# Regulatory Fit and Persuasion: Transfer From "Feeling Right"

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The authors propose that when a message recipient "feels right" from regulatory fit (E. T. Higgins, 2000), this subjective experience transfers to the persuasion context and serves as information for relevant evaluations, including perceived message persuasiveness and opinions of the topic. Fit was induced either by strategic framing of message arguments in a way that fit/did not fit with the recipient's regulatory state or by a source unrelated to the message itself. Across 4 studies, regulatory fit enhanced perceived persuasiveness and opinion ratings. These effects were eliminated when the correct source of feeling right was made salient before message exposure, supporting the misattribution account. These effects reversed when message-related thoughts were negative, supporting the claim that fit provides information about the "rightness" of one's (positive or negative) evaluations.

Subjective experience is a fundamental aspect of life, often serving as a source of meaning and information for evaluations. Accordingly, in one form or other, it has always been a focus of attitudes and persuasion research. Studies of the effects of subjective experience on persuasion and attitude formation traditionally have centered around the conditions under which mood and other emotional feelings influence people's judgments, including both affective reactions to an attitude object and incidental mood states (see Schwarz & Clore, 1996). Nonaffective phenomenal experiences such as perceptual fluency, feelings of uncertainty, and ease of retrieval have also recently been explored (e.g., Schwarz et al., 1991; for reviews, see Clore, 1992; Haddock, 2000). Such influences of subjective experience can operate through different processes depending on the judgmental strategy used (Forgas, 1994), including an affect-priming mechanism (e.g., Bower, 1981) or a feelings-as-information mechanism (e.g., Schwarz & Clore, 1983, 1988). The general purpose of our research was to examine a new kind of subjective experience that could influence persuathis latter process-"feeling right" from sion through regulatory fit.

#### Feelings-as-Information

Substantial evidence has demonstrated that affective and nonaffective feelings can often function as sources of information in judgments and decision making (see Clore, 1992; Clore et al.,

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2001; Schwarz & Clore, 1996). When one is faced with a judgment, phenomenological experiences can serve an information function if one implicitly asks "How do I feel about it?" and uses the experience, at least in part, to answer this question. Although a person's feeling state may be used as information when the judgment is an affective reaction to a target, feelings can convey information even when the task does not specifically request feelings toward a target. This latter influence may occur when a judgment is too complex to compute systematically and needs simplification or when a judgment naturally lends itself to relying on feelings, such as judgments of uncertainty.

When the question "How do I feel about it?" is asked, however, it makes one susceptible to the influence of preexisting feelings that may be quite irrelevant to the judgment at hand. To the extent that (a) one cannot discriminate preexisting feelings from feelings about the target of judgment, (b) one perceives the feelings as appropriate to the judgment, and (c) one cannot attribute the existing feelings to another source, then these feelings will likely serve as relevant information in the construction of a judgment. As Schwarz and Clore (1996; Schwarz, 2001) noted, the "How do I feel about it?" question does not need to be asked explicitly, nor do the feelings have to be consciously attributed to the judgment target. Unless people have reason to question the appropriateness or relevance of some experiential state that comes to mind, they tend to assume that the information it provides is relevant, and they use it (see also Higgins, 1996).

It should be noted that the failure to discriminate among different mood or feeling cues represents one case of a more general phenomenon of *source confusion*. It is well known, for example, that people confuse the sources of episodic experiences (Johnson & Raye, 1981), the sources of accessibility experiences (Tversky & Kahneman, 1973), and the sources of excitation experiences (Schachter & Singer, 1962; Zillmann, 1978). Nonemotional feelings, such as feelings of uncertainty, ease of retrieval, and feelings of familiarity can also be sources of confusion (see Clore, 1992). Our studies examined a new type of nonemotional subjective experience whose impact on persuasion has not yet been investigated—the experience of feeling right that is produced by regulatory fit.

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This research was supported by National Science Foundation Grant DGE-02-23339 to Joseph Cesario, National Institute of Health Grant F31-MH12706-01 to Heidi Grant, and National Institute of Mental Health Grant MH39429 to E. Tory Higgins. We thank Dan Molden for his helpful comments on a draft of this article, and Randy Auerbach, Sally Ghalayini, and Daniel Kosloff for help in data collection.

### Regulatory Fit: When the Manner of Goal Pursuit Sustains a Regulatory Orientation

Certain strategic means, behaviors, or cognitions sustain or *fit* one's current phenomenological state (e.g., one's mind-set, mood, or regulatory focus) better than others do. When a behavior, cognition, or strategic mean naturally sustains a given phenomenological state, it will not only be the dominant response tendency but will also have an additional experiential quality of *value from fit* (see Higgins, 2000, 2002). In the case of goal pursuit, strategic means can vary in the extent to which they sustain one's goal orientation. For example, when people high in need for closure (Kruglanski, 1996) are deciding whether to agree with an advocated position, making the decision in a quick manner (e.g., basing one's opinion on an initial reaction) would provide a better fit than a strategy requiring extensive cognitive activity (e.g., thoroughly analyzing all the arguments).

The broad concept of fit in goal pursuit concerns the relation between an individual's regulatory orientation to an activity and the manner in which that activity is pursued. Individuals can pursue the same goal activity with different regulatory orientations and in different ways. Higgins (2000, 2002) proposed that independent of valued outcomes, people experience a *regulatory fit* when they pursue a goal in a manner that sustains their regulatory orientation. When there is regulatory fit, the manner of goal pursuit feels right and increases the value of what a person is doing *value from fit*. Value from fit can be transferred to other value experiences. Feeling right from regulatory fit, for example, has been shown to transfer to monetary evaluations of a chosen object and to moral evaluations of a conflict resolution (see Avnet & Higgins, 2003; Camacho, Higgins, & Luger, 2003; Higgins, Idson, Freitas, Spiegel, & Molden, 2003).

Although the experience of value from regulatory fit is a broad theory applicable to a variety of motivational orientations, the present studies focus specifically on the predictions of regulatory focus theory (Higgins, 1997, 1998b). This theory distinguishes between two distinct regulatory orientations and the strategic means that best fit each. A promotion focus represents goal pursuit in terms of hopes and aspirations (*ideals*) and entails an orientation toward accomplishment and a sensitivity to the presence and absence of gain/nongain outcomes. A prevention focus represents goal pursuit in terms of duties and obligations (*oughts*) and entails an orientation toward security and a sensitivity to the presence and absence of nonloss/loss outcomes. (Regulatory focus is a state that can be investigated either as a chronic tendency or a situationally induced focus.)

It has been shown that different strategic means used during goal pursuit fit differently with each regulatory orientation (e.g., Crowe & Higgins, 1997; Liberman, Molden, Idson, & Higgins, 2001; Shah, Higgins, & Friedman, 1998). There is a natural fit between promotion focus concerns and pursuing goals with *eager means* (in signal detection terms, ensuring hits and ensuring against errors of omission), given that both are concerned with gains and nongains. There is also a natural fit between prevention focus concerns and pursuing goals with *vigilant means* (ensuring correct rejections and ensuring against errors of commission), given that both are concerned with nonlosses and losses (see Crowe & Higgins, 1997). Note that although eagerness is an approach strategy, it can involve both positive responses to an input (for hits) and negative responses (for misses). Similarly, although vigilance is an avoidance strategy, it can involve both positive responses to an input (for correct rejections) and negative responses (for mistakes or false alarms).

As an example of regulatory fit, consider two students who both want to earn an A in a course but differ in their regulatory focus toward this goal. Although the desired end state is identical in both cases, a student with promotion focus concerns conceives of this goal as an accomplishment or aspiration, and so eager means for achieving this goal (reading beyond the required course material) would provide the better fit for this student. The student with prevention focus concerns, on the other hand, conceives of this same goal as a responsibility or duty, and so vigilant means for achieving this goal (being careful to fulfill all course requirements) would provide the better fit for this student. Both students will have valued outcomes from receiving an A in the course, yet independent of outcome value, the students will experience additional value if they pursue their goals with the strategic means that fit their regulatory focus.

What does it mean, subjectively, for one to experience regulatory fit? Recent research has found that regulatory fit influences motivational intensity during goal pursuit, prospective feelings about a future choice, retrospective evaluations of past decisions, and value assigned to a chosen object (see Higgins, 2000). There is evidence that tasks and decisions are evaluated more positively when they are conducted with regulatory fit, independent of outcomes (see Freitas & Higgins, 2002; Freitas, Liberman, & Higgins, 2002; Higgins, 2000). There is also evidence that feeling right from regulatory fit produces a feeling of importance and correctness that can be transferred to evaluations of objects, including policy issues (Camacho et al., 2003; Higgins, Idson, et al., 2003). For example, Higgins, Idson, et al. (2003) had participants choose between a coffee mug and an inferior pen in a way that either fit their orientation (eager/promotion; vigilant/prevention) or did not fit (vigilant/promotion; eager/prevention) and found that the monetary value of the chosen object (all participants chose the mug) was substantially greater in the fit condition.

### Regulatory Fit, Feeling Right, and Persuasion

The general purpose of our research is to consider how feeling right from regulatory fit can influence persuasion. Persuasive messages usually involve some goal to be attained (e.g., a tuition increase) and some means described as the way to attain it (the arguments in support of the advocated position). These arguments can be framed in terms of either gains/nongains or nonlosses/ losses. For example, when advocating a tuition increase to attain the goal of high quality teachers and student services, one could frame the arguments in terms of *eagerly ensuring gains* (if you raise tuition, the quality of the teachers and the student services will be high) or in terms of vigilantly ensuring nonlosses (if you do not raise tuition, the quality of the teachers and the student services will not be high). We propose that when the strategic means (arguments) reflected in a persuasive communication fit the regulatory focus of the message recipient, the recipient should experience regulatory fit and feel right.

