Original Communication

Regulatory Focus Scale (RFS): Development of a Scale to Record Dispositional Regulatory Focus

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This article presents the Regulatory Focus Scale (RFS), an instrument comprising 10 items to record promotion orientation and prevention orientation, in accordance with regulatory focus theory (Higgins, 1997, 1998). In Study 1 ($n = 130$), 33 newly-constructed items were specified to record dispositional regulatory focus. They were administered along with the Regulatory Strength Measure (RSM) and items of various dimensions of the Schwartz values questionnaire (Schwartz Portrait Questionnaire, SPQ). Using distribution and factor analyses (exploratory und confirmatory), 10 new items were put together to create the RFS. Promotion orientation factors were named Openness to New Things and Autonomy, whereas prevention orientation factors were termed Orientation to the Expectations of Others and Sense of Obligation. There were only low correlations between the RFS and the results of the RSM, but very clear correlations between the RFS and the SPQ. In Study 2, using an independent sample ($n = 200$), it was possible to confirm the factor structure of the RFS found in Study 1.

Keywords: self-regulation, regulatory focus, promotion, prevention

Self-regulation, understood as the use of mental techniques to direct thoughts, feelings, and behavior, is taken to be an important factor in achieving goals. A highly-regarded theory on self-regulation, *regulatory focus theory* (Higgins, 1997, 1998), distinguishes between two systems based on different needs: promotion and prevention. This article introduces the *Regulatory Focus Scale* (RFS), an instrument for measuring the dispositional focus on promotion or prevention.

The postulate of two motivational alignments is something Higgins' regulatory focus theory (1997, 1998) has in common with many other theories on motivation and self-regulation. Thus, for example, whereas Higgins' suggestion of dual sources of motivation is based on nurturance and security needs, Herzberg, Mausner, and Snyderman's (1959) is based on motivation and hygiene factors; Dweck and Leggett's (1988) on learning and achievement goals; Deci, Koestner, and Ryan's (1999) on intrinsic and extrinsic motivation; and Atkinson's (1964) on hopes of success and fear of failure.

Regulatory focus theory (Higgins, 1997, 1998) differentiates between self-regulation systems for promotion and prevention. A promotion-oriented person is more oriented to winning than losing and endeavors to succeed in an achievement situation through a high degree of commitment. In terms of goal pursuit, the main focus is on satisfying the individual's own ideals, hopes, and wishes. Growth and self-actualization needs are strongly developed. By contrast, a prevention-oriented person is more oriented to losing than winning and seeks to avoid failure and mistakes in achievement situations by being careful and precise. In terms of goal pursuit, satisfying others' expectations and fulfilling one's obligations are relevant, and security needs are strongly developed.

However, regulatory focus is not only dependent on a person's disposition, but also on the type of situation involved (Higgins, 1997, 1998). Situations in which a profit can be realized are characterized by a situational promotion focus and those in which a loss needs to be avoided by a situational prevention focus. Regulatory focus decisively influences thinking, feeling, and action, and for this reason assumes a central role in contemporary research on motivation.

For example, regulatory focus guides both goal selection and the goal-pursuit strategy (Crowe & Higgins, 1997; Förster, Higgins, & Bianco, 2003; Liberman, Molden, Idson, & Higgins, 2001) and influences both the timing of when an action is initiated and the work rate (Freitas, Liberman, Salovey, & Higgins, 2002). The different levels of preparedness to take risks for promotion and prevention (Friedman & Förster, 2001) result in different work strategies in terms of signal detection (Crowe & Higgins). Having suc-

ceeded or failed in a task triggers different emotions (Roney, Higgins, & Shah, 1995) and different counterfactual thought processes (Roese, Hur, & Pennington, 1999) in promotion- and prevention-oriented individuals. Regulatory focus theory also predicts that success and failure feedback will have different effects on achievement motivation and, by extension, on the performance of promotion- and prevention-oriented individuals (Idson & Higgins, 2000).

A key prediction of regulatory focus theory (Higgins, 1997, 1998) concerns the equivalent value of the needs structure of the promotion and the prevention focus. It is assumed that individuals with a dispositional promotion focus and those with a dispositional prevention focus can deliver an equally good performance and want to achieve their goal. The difference between the two self-regulation systems lies rather in the manner in which the goals are to be achieved and in the choice of goals themselves (Brendl & Higgins, 1996).

