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Making a Good Decision: Value From Fit

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The classic answer to what makes a decision good concerns outcomes. A good decision has high outcome benefits (it is worthwhile) and low outcome costs (it is worth it). I propose that, independent of outcomes or value from worth, people experience a regulatory fit when they use goal pursuit means that fit their regulatory orientation, and this regulatory fit increases the value of what they are doing. The following postulates of this value from fit proposal are examined: (a) People will be more inclined toward goal means that have higher regulatory fit, (b) people's motivation during goal pursuit will be stronger when regulatory fit is higher, (c) people's (prospective) feelings about a choice they might make will be more positive for a desirable choice and more negative for an undesir-

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able choice when regulatory fit is higher, (d) people's (retrospective) evaluations of past decisions or goal pursuits will be more positive when regulatory fit was higher, and (e) people will assign higher value to an object that was chosen with higher regulatory fit. Studies testing each of these postulates support the value-from-fit proposal. How value from fit can enhance or diminish the value of goal pursuits and the quality of life itself is discussed.

It is not enough to do good; one must do it the right way.

—John Morley

We are all motivated to make good decisions. But what makes a decision "good"? The traditional answer has been in terms of outcomes. Simply put, a good decision is one that produces positive outcomes. When choosing among alternatives, a good choice is that alternative whose mix of pleasant or painful outcomes is the most positive. The role of outcomes in making good decisions has been a central issue in decision science, and there are several perspectives on outcome value (for reviews, see Abelson & Levi, 1985; Ajzen, 1996; Dawes, 1998). A critical insight is that the psychological value of an outcome is not simply its objective value. There have been a number of ideas about how psychological and objective value are related. For example, Bernoulli (1738/1954) has proposed a concave logarithmic function relating the value of money to its objective amount. More recently, Kahneman and Tversky (1979) have proposed a concave value function for gains (above the reference point) but a convex value function for losses (below the reference point).

Psychologically, then, a decision is perceived as good when its expected value or utility of outcomes is judged to be more beneficial than the alternatives. The benefits include the social benefits of a decision, such as those received from a "politically correct" or ingratiating decision. The costs of attaining the outcomes can also influence whether a decision is perceived as good. The outcome benefits have to be weighed against the costs of attaining the outcomes. The costs include not only the goods or services one must give in exchange for receiving the benefits but also the costs of the decision-making process itself. Additional information that could increase the benefits, for example, might be defensively avoided because of its emotional costs (e.g., Janis & Mann, 1977). The decision-making process that would optimize outcomes might not be used because the costs in cognitive effort or time are too high (e.g., Simon, 1955, 1967).

Both outcome benefits and outcome costs, therefore, contribute to a decision being good. These two outcome-related ways in which a decision is good concern value from worth. With respect to outcome benefits, the final decision is "worthwhile" because the benefits of the decision are relatively high compared with alternative decisions. With respect to outcome costs, the decision was "worth it" because the costs of the decision are relatively low compared with the benefits. It makes intuitive sense that the value of a decision

is related to its worth. It is common in the decision science literature to equate value with utility, and one sense of *utility* is "worth to some end" (*Webster's Ninth New Collegiate Dictionary*, 1989, p. 1300). A combination of high benefits and low costs of outcomes is a worthy end.

A decision is good, then, when it has worth to some end, when the outcomes have high benefits and low costs. Is a decision's relation to ends or outcomes the only determinant of how good it is? We are all familiar with the idea expressed in the maxim of the late-19th-century British statesman John Morley, "It is not enough to do good; one must do it the right way," or the coaching classic, "What counts is not whether you win or lose but how you play the game." Such maxims reflect a moral position: Achievements should be evaluated not only in terms of outcomes but also in terms of the means by which they were attained. "The ends do not justify the means." From this perspective, proper means must be used for an achievement to be deemed good. This moral message is well-known. But beyond this message of the maxims, there is an insight lurking that applies to decision making in general. This insight concerns how the goodness of a decision depends not only on its relation to ends or outcomes but also on whether the means used to make it were suitable (cf. Beach, 1990; March, 1994). *Suitable* here refers only to what is morally proper. By considering the more general meaning of suitable as "fit," a new perspective on what makes decisions good is possible.

The decision science literature typically equates *value* with *utility*, defined as "worth to some end." It is notable, however, that *utility* has another sense: "fitness for some purpose" (*Webster's Ninth New Collegiate Dictionary*, 1989, p. 1300). In keeping with this additional sense of *utility*, I propose that another factor that makes a decision good is value from fit.

The fit of concern here is the relation between a person's orientation to an activity and the means used to pursue that activity. Individuals can pursue the same goal activity with different orientations and with different means. Consider, for example, students in the same course who are working to attain an A. Some students are oriented toward an A as an accomplishment, whereas others are oriented toward an A as a responsibility. Some students read material beyond the assigned readings as a means to attain an A, whereas others are careful to fulfill all course requirements. The fit between these different regulatory orientations and goal pursuit means varies. Reading extra, nonassigned material fits an accomplishment orientation better than a responsibility orientation, whereas fulfilling course requirements fits a responsibility orientation better than an accomplishment orientation. For all students, receiving an A in the course will have outcome benefits regardless of their orientation and means. Independent of this value from worth, however, there is an additional value from fit. I propose that independent of

outcomes, people experience a *regulatory fit* when they use goal pursuit means that fit their regulatory orientation, and this regulatory fit increases the value of what they are doing.

If goal pursuits with higher regulatory fit have greater value than those without, then (a) people will be more inclined toward goal means that have higher regulatory fit, (b) people's motivation during goal pursuit will be stronger when regulatory fit is higher, (c) people's (prospective) feelings about a choice they might make will be more positive for a desirable choice and more negative for an undesirable choice when regulatory fit is higher, (d) people's (retrospective) evaluations of past decisions or goal pursuits will be more positive when regulatory fit was higher, and (e) people will assign higher value to an object that was chosen with higher regulatory fit. Because our studies thus far have examined regulatory fit in terms of a distinction between *promotion* and *prevention* goal pursuit, the article begins by discussing this distinction. Following this, each of the five postulates of the value-from-fit proposal are considered.