Like other subjective experiences, there are several possibilities regarding how and whether this feeling of rightness is transferred in the persuasion context. Every persuasion context contains multiple attributes (e.g., the source, message, advocated position, etc.), and feeling right could be transferred to any of these attributes for which it is an appropriate source of information in judgments about the attribute. One possibility is that feeling right could be transferred to one's experience of the message, such that the feeling of rightness is used as evidence in one's evaluation of the message's perceived persuasiveness; in this case, perceived message persuasiveness would be enhanced under conditions of fit. Another possibility is that the feeling right experience could be transferred directly to one's opinion of the topic of the message, such that this experience is used as information in one's evaluation of the advocated position; this would result in more messagecongruent attitudes under conditions of fit. These are clearly not incompatible possibilities—because both the message and its topic are relevant aspects of the persuasion context, feeling right can serve as information for both these judgments. These possibilities were examined in our studies.

In both of the above cases, feeling right would be experienced as relevant information, and thus people should use this feeling as evidence when answering the implicit question, "How do I feel about it?" In the persuasion context, relevant evaluations can include the perceived persuasiveness of the message itself and one's attitude toward what is being advocated. But what if the feeling right experience is not considered to be a relevant source of information for these judgments? For example, consider the classic Schwarz and Clore (1983) research, in which sunny versus rainy weather influenced life satisfaction evaluations when weather was not made salient as a possible cause of participants' mood, but it did not do so when participants' attention was drawn to it as a source of good or bad mood. In the latter case, good or bad mood from the current weather was not relevant to evaluations of one's general life satisfaction.

What matters, then, is whether the feeling right experience is considered to be relevant as evidence for the evaluation being performed (Schwarz & Clore, 1996; see also Foerster & Strack, 1998; Sinclair, Mark, & Clore, 1994). Regulatory fit and value transfer theory states that feeling right transfers to the evaluation of the object, not to the object itself. For example, in the Higgins, Idson, et al. (2003) coffee mug studies, feeling right from regulatory fit influenced the process of evaluating the mug, increasing the positive evaluation. It is not that the mug itself feels right but that feeling right is used as evidence in the evaluation at hand. When Higgins, Idson, et al. drew participants' attention to the correct source of their feeling right experience, thereby making this experience not relevant for the price evaluation, regulatory fit no longer increased the price of the mug. Therefore, a third possibility is that feeling right will not be transferred in the persuasion context at all if it is not considered relevant-for example, if it is made apparent that the source of feeling right is independent of this persuasion context. This technique of blocking misattribution, or reattribution of the feeling right experience, is used in Study 3 to test this possibility.

Finally, there is a fourth possibility for how feeling right could be transferred in a persuasion context. When feeling right is experienced as relevant to the evaluations in the context, we predict that regulatory fit will influence those evaluations. We expect that the experience of regulatory fit will generally increase the perceived persuasiveness of a message and one's agreement with what is being advocated. However, this need not always be the case. The impact of feeling right from regulatory fit will depend on what it is that one is feeling right about. For example, it will have a different effect if the cognitive responses in a persuasive context are negative rather than positive. Feeling right about one's negative responses to a message, for instance, would decrease rather than increase the persuasiveness of the message. The feeling right experience would be information about the rightness of one's negative evaluation of the message. Thus, when participants' thoughts in response to a message are predominantly positive, which would be the usual case in our studies, then regulatory fit should increase persuasion, but when the thoughts are predominantly negative, then regulatory fit should decrease persuasion. This possibility was examined in Study 4 by adding a classic thought-listing procedure (see, e.g., Briñol & Petty, 2003; Eagly & Chaiken, 1993; Greenwald, 1968).

Studies 1 and 2 manipulated the eager versus vigilant framing of the persuasive message, where an eager manner fits a promotion but not a prevention focus orientation, and a vigilant manner does the reverse. Regulatory focus was experimentally induced in Study 1 by emphasizing either accomplishment-related promotion concerns or safety-related prevention concerns for the same goal of eating more fruits and vegetables. In Study 2, regulatory focus was a chronic individual difference. Both studies predicted that regulatory fit would increase message effectiveness.

Because regulatory fit in Studies 1 and 2 involved the relation between participants' orientation and the framing of the message, other kinds of compatibility between participants' needs and message fulfillment of those needs might have contributed to the results. For example, as discussed in more detail at the end of the article, one might conceptualize the predicted regulatory fit effect as being a special case of *message matching*, where the match is between the regulatory concerns of a message recipient and the persuasive framing of a message. There is substantial evidence that matching the topic of a persuasive message to some aspect of the message recipient's cognitive, motivational, or affective system can influence persuasion. These characteristics can include, for example, the psychological functions served by the recipient's attitudes (e.g., Clary, Snyder, Ridge, Miene, & Haugen, 1994; Petty, Wheeler, & Bizer, 2000), the recipient's culture (e.g., Han & Shavitt, 1994), the cognitive or affective basis of one's attitude (e.g., Fabrigar & Petty, 1999), and the recipient's chronic selfguides (e.g., Evans & Petty, 2003). Methodologically, the best way to clearly distinguish a message-matching viewpoint from our proposal that regulatory fit increases persuasion through a feeling right transfer in the persuasion context is to experimentally induce regulatory fit prior to and independent of the persuasion context. Our unique prediction is that participants will be more persuaded by an identical message if they have, versus have not, experienced regulatory fit prior to even receiving the message. This prediction was tested in Studies 3 and 4.

In addition to extending the literature relating subjective experience and persuasion, the present studies extend the literature on regulatory fit (and regulatory focus) in a number of ways. First, these studies tested for the first time novel predictions for the different effects of feeling right from regulatory fit on persuasion—predictions of a positive effect, a negative effect, or no effect. Next, the second study tested whether a regulatory fit effect can occur when the manner of goal pursuit concerns not one's own strategic means but, instead, the means used by others to carry out the policy they advocate. The third study provides evidence that the influence of regulatory fit on persuasion is due to a misattribution or transfer of feeling right, and, finally, the fourth study demonstrates the importance of thought valence in response to a persuasive message when predicting the direction of regulatory fit effects.

### Study 1

The participants in this study were given a persuasive message describing the importance of more fruits and vegetables in one's daily diet. Emphasizing either the accomplishment concerns or the safety concerns of eating more fruits and vegetables served to temporarily induce either a promotion focus or a prevention focus, respectively. Additionally, within each regulatory focus condition, the message was experimentally framed in terms of either eager means (i.e., presence and absence of gain/nongain information) or vigilant means (i.e., presence and absence of nonloss/loss information). After reading the communication, participants rated how persuasive they found it and expressed their intention to consume more fruits and vegetables. For both these variables, it was predicted that when the promotion system had been activated, participants would give more positive ratings with eager means framing than vigilant means framing, whereas the reverse would be true when the prevention system had been activated. Thus a Type of Regulatory Focus  $\times$  Type of Means interaction effect on persuasion was predicted.

#### Method

### Participants and Design

Participants were 106 Columbia University undergraduates (50 men, 56 women) who were paid for their participation. They were recruited through the use of flyers posted around the Columbia campus. The study was a 2 (type of regulatory focus: promotion [accomplishment] vs. prevention [safety])  $\times$  2 (type of means: eager [gain/nongain framing] vs. vigilant [nonloss/loss framing]) between-participants design. No gender differences were found for any dependent measures, so all analyses are collapsed across this variable.

### Procedure

Participants were informed that they were participating in an experiment studying the nutritional habits of college students. Participants were asked questions about their current nutritional practices and then read a message designed to persuade them to improve these habits. It was explained that they would be asked to evaluate the message in order to give the investigators feedback to help them "develop more effective messages." On arriving at the experimental session, participants were given a booklet that consisted of the following items, in order: a cover letter, the Food Habits Questionnaire (FHQ), the persuasive message, and the message evaluation measure. Participants were then paid and fully debriefed.

#### Materials

*FHQ.* The FHQ was designed to measure participants' premessage attitudes toward fruits and vegetables. Participants were first asked to answer a number of questions regarding their general eating and drinking habits, included to conceal the true purpose of the measure. Participants were then asked to indicate their overall attitude toward vegetables and fruits on a 7-point scale from 1 (*very negative*) to 7 (*very positive*).

*Persuasive message.* Each persuasive message was approximately 150 words in length. Regulatory focus was manipulated by describing different concerns associated with eating fruits and vegetables. The message with a promotion focus emphasized a concern with accomplishment, and the message with a prevention focus emphasized a concern with safety. In the promotion focus essay, for example, the following sentence emphasized

increased energy and general fulfillment: "A diet rich in essential nutrients, like those found in fruits and vegetables, has direct effects on the biochemistry of the brain, resulting in increased energy, better moods, and a general sense of happiness and fulfillment." In the prevention focus essay, for example, the following sentence emphasized protection from harmful daily elements: "Eating fruits and vegetables supplies the body with the nutrients it needs, enabling the body to produce substances from within which buffer it from the physical demands of the world we live in (pollution, daily stress, bad weather, etc.)."

Within each regulatory focus essay, the message was also framed in terms of either eager means or vigilant means. In the prevention focus essay, an example of eager means (gain/nongain) is "if you eat the right amount of fruits and vegetables, you can actively help keep yourself safe from illness and obtain overall good health"; an example of vigilant means (nonloss/loss) is "if you do not eat the right amount of fruits and vegetables, you cannot actively help keep yourself safe from illness and facilitate overall good health."

