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Rethinking Regulatory Engagement Theory

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## Abstract

We offer a constructive critique of Regulatory Engagement Theory (Higgins, 2006; Higgins & Scholer, 2009). After highlighting the major tenets of the theory and its main contributions, we identify some of its conceptual ambiguities. We then argue that the hedonic and intensity components of value may not be psychologically separable in that experiences acquire their hedonic quality through their intensity. We next discuss why the various determinants of strength of engagement proposed by the theory may not all operate through the same process. Even the regulatory fit phenomenon seems to involve more than one process. We conclude by suggesting that many strength-of-engagement effects may reflect feelings-as-information inferences consistent with the Generalized Affect-as-Information Model of judgment (GAIM; Pham 2008).

Regulatory Focus Theory (Higgins 1997) and its cousin, Regulatory Fit Theory (Higgins 2000), have made an enormous contribution to consumer and social psychology. As early investigators of these two theories' implications for consumer judgment and decision making (Avnet & Laufer, 2008; Pham & Avnet, 2004; Zhou & Pham, 2004)—sometimes as Higgins co-authors (Avnet & Higgins, 2003, 2006; Pham & Higgins, 2005)—it is an honor to comment on Higgins's most recent progeny, Regulatory Engagement Theory (Higgins, 2006; Higgins & Scholer, 2009). In this commentary, we briefly highlight the major tenets of the theory, identify some conceptual ambiguities, evaluate two of its central propositions, and suggest that regulatory engagement effects can be viewed as feeling-as-information inferences broadly consistent with the Generalized Affect-as-Information Model (Pham, 2008).

### **The Major Tenets of Regulatory Engagement Theory**

We view Regulatory Engagement Theory (hereafter, RET; Higgins, 2006; Higgins & Scholer, 2009) as making four central and one corollary propositions:

1. Value can be conceptualized as a motivational force, experienced as attraction or repulsion, that moves the person either toward or away from an object.
2. This force has two distinguishable components: (a) a directional component (approach or avoidance) that is primarily determined by the hedonic quality of the object, and (b) an intensity component that is determined *both* by the hedonic quality of the object and by *other* sources of force intensity that are unrelated to the hedonic quality of the object.
3. Some of these other sources of force intensity—the ones that RET focuses on—emanate from the process of goal pursuit itself.
4. These sources: (a) opposition to interfering forces, (b) overcoming personal resistance, (c) regulatory fit, (d) the use of proper means, and (e) high event likelihood, all tap into a single

construct labeled “strength of engagement.”

The second and fourth propositions entail a fifth corollary proposition:

5. The effects of opposition to interfering forces, overcoming personal resistance, regulatory fit, use of proper means, and high event likelihood on perceived value are to magnify the hedonic component of the motivational force.

This theory is compelling for multiple reasons. First, RET imbues the notion of value with true psychological meaning—a motivational force of attraction or repulsion—unlike the more nebulous notion of “utility.” Second, RET offers the major insight that the process of goal pursuit *itself* may have a direct effect on the value of the goal object, *independent* of the object’s intrinsic desirability or goal-fulfilling properties. Third, the theory provides an alternative way of interpreting a wide variety of classic findings in the motivation literature including dissonance, reactance, and goal-gradient effects.

In our opinion, RET’s most compelling evidence comes from studies of the regulatory-fit phenomenon. Regulatory fit (nonfit) occurs when the manner in which a goal is being pursued is consistent (inconsistent) with the regulatory orientation of the individual (Higgins, 2000). In typical regulatory fit studies (see Avnet & Higgins, 2006), a dominant regulatory orientation, such as a promotion or prevention focus or a locomotion or assessment orientation, is first triggered. A task is then completed in a manner that is either consistent or inconsistent with this dominant regulatory orientation. It is generally found that objects whose intrinsic hedonic quality is positive are valued more positively when the manner in which the task was pursued is consistent with the dominant regulatory orientation (under regulatory fit) than when the task is inconsistent with the dominant regulatory orientation (under regulatory nonfit). Such findings strongly support Proposition 3 that value may be influenced, independently of the intrinsic

hedonic properties of the object, by processes associated with the manner of goal pursuit itself. A more limited set of studies also indicate that, when the object has an intrinsic negative hedonic quality, regulatory fit magnifies the negativity of the evaluative response, consistent with Proposition 5 that an experience of regulatory fit during goal pursuit intensifies the natural hedonic response to the goal object.