Promotion and Prevention as Distinct Orientations

Self-regulation occurs in relation to both desired end states and undesired end states. Animal learning-biological models (e.g., Gray, 1982; Hull, 1952; Konorski, 1967; Lang, 1995; N. E. Miller, 1944; Mowrer, 1960), cybernetic-control models (e.g., Carver & Scheier, 1990; Powers, 1973), and dynamic models (e.g., Atkinson, 1964; Lewin, 1935; Lopes, 1987; McClelland, Atkinson, Clark, & Lowell, 1953) all distinguish between approaching desired end states and avoiding undesired end states. This article emphasizes self-regulation toward desired end states because approaching desired end states has received the most attention in the literature (see, e.g., Carver & Scheier, 1981, 1990; Gollwitzer & Bargh, 1996; Miller, Galanter, & Pribram, 1960; Pervin, 1989).

Regulatory focus theory assumes that self-regulation operates differently when serving fundamentally different needs, such as the distinct survival needs of nurturance (e.g., nourishment) and security (e.g., protection). Parents' social regulatory style can emphasize either nurturance or security. It can emphasize nurturance by bolstering to meet desired end states and by withdrawing love when desired end states are not met. It can emphasize security by safeguarding to meet desired end states and by criticizing when desired end states are not met. These different social regulatory styles communicate distinct concerns about getting along in the world. Nurturant social regulation engenders a *promotion focus*, in which self-regulation is concerned with the presence and absence of positive outcomes. Security social regulation engenders a *prevention focus*, in which self-regulation is concerned with the absence and presence of negative outcomes (see Higgins & Silberman, 1998). Earlier papers on self-discrepancy theory (e.g., Higgins, 1987, 1989, 1991)

describe how certain modes of caretaker-child interaction increase the likelihood that children will acquire strong promotion concerns reflecting hopes, wishes, and aspirations for them (strong *ideals*) or strong prevention concerns reflecting beliefs about their duties, obligations, and responsibilities (strong *oughts*).

The hopes, wishes, and aspirations represented in ideals function like maximal goals. Actual self-congruencies to ideals represent the presence of positive outcomes, and discrepancies represent the absence of positive outcomes. With its emphasis on ensuring the presence of positive outcomes and ensuring against the absence of positive outcomes, ideal self-regulation involves promotion-focus concerns with advancement, aspirations, and accomplishments. The duties, obligations, and responsibilities represented in oughts function more like minimal goals that a person must attain (see Brendl & Higgins, 1996). Actual self-congruencies to oughts represent the absence of negative outcomes, and discrepancies represent the presence of negative outcomes (see Gould, 1939; Rotter, 1982). With its emphasis on ensuring the absence of negative outcomes and ensuring against the presence of negative outcomes, ought self-regulation involves prevention-focus concerns with protection, safety, and responsibilities.

Momentary situations are also capable of temporarily inducing either promotion-focus or prevention-focus concerns. Just as the responses of caretakers to their children's actions communicate to the children about how to attain desired end states, feedback from a boss to an employee or from a teacher to a student is a situation that can communicate *gain-nongain* concerns with the presence and absence of positive outcomes (promotion concerns) or *nonloss-loss* concerns with the absence or presence of negative outcomes (prevention concerns). Task instructions that frame outcome contingencies in terms of gains-nongains versus losses-nonlosses can also induce promotion or prevention concerns, respectively. Thus, the distinction between promotion-focus concerns and prevention-focus concerns does not apply only to individual differences. Situations and tasks can also vary in regulatory focus concerns.

Regulatory focus theory also distinguishes between different means of goal pursuit. It distinguishes between *eagerness* means and *vigilance* means (see Crowe & Higgins, 1997; Higgins, 1997, 1998). In signal-detection terms (e.g., Tanner & Swets, 1954; see also Trope & Liberman, 1996), eagerness involves ensuring *hits* and ensuring against errors of omission or *misses*, and vigilance involves ensuring *correct rejections* and ensuring against errors of commission or *false alarms*. Regulatory focus theory proposes (Crowe & Higgins, 1997; Higgins, 1997, 1998) that there is a natural fit between promotion-focus concerns and the use of eagerness means because eagerness means ensure the presence of positive outcomes (ensure hits; look for means of advancement) and ensure against the absence of positive outcomes

(ensure against errors of omission; don't close off possibilities). There is also a natural fit between prevention-focus concerns and the use of vigilance means because vigilance means ensure the absence of negative outcomes (ensure correct rejections; be careful) and ensure against the presence of negative outcomes (ensure against errors of commission; avoid mistakes).

In sum, regulatory focus theory distinguishes between promotion and prevention orientations. A promotion orientation is concerned with advancement and accomplishment, with the presence and absence of positive outcomes. Eagerness (approach) means fit a promotion orientation. A prevention orientation is concerned with safety and responsibility, with the absence and presence of negative outcomes. Vigilance (avoidance) means fit a prevention orientation. The *value from fit* proposal is that when individuals use goal pursuit means that fit their regulatory orientation, they experience a regulatory fit that increases the value of what they are doing. The first postulate of this proposal is that people will be more inclined toward goal means that have higher regulatory fit. If so, then people with a promotion orientation will be more inclined toward eagerness means than vigilance means, whereas the reverse will be true for people with a prevention orientation. Research testing this postulate is considered next.

Regulatory Fit and Inclination Toward Distinct Means

Kelly (1955) has suggested that personal constructs create a scanning pattern that picks up "blips of meaning" (p. 145). Events that match a perceiver's inclinations, then, will be better remembered than those that do not. If individuals with a promotion orientation have a stronger inclination toward eagerness (approach) means than vigilance (avoidance) means, then goal-pursuit events in which eagerness means are used will be better remembered than goal pursuit events in which vigilance means are used. The reverse will be true for individuals with a prevention orientation. This prediction was tested in a study by Higgins, Roney, Crowe, and Hymes (1994) that manipulated participants' regulatory focus through a priming procedure.