The complete text of the promotion focus essay can be found in Appendix A, and the complete text of the prevention focus essay can be found in Appendix B; both texts contain the eager and vigilant framing differences in brackets. It should be noted that the content of the messages only varied by focus and that within a focus the content was the same. Only the means framing of the persuasive messages differed within each regulatory focus condition. In addition, all messages advocated the same desired goal of eating more fruits and vegetables.

#### **Dependent Measures**

*Message evaluation measure*. The message evaluation measure asked participants to indicate in the following order (a) their intention to eat more fruits and vegetables, from 0 (*not at all*) to 6 (*a great deal*); (b) the believability of the message, from 1 (*not at all*) to 7 (*completely*); and (c) their postmanipulation attitude toward fruits and vegetables, from 1 (*very negative*) to 7 (*very positive*). Item b served as a measure of the perceived persuasiveness of the message.

### Results and Discussion

#### Analysis Overview

The most direct test of the value from fit hypothesis is a Type of Regulatory Focus  $\times$  Type of Means interaction when predicting both intention to eat more fruits and vegetables<sup>1</sup> and perceived persuasiveness of the message. The results supported these predictions.

#### Intention Ratings

A 2 (type of regulatory focus)  $\times$  2 (type of means) univariate analysis of variance (ANOVA) with intention ratings as the dependent measure yielded no significant main effects (ps > .36). There was a significant interaction, F(1, 102) = 4.22, p = .04. This interaction reflects the fact that participants in the promotion condition showed greater intention ratings with eager framing (M = 2.52, SD = 1.77) than with vigilant framing (M = 1.96, SD = 1.85), t(102) = -1.17, p = .24, whereas the reverse was true for participants in the prevention condition, who showed

<sup>&</sup>lt;sup>1</sup>Because the persuasive message advocates eating more fruits and vegetables, not merely liking them more, we chose ratings of intention to represent the primary measure of message effectiveness. However, analyses using attitude change (postmessage attitudes minus premessage attitudes) as a dependent variable yield identical results.

greater intention ratings with vigilant framing (M = 2.97, SD = 1.74) than with eager framing (M = 2.14, SD = 1.49), t(102) = 1.73, p = .09.

#### Perceived Message Persuasiveness

Ratings of perceived message persuasiveness (believability scores) were submitted to a 2 (type of regulatory focus)  $\times$  2 (type of means) univariate ANOVA. An unpredicted main effect of regulatory focus was observed, F(1, 102) = 24.21, p < .001, with greater perceived persuasiveness ratings for participants in the prevention focus condition (M = 5.47, SD = 1.51) than the promotion focus condition (M = 3.85, SD = 1.83). With respect to our central hypothesis, the predicted interaction between type of regulatory focus and type of means was significant, F(1, 102) =3.88, p = .05, with prevention focus participants having higher ratings when exposed to vigilant means (M = 5.71, SD = 1.42)than eager means (M = 5.14, SD = 1.61), and promotion focus participants having higher ratings when exposed to eager means (M = 4.17, SD = 1.77) than vigilant means (M = 3.46, SD =1.86). Planned contrasts revealed that although the interaction was significant, neither within regulatory focus means difference reached conventional levels of significance.

Overall, the results of Study 1 are encouraging for the hypothesis that regulatory fit can increase the perceived persuasiveness of a communication and agreement with its message. A limitation of Study 1 is that because regulatory focus was manipulated through different concerns (accomplishment vs. safety), the content of the message was not the same across regulatory focus framing conditions. Study 1 also did not measure participants' mood after receiving the persuasive message. Consistent with previous research on feeling right from regulatory fit, we expect regulatory fit to increase persuasion independent of simply how good or bad the message makes participants feel, because feeling right is more than just feeling pleasure or pain (see Camacho et al., 2003; Higgins, Idson, et al., 2003). Of course, positive mood could have its own independent effect on persuasion. To examine this, it is necessary to measure participants' mood. Study 2 was designed to address both these limitations of Study 1. Study 2 also extended Study 1 by examining regulatory focus as a chronic individual difference rather than as a situationally manipulated variable.

### Study 2

This study measured participants' chronic regulatory focus and manipulated whether a persuasive message advocating a new policy used either eager or vigilant means framing. It was predicted that participants for whom the strategic means of the persuasive message fit with their chronic regulatory focus would experience value from fit. This "feels right" experience from fit would transfer to the persuasion context, resulting in increased perceived persuasiveness ratings and agreement with the proposal—a Type of Regulatory Focus  $\times$  Type of Means interaction on perceived persuasiveness and opinions. Because the outcome and information content of the persuasion effects resulting from the Regulatory Focus  $\times$  Type of Means interaction must be from regulatory fit and not from differences in the message received (i.e., message matching). A measure of positive mood was also obtained to test whether the effect of regulatory fit on persuasion is independent of positive mood, as hypothesized.

### Method

### Participants and Design

Eighty-six students at Columbia University voluntarily participated in the experiment in exchange for \$7. Participants were recruited through the use of flyers posted around the campus. The study was a 2 (type of regulatory focus: promotion vs. prevention)  $\times$  2 (type of means: eager vs. vigilant) between-participants design. Gender data were not available for this study.

### Procedure

Each participant completed the study individually. After giving written consent, participants were seated in individual soundproof booths and told the experiment contained two unrelated studies. For the first study, participants completed the Regulatory Focus Questionnaire (RFQ) and one other self-regulation measure unrelated to the current article. For the second study, participants were given either the eager means or vigilant means version of the persuasive communication and the dependent measures in the order listed below. Following completion of the questionnaire, participants were debriefed and paid for their participation. No participant expressed awareness of the two studies being related in any way.

#### **Materials**

Assessment of regulatory focus. The RFQ (Higgins et al., 2001) was used to measure participants' chronic regulatory focus, operationalized as the subjective history of promotion success versus prevention success. According to achievement motivation theory (e.g., Atkinson, 1964; Mc-Clelland, 1951; McClelland, Atkinson, Clark, & Lowell, 1953), feelings associated with a previous achievement task are elicited when a new task is encountered. If one has a subjective history of success with past task engagements, a new achievement task can elicit feelings of pride, and if one has a subjective history of failure, a new task can elicit feelings of shame. In the former case, this pride would serve to energize and direct behavior toward approaching the new goal. In the latter case, this shame would serve to energize and direct behavior toward avoiding the new goal.

Regulatory focus theory expands on this classic framework by distinguishing between two distinct kinds of achievement pride—promotion pride and prevention pride. A history of success with promotion-related eagerness (*promotion pride*) orients the individual toward using similar eager means on encountering a new task goal; conversely, a history of success with prevention-related vigilance (*prevention pride*) orients the individual toward using similar vigilant means on encountering a new task goal. Thus, measuring individuals' subjective history of success with using either promotion-related eagerness or prevention-related vigilance taps their strategic inclinations for new task goals.<sup>2</sup>

The RFQ is an 11-item measure, with participants rating their history of promotion and prevention success and failure on 5-point scales from 1 (*never or seldom*) to 5 (*very often*). Regulatory focus can be analyzed as a continuous variable with separate orthogonal scales for promotion pride and prevention pride. Additionally, it is possible to examine individual differences in either predominant promotion pride or prevention pride. In this case, the RFQ can be computed as a single categorical variable using a median split on the difference score of promotion pride minus prevention pride. Evidence of both the validity and reliability of the RFQ was reported in Higgins et al. (2001).

<sup>&</sup>lt;sup>2</sup> Regulatory focus applies to avoidance of undesired end states as well; because most of the research to date has focused on approaching desired end states, we restrict our discussion to this aspect of goal pursuit.

Persuasive communication. An article outlining the benefits of a new student after-school program was designed specifically for this study; a copy can be found in Appendix C. The purported purpose of this article was to elicit support for applying a new city tax toward an after-school program that would help elementary and high school students in their personal and academic lives. The article was written in two formats, using either eager means (738 words) or vigilant means (753 words) to advocate the program. The structure, content, and primary goal of the article was identical for both versions. The only difference concerned the type of strategic means framing used to advocate the policy. The following are examples of eager versus vigilant framing used in the article: "The primary reason for supporting this program is because it will advance children's education and support more children to succeed" (eager means; italics added); "The primary reason for supporting this program is because it will secure children's education and prevent more children from failing" (vigilant means; italics added).

Such differences were scattered throughout the text, with 16 sentences framed in either eager or vigilant terms while the desired goal was held constant across both conditions. The other sentences, which described the specific details of the program, were constant across conditions.

#### **Dependent Measures**

*Perceived persuasiveness of article.* This scale measured participants' perceptions of the persuasiveness of the article on a scale from 1 (*not at all*) to 7 (*very*). The measure consisted of four items tapping how persuasive, convincing, effective, and coherent participants perceived the article to be. A perceived persuasiveness index was created by averaging scores for these four items ( $\alpha = .87$ ).

*Opinion of proposal.* This served as the primary measure of participants' attitudes toward the program outlined in the persuasive message and thus served as the measure of message impact on attitudes. Participants rated their "overall opinion of the proposal" on a 7-point scale from 1 (*very negative*) to 7 (*very positive*).

*Positive mood index.* Four items assessed participants' ratings of how "happy," "pleased," "overjoyed," and "cheerful" they felt while reading the essay on a scale from 1 (*not at all*) to 7 (*very*). The scores for these four items were combined to represent positive mood ( $\alpha = .91$ ).