### **Conceptual Ambiguities**

There are some conceptual ambiguities in the way RET is currently stated. First, the exact relation among the notions of “hedonic experience,” “motivational force experience,” and “value” is not totally clear (see Fig. 1 in Higgins, 2006, p. 441). In one interpretation, the hedonic experience and the motivational force experience are *antecedents* of the direction and intensity of experienced value, which would then be a separate construct. The value experience would thus be *derived* from the hedonic experience and motivational force experience, possibly through an inferential mechanism such as the “How-do-I-feel-about-it?” heuristic (Schwarz & Clore, 2007). In another interpretation, the hedonic experience and motivational force experience are *themselves* the components of the experience of value, with the former referring to the directional component and the latter to the intensity component. These two different interpretations imply different mechanisms of value computation and different views about the possibility of disentangling the effects of engagement on the direction versus intensity components of value.

Second, if the motivational force experience is posited to be a separate construct, what is the conceptual distinction between this construct and the construct of “strength of engagement”? In other words, other than their presumably distinct antecedents, are there *psychological* differences between the intensity of the experienced force of attraction or repulsion and the strength of

engagement? Or is the intensity of this experienced force the strength of engagement *itself*?

Third, in some descriptions of the theory (see Higgins, 2006, p. 442), the hedonic experience *itself* is characterized as having an intensity component. If it is the case, it is not clear that one needs to posit separate constructs of hedonic experience and motivational force experience, even if the motivational force experience may be driven by factors other than the hedonic properties of the target.

Fourth, the theory could also be clearer in terms of what is meant by “engagement.” In some places, engagement is defined as “a state of being involved, occupied, fully absorbed, or engrossed in something” (Higgins & Scholer, 2009, p. 7). In other words, engagement appears to be a motivational state related to involvement and absorption of attention: “being engaged is to be involved, occupied, and interested in something” (Higgins, 2006, p. 442). Elsewhere engagement is discussed in more behavioral terms: “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” (Higgins, 2006, p. 443); “If individuals oppose difficulty or adversity, engagement is strengthened. If, however, difficulty or adversity results in individuals deciding not to initiate action in the first place or to give up during pursuit, engagement will be weakened” (Higgins & Scholer, 2009, p. 11). In these latter discussions, engagement seems to be inferred from a pattern of action or withdrawal with respect to the target object. Note that these two conceptions imply very different notions of engagement, especially with respect to what low engagement means. Behavioral withdrawal (“low engagement”) need not be associated with lower involvement or interest. For example, a person who avoids looking or faints in the face of imminent threat is not disengaged in the sense of lack of interest. If anything such acts of behavioral withdrawal may be indicative of excessive emotional and motivational activation.

Finally, the theory would also benefit from greater clarity about the distinction between the notion of “engagement” and the notion of “arousal” prominent in the emotion literature. According to Higgins (2006; see p. 453), the two notions are distinct, although there are similarities. Higgins acknowledges at least two similarities: (a) both are conceptualized as undifferentiated, nondirectional factors, and (b) both have been shown to intensify motivational and evaluative responses. We see additional similarities: (c) both notions have a phenomenological experience similar to force intensity; (d) both generally increase behavioral activation; (e) both increase attention and alertness; (f) both can be triggered by contextual factors and be misattributed to an unrelated target, thereby polarizing its evaluation; and finally, (g) both cease to influence evaluations of the target when attributed to a source unrelated to this target. Arousal is also known to narrow attention to the most diagnostic aspect of the situation (Pham, 1996), a property that engagement would presumably also share. Therefore, there appear to be sufficient similarities that the two constructs should be equated or better differentiated. In our opinion, two types of evidence would aid in distinguishing the notion of engagement strength from the notion of arousal. First, it would be helpful to show that factors posited to influence engagement strength—for example, opposing interfering forces, high event likelihood, overcoming personal resistance—do *not* also influence arousal intensity. Alternatively, it would be helpful to put the two constructs in *opposition*, for example by demonstrating that factors posited to increase engagement (e.g., regulatory fit) would also intensify reactions pertaining to *low-arousal* emotions such as sadness and relaxation (e.g., make people want to be *more* relaxed).