At the beginning of the experiment, the experimenter asked undergraduates to report either on how their hopes and aspirations had changed over time (priming their ideals and a promotion orientation) or on how their sense of duty and obligation had changed over time (priming their oughts and a prevention orientation). Next, as part of a supposedly unrelated study, the participants read about several episodes that had occurred over a few days in the life of another student. In one set of episodes, the target used either eagerness means to attain a goal, such as the target person waking up early to get to an excellent psychology class that began at 8:30 a.m., or vigilance means to attain a goal, such as not registering for a Spanish class that was scheduled at the same time as a photography class

the target person wanted to take. Supporting the prediction, participants with a promotion orientation remembered better goal-attainment episodes in which eagerness means were used than goal-attainment episodes in which vigilance means were used, and the reverse was true for participants with a prevention orientation.

The prediction of inclinations for distinct means as a function of regulatory orientation was also tested in a recognition-memory study by Crowe and Higgins (1997). The participants were first shown a list of target items. After a delay, they were then given test items that included both old target items from the original list and new distractor items not from the original list. The participants were asked to respond "yes" if they believed the test item was an old target item and to respond "no" if they believed the test item was a new distractor item.

From a signal-detection perspective, using the eagerness means of ensuring hits and ensuring against errors of omission would produce "yes" responses (a *risky* bias), whereas using the vigilance means of ensuring correct rejections and ensuring against errors of commission would produce "no" responses (a *conservative* bias). The predictions were that participants with a promotion focus would use eagerness means that would produce a risky bias, and participants with a prevention focus would use vigilance means that would produce a conservative bias. The participants were told that they would first perform a recognition-memory task and then would be assigned a second, final task. A liked and a disliked activity had been selected earlier for each participant to serve as the final task. The participants were told that which of the alternative final tasks they would work on at the end of the session depended on their performance on the initial recognition-memory task.

The relation between performance on the initial memory task and which of the final tasks they would do was described as contingent for everyone, but the framing varied as a function of both regulatory focus (promotion vs. prevention) and outcome valence (success vs. failure). The promotion framing of the contingency stated that by doing well on the initial memory task the participant would get to do the liked task (or by not doing well they would not get to do the liked task). The prevention framing of the contingency stated that by not doing poorly on the initial memory task the participant would not have to do the disliked task (or by doing poorly they would have to do the disliked task). The study found that independent of success versus failure framing (which itself had no effect), participants with a promotion orientation had a risky bias of saying "yes" in the recognition-memory task, whereas participants with a prevention orientation had a conservative bias of saying no.

The results of these studies support the first value from fit postulate that people will be more inclined toward goal means that have higher regulatory fit. Specifically, the stud-

ies found that individuals with a promotion orientation were more inclined toward eagerness (approach) means than vigilance (avoidance) means, whereas the reverse was true for individuals with a prevention orientation. Let us now consider the second postulate of the value from fit proposal: People's motivation during goal pursuit will be stronger when regulatory fit is higher.

Regulatory Fit and Increased Motivational Strength

The prediction that people's motivation during goal pursuit will be stronger when regulatory fit is higher was tested in a study on anagram performance by Forster, Higgins, and Idson (1998). The regulatory orientation of the participants was experimentally manipulated with a framing procedure similar to that used by Crowe and Higgins (1997). The instructions informed all participants that they had to identify 90% or more of all the possible words in the anagrams to succeed on the task and that they would earn \$1 more by succeeding on the task. The contingency information, however, was framed with either a promotion focus (gain–non-gain framing) or a prevention focus (nonloss–loss framing).

Independent of this manipulation of promotion or prevention orientation, either eagerness-related approach means or vigilance-related avoidance means were also manipulated using an arm-pressure technique. Previous studies (e.g., Cacioppo, Priester, & Berntson, 1993) had found that pressing downward on the top of a surface (arm extension) induces avoidance (related to moving an object away from one's face and chest), whereas pressing upward on the bottom of a surface (arm flexion) induces approach (related to bringing an object toward one's face and chest). The supposed purpose of the study was to test a new skin-conductance machine. While solving one set of anagrams, the participants pressed upward on the plate of the machine that was attached to the bottom of a table (eagerness-related approach means). While solving another set of anagrams, they pressed downward on the plate that was attached to the top of the table (vigilance-related avoidance means).

For a promotion orientation, eagerness-related approach means has a better fit than vigilance-related avoidance means. The reverse is true for a prevention orientation. If regulatory fit increases motivational strength, then anagram performance should be better for arm flexion (approach) than arm extension (avoidance) when participants are in a promotion focus, whereas the reverse should be true when participants are in a prevention focus. As shown in the top half of Table 1, this prediction was confirmed.

Forster et al. (1998) conducted another study in which regulatory orientation varied as a chronic individual difference rather than being experimentally manipulated. The participants in the study varied in the strength of their promotion focus and in the strength of their prevention focus. In keeping with previous work on attitude accessibility (see Bassili, 1995, 1996; Fazio, 1986, 1995), regulatory focus strength was conceptualized and

operationalized in terms of the chronic accessibility of a person's ideals (promotion focus strength) and oughts (prevention focus strength). Chronic accessibility of a person's ideals and oughts was measured by means of response times to inquiries about his or her ideal attributes and ought attributes.

Accessibility is activation potential, and knowledge units with higher activation potentials would produce faster responses to knowledge-related inputs (see Higgins, 1996). Ideal (or ought) strength was measured by response latencies in listing ideal (or ought) attributes, with stronger ideals (or oughts) being operationalized by shorter response latencies (for more details about this strength measure, see Higgins, Shah, & Friedman, 1997). Arm flexion and arm extension were again used to manipulate approach and avoidance, respectively. As shown on the bottom half of Table 1, this study also found that performance was better (i.e., motivation was stronger) when there was higher regulatory fit (promotion with approach; prevention with avoidance).