With respect to dimensionality, Higgins (1997) contends that promotion and prevention are orthogonal constructs. However, several authors, such as Schwartz, Lehmann, and Roccas (1999), assume that different promotion-typical and prevention-typical values conflict with each other (e.g., security and self-realization). Kluger and Ganzach (2004) resolved this conceptual dispute by presuming that promotion and prevention can operate in two different modes, the monitoring and the action mode. Accordingly, in the monitoring mode, in other words during simple routine activities, promotion and prevention goals are independent of one another and can even be pursued simultaneously. However, in the action mode, which calls for immediate action, the needs underpinning the two foci are mutually exclusive. When urgent action is required, either the promotion focus or the prevention focus guides the action taken. To date, there have been numerous studies on regulatory focus, many of which have attempted to measure dispositional regulatory focus, thus producing different methods to do so.

One instrument developed to measure dispositional regulatory focus is the *Regulatory Focus Questionnaire* (RFQ; Higgins et al., 2001). Its mode of function is based on research by McClelland (1951, 1961) and Atkinson (1964), who found that, when one faces a new task, feelings develop which are linked to past tasks. Each new task evokes a feeling of pride in individuals with a subjective history of success. In turn, this activates energy which allows the person concerned to directly pursue the new objective. By contrast, a new task triggers a feeling of shame or unworthiness in individuals with a subjective history of failure, who then seek to deflect the new task. Based on these findings, the authors of the RFQ postulate that a subjective individual history mainly involving success with promotion-linked attitudes and patterns of behavior will lead to promotion pride, whereas an individual history mainly involving success with prevention-linked attitudes and patterns of behavior will lead to prevention pride. The individual items of the two scales of this questionnaire consequently relate either to the frequency of success in an individual's past

with actions linked to promotion (e.g., "How often have you accomplished things that got you "psyched" to work even harder?") or to prevention (e.g., "Not being careful enough has gotten me into trouble at times.").

Lockwood, Jordan, and Kunda (2002) also developed a questionnaire for measuring regulatory focus. The English-language questionnaire, created specifically to study young people's choice of role models, comprises a total of 18 items (9 promotion and 9 prevention items) to be answered on a 9-point scale ranging from *not at all true of me* to *very true of me.* In contrast to the items in the RFQ, the items in this questionnaire relate to current attitudes, actions, and habits (e.g., "In general, I am focused on preventing negative events in my life." or "I typically focus on the success I hope to achieve in the future.").

The *Regulatory Strength Measure* (RSM; Shah, Higgins, & Friedman, 1998), which is administered exclusively by computer, measures regulatory focus and the strength of promotion and prevention. It is based on Fazio's (1986, 1995) research, which found that the accessibility of attitudes reflects their subjective importance. Accordingly, attitudes which can be logged quickly on the computer are deemed particularly important. The RSM measures the time people require to type in their own *ideals* and *oughts* and to rate them; based on this data, conclusions are drawn about the importance and strength of promotion and prevention.

A further possibility for determining regulatory focus lies in recording values which can be attributed either to promotion or prevention. Liberman, Idson, Camacho, and Higgins' (1999) findings suggest that promotion orientation is linked to openness to change and prevention orientation to retaining the status quo. On the basis of these links, various dimensions of the *Schwartz Portrait Questionnaire* (SPQ; Schwartz et al., 1999) have been used to determine regulatory focus (e.g., in Van Dijk & Kluger, 2004). The SPQ distinguishes between a total of 10 different value dimensions, which in turn can be combined to the factors Conservation of the Status Quo (tradition, conformity, security), Self-Enhancement (power, achievement, hedonism), Openness to Change (stimulation, self-direction) and Self-Transcendence (universalism, benevolence). To measure dispositional regulatory focus, Van Dijk and Kluger use the items for the dimensions conformity, security, stimulation, and self-direction. Participants rating high on stimulation and self-direction and, at the same time, low on conformity and security were categorized as dispositionally promotion-oriented, whereas those rating low on stimulation and self-direction and high on conformity und security were categorized as dispositionally prevention-oriented.

As shown above, a number of methods have been developed and used to determine dispositional regulatory focus. Nevertheless, it seemed that the construction of a new instrument was both sensible and necessary for various reasons. The RFQ (Higgins et al., 2001) items relate to situations experienced in the past, partly even in childhood, in which success or failure were experienced in promotion or prevention situations (e.g., "Did you get on your parents'

nerves often when you were growing up?"). Having the items relate to events often taking place many years earlier is intended to reduce the tendency to give socially desirable responses. Therefore, it needs to be considered that answers can be less precise. The items in Lockwood et al.'s (2002) questionnaire relate to the importance of different goals and to the correspondingly preferred strategy to achieve a goal (approach or avoidance). These two factors are consequently mixed together. Furthermore, given the wording of some of the items (e.g., "My major goal in school right now is to achieve my academic ambitions."), this questionnaire can only be used in a context relating to initial and continuing education. However, the aim of the present study was to devise a questionnaire capable of being used generally, without being restricted to a particular target group. The RSM represents the sole implicit method for determining promotion and prevention. However, it can be administered only under extremely controlled conditions (e.g., in the laboratory) and is therefore unsuitable for online studies, for example. Consequently, however, we must assume that the responses are also less accurate. Finally, the SPQ can only be considered as a methodological aid for determining regulatory focus since it was not specially designed to measure this construct.