### **Can Pleasure or Pain Exist in the Absence of Intensity?**

Central to RET is a distinction between the hedonic (or pleasure/pain) component of value

and its intensity component (Proposition 2). This distinction has correlates in other literature. In the attitude literature, researchers have argued for a distinction between “attitude valence” (or level), which refers to the location of the attitude object on an evaluative continuum, and a presumably independent dimension usually called “attitude strength,” which captures notions such as confidence (or certainty), accessibility, importance, and so on, that are believed to intensify the behavioral implications of the attitude. Similarly, in the emotion literature, emotional responses are often believed to map onto a two-dimensional space (Russell, 1980), where the first dimension captures the extent of pleasure or displeasure associated with the emotion (e.g., “happy” vs. “sad”) and the second dimension reflects the level of arousal associated with the emotion (e.g., “relaxed” vs. “tense”). The distinction between the hedonic and intensity components of value has therefore theoretical precedents.

We agree that this distinction is important at a conceptual level. However, it is less clear that it also holds at the *psychological* level. In psychological experiences of value, the hedonic and intensity components may not be separable. Take, for example, the pain that may arise from the pressure of a sharp object (e.g., a needle) onto our body. If the pressure is very strong, we would experience pain. However, if the pressure is very light (e.g., if the needle barely touches the surface of our skin), we would not experience *any* pain. Note that what gives this experience its hedonic quality is therefore its intensity. In other words, experiences do not have a hedonic quality independent of their intensity. The same is true for positive hedonic experiences. For example, a perfume cannot be pleasant unless its smell can be detected.

The psychological inseparability of the hedonic and intensity components of value-related experiences can also be observed from how emotional responses are elicited by a wide variety of objects. Many studies have shown that when respondents are asked to rate their affective states

on a battery of affective terms (e.g., happy, energetic, fearful, sad), these ratings are well captured by two-dimensional structure of pleasure versus arousal—a structure that parallels RET’s distinction between hedonic and intensity components of value (Russell 1980). However, the structure is very different when, instead of rating their current affective states *across affective terms*, respondents are asked to rate their feelings of pleasantness and arousal *across objects*—a more meaningful source of variability with respect to value, which naturally varies across objects rather than across labels of responses to a single object. Figure 1 shows the distribution of emotional pleasure and arousal ratings that large samples of respondents gave to the pictures of the International Affective Picture System (IAPS; Lang, Bradley, & Cuthbert, 2005). Contrary to the widely held assumption that pleasure and arousal are orthogonal dimensions of emotional experience, there is a clear relationship between the pictures’ level of pleasure or displeasure (hedonic valence) and their arousal intensity. The pictures rated as extremely pleasant or extremely unpleasant also tend to be the ones rated as more intensely arousing. Similarly, pictures rated low on arousal intensity also tend to be rated as neither pleasant nor unpleasant. As shown in Figure 1, the relation between the arousal and pleasantness evoked by the IAPS pictures is well summarized by a U-shape pattern of a regression in which arousal is modeled as a quadratic function of pleasure ( $R^2 = .29$ ) or the V-shape pattern of a regression in which arousal is modeled as a linear function of the absolute deviation of pleasure from the midpoint of the scale ( $R^2 = .30$ ). Therefore, even in the context of emotional responses—where there has been a long tradition of separating pleasure and arousal--the hedonic experience of pleasure across objects cannot be dissociated from its arousal intensity. Similar issues arise with the distinction between “attitude valence” and “attitude strength” in that the valence of an attitude (its hedonic component) is psychologically intertwined with its subjective intensity.

[Insert Figure 1 about here]

Therefore, while we agree that the hedonic and intensity components of value can be distinguished *conceptually*, it is not clear that they can be distinguished *psychologically*. We argue that experiences, in fact, acquire their hedonic quality through their intensity. Interestingly, this is one point in which we agree with standard economic utility theory wherein the notion of gain or loss is meaningless without a certain magnitude attached to the gain or loss.

### **Is Engagement a Unitary Process Explanation?**

The most critical proposition of Regulatory Engagement Theory—the one that gives the theory its main appeal—is also its most debatable. According to RET, disparate sources of value intensification can all be understood in terms of a single unitary construct (and process) called strength of engagement (Proposition 4). That is, conditions as varied as choice restrictions (“interfering forces”), physical tiredness (“personal resistance”), probability of repeating an experience (“event likelihood”), match between regulatory orientation and mode of task performance (“regulatory fit”), and respect of procedural norms (“use of proper means”) are all posited to intensify value experiences by strengthening the person’s engagement during goal pursuit. Although this proposition has tremendous appeal in terms of parsimony, the evidence in its support is not yet conclusive.