The prediction that people's motivation during goal pursuit would be stronger when regulatory fit was higher was tested in a different way in a study by Shah, Higgins, and Friedman (1998). Participants who had either a chronic promotion focus (predominant ideal strength) or a chronic prevention focus (predominant ought strength) were given the goal of earning more money by identifying 90% or more of the possible words in an anagrams task. The contingency information was framed with either a promotion focus or a prevention focus.

The means of goal attainment were also varied by dividing the anagrams into two types. One half of the anagrams appeared in green, and the other half appeared in red. The participants were told that when they found all of the possible solutions for an anagram, they would gain a point if it was green and they would not lose a point if it was red. Thus, solving the green anagrams was an eagerness means for goal attainment, and solving the red anagrams was a vigilance means for goal attainment. If people's motivation during goal pursuit is stronger when the regulatory fit is higher, then (a) for goal pursuit framed with a promotion orientation, people with a chronic promotion focus would perform better than people with a chronic prevention focus when using eagerness means that fit a promotion orientation (the green anagrams) and (b) for goal

Table 1
Anagram Performance as a Function of Regulatory Focus and Arm Position

Arm position	Regulatory focus	
	Promotion	Prevention
Experimental framing		
Flexion (approach)	15.83	13.23
Extension (avoidance)	13.63	14.63
Chronic individual differences		
Flexion (approach)	14.50	10.88
Extension (avoidance)	12.13	13.56

pursuit framed with a prevention orientation, people with a chronic prevention focus would perform better than people with a chronic promotion focus when using vigilance means that fit a prevention orientation (the red anagrams). As shown in Table 2, the results supported these predictions.

The results of these studies support the second postulate of the value from fit proposal: People's motivation during goal pursuit will be stronger when regulatory fit is higher. Performance was better when a promotion orientation was combined with eagerness means and a prevention orientation was combined with vigilance means. In these studies, stronger motivation enhanced performance. One should not conclude, however, that regulatory fit necessarily improves outcomes by increasing motivation. As suggested by the results of the Crowe and Higgins (1997) signal-detection study, stronger motivation could increase performance biases, such as a risky bias or a conservative bias, independent of performance outcomes (e.g., accuracy). Thus, value from fit and value from worth are independent. This independence is especially clear when higher value from fit increases the value of the same decision with the same outcomes. Such critical evidence is described in the next two sections, which examine the third and fourth postulates of the value from fit proposal. The third postulate is that people's (predecisional) feelings about a choice they might make will be more positive for a desirable choice and more negative for an undesirable choice when regulatory fit is higher. This postulate is considered next.

Regulatory Fit and Imagining Feeling Better About a Good Choice and Feeling Worse About a Bad Choice

A general strategy of decision making is to imagine or simulate how you would feel if you were to make a particular choice (e.g., Kahneman & Tversky, 1982). You can imagine feeling good if you were to make a desirable choice or feeling bad if you were to make an undesirable choice. According to regulatory focus theory, one can also feel good or feel bad in different ways. In a promotion focus, one can feel good about a promotion success (presence of positive or gain) or feel bad about a promotion failure (absence of positive or nongain). In a prevention focus, one can feel good about a prevention success

(absence of negative outcome or nonloss) or feel bad about a prevention failure (presence of negative outcome or loss). Let us now consider how intensity of feeling good about a desirable outcome or feeling bad about an undesirable outcome varies by regulatory focus.

Imagining Feeling Good or Feeling Bad About an Outcome

Idson, Liberman, and Higgins (2000a) asked participants to imagine succeeding or failing on a task, or to imagine other kinds of positive and negative outcomes, and then describe how good or bad they would feel. The participants varied in regulatory focus either as a chronic individual difference (differences in promotion-focus strength and in prevention-focus strength) or as experimentally induced by framing (gain-nongain framing and nonloss-loss framing). Idson et al. (2000a) found that when participants imagined prospective outcomes, their ratings of how good they would feel when they imagined positive outcomes were higher for participants in a promotion focus (gain) than participants in a prevention focus (nonloss), and their ratings of how bad they would feel when they imagined negative outcomes were higher for participants in a prevention focus (loss) than participants in a promotion focus (nongain).

Imagining Feeling Good or Feeling Bad About Prospective Choices

The Idson et al. (2000a) studies involved imagining positive and negative outcomes. They did not concern decision making per se. Recent studies by Idson, Liberman, and Higgins (2000b) have extended this earlier research by having participants imagine how they would feel if they were to make different choices. Modifying a well-known example from Thaler (1980), undergraduate participants were instructed to imagine that they were in the bookstore, buying a book that they needed for one of their classes. In the promotion-focus framing condition, the participants were told the following:

The book's price is \$65. As you wait in line to pay for it, you realize that the store offers a \$5 discount for paying in cash. Of course you would like to pay \$60 for the book. You have both cash and a credit card and have to choose between them.

Table 2
Anagram Performance as a Function of Regulatory Focus Framing, Chronic Regulatory Focus, and Strategic Means

Strategic means	Regulatory focus framing			
	Promotion		Prevention	
	Vigilance (red)	Eagerness (green)	Vigilance (red)	Eagerness (green)
Chronic regulatory focus				
Promotion	10.6	11.8	9.7	10.8
Prevention	11.4	8.9	12.2	11.7

Half of these participants were then asked to rate how it would feel to pay in cash and get the \$5 discount (gain), and the other half were asked how it would feel to use their credit card and give up the \$5 discount (nongain). In the prevention-focus framing condition, the participants were told the following:

The book's price is \$60. As you wait in line to pay for it, you realize that the store charges a \$5 penalty for paying in credit. Of course you would like to pay \$60 for the book. You have both cash and a credit card and have to choose between them.