The aim of the studies described below was to devise a scale for measuring dispositional regulatory focus validly, reliably, and economically. In Study 1, the Regulatory Focus Scale is developed by using both exploratory and confirmatory factor analyses. In Study 2, the factor structure of the RFS found in Study 1 is checked using an independent sample.

Study 1

From 33 newly-constructed items, the task was to identify those most suitable for measuring promotion orientation and prevention orientation and combine these into a single scale. In addition, the connections between this scale and other additionally administered procedures were to be examined.

Method

Participants and procedure

The sample comprised 130 participants, of whom 82 (63%) were women, with an average age of 24 (*SD* = 4.1). As for the highest level of education achieved, 0.8% indicated having completed general secondary school (*Hauptschule*), 2.3% an apprenticeship, 84.6% a higher-level educational or vocational college, and 11.5% an university or university of applied sciences. The data was gathered in May and June 2005 in a laboratory facility at the Department of Economic Psychology, Educational Psychology, and Evaluation (Institut für Wirtschaftspsychologie, Bildungspsychologie und Evaluation) at the University of Vienna. First,

the RSM was administered to participants via computer. After this, using a paper-pencil format, the 33 new items were presented, and finally the 20 SPQ items. Processing took between 20 and 30 min. At the end, participants were each remunerated with a sum of 3 €.

Materials

Regulatory Strength Measure (Higgins, Shah, & Friedman, 1997): The RSM was translated into German by the authors and administered via computer.

Schwartz Portrait Questionnaire (Schwartz et al., 1999): The elements administered were the 20 items for the dimensions self-direction, stimulation, security, conformity, and tradition in the German version of the SPQ.

New items (see Appendix): In generating these items, an attempt was made to reflect the core statements of Higgins' (1997, 1998) regulatory focus theory in the wording of the items. We attempted to formulate items depicting the importance of the individual's own ideals and of obligations (oughts). Furthermore, items were constructed that relate to variables which can be derived directly from the individual's own ideals or obligations (e.g., creativity or apprehension). In total, 33 items were generated, 17 for promotion orientation, and 16 for prevention orientation. The response format selected was a 7-point scale: *definitely untrue, not true, probably not true, neither true nor untrue, probably true, true, definitely true.*

Results and Discussion

Item selection

From the 33 newly-constructed items, the task was to identify those most suitable for measuring dispositional promotion focus and prevention focus. In view of the skewed distribution of responses (overwhelming agreement), Items 2, 9, and 11 were excluded from further analysis. Exploratory factor analyses were then used to examine the internal structure of the remaining items and to improve that structure by excluding further items.

The solution of the first factor analysis after varimax rotation (percentage of variance: 40.6%) provided a series of eigenvalues of the components that was close to a four-factor solution (eigenvalues of the first 8 components: 5.44, 2.96, 2.11, 1.87, 1.56, 1.47, 1.37, 1.22). Limiting to four factors provided loadings on six items below 0.4 on all of the factors (Items 3, 4, 24, 30, 32, 33). These were therefore removed from further analysis. Items 14 and 23 could not be attributed clearly to any factor and were therefore likewise excluded. In a further factor analysis (percentage of variance: 43.8%), again limited to four factors, there were two additional items (Item 15 and 12) that did not achieve factor loadings of 0.4 for any factor and which therefore were likewise excluded. A further factor analysis carried

out on the remaining 20 items (percentage of variance: 51.8%) showed that each item could be clearly attributed to one of the four factors. An attempt was made to further refine the structure of the four dimensions starting from these 20 items using confirmatory factor analyses and excluding further items. A priori correlations were admitted only between the promotion factors (Openness to New Things and Autonomy) or between the prevention factors (Orientation to the Expectations of Others and Sense of Obligation). Finally, Openness to New Things was reduced to Items 16, 22, and 27, Autonomy to 5 and 6, Orientation to the Expectations of Others to 28 and 31, and Sense of Obligation to 10, 20, and 26.

An analysis of the residuals for this model suggested low negative correlations between Autonomy and Orientation to the Expectations of Others and between Openness to New Things and Orientation to the Expectations of Others. However, it is possible that these low correlations can be better explained by corresponding loadings on the manifest variables. This model provided a good fit to the data ($\chi^2(33)$ = 38.7, p = .23, $AGFI$ = .91, $RmSEA$ = .04, CFI = .99) and was therefore taken as the basis for Study 2.