#### *Engagement as an Explanation of Dissonance and Reactance Phenomena*

The case for RET rests in part on findings and phenomena typically associated with dissonance theory (Festinger, 1957) and reactance theory (Brehm, 1966). This is both a major strength of the theory—its ability to re-explain classic empirical findings—and one of its primary challenges. The challenge is that each set of findings re-interpreted in terms of RET can alternatively be explained in terms of their original theoretical explanation. RET attempts to

address this challenge by showing that its core principles can explain *other* phenomena that fall outside the boundaries of these original theories (e.g., regulatory fit effects), and by providing new empirical evidence that tries to rule out these original theoretical explanations (e.g., Higgins, Marguc, & Scholer, 2008). These attempts need to be strengthened.

A second challenge with the theory's reinterpretation of these classic valuation phenomena is that many of the observable factors that produce them—that is, the various types of “interfering forces” and “personal resistances”—do not have monotonic effects on valuation. Take for instance, the effect of having to wake up at 5 AM to finish a project—a case of “personal resistance” according to RET. According to the theory, overcoming the physiological drive to stay in bed may increase the value attached to the project by raising the person's engagement with this project (assuming that finishing the project is inherently hedonically pleasing). However, if the force to be overcome is too strong—for example, the person has to wake up at 2:30AM instead—the person may elect not to oppose it and disengage, resulting in a decreased valuation of the project. Similarly, imagine a child who is prevented by her parent from watching TV after school—a case of “interfering forces.” Again, the tendency to oppose this restriction may increase the child's engagement and therefore further raise the value that she attaches to watching TV. However, if the restriction is very strong (e.g., violation entails severe punishment, or, alternatively, TV is forbidden for a period of one month), the child may disengage, which would lower the perceived value of watching TV. The major appeal of RET in explaining such findings is that, even though the forces to be overcome may have nonmonotonic effects on value, the mediating principle remains the same: engagement intensifies inherent valuation.

The main theoretical problem, however, is in predicting *a priori* the relation between the

force to be opposed and the strength of engagement. When does such a force raise engagement and when does it lower it? In this respect RET is underspecified. As a result, one often has to infer the level of engagement from observed patterns of behavior or observed valuation outcomes, raising issues of circularity and reverse causality. Suppose, for example, that Jack didn't wake up early to finish a project. According to RET, Jack's engagement would decrease, which would in turn reduce his valuation of the project (didn't wake up → lower engagement → lower valuation). Alternatively, it could also be that Jack didn't wake up precisely because his valuation of the project was low *to begin with* (lower valuation → didn't wake up; or alternatively, lower valuation → lower engagement → didn't wake up), with engagement playing no actual causal role in the lower valuation. This example also illustrates another issue with RET's interpretation of opposing-forces-type findings that are based on observable behaviors and valuation outcomes: Such findings are often open to a self-perception interpretation (Bem, 1967): "I didn't wake up: I must have not found this project very important."

A final issue with RET as an alternative explanation for classic dissonance and reactance-type findings is that, in the original studies, it is typically difficult to disentangle value *enhancement* effects (which the original theories generally predict) from value *intensification* effects (which RET predicts). Suppose that a child who is prevented from watching TV wants to watch TV more as a result. Is this effect an attitudinal shift toward greater positivity (a shift in hedonic response) or an intensification of an inherently positive hedonic response? To resolve this issue, it would be useful to test RET's predictions in the context of targets that are inherently undesirable. Imagine the situation of a child who *dislikes* carrots and is told by her parents "You are *not* allowed to eat carrots!" According to a reactance explanation, this restriction would create an urge for the child to restore her freedom, which would make the carrot appear more

desirable. According to RET, however, this restriction would trigger a tendency to oppose this outside force, thus raising the child's engagement, which would then intensify her *dislike* of carrots.

#### *Engagement from Use of Proper Means*

The use of proper means is also hypothesized to intensify inherent hedonic value by raising the person's engagement. For example, participants who were instructed to choose a product "the right way" were found to attach greater value to the chosen product (a mug) than participants who were instructed to "make the best decision" (Higgins, Camacho, Idson, Spiegel, & Scholer, in press, cited in Higgins & Scholer, 2009). Although this finding is compelling, one should note that in this study the target was inherently pleasant. This makes it difficult to ascertain whether the finding reflects a *value-intensification* effect of using proper means, as RET posits, or rather a *value-enhancement* effect, which other theories would predict. For instance, one can postulate a utility function similar to that of transaction utility theory (Thaler, 1985), where one component would capture the intrinsic utility of the chosen option (Thaler's "acquisition utility"), and a separate component would capture the utility of using proper means (parallel to Thaler's "transaction utility"). In such a model, the use of proper means would contribute to the overall utility of the chosen option in an *additive* fashion (enhancement) rather than in a multiplicative fashion (intensification).