#### Results and Discussion

#### Analysis Overview

As in Study 1, the most relevant test of the value from fit hypothesis is a Type of Regulatory Focus  $\times$  Type of Means interaction when predicting persuasiveness and opinions.<sup>3</sup> Following Aiken and West (1991), all continuous variables were centered.

### Perceived Message Persuasiveness

Perceived persuasiveness scores served as the dependent variable in a 2 (type of regulatory focus: predominant promotion pride vs. predominant prevention pride)  $\times$  2 (type of means: eager vs. vigilant) univariate ANOVA. Figure 1A presents the means for the different conditions. Results showed only the predicted interaction to be significant, F(1, 82) = 4.04, p < .05. Promotion focus participants perceived the communication as more persuasive when it was framed in terms of eager means (M = 4.66, SD = 1.24) rather than vigilant means (M = 4.18, SD = 1.32); prevention focus participants perceived it as more persuasive when it was framed in vigilant means (M = 4.86, SD = 1.00) than in eager means (M = 4.35, SD = 0.94). Neither of the within-focus differences achieved conventional levels of significance.

### **Opinion** of Proposal

The means for opinion of proposal scores are presented in Figure 1B. Opinion ratings were submitted to a 2 (type of regulatory focus)  $\times$  2 (type of means) univariate ANOVA; 1 participant failed to respond to this item. This analysis yielded an unpredicted main effect of RFQ, F(1, 81) = 7.43, p = .008, with prevention focus participants (M = 5.48, SD = 1.05) being more persuaded by the message than promotion focus participants (M = 4.72, SD = 1.51). No main effect of essay means type was observed (F < 1).

More important, the predicted interaction between type of regulatory focus and type of means was significant, F(1, 81) = 5.54, p = .02. As expected, planned contrasts revealed that promotion focus participants were more persuaded by eager means (M =5.06, SD = 1.37) than vigilant means (M = 4.30, SD = 1.59), t(81) = -1.97, p = .05, and prevention focus participants were nonsignificantly more persuaded by vigilant means (M = 5.72, SD = 1.05) than eager means (M = 5.17, SD = 0.99), t(81) =1.37, p = .17.

### Positive Mood Ratings

The influence of positive mood on participants' opinions of the proposal and perceived message persuasiveness was consistent with previous research on mood-congruent effects in evaluative judgments. Regression analyses revealed a significant relation between positive mood and opinions, B = 0.56, t(83) = 6.05, p < .001, and perceived message persuasiveness, B = 0.29, t(84) = 3.22, p = .002. In both instances, higher positive mood ratings related to more positive evaluations. It is important that conditions of regulatory fit did not significantly predict positive mood, B = 0.23, t(82) < 1, p > .50. Thus, as expected, regulatory fit is not synonymous with positive mood (see also Higgins, Idson, et al., 2003).

#### Value From Fit and Positive Mood: Independent Paths

We propose that feeling right from regulatory fit is not the same as feeling good or positive mood. To demonstrate this independence, we separately regressed perceived persuasiveness and opinion ratings on both a regulatory fit interaction term (Type of Regulatory Focus × Essay Means Type) and positive mood ratings to demonstrate that the regulatory fit effects on these variables remain when controlling for positive mood. For perceived persuasiveness ratings, regulatory fit effects were still significant when positive mood ratings were included, B = 0.30, t(81) = 1.98, p =.05, and the same was true for opinion of proposal ratings, B =

<sup>&</sup>lt;sup>3</sup> For ease of presentation, all the results for Study 2 are reported using the median-split categories of predominant promotion pride or prevention pride. Analyses using orthogonal promotion pride and prevention pride scales and a separate interaction term for each yielded a similar pattern of results, as did computing the categorical RFQ score using an absolute median split instead of the sample-relative median split. We believe that the categorical analysis has several advantages. Making it categorical yields a single variable, which simplifies the analyses. Additionally, we are conceptualizing the impact of the message strategy in terms of individuals with real fit or nonfit with each strategy, which again argues for a categorical approach. Finally, the categorical analysis makes the findings of Study 2 more comparable with those of the other studies.



*Figure 1.* Mean ratings of perceived persuasiveness (A) and opinion of proposal (B) by Regulatory Focus Questionnaire and type of essay means, Study 2.

1.20, t(80) = 2.62, p = .01. Additionally, positive mood had its own independent effect on perceived persuasiveness, B = 0.30, t(81) = 3.25, p = .002, and opinion ratings, B = 0.56, t(80) = 6.37, p < .001. Thus, independent of positive mood, which has its own effects, regulatory fit influences perceived message persuasiveness and opinions.

Study 2 extends the findings of Study 1 in several ways. Study 2 used a chronic individual difference measure of regulatory focus (as well as different dependent variables), and the results were at least as strong as in Study 1, where regulatory focus was experimentally manipulated. Study 2 also demonstrated that the regulatory fit effect is distinct from and independent of positive mood. Regulatory fit did not relate to positive mood, and fit effects were observed even when positive mood was controlled for. Another noteworthy aspect of Study 2 was that the persuasive message had greater similarity across all of the conditions—only the strategic means of framing certain sentences differed, which is a more subtle manipulation. As with Study 1, the results of Study 2 support the conclusion that the type of strategic means used in a

persuasive message can vary in its fit with the regulatory orientation of the message recipient, and this can influence the perceived persuasiveness of the message and agreement with its topic.

What Studies 1 and 2 do not directly show, however, is that the influence of regulatory fit on persuasion is due to a transfer of feeling right from regulatory fit. This was one major purpose of Study 3. The other major purpose was to demonstrate the regulatory fit effect on persuasion when regulatory fit is induced before participants even receive the message. Such an effect would not follow from other compatibility viewpoints, such as a message-matching viewpoint.

#### Study 3

The goal of this study was to demonstrate that misattribution or transfer of the feeling right experience from regulatory fit to evaluation in the persuasion context is the process by which regulatory fit increases persuasion. This was accomplished, first, by directly manipulating the states of regulatory fit and nonfit separate from the persuasion context itself-indeed, prior to participants even receiving the message. In this way, the impact of regulatory fit on persuasion could be examined without message content contributing to the effect in any way. Second, to test for the hypothesized misattribution process or transfer of feeling right from regulatory fit to evaluation in the persuasion context, participants' attention either was or was not drawn to the true source of their feeling right experience prior to their receiving the message (e.g., Schwarz & Clore, 1983). If the feeling right experience from regulatory fit transfers to the persuasion context because of source confusion, as we hypothesize, then drawing participants' attention to the source of this fit experience before they receive the message should reduce the confusion, thereby eliminating the fit effect on persuasion. As evidence for evaluation in the persuasion context, the feeling right experience would no longer be relevant because its source was an event that occurred independent of the message.

Therefore, a Regulatory Fit  $\times$  Attention Condition interaction on participants' postcommunication attitudes and perceived persuasiveness ratings is predicted. The standard condition in which participants' attention is not drawn to the source of the feeling right experience should show the usual regulatory fit effect on persuasion, replicating the previous two studies. To the extent that this effect is due to the misattribution of feelings of rightness, the condition drawing attention to the source of the feeling right experience should eliminate this effect. Again, these effects should be independent of positive mood.

### Method

#### Participants and Design

One hundred thirty-nine students at Columbia University were recruited through the use of flyers and voluntarily participated in exchange for \$5. The study was a 2 (regulatory fit condition: fit vs. nonfit)  $\times$  2 (attention condition: standard vs. attention to source of feeling right) between-participants design. Seventeen participants (12.2%) scattered across the experimental conditions failed to follow directions or complete the task and were removed from the data analysis, leaving 64 men and 58 women. There were no effects of gender.

### Procedure

Participants were individually seated at a private cubicle and told they would be participating in two allegedly unrelated studies. For the first study, participants were randomly assigned to complete one of four versions of a regulatory fit manipulation questionnaire, designed to induce either regulatory fit or nonfit. Immediately following this manipulation, participants were randomly assigned to one of two attention conditions: the standard condition (no attention directed to the source of the feeling right experience) or the attention to feeling right condition (attention directed to the source of the feeling right experience). For the supposed second study, all participants read the same persuasive communication and completed the dependent measures listed below. Participants were then debriefed and paid for their participation. No participant expressed awareness of the two studies being related.

#### Materials

Regulatory Fit Manipulation Questionnaire. Using a technique developed by Freitas and Higgins (2002), this questionnaire was designed to induce either regulatory fit or nonfit. The regulatory fit conditions consist of engaging in ideal (promotion focus) goal pursuit with eager means or ought (prevention focus) goal pursuit with vigilant means. The regulatory nonfit conditions consist of pairing ideal goal pursuit with vigilant means or ought goal pursuit with eager means. The manipulation of regulatory fit was accomplished by asking participants to first list either a current "hope or aspiration" (promotion focus induction) or a current "duty or obligation" (prevention focus induction) and then asking them to list several means they could use to achieve this goal. The instructions for listing means asked for either eager strategies ("Please list some strategies you could use to make sure everything goes right . . . ") or vigilant strategies ("Please list some strategies you could use to avoid anything that could go wrong ..."). Beneath the means instructions were eight blank free-response lines. Crossing goal type with means type yields four possible conditions: two fit conditions and two nonfit conditions. Participants completed this task twice for two different goals, keeping the type of goal/type of strategy condition constant.