Half of these participants were then asked to rate how it would feel to pay in cash and avoid the \$5 penalty (non-loss), and the other half were asked how it would feel to use their credit card and pay the \$5 penalty (loss).

As shown in Table 3, the results of this choice study were consistent with the results of the previous studies by Idson et al. (2000a). There was a valence of outcome effect reflecting the fact that participants imagined feeling better when they paid \$60 for the book (positive outcome) rather than \$65 for the book (negative outcome). Independent of this between-valence effect, there was also a within-valence effect of the regulatory focus of the outcome. Participants' ratings of how good it would feel to pay what they would like for the book (\$60) were higher when it was a promotion-focus gain than when it was a prevention-focus nonloss. In addition, participants' ratings of how bad it would feel to pay more than they would like for the book (\$65) were higher when it was a prevention-focus loss than when it was a promotion-focus nongain.

Intensity of Feeling Good or Bad and Motivational Strength

What is the nature of the higher intensity of feeling good or feeling bad about prospective choices that was found in the Idson et al. (2000b) choice study? Is it simply the intensity of the imagined pleasure or pain from the outcomes of the prospective choices? An alternative possibility is that motivational strength from regulatory fit contributes to the higher intensity feelings. To have regulatory fit, the means of goal attainment must be the right *type* and the right *level*. One way to have poor regulatory fit is to have the wrong type of means,

such as vigilance or avoidance means for goal pursuit in a promotion focus and eagerness or approach means for goal pursuit in a prevention focus. Another way to have poor regulatory fit is to have the wrong level of means, such as having low eagerness during goal pursuit in a promotion focus or low vigilance during goal pursuit in a prevention focus.

The results of previous studies (e.g., Idson et al., 2000a, b) suggest that the eagerness of individuals in a promotion focus is maintained by imagining a positive outcome (gain) but is reduced by imagining a negative outcome (nongain), whereas the vigilance of individuals in a prevention focus is maintained by imagining a negative outcome (loss) but is reduced by imagining a positive outcome (nonloss). Forster et al. (1998) also found that motivational intensity (as measured by arm pressure) was stronger in the promotion-success framing condition (gain) than in the promotion-failure framing condition (nongain) and was stronger in the prevention-failure framing condition (loss) than in the prevention-success framing condition (nonloss).

Might this difference in motivational strength contribute to the higher intensity feelings found in the Idson et al. (2000a, 2000b) studies? To test this possibility, Idson et al. (2000b) conducted the same choice study again, but instead of the participants rating how good or bad they felt about different choices, they rated their choices in different ways. Half of the participants answered questions about the pleasure or pain of the outcomes from paying with cash or a credit card. In the promotion-focus framing conditions, participants imagined paying in cash and getting the \$5 discount (gain) and rated how pleasant this would be, or they imagined using their credit card and giving up the \$5 discount (nongain) and rated how painful this would be. In the prevention-focus framing conditions, participants imagined paying in cash and avoiding the \$5 penalty (nonloss) and rated how pleasant this would be, or they imagined using their credit card and paying the \$5 penalty (loss) and rated how painful this would be.

The other half of the participants answered questions about how motivated they would be to pay with cash instead of a credit card. In the promotion-focus framing conditions, participants imagined paying in cash and getting the \$5 discount (gain) and rated how motivated they would be to make this happen, or they imagined using their credit card and giving up the \$5 discount (nongain) and rated how motivated they would be to make this not happen. In the prevention-focus framing conditions, participants imagined paying in cash and avoiding the \$5 penalty (nonloss) and rated how motivated they would be to make this happen, or they imagined using their credit card and paying the \$5 penalty (loss) and rated how motivated they would be to make this not happen.

As shown in Table 4, the ratings for how pleasant or painful it would be to pay with cash or a credit card did not replicate the within-valence regulatory focus effect found previously for

Table 3
Mean Ratings of Subjective Feelings as a Function of Valence and Regulatory Focus of Imagined Outcome

Valence of outcome	Regulatory focus of outcome	
	Gain-related (discount)	Loss-related (penalty)
Positive (pay \$60)	6.41	5.13
Negative (pay \$65)	-3.08	-4.90

Note. The 19-point rating scale ranged from -9 (very bad) to 9 (very good).

the intensity of feeling good and feeling bad: Gain versus non-loss did not differ significantly, and loss versus nongain did not differ significantly. In contrast, as shown in Table 5, the ratings for how motivated they would be to pay with cash instead of a credit card did replicate the within-valence regulatory focus effect. Motivational intensity was higher for a gain than a nonloss and was higher for a loss than a nongain.

Idson et al. (2000b) conducted the same choice study for a third time as a repeated measures study that would allow a direct comparison of participants' ratings of how good or bad they would feel about the choice they imagined, how pleasant or painful the outcomes of the choice would be, and how motivated they would be to make the choice happen or not happen. (The order of these measures varied across participants, and there were no order effects.) On the original measure of the intensity of participants' good or bad feelings about desirable or undesirable choices, the results replicated those of the previous studies. There was both a between-valence effect (i.e., the positive outcome felt better than the negative outcome) and a within-valence regulatory focus effect (i.e., gain felt better than nonloss; loss felt worse than nongain). As shown in Table 6, the study also found that the pleasure-pain intensity ratings uniquely predicted the between-valence outcome effect and the motivational intensity ratings uniquely predicted the within-valence regulatory focus effect. Thus, independent of the imagined pleasure or pain from choice outcomes, higher motivational intensity from regulatory fit contributed uniquely to the within-valence effect of imagining feeling better from gain than nonloss and imagining feeling worse from loss than nongain.¹

The results of these studies support the third postulate of the value from fit proposal. When imagining how they would feel if they were to make different choices, people imagined that they would feel more positive about a desirable choice and more negative about an undesirable choice when the imagined decision had higher regulatory fit. There was also evidence that these within-valence differences in emotional intensity were related to higher motivational strength (i.e., how motivated they would be to make the desirable choice happen or the undesirable choice not happen) rather than to outcome pleasure (i.e., how pleasant the desirable choice would be or how painful the undesirable choice would be). The fourth postulate of the value from fit proposal concerns postdecisional evaluations rather than

Table 4
Mean Ratings of Pleasure or Pain as a Function of Valence and Regulatory Focus of Imagined Outcome

Valence of outcome	Regulatory focus of outcome	
	Gain-related (discount)	Loss-related (penalty)
Positive (pay \$60)	6.65	6.71
Negative (pay \$65)	5.44	6.00

Note. The 10-point rating scale ranged from 0 (*not at all*) to 9 (*very*).