To help disentangle a true value-intensification account from a value-enhancement account in explaining the use-of-proper-means effect, it would again be useful to test these effects in the context of targets with inherently negative hedonic value. Ideally, one would need to manipulate intrinsic hedonic value and use of proper means independently. Although we are not aware of such a study, there is an interesting conceptual parallel in the organizational

behavior literature, where many studies investigate the interaction between *outcome favorability*—which resembles the notion of intrinsic hedonic value—and *procedural fairness*—a notion seemingly related to the use of proper means. A review of this literature (Brockner, 2002). indicates that, with respect to self-evaluations, high procedural fairness tends to increase the effect of outcome favorability—an amplification pattern similar to RET’s predictions. However, when it comes to the support of organizational decisions, high procedural fairness tends to *decrease* the effect of outcome favorability—an attenuation pattern opposite to RET’s predictions. It is therefore not clear that the use of proper means would necessarily amplify the unfavorable evaluation of targets with inherently negative hedonic qualities.

#### *Engagement and Regulatory Fit*

The most compelling case for RET comes from studies of the regulatory fit phenomenon (Higgins, 2000). A large number of studies indicate that situations of regulatory fit—a match between the person’s regulatory orientation and his or her mode of goal pursuit—can alter the value attached to the goal object. In particular, the value attached to desirable goal objects tends to increase when there is regulatory fit as opposed to regulatory nonfit. This change in value occurs despite everything else about the object being held constant, notably its inherent hedonic properties. Although the empirical evidence with regard to undesirable goal objects is somewhat more limited, some studies also show that when the inherent hedonic response to the target is *negative*, conditions of regulatory fit magnify the negativity of the evaluative response. Such strengthening of negative evaluative responses is strongly supportive of RET’s proposition that regulatory fit intensifies the natural hedonic response to the goal object.

The remaining theoretical issue about regulatory fit effects is that two different mechanisms have been proposed to account for them. One mechanism entails a heightened

experience of “feeling right” when there is regulatory fit (compared to nonfit). Because this experience is presumably pleasing in and of itself, its hedonic quality may transfer onto the target, thereby raising its perceived value (Avnet & Higgins, 2003; Camacho, Higgins, & Luger, 2003; Higgins, 2000): a value-enhancement effect. This mechanism is consistent with a feeling-as-information explanation (Schwarz & Clore, 2007), whereby the experience of “feeling right” that arises from regulatory fit is misattributed to the target object. Indeed, when people are led to attribute their “feeling right” experience to a source unrelated to the target, the effects of regulatory fit generally disappear (Cesario, Grant, & Higgins, 2004; Vaughn, Malik, Schwartz, Petkova, & Trudeau, 2006). The second mechanism is the strength-of-engagement mechanism proposed by RET. Situations of regulatory fit strengthen the person’s engagement during goal pursuit, which intensifies the inherent hedonic response to the goal object—a value-amplification effect. Studies that show higher motivational intensity and persistence in goal pursuits under situations of regulatory fit (e.g., Hong & Lee, 2008) are consistent with this latter mechanism. The relation between these two mechanisms is somewhat ambiguous. In some of the earlier work on regulatory fit (Avnet & Higgins, 2003; Camacho, et al., 2003; Higgins, 2000), the “feeling right” mechanism was advanced as the primary explanation for regulatory fit effects. However, in subsequent work, the “feeling right” experience was described as an antecedent of the strength of engagement (Avnet & Higgins, 2006; Higgins, 2006). In the latest discussion of RET (Higgins & Scholer, 2009), the exact relation between the two mechanisms is left open. This ambiguity can be resolved as follows.

We propose that regulatory fit effects operate differently depending on the person’s preexisting level of involvement (before regulatory fit is experienced). Under high levels of involvement, regulatory fit effects indeed tend to operate through the strength-of- engagement

mechanism posited by RET, producing value-intensification effects. However, under low levels of involvement, regulatory fit effects tend to operate instead through the “feeling right” mechanism, producing mostly value-enhancement effects. Evidence for this proposition comes from studies on how regulatory fit moderates consumer responses to situations in which a company causes harm to other consumers (Avnet & Laufer, 2008). The authors found that, among participants with high levels of involvement, regulatory fit indeed intensifies evaluative reactions to the situation, consistent with a strength-of-engagement explanation. Specifically, compared to participants under conditions of nonfit, participants under conditions of regulatory fit assigned greater blame and punitive damages to the company (an intensification of inherent negative responses) and expressed more support and financial compensation for the consumer victims (an intensification of inherent positive responses). However, among participants with low levels of involvement, the amplification effect of regulatory fit disappears. Instead, compared to participants under conditions of nonfit, participants under conditions of regulatory fit were more positive both toward the company (more forgiving) and toward the consumer victims (more supportive). This shift toward greater positivity, unqualified by the inherent hedonic quality of the two targets (company or consumer victims), is more consistent with a heuristic transfer of hedonic value from “feeling right.”