Attention manipulation. Participants were assigned to one of two attention conditions. In the standard condition, which served as a replication of the previous two studies, no instructions were given to direct attention to the source of the feeling right experience following the regulatory fit manipulation, thereby allowing for the misattribution or transfer of feeling right from regulatory fit to the persuasion context. In the attention to feeling right condition, immediately following the regulatory fit manipulation, participants' attention was directed to the correct source of their feeling right experience with the following instructions: "Sometimes thinking about using the right means to attain each goal can make people 'feel right' about their goal pursuit. On the following scale, indicate how much you 'feel right' about your goal pursuit." Participants then indicated their response on a 6-point scale anchored at *Not at all* and *Extremely*.

*Persuasive communication.* All participants received an identical persuasive essay, a modified version of the message from Study 2. The critical change involved rewriting the essay to remove the means-framing manipulation, such that the message was now neutral with respect to matching regulatory focus and was the same for everyone. For example, an eager [vigilant] framed sentence such as, "The primary reason for supporting this program is because it will advance [secure] children's education and support [prevent] more children to succeed [from failing]," would now read, "The primary reason for supporting this program is because it will supplement children's education with the knowledge and skills important for both school life and social life more generally." Additionally, the essay was substantially shortened to 374 words to help ensure that the effect of having paid attention to the feeling right experience before the message would remain throughout the length of reading the message.

### **Dependent Measures**

*Perceived persuasiveness of article.* Participants responded to five items ( $\alpha = .93$ ) tapping their perceived persuasiveness of the communication. Items included, on a 7-point scale from 1 (*not at all*) to 7 (*very*),

how persuasive, convincing, compelling, influential, and effective they found the article. Each participants' mean for all five items was used in the analyses.

*Opinion of proposal.* This served as the primary measure of participants' attitude toward the program outlined in the persuasive message and thus served as the measure of message impact on attitude. Each participants' mean for the following four items ( $\alpha = .87$ ) was taken as a measure of their opinion of the proposed after-school program: "How supportive of the program are you?"; "How good an idea do you think the program is?"; "How necessary do you think the program is?"; and "What is your overall opinion of the program?" Ratings were made on a 7-point scale from 1 (*not at all*) to 7 (*very*).

Attitude confidence rating. One item asked participants, "How confident are you in the ratings you just made (about your attitude towards the proposal)?" on a 7-point scale from 1 (*not at all*) to 7 (*very*). Given present interest in and demonstrated importance of attitude confidence and certainty (e.g., Tormala & Petty, 2002), we felt it worthwhile to investigate how regulatory fit may influence this variable. Similar to our other dependent measures, we predicted that the feeling right of regulatory fit would increase attitude confidence when the misattribution of this feeling was not eliminated.

*Volunteer rating.* One item asked participants, on a 7-point scale anchored at 1 (*not at all*) and 7 (*very*), "If you had the chance to volunteer for this program at a school near you, how likely would you be willing to devote a couple hours per week to do so?" This served as yet another measure of the impact of regulatory fit on attitudes, and it measured hypothesized behavioral intention to act in correspondence with one's attitude.

*Mood questionnaire.* Nine items ( $\alpha = .90$ ) tapping both high arousal and low arousal positive moods were included to further demonstrate the independence of feeling right from positive mood. Responses were given on a 7-point scale from 1 (*not at all*) to 7 (*very*). Participants were asked how good, happy, sad (reverse scored), relaxed, positive, cheerful, tense (reverse scored), content, and energized they felt. A positive mood index was created by computing the mean for all nine items.

#### Results and Discussion

#### Analysis Overview

The most relevant test of our transfer or misattribution hypothesis is a significant Regulatory Fit (fit vs. nonfit)  $\times$  Attention Condition (standard vs. attention to feeling right) interaction, with the effect of regulatory fit on persuasion being eliminated in the attention to feeling right condition.

#### Perceived Persuasiveness

The means for participants' ratings of perceived persuasiveness were subject to a 2 (fit condition)  $\times$  2 (attention condition) ANOVA. Although all means reflected the predicted pattern ( $M_{\text{standard, fit}} = 4.04, M_{\text{standard, nonfit}} = 3.73, M_{\text{feeling right, fit}} = 3.85, M_{\text{feeling right, nonfit}} = 3.84$ ), the interaction term did not achieve significance (F < 1).

### **Opinion** of Proposal

The means for participants' opinion of the program advocated in the persuasive message as a function of regulatory fit and attention condition are presented in Figure 2A. The central test of our misattribution prediction concerns the Regulatory Fit × Attention interaction. A 2 × 2 ANOVA yielded only a significant Regulatory Fit × Attention interaction, F(1, 118) = 4.89, p < .03. Planned contrasts revealed a significant difference between fit and



*Figure 2.* Mean ratings of opinion of proposal (A) and attitude confidence (B) by attention condition and fit condition, Study 3.

nonfit conditions within the standard condition, with participants in the fit condition (M = 5.56, SD = 1.05) giving more positive opinion ratings than participants in the nonfit condition (M = 4.96, SD = 1.18), t(118) = -1.96, p = .05. This replicates the regulatory fit effect on persuasion found in Studies 1 and 2. Furthermore, the significant interaction reflects the fact that the attention to feeling right condition eliminated the regulatory fit effect. The between-fit contrast within the attention to feeling right condition ( $M_{\rm fit} = 4.76$ ,  $SD_{\rm fit} = 1.27$ ;  $M_{\rm nonfit} = 5.11$ ,  $SD_{\rm nonfit} = 1.24$ ) was not significant, t(116) = 1.16, p = .25, and was, if anything, slightly reversed.

### Attitude Confidence Ratings

Mean confidence ratings for all conditions are presented in Figure 2B. To test if regulatory fit increases participants' confidence in the ratings they made regarding their opinion of the proposal, and also whether attention to feeling right would eliminate this effect, confidence ratings served as the dependent variable in a 2 (regulatory fit condition)  $\times$  2 (attention condition) ANOVA. Only a significant interaction was observed, *F*(1, 118) =

10.49, p = .002. Planned contrasts revealed two significant withinattention differences. Within the standard condition, as expected, participants in the fit condition (M = 5.70, SD = .99) had higher confidence than those in the nonfit condition (M = 5.21, SD =1.14), t(118) = -1.87, p = .06. This pattern was reversed for participants in the attention to feeling right condition, with participants in the fit condition showing lower ratings (M = 5.08, SD =.87) than those in the nonfit condition (M = 5.78, SD = 1.01), t(118) = 2.72, p = .008. Thus, when the misattribution or transfer of feeling right from regulatory fit is blocked, the effect on confidence ratings is eliminated, and even reversed.

#### Volunteer Ratings

Volunteer ratings were submitted to the same  $2 \times 2$  ANOVA. Only the interaction term approached significance, F(1, 118) = 2.86, p = .09. The pattern of means mimicked that of the previous analysis of persuasion, with the standard condition showing larger volunteer ratings for fit (M = 4.89, SD = 1.78) than nonfit (M = 4.15, SD = 1.48), t(118) = -1.72, p = .09, and the attention to feeling right condition showing, if anything, nonsignificantly larger volunteer ratings for nonfit (M = 4.31, SD = 1.84) than fit (M = 4.03, SD = 1.50).

### Regulatory Fit and Positive Mood: Independent Effects

A series of analyses were conducted to demonstrate further the independence of regulatory fit from positive mood. First, a t test revealed that ratings on the positive mood index did not vary as a function of regulatory fit ( $M_{\rm fit} = 4.74$ ,  $SD_{\rm fit} = 1.05$ ;  $M_{\rm nonfit} =$ 4.75,  $SD_{nonfit} = 1.17$ ; t < 1). Next, the above ANOVAs for each dependent variable were repeated with multiple regressions that included the positive mood index. The first analysis regressed opinion of proposal scores on a dummy-coded regulatory fit variable (nonfit [0] vs. fit [1]), an attention condition variable (standard [0] vs. attention to feeling right [1]), a Regulatory Fit  $\times$ Attention interaction term, and mood ratings (centered). Mood had an independent, significant relation to opinion scores, B = 0.26, t(117) = 2.62, p = .01, with more positive moods relating to more positive ratings of the proposal. Additionally, the Regulatory Fit imesAttention interaction still remained significant, B = -1.07, t(117) = -2.52, p = .01.

The second regression analysis regressed opinion of proposal scores on the regulatory fit dummy variable and positive mood ratings for participants in the standard attention condition only. Two significant results were again found. As in Study 2, increased positive mood related to more positive opinion ratings, B = 0.26, t(57) = 2.13, p = .04, and participants in the regulatory fit condition still had significantly more positive opinions than participants in the regulatory nonfit condition, B = 0.66, t(57) = 2.33, p = .02. As in Study 2, the effect of regulatory fit was independent of positive mood, which had its own significant effect on opinion scores.

Next, confidence ratings were submitted to the same two multiple regression analyses with the predictor variables listed above. For the first analysis, mood had its own independent effect on confidence, B = 0.22, t(117) = 2.65, p = .009, and the Regulatory Fit × Attention interaction variable remained significant, B =-1.29, t(117) = -3.57, p = .001. For the second analysis testing the regulatory fit effect within the standard attention condition only, both positive mood, B = 0.24, t(57) = 2.07, p = .04, and conditions of regulatory fit, B = 0.54, t(57) = 1.99, p = .05, had independent, significant effects on confidence.

Finally, volunteer ratings served as the dependent variable in the multiple regressions as listed above. Although the effect of positive mood was not reliably significant, B = 0.21, t(117) = 1.49, p = .14, the regulatory fit interaction was near significance, B = -1.11, t(117) = -1.89, p = .07. This pattern held when testing the standard attention condition only, again with positive mood nonsignificantly related, B = 0.28, t(57) = 1.59, p = .12, and regulatory fit having an independent effect on volunteer ratings, B = 0.80, t(57) = 1.91, p = .06.

