength. This decrease in engagement strength should decrease the attractiveness of the two liked activities, and decrease the repulsiveness of the two disliked activities, more in the simultaneous condition than in the successive condition. This is exactly what was found (see Higgins et al., 1995, 1999).

Conflict between competing activities does not necessarily decrease strength of engagement. It can also increase strength of engagement. If an actor effectively opposes an interfering force produced by a conflict, for example, then strength of engagement should increase. For example, in the Freitas et al. studies (2002) mentioned earlier, there was an approach–approach conflict between a positive focal activity and a positive distracting activity. Those prevention focus participants who vigilantly and effectively opposed the interfering distraction reported greater task enjoyment than when the conflict-producing distraction was not present. This suggests that for these participants the conflict increased strength of engagement (by way of their opposition to an interfering force), which increased the attractiveness of the value target. Approach–avoidance conflict can also involve opposition to interfering forces that increases strength of engagement, as is evident in the cases mentioned earlier (e.g., Lewin, 1935; Wright, 1937), in which a barrier to goal pursuit was opposed, which also increased the attractiveness of the value target.

It should be noted that the varying "conflict-engagement strength" relationships just described provide another example of the difference between arousal and engagement strength as psychological concepts. According to the literature, conflict generally produces an unpleasant state of high arousal. In my view, however, conflict can produce either high engagement or low engagement, which in turn can respectively increase or decrease the attractiveness or repulsiveness of something.

Potential interventions for affective disorders. Earlier I discussed how the affective disorders of generalized anxiety and depression, although both painful, may differ in terms of their regulatory focus and engagement strength. Given these differences, what distinct activities might be recommended as interventions to help those suffering from these affective disorders? The hypervigilance associated with generalized anxiety involves excessive engagement in prevention. Thus, what should be helpful are activities that require only relatively low levels of prevention engagement and produce a sense of success—given that success in a prevention focus reduces vigilance. Such activities might include monotonous or repetitive prevention tasks that many people would find boring (i.e., not challenging), such as washing the dishes, doing the laundry, or weeding the garden. In contrast, the hypoeagerness associated with depression involves inadequate engagement in promotion. Thus, what should be helpful are activities requiring relatively high levels of promotion engagement and that produce a sense of success—given that success in a promotion focus increases eagerness. Such activities might include promotion tasks that require effort and have a high likelihood of success while still being somewhat challenging, such as planning, shopping, and cooking a nice meal for a friend or becoming involved in volunteer work. The difference between these two types of recommended activities is not outcome. For different reasons, both types of activities should be ones in which a person is likely to succeed—either to reduce vigilance or increase eagerness. The difference concerns strength of engagement. For anxiety, the success should be in a prevention activity with low engagement strength. For

depression, the success should be in a promotion activity with high engagement strength.

Value creation from transfer of engagement strength. This article has emphasized the effect of engagement strength on the value of the engaged activity or the value of an object associated with the engaged activity. There is also evidence, however, especially from research on regulatory fit, that increasing engagement strength with respect to one activity can intensify the positive or negative value of a totally separate object or activity that is subsequently encountered (see Cesario et al., 2004; Higgins et al., 2003). In one study by Higgins et al. (2003), for example, participants were first asked to think about strategies for pursuing their personal goals that either fit or did not fit their goal orientation. Later, they rated nice-looking dogs in terms of how "good-natured" they were. Participants in the prior fit conditions rated the dogs as more "good-natured" overall than did participants in the prior nonfit conditions. Thus, increasing strength of engagement through regulatory fit in one task activity subsequently increased the positive response to an object in an entirely separate task.

Such value creation from transfer of engagement strength suggests that strong engagement produced by one set of conditions can persist long enough to influence the value response to something else that is independent of those conditions. Future research should investigate the temporal parameters of such persistence and transfer. I discussed earlier the similarities and differences between the present model of value creation and those offered by Berridge and Robinson (Berridge & Robinson, 2003; Robinson & Berridge, 2003) and Salamone and Correa (2002). Another difference is that these models have not considered how a nondirectional factor pertaining to one activity can affect the value of some subsequent, separate object or activity. Value creation from transfer of engagement strength is one way in which this could occur.