#### *Engagement from Event Likelihood*

According to RET, subjective event probability has similar effects on engagement and valuations. Compared to events that are unlikely, events that are subjectively likely feel more “real,” which strengthens people’s engagement and therefore intensifies their hedonic responses to goal objects (Higgins & Scholer, 2009). This factor is quite different from the other proposed determinants of strength of engagement (interfering forces, personal resistances, regulatory fit,

and use of proper means). Unlike these other determinants, conceptually, subjective event probability does not, in and of itself, have any hedonic content.

This characteristic makes it easier to disentangle the value-intensification effects predicted by RET from mere value-enhancement effects. For example, Higgins, Franks, and Pavarini (2008) recently found that participants who believed they had a high probability of tasting again *one* of two yogurts (A *or* B) had more polarized evaluations of *both* yogurts (A *and* B) during an initial taste test compared to participants who believed they had a low probability of tasting one of the yogurts again. This is presumably because high expectations of the event happening again in the near future heightened participants' engagement during the initial taste test, consistent with the theory. Still, such value-intensification effects of high event likelihood are difficult to distinguish from those that one would predict from existing conceptualizations of the role probability in valuation, such as expected utility (EU) theory. According to Higgins and Scholer (2009), a key difference is that EU theory would predict that high probability would magnify only the valuation of the focal option (the one associated with the high probability), whereas RET would predict that high probability could also magnify the valuation of the nonfocal option. Further differentiations of RET's versus EU theory's predictions would be helpful.

### *Interim Summary*

While there is great appeal in RET's ability to explain (or re-explain) such a wide range of valuation phenomena, each set of phenomena raises unique issues as to whether RET indeed provides a better explanation of the original phenomena than previous explanations. One domain in which RET clearly dominates other possible explanations is in the account of regulatory-fit effects. However, even in the domain of regulatory fit, the RET explanation may need to be refined in that two distinct processes may be at work depending on the person's level of

involvement.

When RET's explanatory power is examined *across* sets of phenomena, it is not clear that factors such as the use of proper means and regulatory fit would operate through the same mechanism as factors such as opposing interfering forces and overcoming personal resistance. The use of proper means and regulatory fit are typically associated with positive task-related affect. That is, the feeling of correctness that arises from doing things properly and the feeling of suitability ("feeling right") that arises from situations of regulatory fit are *themselves* pleasant hedonic experiences. In contrast, the process of opposing interfering forces (e.g., reacting to restrictions on choice) or overcoming personal resistance (e.g., fighting back one's fatigue) is typically associated with negative task-related affect. Given the distinct nature of their hedonic process experiences, it seems somewhat unlikely that the two sets of factors would operate via a common set of mechanisms. For the same reason, high subjective event likelihood, which does not have a hedonic quality in itself, would seem to operate rather differently.

### **GAIM and the Feeling of Engagement**

Given the issues that were raised, we would like to offer a different perspective on the phenomena examined by RET. We believe that many of the phenomena captured by the theory can also be explained within general models of the use of feelings as information in judgment (Schwarz & Clore, 2007), such as the Generalized Affect-as-Information Model of judgment (GAIM; Pham, 2008). According to these models, people consult their feelings to make a wide variety of judgments. Within the GAIM (see Figure 2), the feelings-as-information process is modeled as a set of prototypical questions (or queries) that people ask themselves at the time of judgment, such as the "How-do-I-feel-about-it?" question asked in the well-documented heuristic of the same name (Schwarz & Clore, 2007; see also Pham, 1998). According to the

GAIM, other prototypical questions are frequently asked, including: “How scary does it feel?”—a question underlying pervasive “risk-as-feelings” phenomena; “What do I feel like doing?”—a question underlying many affect-regulation phenomena and other motivational effects of affective states; and “How serious does it feel?”—a question that underlies the vigilance effects of negative moods and nonchalance effects of positive moods. As illustrated in Figure 2, which specific question is being asked when consulting one’s feelings depends on a combination of task factors, the person’s goals, the target, and other situational factors.