Table 5
Mean Ratings of Motivational Intensity as a Function of Valence and Regulatory Focus of Imagined Outcome

Valence of outcome	Regulatory focus of outcome	
	Gain-related (discount)	Loss-related (penalty)
Positive (pay \$60)	7.44	6.19
Negative (pay \$65)	4.88	7.19

Note. The 10-point rating scale ranged from 0 (*not at all*) to 9 (*very*).

predecisional feelings. It states that people's (retrospective) evaluation of a decision they made will be more positive when regulatory fit is higher. Does regulatory fit influence how good individuals judge their decision to be? The next section considers this central question, as well as the broader question of whether goal pursuits in general are evaluated more positively when regulatory fit is higher. It also examines what feelings people experience during decision making when their regulatory fit is higher.

Regulatory Fit and Evaluating One's Decisions and Goal Pursuits More Positively

After people make a decision, what determines their evaluation of their decision? On what basis do they judge the decision to be a good one? The value from fit proposal is that when individuals use goal pursuit means that fit their regulatory orientation, they experience a regulatory fit that increases the value of what they are doing. As described earlier, imagining a desirable choice has a higher regulatory fit for individuals in a promotion focus (high eagerness gain) than individuals in a prevention focus (low vigilance nonloss). Imagining the desirable choice happen feels better for individuals in a promotion than a prevention focus. Thus, making the desirable choice happen should be evaluated as a better choice by individuals in a promotion focus (making gain happen) than a prevention focus (making nonloss happen). Similarly, imagining an undesirable choice has a higher regulatory fit for individuals in a prevention focus (high vigilance loss) than individuals in a promotion focus (low eagerness nongain). Imagining the undesirable choice happen feels worse for individuals in a prevention than a promotion focus. Thus, making the undesirable choice *not* happen should be evaluated as a better choice by individuals in a prevention focus (making loss not happen) than a promotion focus (making nongain not happen).

¹ The pleasure-pain intensity ratings and the motivational intensity ratings each uniquely predicted a different effect on good or bad feelings across the four outcome conditions. Because the ratings were made to the same four scenarios, these unique predictions of the different types of ratings indicate that there is nothing about the scenarios per se that biases intensity ratings in a particular direction.

Table 6

Pleasure–Pain Intensity and Motivational Intensity as Unique Predictors of Valence and Regulatory Focus Effects on Good or Bad Feelings

Significant contribution to effect	Unique predictors	
	Pleasure–pain intensity	Motivational intensity
Between-valence outcome effect (positive or negative)	yes	no
Within-valence regulatory focus effect (gain-related or loss-related)	no	yes

In the repeated measures study of Idson et al. (2000b), participants were asked two additional questions after they completed their three predecisional ratings. They were first asked, “Now if you were in this situation, would you choose to pay with cash or a credit card?” After they had made their decision, they were asked, “How good is this decision?” Not surprisingly, most participants said that they would pay with cash (which all scenarios presented as the desirable choice). For these participants, their choice was exactly the same and was equally worthwhile. However, the decisions were not the same in value from fit. Choosing to pay with cash made the desirable choice happen, which should be evaluated as a better choice by individuals in a promotion than a prevention focus, and it made the undesirable choice not happen, which should be evaluated as a better choice by individuals in a prevention than a promotion focus. As predicted (see Table 7), participants evaluated their choice to pay with cash as better when they made promotion success (gain) happen or prevention failure (loss) not happen than when they made prevention success (nonloss) happen or promotion failure (nongain) not happen.

The results of this study suggest that a higher fit produces a valued increase in motivation. I propose that people feel *alert* when there is a fit between regulatory orientation and regulatory means, and people feel better about a decision when they feel more alert while making it. As a preliminary test of these ideas, the repeated measures study also asked participants, after they had made their choice between paying with cash or a credit card, to describe how alert they felt while making this decision. They reported feeling more alert in the promotion-success (gain) condition than in the prevention-success (nonloss) condition and more alert in the prevention-failure (loss) condition than in the promotion-failure (nongain) condition. Thus, the participants reported feeling more alert when they made a decision in a condition with higher regulatory fit. The study also found that the more alert partic-

ipants reported feeling while making their decision, the better they judged their decision to be.

The positive relations among regulatory fit, feeling alert, and evaluating a decision as better suggest that goal pursuit in general might be experienced as more enjoyable when there is higher regulatory fit. This possibility has been recently examined with respect to both imagining (prospectively) and describing (retrospectively) the enjoyability of goal pursuit that varies in regulatory fit. In one study, Freitas and Higgins (2000) induced either a promotion orientation (priming participants’ hopes and aspirations in life) or a prevention orientation (priming participants’ beliefs about their duties and obligations in life). Next, as part of a supposedly unrelated study, the participants were given either a set of eagerness–approach means (e.g., spend more time at the library) or a set of vigilance–avoidance means (e.g., avoid missing any classes) that could be used to attain the same goal of earning a high grade point average. They were then asked how much they would enjoy using the given means to pursue the goal. Participants with a promotion orientation imagined that pursuing the goal with eagerness means would be more enjoyable than pursuing it with vigilance means, whereas the reverse was true for participants with a prevention orientation.