Study 3 extends the evidence for the regulatory fit effect on persuasion in several ways. The misattribution design provided support for the claim that regulatory fit effects are due to the transfer of feeling right to the persuasion experience. It also demonstrated that regulatory fit can influence participants' confidence in their attitudes and their intention to perform a behavior consonant with the topic of the communication. It also provided further evidence that the experience of regulatory fit is distinct from positive mood, with each having independent effects on persuasion. Finally, manipulating regulatory fit outside of the persuasion context clearly distinguishes regulatory fit effects from message-matching effects in persuasion, because all participants received identical messages after fit was induced.

One issue raised by the results of Study 3 is why, in the standard condition, regulatory fit did not influence perceived persuasiveness ratings (as in Studies 1 and 2) but again significantly affected opinions. Because the overall pattern of results for perceived persuasiveness in Study 3 was in the same direction as in Studies 1 and 2, it is possible that the failure to reach significance simply reflected variability in the size of the fit effect over studies. Indeed, as discussed later, a meta-analysis across all four studies did show a highly reliable effect of fit on perceived persuasiveness. The weaker effect did, however, make us consider more generally other factors that could influence the size and direction of the fit effect.

One possibility is that in Study 3, as discussed in the introduction, the feeling right experience transferred directly to attitudes toward the proposal and not to the evaluations of the message itself. It may also be the case that the impact of fit depends on participants' reactions to the message. In considering why there was less of a fit effect on perceived persuasiveness in Study 3, it occurred to us that a modification in our persuasive message for Study 3 may have changed how participants experienced it. Because we wished to shorten the length of the essay, a significant number of details about the after-school program were removed. In particular, many of the positive consequences of the after-school program described in the original Study 2 essay were removed for Study 3. This produced an essay that was more vague and less positive than in Study 2 and thus one that could potentially induce more negative thoughts. (Indeed, mean perceived persuasiveness ratings were lower in Study 3 than in Study 2.)

Both of these potential factors suggested a new study that could examine more deeply the influence on persuasion of the subjective feeling right experience. As discussed in the introduction, for participants generating negative thoughts in response to a message, the information afforded by the feeling right of regulatory fit would have consequences that are exactly opposite to those participants generating positive thoughts. If participants are generating positive thoughts, their experience of feeling right about those positive thoughts would signal agreement with the message and increase perceived persuasiveness ratings. In contrast, if participants are generating negative thoughts, their experience of feeling right about those negative thoughts would signal disagreement with the message and therefore lower perceived persuasiveness ratings. Such predictions are analogous to the effect of thought confidence on persuasion, where increased confidence in positive thoughts and increased confidence in negative thoughts have opposite effects (Petty, Briñol, & Tormala, 2002).

In Study 3, message-related thoughts may have influenced ratings of perceived message persuasiveness but not opinions toward the advocated proposal. One way in which message-related thoughts should more strongly predict opinions of the proposal is to call participants' attention to their perceptions of the message itself. Directing participants' attention to their evaluations of the persuasiveness of a message should make them more likely to utilize message-related thoughts when subsequently forming an opinion toward the advocated proposal. In contrast, directing participants to think only about their opinion of the advocated proposal, rather than the persuasiveness of the message, should make message-related thoughts less important in determining one's attitude.

The purpose of Study 4 was to explicitly test these predictions in two ways. First, we provided participants with a thought-listing measure in which they could reveal both positive and negative cognitive responses to the message. Second, the attention of the participants was repeatedly directed to either the persuasiveness of the message or their opinion of the advocated proposal.

### Study 4

There were several goals of this study. First, we wished to show that regulatory fit can interact with message-related thoughts in a theoretically meaningful way, such that the information provided by the subjective experience of fit can either increase or decrease perceived persuasiveness and opinion, depending on whether thoughts in response to the message are positive or negative, respectively. This predicts an interaction of regulatory fit and favorability of message-related thoughts (positive thoughts minus negative thoughts) on both perceived persuasiveness and opinions. Second, we wished to show that the effect of message-related thoughts on perceived persuasiveness and opinions may vary depending on which aspect of the persuasion experience attention is directed. To the extent that participants are attending to the message itself, the regulatory fit effect should interact with thought favorability when predicting persuasiveness and opinions. To the extent that participants are attending to the advocated proposal itself rather than the message per se, the regulatory fit effect should not interact with thought favorability, and just the standard regulatory fit effect should be observed. These are the major predictions of Study 4.

### Method

#### Participants and Design

Ninety-nine Columbia University students participated in return for \$5. Five participants were removed for either trying to guess the purpose of the study or not following instructions, leaving 47 men and 47 women. No gender differences were found on the primary dependent variables. The study was a 2 (regulatory fit: fit vs. nonfit)  $\times$  2 (directed attention: message vs. proposal) between-participants design.

#### Procedure

Participants were seated in individual soundproof booths and given an informed consent document, which contained the first of three instances for the directed-attention variable manipulation. They read that the experiment contained two unrelated studies, the first of which involved answering a few questions about themselves. They then read one of two descriptions for the second study, leading them to believe they would answer questions about either how persuasive they found a message to be or their attitudes toward the proposal of a message. After participants signed informed consent, the experimenter then verbally repeated the purpose of the two studies, again including the manipulated directed-attention instructions.

Each participant was then randomly assigned to one of four versions of the regulatory fit manipulation used in Study 3, producing either regulatory fit or regulatory nonfit. Following completion, participants were then given the persuasive message, with the written instructions at the start of the message strongly encouraging participants to either pay attention to the persuasiveness of the message or to their attitude toward the proposal. The dependent variables followed the message, in the order listed below. Participants were paid and debriefed.

#### Materials

*Regulatory Fit Manipulation Questionnaire.* The manipulation of regulatory fit and nonfit conditions was achieved through the same questionnaire as described in Study 3.

Directed attention manipulation. Three occasions throughout the experiment directed the attention of the participants to either the persuasiveness of the message or their attitudes toward the message proposal. Instructions for directing attention to the message were as follows: "You will be given an essay and asked how persuasive you found it." Instructions for directing attention to the message proposal were as follows: "You will be given an article about a policy proposal and asked what your attitude toward the policy proposal is." The informed consent form, a verbal description of the study from the experimenter, and the instructions at the beginning of the message were all consistently framed for one condition or the other.

*Persuasive communication.* All participants received the same message used in Study 3.

### **Dependent Measures**

*Perceived persuasiveness of message.* Four items tapped participants' perceived persuasiveness of the message. On a scale from 1 (*not at all*) to 7 (*very*), participants rated how persuasive, compelling, influential, and coherent they found the message ( $\alpha = .83$ ). Mean responses for these items served as the dependent measure.

*Opinion of proposal.* This was the primary measure of participants' postcommunication attitudes. Participants rated their "overall opinion of the program" on a scale from 1 (*not at all positive*) to 7 (*very positive*).

Thought Listing Measure. As in previous studies using this measure (e.g., Briñol & Petty, 2003), participants were given a page with four empty boxes and instructed to list between one and four "thoughts about the possible consequences of the after-school program proposal," without regard to spelling or grammar. After listing their thoughts, participants were then asked to rate each of their responses as positive, negative, or neutral; examples were provided. They were then asked to rate their confidence in each thought on a scale from 1 (not at all confident) to 9 (extremely confident). Responses were checked to ensure that (a) all thoughts were message-related and (b) the correct valence was assigned to each thought. An index of thought favorability was created by subtracting unfavorable thoughts. This variable was centered prior to analyses.

#### Results and Discussion

#### Analysis Overview

Our prediction that the interaction between regulatory fit and favorability of thoughts would depend on participants' directed attention should yield a three-way interaction. Regulatory fit (0 = nonfit; 1 = fit), directed attention (0 = message; 1 = proposal), and favorability of thoughts (continuous) were first entered into a regression analysis, followed by all two-way interactions, and finally the three-way interaction. The only significant term to emerge from these analyses was the predicted three-way interaction for both perceived persuasiveness, B = -1.87, t(85) = -2.66, p = .009, and opinion of the proposal, B = -1.88, t(85) = -2.06, p = .04.<sup>4</sup> To probe the nature of these interactions further, we separated the sample by directed-attention condition and proceeded to analyze the Regulatory Fit × Favorability effect separately for each.

### Message-Directed Condition Only

The prediction for the message-directed condition was that the regulatory fit effect would interact with thought favorability. Specifically, as thought favorability increases, feeling right from regulatory fit should increase perceived persuasiveness and increase opinions toward the advocated proposal; stated in complementary terms, as thought favorability decreases, feeling right should decrease perceived persuasiveness and decrease opinions toward the advocated proposal. This predicted pattern was obtained. Ratings of perceived persuasiveness served as the dependent variable in a first regression with regulatory fit and favorability of thoughts (continuous) and in a second regression with the relevant interaction term included. No main effects were observed (ts < 1.31), but the interaction term was significant, B = 1.13, t(39) = 2.25, p =.03, indicating that the effect of regulatory fit differed depending on direction of thought favorability. Figure 3A displays the simple regression lines illustrating this interaction; following Aiken and West (1991), the three values of the thought favorability index chosen to plot relevant interactions were the mean, 1 standard deviation below the mean, and 1 standard deviation above the mean. Tests of the simple slopes revealed that under conditions of fit, as thought favorability increased, perceived persuasiveness significantly increased, B = 0.92, t(39) = 2.57, p = .01. The slope of the nonfit line did not significantly differ from zero.