[Insert Figure 2 about here]

More central to our discussion, one of the prototypical questions postulated by the GAIM is “How strongly do I feel about it?” (Pham, 2008). This question captures the finding that people often seem to infer the strength of their preferences from the intensity of their feelings toward the target (Pham, 2004). This proposition is consistent with RET’s proposition that the intensity of the force experience intensifies the value attached to objects. The main difference, however, is that according to the GAIM, such value intensification effects arise from the *inferences* that people draw from the intensity of their feelings (“my feelings are intense, I must strongly like [dislike] X”). In contrast, in RET the intensification of value seems to arise from the motivational force of the experience *itself*.

According to the GAIM, the main explanation for valuation intensification effects when feelings are intense is that the intensity of the feelings is perceived to be informative of the target. The GAIM would therefore predict that such intensification effects would dissipate if the informativeness of the feelings is called into question. This is indeed what is typically found in studies where the intensity of feelings is manipulated via incidental sources of emotional arousal (Schwarz, Servay, & Kumpf, 1985). Interestingly, engagement-like effects from regulatory fit

also dissipate when the information value of the regulatory-fit experience is called into question (Cesario, et al., 2004; Vaughn, et al., 2006). This suggests that at least *some* strength-of-engagement effects are inferential feelings-as-information types of effects.

We therefore speculate that many (if not most) strength-of-engagement effects arise because the various theoretical antecedents of strength of engagement (e.g., opposing interfering forces, regulatory fit) intensify the subjective feelings that people have while evaluating the target, which people are inclined to interpret as indicative of the strength of their preferences. According to this feelings-of-engagement-as-information account, the notions of strength of engagement and arousal would not be conceptually different. This account could therefore easily explain why engagement can transfer from one task to the next (cf. Higgins and Scholer's discussion of the "dog study"). It is indeed well known in the arousal and feelings-as-information literatures that arousal elicited during one task can carry over to another task and be misattributed to a subsequent target, thereby intensifying its evaluation (Gorn, Pham, & Sin, 2001; see line between incidental feelings and subjective feeling response in Figure 2).

This GAIM interpretation of engagement effects can also explain why the effects of regulatory fit appear to be different under high versus low involvement (Avnet & Laufer, 2008). Recall that in the Avnet and Laufer (2008) studies regulatory fit resulted in value-intensification effects under high involvement, but value-enhancement effects under low involvement. These differential effects are difficult to explain using a unitary strength-of-engagement explanation. They are easier to explain from a GAIM perspective. As illustrated in Figure 2, the information inferred from feelings depends on the type of questions people are asking themselves when inspecting their feelings. These questions tend to vary depending on the task, the person's goals, the target, and other situational factors. Therefore, a plausible explanation for the Avnet and

Laufer findings is that, under low involvement, people were more likely to heuristically ask themselves something like “How do I feel about it?,” resulting in more positive evaluations when the target “felt right” (regulatory fit) than when it “didn’t feel right” (regulatory nonfit). In contrast, under high involvement, people were more likely to ask themselves something *beyond* the mere direction of their preferences that also included the *strength* of their preferences: “How strongly do I feel about it?” As a result, evaluations were more extreme under regulatory fit than under regulatory nonfit.

Finally, according to the GAIM, feelings can have different behavioral translations depending not only on the question being asked (the query-mapping contingency), but also on how task factors influence the mapping of private inferences onto overt behavioral responses (the response-mapping contingency). For example, happy mood-induced feelings will result in more favorable evaluations of a happy story than of a sad story (Martin, Abend, Sedikides, & Green, 1997). This is because feelings of happiness presumably have different evaluative implications when the target is meant to be happy or is meant to be sad. According to a GAIM account, feelings of engagement may thus have different behavioral effects depending on the rules that are used to interpret them. Consistent with this proposition, Vaughn and colleagues (2006) recently observed that regulatory fit has different effects on task persistence depending on the stopping rule conveyed by task instructions.