In a different test of prospective evaluation, Higgins and Idson (2000) told all participants to imagine that they were given an anagrams task in which there were six anagrams colored in green and six anagrams colored in red. Points would be added to their score when they solved the anagrams colored in green, and points would not be subtracted from their score when they solved the anagrams colored in red. To succeed on the task, they needed to finish with 4 or more points. The experimental manipulations were then introduced. Half of the participants imagined that they would be paid an extra dollar if they succeeded on the task (promotion orientation), and the other half imagined that they would not lose a dollar if they succeeded (prevention orientation). In each of these conditions, half of the participants imagined adopting the strategy of concentrating on the green anagrams (eagerness means), and half imagined adopting the strategy of concentrating on the red anagrams

Table 7

Mean Ratings of the Goodness of the Decision as a Function of Valence and Regulatory Focus of Outcome

Valence of outcome	Regulatory focus of outcome	
	Gain-related (discount)	Loss-related (penalty)
Positive (pay \$60)	8.46	7.58
Negative (pay \$65)	6.31	7.77

Note. The 10-point rating scale ranged from 0 (*not at all*) to 9 (*very*).

(vigilance means). All participants were told to imagine that they had succeeded on the task by finishing with 4 points. They then expressed how good they felt about their score. Participants with a promotion orientation imagined feeling better about their score when they pursued the goal with eagerness means than when they pursued it with vigilance means, whereas the reverse was true for participants with a prevention orientation.

Freitas and Higgins (2000) examined actual enjoyment of goal pursuit in another study. In an ostensible initial study, the participants described either their hopes and aspirations in life or their beliefs about their duties and obligations in life, to induce either a promotion or a prevention orientation, respectively. The participants then began the "next study" about scientists working with organic material whose goal was to find as many four-sided objects as possible among dozens of multiply shaped objects on a sheet of paper. Half of the participants were instructed that the way to do well on the task was to be eager and to try to maximize the helpful four-sided objects. The other half were instructed that the way to do well on the task was to be vigilant and to try to eliminate the harmful four-sided objects. Thus, all participants had the same goal of searching for and noting as many four-sided objects as possible, but they were induced to pursue this goal in an eager or vigilant way. Participants with a promotion orientation reported enjoying the task more when they pursued the goal with eagerness means than when they pursued it with vigilance means, whereas the reverse was true for participants with a prevention orientation.

The results of these studies support the fourth postulate of the value from fit proposal. Even when people made the same decision, those who had made it with higher regulatory fit subsequently evaluated it more positively. Thus, as predicted, regulatory fit influenced how good individuals judged their decision to be. Regulatory fit also influenced how good individuals judged their goal pursuit to be. They imagined that they would enjoy more, and reported actually enjoying more, pursuing goals when the means they used fit their regulatory orientation. The decision studies also found that people report feeling more alert when they make a decision with higher regulatory fit, and that feeling alert is positively related to how good individuals judge their decision to be. Taken together, these findings suggest that there is value from fit that is independent of outcomes. Might this value from fit be transferred to value from outcomes so that the value assigned to an object would be higher if the object was chosen with higher regulatory fit? The next section considers this final postulate.

Regulatory Fit and Assigning Value to the Object of a Decision

It is possible for people to evaluate a decision as better when it was made with higher regulatory fit without believing that the object of the decision itself has greater value.

Does value from fit add value to the decision object? Would people actually assign a higher monetary value to an object they chose from a decision that was made with higher regulatory fit? Higgins and Idson (2000) examined this question in another study. As part of a larger battery of measures, participants' ideal strength (chronic promotion orientation) and ought strength (chronic prevention orientation) were measured. After completing the battery, the participants were told that over and above their usual payment for participating, they would receive a gift. They could choose between a coffee mug and a pen. (The coffee mug cost more, and pretesting had shown that it was clearly preferred to the pen.) The means of making the decision was manipulated through framing of the choice strategy. Half of the participants were told to think about what they would gain by choosing A and think about what they would gain by choosing B (gain-related eagerness framing), where A and B alternated between the mug or the pen. The other half were told to think about what they would lose by not choosing A and think about what they would lose by not choosing B (loss-related vigilance framing). Almost all participants chose the coffee mug. These participants were asked to assess the price of the mug they had chosen. As shown in Table 8, predominant promotion-focus individuals assigned a higher price to the mug when they had chosen it using eagerness means than vigilance means, whereas the reverse was true for predominant prevention-focus individuals. Choice strategy (gain related vs. loss related) had no independent effect.

Summary and Conclusions

What makes a decision good? The classic answer concerns outcomes. A good decision has high outcome benefits (it is worthwhile) and low outcome costs (it is worth it). However, it is not only outcomes or value from worth that makes a decision good. I proposed that people experience a regulatory fit when they use goal pursuit means that fit their regulatory orientation, and this regulatory fit increases the value of what they are doing. The results of our studies indicate that people judge their decision to be better when they make it with higher regulatory fit. Value from fit contributes to a decision being good independent of value from worth. Our research supports the postulates of the

Table 8
Mean Price Assigned to the Chosen Coffee Mug as a Function of Participants' Predominant Orientation and Framing of Choice Strategy

Predominant focus	Framing of choice strategy	
	Gain-related	Loss-related
Promotion	\$8.78	\$6.32
Prevention	\$5.00	\$8.07

value from fit proposal. People are inclined toward goal means that fit their regulatory orientation. When regulatory fit is higher, people are more strongly motivated. When regulatory fit is higher, people imagine feeling better if they made a desirable choice and feeling worse if they made an undesirable choice. When regulatory fit is higher, people feel more alert when they make a decision, and after making a decision, they evaluate it more positively. People prospectively and retrospectively enjoy goal pursuit more when it has higher regulatory fit. People assign higher monetary value to an object they have chosen when the decision was made with higher regulatory fit.