The same set of analyses were again conducted with opinion of the proposal ratings. No main effects were observed (ts < .50), but the interaction term was significant, B = 1.36, t(39) = 2.14, p =.04. As illustrated in Figure 3B, participants in fit conditions gave more positive opinions as favorability of thoughts increased, B =0.86, t(39) = 1.89, p = .06. The slope of the nonfit line did not differ from zero. In sum, as predicted, when participants were experiencing feeling right from regulatory fit, positive thoughts resulted in increased ratings of persuasiveness and opinion of the proposal, and negative thoughts resulted in decreased ratings.

### Proposal-Directed Condition Only

The prediction for the proposal-directed condition was that the regulatory fit effect would not interact with thought favorability.

<sup>&</sup>lt;sup>4</sup> For perceived persuasiveness ratings, a nearly significant main effect of regulatory fit, B = 0.46, t(89) = 1.88, p = .06, also emerged.



*Figure 3.* Regulatory fit and nonfit conditions by thought favorability. Simple slope regression lines predict perceived message persuasiveness (A) and opinion of topic (B) in the message-directed condition, Study 4.

Ratings for persuasiveness again served as the dependent variable for the same series of regressions. The results are displayed in Figure 4A. The only significant effect from these regressions was a main effect of fit condition, B = 0.80, t(47) = 2.51, p = .02, such that participants in fit conditions gave higher ratings (M = 4.57) than participants in nonfit conditions (M = 3.77). As predicted, there was no interaction of regulatory fit with thought favorability. Neither slope of the simple regression lines differed significantly from zero.

Results from the same series of regressions with participants' opinion of the proposal are displayed in Figure 4B. Again, only a main effect of fit achieved significance, B = 0.83, t(47) = 2.00, p = .05, reflecting the fact that participants in fit conditions had more positive opinions (M = 5.69) than participants in nonfit conditions (M = 4.86). As predicted, there was no interaction of regulatory fit with thought favorability. Neither slope differed significantly from zero.

The results of Study 4 supported the predictions. When participants were directed to pay attention to the persuasiveness of the message, valence of message-related thoughts interacted with regulatory fit such that feeling right about positive thoughts resulted in increased perceived persuasiveness and opinions, and feeling right about negative thoughts resulted in decreased persuasiveness and opinions. When participants were instead directed to pay attention to their opinion of the proposal, message-related thoughts played little role in determining perceived persuasiveness and opinions, and instead, there was simply a direct effect on persuasion from regulatory fit.

## General Discussion and Conclusions

The influence of one's subjective experience on attitude formation and attitude change was investigated by early theorists (e.g., Hovland, Janis, & Kelley, 1953) and continues today. We present four studies that provide initial evidence for the importance of a new subjective experience in persuasion research—feeling right from regulatory fit. Like other experiences, this regulatory fit experience can be misattributed or transferred to the persuasion context, thereby increasing perceived message persuasiveness and/or opinions toward the advocated proposal.

Studies 1 and 2 manipulated regulatory fit by relating participants' promotion or prevention focus to the eager or vigilant framing of a persuasive message. Studies 3 and 4 used a different design in which regulatory fit was induced before participants received the message, which was the same for everyone. Across these cases, regulatory fit generally increased persuasion. Study 3



*Figure 4.* Regulatory fit and nonfit conditions by thought favorability. Simple slope regression lines predict perceived message persuasiveness (A) and opinion of topic (B) in the proposal-directed condition, Study 4.

also found evidence consistent with the proposal that feeling right transfers to the persuasion experience like other kinds of misattribution found in the literature. Study 4 began to examine more deeply how feeling right from regulatory fit can influence persuasion by considering both the valence of participants' thoughts in response to the message and the focus of their attention to either the message or the advocated proposal.

A meta-analysis across all four studies (including only the standard condition for Study 3 and the proposal-directed condition for Study 4) revealed a strong effect of regulatory fit on both perceived persuasiveness and message effectiveness, with increased ratings under regulatory fit conditions compared with regulatory nonfit conditions. For the measure of perceived persuasiveness (Study 1: believability; Studies 2-4: perceived persuasiveness index), participants experiencing regulatory fit found the messages more persuasive than participants experiencing nonfit (Z = 3.21, p < .003). For the measure of message effectiveness (Study 1: intention; Studies 2 and 4: overall opinion; Study 3: opinion index), the message had a greater impact for participants in regulatory fit conditions than for participants in regulatory nonfit conditions (Z = 4.92, p < .001). In addition, Study 3 obtained a conceptually related finding for confidence. As would be expected if feeling right from regulatory fit transferred to the message experience such that participants felt right about what it was advocating, participants in the standard attention condition were more confident in the ratings they made regarding their (higher) opinion of the proposal.

Although we generally predict feeling right from regulatory fit to increase persuasion, it will not necessarily do so, as Study 4 shows. According to the "mood-as-input" extension of the moodas-information approach (Martin & Stoner, 1996; Martin, Ward, Achee, & Wyer, 1993), feelings in and of themselves have no particular information-processing implications. Instead, feelings have implications only as they are interpreted in a given context. Analogously, the persuasive impact of feeling right from regulatory fit would depend on how this feeling is interpreted, and this interpretation may depend on various factors, including the valence of message-related thoughts. Feeling right about negative thoughts should lead to decreased persuasion, and feeling right about positive thoughts should lead to increased persuasion, predictions confirmed in Study 4.

Other instructions and manipulations might also produce a pattern of opposite effects for regulatory fit. What if message recipients were told to respond thoughtfully to the message and that feelings could have a potentially biasing effect on their judgments? In this case, regulatory fit conditions might decrease persuasion if feeling right about the message is interpreted negatively. For example, task instructions could alert participants to avoid "emotional" or experiential feelings when making judgments, thereby causing feelings of rightness to arouse suspicion. During a subsequent evaluation of the "judged usability" of these feelings (see Higgins, 1996; 1998a), participants might infer the feelings to be inappropriate and correct for a perceived biasing influence in the message, thereby reducing its effectiveness.

A similar effect has been predicted for *superyielding*, a situation in which an experience of excessively high yielding may produce inferences about being manipulated in some way, thereby lowering the validity of the persuasive communication (Higgins, 1998a). The flexible correction model provides similar predictions, in which overcorrecting for a perceived (yet not actually present) bias can lead dislikable sources to be more influential than likable sources (Petty, Wegener, & White, 1998, Study 2; see also Martin & Achee, 1992). Indeed, when the regulatory fit effect on persuasion was eliminated in Study 3 by having participants attend to the correct source of their feeling right from regulatory fit prior to receiving the message, confidence was higher in the nonfit condition than in the fit condition. This reversal effect could be a version of overcorrection that occurs when people pay attention to and then become concerned about a possible bias in their judgments (e.g., Martin & Achee, 1992; Petty & Wegener, 1993)—in this case, a bias in their acceptance of the message's position because of their feeling right from regulatory fit.

Although we chose regulatory focus as the motivational orientation with which to investigate a regulatory fit effect on persuasion, this effect need not be limited to these orientations. A regulatory fit effect on persuasion could occur whenever the means used to advocate a behavior or policy in a message suits the message recipient's self-regulatory orientation, be it a locomotion versus assessment orientation (e.g., Kruglanski et al., 2000), a near versus distant temporal construal (e.g., Trope & Liberman, 2000), or a deliberative versus implementative action mind-set (e.g., Gollwitzer, 1990). For example, message recipients could be in either a locomotion orientation, which constitutes the aspect of self-regulation that is concerned with movement from state to state, or an *assessment* orientation, which constitutes the aspect of self-regulation that is concerned with making comparisons (see Higgins, Kruglanski, & Pierro, 2003). A message could advocate that one policy is better than its alternatives with either a progressive elimination strategy (i.e., eliminate the worst competing alternative with respect to each successive attribute for a set of attributes until only the advocated policy remains) or a full evaluation strategy (i.e., make a full comparison among all of the alternatives for all of the attributes and show that the advocated policy is the best overall). Persuasion should be greatest when there is a fit between regulatory mode orientation and advocacy means (assessment/full evaluation and locomotion/progressive elimination; cf. Avnet & Higgins, 2003).

Studies 3 and 4 demonstrate that a regulatory fit effect on persuasion can occur even when the fit is induced prior to participants' receiving the same persuasive message (as long as their attention is not directed toward the true source of their feeling right experience). This fit effect on persuasion is especially important because it distinguishes regulatory fit from other forms of compatibility between individuals' orientations and message content that can also increase persuasion. Perhaps the best known of these is message matching, which we briefly mention in our introduction.

Matching the content or outcome of a persuasive message to some aspect of the message recipient's cognitive, motivational, or affective system can influence persuasion. Although message matching typically increases the persuasive impact of a message, Petty and Wegener (1998; see also Petty et al., 2000) used the elaboration likelihood model framework to show that message matching enhances message scrutiny, at least for attitude function matching. To the extent that the arguments contained in a persuasive message are of high quality, this will increase message impact, but if the arguments are of poor quality, message matching actually reduces attitude change.