### **Conclusions**

We would like to conclude by emphasizing that our comments should not be interpreted as a disagreement with RET as a whole. We do agree that it is helpful to conceptualize value as a force of attraction to or repulsion from the target, and that the intensity of hedonic experiences plays an important role in shaping perceived value. We also agree that this intensity is driven in

part by processes occurring during goal pursuit that are independent of the inherent hedonic quality of the target, as is well demonstrated by the regulatory fit phenomenon. In our opinion, this is the main insight of the theory. Still, there are conceptual ambiguities in the theory as currently stated. We also believe that the distinction between the hedonic and intensity components of value is more conceptual than psychological. More importantly, it is not totally clear that all the phenomena that the theory is meant to explain can all be accounted by a single unitary process of strength of engagement. Finally, we believe that those phenomena that are indeed driven by strength-of-engagement processes may be seen as part of a broader class of feeling-based inferences, wherein people infer the strength of their evaluations from the subjective intensity of their feelings while evaluating the goal object. As RET powerfully points out, the intensity of these subjective feelings is driven not only by the hedonic properties of the goal object itself but also by factors related to the goal pursuit. However, we suggest that *any* factor that increases the subjective intensity of these feelings can amplify evaluations, as long as the feelings are perceived to be informative of the goal object.

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Figure 1: Distribution of Pleasure and Arousal Ratings of Pictures of the International Affective Picture System

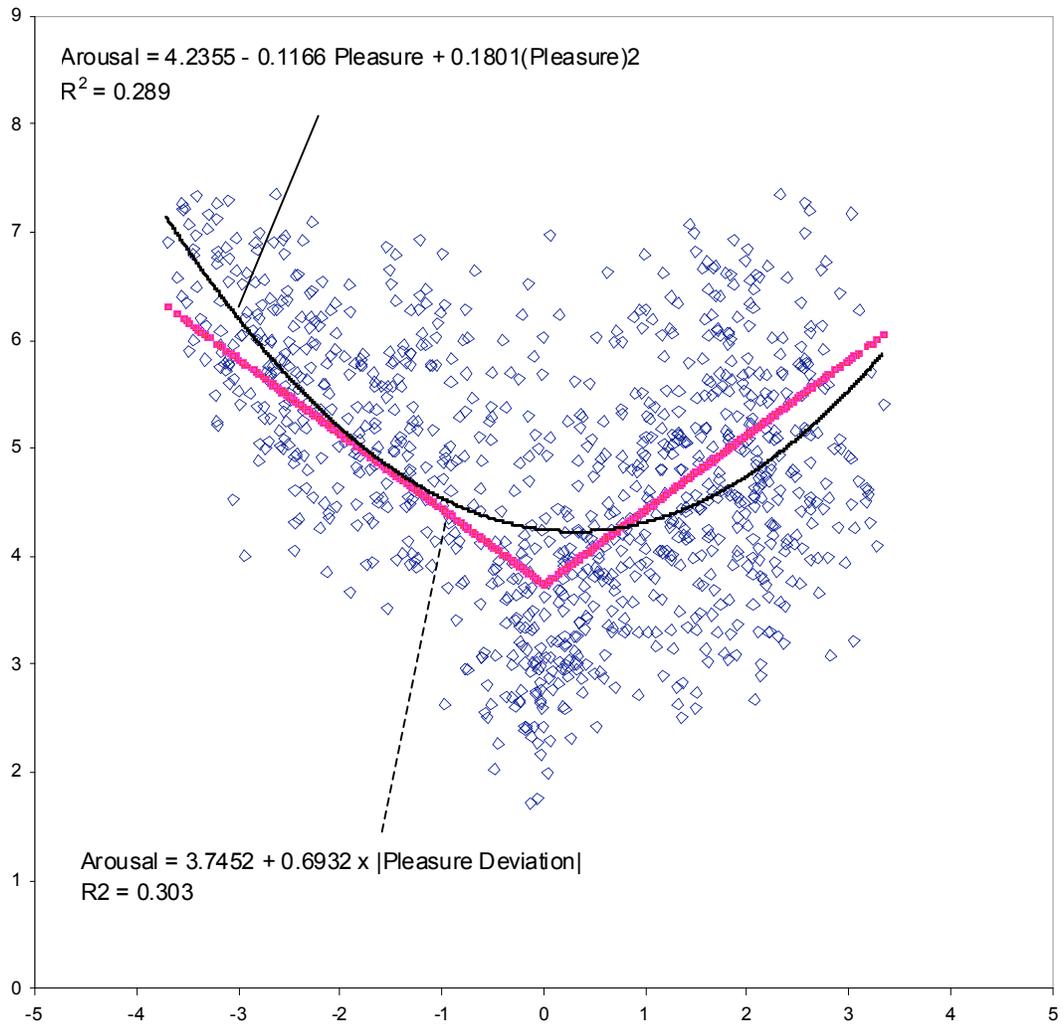


Figure 2: The General Affect-as-Information Model of Judgment