Value from worth and value from fit both contribute to people's evaluation of their decision. It is unlikely, however, that people can calibrate the relative contribution of value from worth and value from fit to their good decision. Indeed, people are likely to overestimate the contribution of value from worth. Consider the case of people choosing an object among a set of alternatives. It is more natural for people to infer that their choice is good because of the positive outcomes of their choice (value from worth) than to infer that it is good because of the high fit between their decision orientation and decision means (value from fit). Thus, the value from fit contribution is likely to be transferred to the value from worth contribution, thereby increasing the perceived worth of the choice. Because regulatory fit can be manipulated independent of outcomes, a change in regulatory fit can change the perceived worth of the same choice with the same outcomes. Such *value transfer* was demonstrated in Higgins and Idson's (2000) study of assigning a price to a chosen coffee mug.

The studies reported in this article have tested the value from fit proposal in terms of promotion and prevention orientations and eagerness and vigilance means, but the proposal applies to orientations and means in general. Value from fit, for example, could contribute to the classic phenomenon of undermining children's intrinsic interest in a pleasant activity by offering them a reward for engaging in the activity (e.g., Deci, 1971; Kruglanski, Friedman, & Zeevi, 1971; Lepper, Greene, & Nisbett, 1973). In an early study by Lepper et al. (1973), for example, children's subsequent interest in playing with Magic Markers was reduced when they were promised an award for playing with them. The regulatory orientation of the children when they begin the coloring activity is to have fun, but the promise of an award is likely to influence how the children engage in the activity in a way that reduces the regulatory fit. According to the value from fit proposal, this should reduce the value of the activity, thereby undermining interest in the activity.

The value from fit proposal has implications not only for understanding how activities become devalued but also for how life itself can become devalued. The value from fit proposal, for example, provides an explanation for why depressed individuals are more likely to give up on life than

anxious individuals, despite both suffering extreme pain from self-regulatory failures. Depression relates to promotion failure in which eagerness is reduced, whereas anxiety relates to prevention failure in which vigilance is maintained. The extreme reduction in eagerness associated with depression provides a very poor fit for its underlying promotion orientation. The maintained vigilance associated with anxiety provides a better fit for its underlying prevention orientation. Depressed individuals, therefore, feel less alert, less "alive" than anxious individuals. Their anticipated and actual enjoyment of activities diminishes.

Depression has poor regulatory fit because the level of eagerness is too low for a promotion focus. There can also be poor regulatory fit because the level of means is too high. Being overeager or hypervigilant refers to the use of excessive means. With manic states or impulsivity, the level of eagerness is too high for the underlying promotion orientation. With panic states or compulsivity, the level of vigilance is too high for the underlying prevention orientation. A good regulatory fit requires not only the right type of means but also the right level of means, neither too high nor too low.

Beyond extreme problems of life adjustment, the value from fit proposal has general implications for quality of life. There is an increasing recognition among social scientists that traditional measures of well-being, such as economic measures like the gross national product, do not capture quality of life adequately (e.g., Stille, 2000). The question of what makes for a good life is receiving increasing attention (see Kahneman, Diener, & Schwarz, 1999). Social leaders are disturbed by people behaving as if the ends justify the means, as if only outcomes matter. They champion a return to traditional moral values and the use of proper means. This alternative has been part of our culture for centuries, as illustrated in the maxims described earlier. Value from regulatory fit, however, is broader than just using proper means. When people use goal pursuit means that fit their regulatory orientation they feel alert and energized, they feel good about what they have done. Regulatory fit adds value to a person's life. It is one reason why living according to religious dictates can enhance well-being, but it is not restricted to religious orientations. Existentialists distinguish between living and feeling alive. To feel alive means to feel alert and energized. Regulatory fit increases such feelings and contributes to well-being. Scientists of well-being, as well as policymakers, need to pay attention to value from fit in addition to value from worth.

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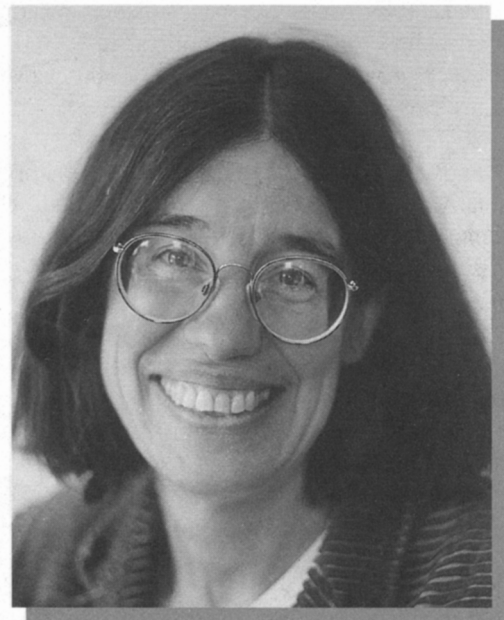
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Elizabeth S. Spelke

Award for Distinguished Scientific Contributions

Citation

“For revolutionizing the study of infant cognition through the development and validation of the violation-of-expectancy looking-time methodology, and for bringing it to bear on infants’ concepts of objects, causality, persons, and number. Elizabeth S. Spelke has demonstrated how to move seamlessly between studies of nonlinguistic representations in animals and those of young children, a strategy that has borne fruit, especially in her studies of number and of reorientation in space. Through her theoretical boldness and extraordinary empirical creativity in characterizing ‘core knowledge,’ Spelke has shown that the study of ontogenesis is indeed central to the understanding of the mind.”

Biography

The story of Elizabeth S. Spelke’s life as a psychologist is really the story of the teachers, colleagues, and students she has had the good luck to know. It began at Radcliffe–Harvard in 1970 with Jerome Kagan, who introduced Spelke to developmental psychology through his undergraduate class and let her try out her first research ideas in his lab. Kagan taught Spelke that the deepest and most difficult questions can be asked in simple language and addressed by straightforward experiments. He turned her from history and literature to the fields she has been pursuing ever since. Spelke’s luck continued at Cornell, where she was able to work with two towering figures in experimental psychology. Eleanor Gibson and Ulric Neisser taught her how to think about perception, cognition, and development. Thanks to