As evident from Studies 3 and 4, the regulatory fit effect on persuasion does not depend on the relation between individuals' orientation and the nature of the message. The regulatory fit effect can occur when the experience of feeling right from regulatory fit occurs prior to the message even being received. Thus, the regulatory fit effect is not the same as the message-matching effect on persuasion. However, what about when, as in Studies 1 and 2, regulatory fit is induced by the relation between the regulatory focus of the participants and the strategic manner of the message advocacy? Should the fit effect in these studies be considered a special case of a message-matching effect? In order to understand why we do not believe this, it is necessary to distinguish between two different ways that individuals' regulatory states or orientations can create value (see Higgins, 2002).<sup>5</sup>

The first way that individuals' orientations can create value is through *relevance*, which concerns the relation between a personal orientation and the extent to which goal attainment (outcome) will satisfy that orientation. In decision making, for example, this would involve whether the outcome of a decision satisfies some orienting concern or need of the decision maker. Relevance relates personal orientation and outcome, and it influences the perceived value and importance of the outcome. The second way that individuals' orientations can create value is through regulatory fit, which concerns the relation between a personal orientation and the strategic manner of goal pursuit.

These two ways of creating value in relation to individuals' orientations differ in whether value is created by the strategic process sustaining the orientation (fit) or by the outcome satisfying the orientation need (relevance). The typical message-matching study on attitude functions has messages about different outcomes that serve different functions, such as messages about different properties of a washing machine that serve either a utilitarian (low cost) or value-based (environmentally friendly) function. The outcomes described in different messages are relevant to different needs or concerns of the recipient.<sup>6</sup> Regulatory relevance studies can also be conducted for promotion versus prevention orientations, such as describing the advanced technology properties of a camera (satisfying promotion) or its reliability properties (satisfying prevention). However, these relevance studies are different from regulatory fit studies (see Higgins, 2002). Fit studies vary the strategic manner of goal pursuit while controlling for outcome. In Study 2, for example, the outcomes of the new after-school program were exactly the same in the eager and vigilant means conditions.

We present here four studies demonstrating the importance of regulatory fit for persuasion. The results of our studies support the proposal that the experience of feeling right from regulatory fit can transfer to the persuasion context, thereby influencing perceived message persuasiveness and opinions. This can happen even when the regulatory fit occurs prior to the message being received. The fit effect on persuasion can also be eliminated by drawing attention to regulatory fit as the source of the feeling right experience, or even reversed when message recipients feel right about their negative reactions to the message. An interesting implication of the fit effect on persuasion is that in order to increase persuasion, it is not necessary to shape the message content to match the idiosyncratic, personal characteristics of the message recipient because regulatory fit can be situationally induced prior to the message being received-a message that can be the same for everyone. Like all persuasion techniques, the conditions under which regulatory fit influences persuasion, and the different mechanisms that determine the strength and direction of its influence, need to be identified and investigated in future research.

<sup>6</sup> This explanation for why matched messages are important for persuasion is consistent with Petty and Wegener's (1998) work demonstrating increased message scrutiny with matched messages. If a message is perceived as fulfilling an important need or satisfying a central concern, it could serve to direct increased attention toward the message, resulting in greater message scrutiny.

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<sup>&</sup>lt;sup>5</sup> A third type, value from proper means, is not discussed here (see Higgins, 2002).

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#### REGULATORY FIT AND PERSUASION

### Appendix A

### Study 1 Promotion Focus Communication in [Eager/Vigilant] Formats

### [EAT/NEGLECT TO EAT] FRUITS AND VEGETABLES AND YOU [WILL/WON'T] FEEL ACCOMPLISHED!

A diet that [is/is not] rich in essential nutrients, like those found in fruits and vegetables, has direct effects on the biochemistry of the brain, resulting in [increased/a lost opportunity for increased] energy, better moods, and a general sense of happiness and fulfillment. People who [do/do not] eat a balanced diet, of which fruits and vegetables are an integral part, can [experience/miss out on experiencing] greater confidence and optimism, which [in turn makes/would have in turn made] them more appealing to others as well as successful in their endeavors. [Having/Not having] an adequate supply of nutrients in the bloodstream [is also important for maintaining/results in a failure to maintain] attractive hair and skin, and [promotes/does not promote] an active metabolism, [which/which when active] burns fat and contributes to an overall toned and attractive body. The vitamins and minerals found in fruits and vegetables provide the nourishment necessary for greater concentration and attentiveness, and maximizing mental abilities and creativity. [Good nutrition/By not maintaining good nutrition] [can have a/you will not benefit from the] substantial positive effect on test performance and IQ (intelligence) scoring. If you [eat/do not eat] the right amount of fruits and vegetables daily, you [can/will not] experience an overall sense of feeling good about yourself.

### Appendix B

### Study 1 Prevention Focus Communication in [Eager/Vigilant] Formats

### [EAT/NEGLECT TO EAT] FRUITS AND VEGETABLES AND [ENJOY/YOU'LL MISS] THE SAFETY OF GOOD HEALTH!

Human beings require a whole regimen of nutrients for basic good health. [Eating/Not eating] fruits and vegetables [supplies/results in a failure to supply] the body with the nutrients it needs, [enabling/and will not enable] the body to produce substances from within which buffer it from the physical demands of the world we live in (pollution, daily stress, bad weather, etc.). The vitamins and minerals found in fruits and vegetables are known to play a protective role, and help to repair already damaged tissues. [Eating/If you do not eat] fruits and vegetables [helps/you will not help] to facilitate the actions of the immune system, which [works/then cannot work] to keep you healthy and safe from illness. A [well-nourished immune system/immune system that is not well nourished] [stops/does not stop] pathogens (poisons) and neutralizes their toxins, and [forms/does not form] a barrier against invading bacteria to prevent their spread. [Certain vegetables have even been shown to be effective in protecting the body from cancer and heart disease/Not eating certain vegetables means you will miss an opportunity to obtain nutrients which are effective in protecting the body from cancer and heart disease.] [The/If you do not take in the] nutrients found in fruits and vegetables [also/you cannot] contribute to healthy teeth, gums, and bones. If you [eat/do not eat] the right amount of fruits and vegetables, you [can/cannot] actively help keep yourself safe from illness and obtain overall good health.

### Appendix C

### Study 2 Persuasive Communication in [Eager/Vigilant] Formats

#### NEW STUDENT AFTER-SCHOOL PROGRAM

This essay is written to advocate a new proposed citywide policy change involving the New York Public School system and the city of New York. A new city tax would be applied toward the development and implementation of a special after-school program for public grade- and high-school level students. The primary reason for supporting this program is because it will [advance/secure] children's education and [support/prevent] more children [to succeed/from failing]. If this program is initialized there will be a [greater/lower] number of schoolchildren who [complete/fail to complete] the full K–12 education program, and there will be a [greater/lower] number of students who [succeed/fail] in their post-academic life choices as well. Given the [higher rate of success/lower rate of failure] which this program would ensure, it is important to develop this [achievement/prevention] program as soon as possible.

The primary goal of this program is to [ensure success/prevent failures] for the city's youth, and it would focus on improving both academic and practical skills. There would be several steps taken to ensure the success of this program in meeting its goal. First, teachers from individual schools would meet to design a program tailored specifically to the needs of that student body. After faculty and administration identified factors which would help [promote achievement/avert failure] of students at that school, they would design a program which focused specifically on these domain topics. However, the content of a given program would not be limited to any specific topic. Assistance for any issue which the student believes would [help him or her succeed/prevent him or her from failing] can be addressed in these sessions. Thus, special training could be provided in nearly any academic and relevant practical domain. This design allows for the program to be both specific and broad in terms of the targeted topics which [promote/prevent] student success.

Another noteworthy aspect of this program will be its comprehensive content, which will include both academic and non-academic domains. In this way, a broader scope of topics necessary for [success/the prevention of failure] can be covered. The program, therefore, will focus not only on important academic qualities but also on important social aspects of a student's life. Assistance can be provided for students who wish to receive help with interpersonal skills, emotional difficulties, or any number of social and psychological issues with which they may need help. In addition to the standard academic skills covered in such programs, other lessemphasized topics can be targeted as well; these include topics such as the creative arts (music, painting, etc.), industrial arts (woodworking, mechanics, etc.), home economics, and others. Such a broad skill base allows for the development of the whole person, not just single-aspects of one's life. Given this far-reaching knowledge base, student [success/failure] levels will be [greater/smaller] because all aspects of the individual can be refined.

Another step taken to ensure the success of this program will be the method by which students are selected to participate. Students can either decide by themselves that they wish to participate in the program or can be recommended for participation by a teacher or administrator. Utilizing both methods of participation will [allow a greater number of students/prevent less students from missing the opportunity] to participate, and therefore there will be a [higher/lower] percentage of students [succeeding/failing] following implementation of the program.

Finally, it is important to consider the issue of the extra tax needed to fund this project. The personal cost of funding this program is far outweighed by the many potential [benefits/costs] this program will [promote/ avert]. In fact it is estimated that for every dollar spent on this program now, 3.5 extra dollars will be [available in the future due to higher safety rates/saved in future costs due to lower crime rates] and [greater/lower] numbers of people [lacking/with] financial assistance needs. [Greater stu-

dent successes/Reduced student failures] now result in [greater benefits/ reduced costs] for everyone, including those same students and other citizens, later.

In conclusion, it is important that we develop and back a special after-school program for the grade- and high-school level students of NYC, to be funded by a new city-wide tax. [By helping students to achieve/By preventing the failure of students to meet] their academic and social potential, we will have a [greater/lower] number of students [succeeding/failing] in both academic and post-academic life. This includes an [increased/decreased] number of students [finishing/failing to finish] their K-12 education program, a [greater/smaller] number of students [attending/ not attending] post-high school education programs, and, overall, [students receiving/less students failing to receive] more fulfilling and higher paying jobs. This program can be an effective way of providing the assistance needed to students to [raise/lower] the overall level of [success/failure] in our public school system.

Received February 11, 2002 Revision received October 27, 2003 Accepted October 27, 2003

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