Earlier I discussed the implications of engagement strength for coping strategies. When one adds to this discussion the fact that there may be value creation from transfer of engagement strength, the potential implications for coping expand even further. We know that people select different activities as a function of the hedonic experience that they produce. It is possible that people also select different activities as a function of the level of engagement strength that they naturally require because this engagement strength will transfer to other things. People might select high engagement strength activities to make the currently positive things in their lives more attractive. Alternatively, they might select low engagement strength activities to make the currently negative things in their lives less repulsive. We know that people try to control their hedonic experiences, including their emotions. Do people also try to regulate their engagement strength experiences? And if so, are some people better at it than others?

Concluding Remarks

Value is an experience of strength of motivational force. It is an experience of how intensely one is attracted to or repulsed from something. I have proposed that the value experience derives not only from hedonic experience but also from the strength of the motivational force experience of wanting to make something attractive happen or something repulsive not happen. The intensity of the motivational force experience, in turn, is influenced by strength of engagement. Although the subjective properties of a value target are an important determinant of engagement strength, they are not the only determinant. Factors separate from the value target's properties also influence strength of engagement and thus contribute to the intensity of attraction or repulsion. Because their contribution to value creation runs through engagement strength to experienced motivational intensity, these additional factors can intensify either attraction or repulsion regardless of whether they themselves are pleasant or unpleasant situations.

The value force experience has both direction and strength. It is natural to emphasize the basic directional aspect of the value experience—whether something is attractive or repulsive. It is not surprising, then, that the role of engagement strength in value creation has received little attention; it does not contribute to direction. Furthermore, because an important determinant of engagement strength is the subjective hedonic properties of the value target, which is the same factor that contributes to direction, it makes sense that hedonic experience would be emphasized at the expense of strength of engagement per se. What has been overlooked is that there are other determinants of engagement strength that are independent of the value target's hedonic properties. What is striking about these other factors is that they can each influence engagement strength, and thereby affect the intensity of the value force experience, regardless of whether they in themselves are experienced as pleasant or unpleasant. This makes it even less likely phenomenologically for people to recognize the role of engagement strength in value creation, because a situation that is unpleasant can increase engagement strength that intensifies attraction to something, and a situation that is pleasant can increase engagement strength that intensifies repulsion from something. In these cases, drawing people's attention to the situation's hedonic properties would not eliminate the effect of engagement strength on value; indeed, the effect might be augmented. The effect of engagement strength on value might be reduced, or even eliminated, by drawing people's attention explicitly to the situation's contribution to engagement strength, but drawing people's attention to their engagement experience is unlikely to happen in everyday life. Thus, value creation from sources of engagement strength other than the target's hedonic properties naturally occurs ubiquitously.

At this point, we know more about how to manipulate sources of engagement strength—opposition to interfering forces, overcoming personal resistance, regulatory fit, use of proper means—than we know about how to measure engagement strength itself. Thus far, the measures have been arm pressure while performing a task, persistence on a task, and level of task performance. There is a need to develop other measures of engagement strength that will both suit its level of analysis in the present model and permit more direct tests of its hypothesized role in value creation. These measures will also need to distinguish engagement strength from other related variables (e.g., arousal). This will be a major challenge for the future. For now, it is sufficient to recognize that manipulating sources of engagement strength creates value independent of hedonic experience.

Opposition to interfering forces, overcoming personal resistance, regulatory fit, and use of proper means as sources of engagement strength create value. This is beneficial under many circumstances by stimulating the allocation of resources to those activities and choices that merit such resources. But not always, as is evident in various forms of addiction and zealotry. It is the

function of accurate and realistic feedback about costs and benefits to help us control for overcommitment, misplaced devotion, and overvaluation. But such feedback is not always available or heeded. A fruitful area for future research would be to determine which interventions are effective in correcting overvaluation (be it too positive or too negative). The distinction between hedonic experience and engagement strength could be useful in this regard. In the case of drug addiction, for example, it might be more effective to consider substitutes for engagement strength rather than substitutes for hedonic experience. The contribution to value creation from engagement strength has not received sufficient attention in psychology or other disciplines. By recognizing and studying this contribution, we may gain a deeper understanding of what makes something valuable.

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