Links between RFS, SPQ, and RSM

In order to be able to compare the RSM results with the results of the other procedures, scores were calculated for the ideal self and the ought self, respectively. To this end, in accordance with Higgins et al. (1997), the respective response latencies (the time required to enter oughts and ideals) were totaled. The correlations between the 10 new RFS items, the 20 SPQ items, and the RSM scores showed clear links between the promotion dimensions of the SPQ (self-direction and stimulation) and the promotion dimensions of the RFS as well as between the prevention dimensions of the

SPQ (tradition, conformity, and security) and the prevention dimensions of the RFS. By contrast, there were no to only very slight correlations evident between the two RSM dimensions and the administered SPQ items and the new items (Table 1). Even when the SPQ and the RFS items corresponding to the promotion and prevention dimensions were combined, the picture obtained remained practically unchanged. Furthermore, the RSM dimensions ideals and oughts correlated very positively with one another (r = .59).

In a further step, the participants' results were categorized for each procedure and entered in contingency tables relating them to one another (Table 2). For the RFS, a single promotion score was calculated from its five promotion items and a single prevention score from the five prevention items. Participants whose promotion score lay above the median and whose prevention score lay below the median were categorized as dispositionally promotion-oriented; those whose prevention score lay above the median and whose promotion score lay below the median were categorized as prevention-oriented. All other participants were classified as indifferent (i.e., neither dispositionally promotion- nor prevention-oriented). Following Van Dijk and Kluger (2004), the scores for the SPQ dimensions self-direction and stimulation, on the one hand, and conformity, security, and tradition, on the other, were grouped into two dimensions. As done above with the RFS scores, participant categorization was carried out with the SPQ and RSM scores on the basis of the respective medians. Table 2 shows the extent to which the results match when categorized in this way.

As with the comparison at the dimensional level, the categorizations of participants using the RFS and the SPQ data were similar to each other, but deviated markedly from those using the RSM data. One cause of the difference in these results could be that the RFS and the SPQ are explicit procedures, whereas the RSM is an implicit procedure.

Table 1

Correlations Between the Dimensions of the Regulatory Focus Scale, the Schwartz Portrait Questionnaire, and the Regulatory Strength Measure

| | | RFS | | | | SPQ | | | | | RSM | |
		ONT	A	OEO	SO	SD	ST	CO	SE	TR	Ideals	Oughts
RFS	ONT	1.00										
	A	.38	1.00									
	OEO	-.16	-.17	1.00								
	SO	-.02	.07	.30	1.00							
SPQ	SD	.70	.25	-.07	-.17	1.00						
	ST	.39	.34	.01	.01	.54	1.00					
	CO	-.28	-.44	.36	.06	-.25	-.33	1.00				
	SE	-.22	-.27	.30	.33	-.21	-.11	.53	1.00			
	TR	-.12	-.24	.14	.04	-.12	-.13	.46	.31	1.00		
RSM	Ideals	-.014	.02	.15	.05	.04	.23	-.11	.03	-.13	1.00	
	Oughts	.084	.01	.04	.03	.09	.09	-.10	-.08	-.19	.59	1.00

Notes. RFS = Regulatory Focus Scale; SPQ = Schwartz Portrait Questionnaire; RSM = Regulatory Strength Measure; ONT = Openness to New Things; A = Autonomy; OEO = Orientation to the Expectations of Others; SO = Sense of Obligation; SD = Self-Direction; ST = Stimulation; CO = Conformity; SE = Security; TR = Tradition.

Table 2
Categorization of Individual Participants

		Regulatory Strength Measure			Σ	Regulatory Focus Scale			
		Promotion	Indifferent	Prevention		Promotion	Indifferent	Prevention	Σ
Schwartz	Promotion	3	23	6	32	18	11	3	32
Portrait	Indifferent	8	43	5	56	13	30	13	56
Questionnaire	Prevention	6	27	6	39	4	16	19	39
	Σ	17	93	17	127	35	57	35	127
Regulatory	Promotion	3	26	6	35				
Focus Scale	Indifferent	8	42	7	57				
	Prevention	6	25	4	35				
	Σ	17	93	17	127				

As was the case for Greenwald, McGhee, and Schwartz (1998), we found no connection between the results of explicit and implicit measures. This argues against a direct comparison between the measurement instruments of the two groups and explains the low correlation between RFS and RSM values. In the present study, a positive correlation of $r = .58$ was found on the RSM for ideals and oughts, making a distinction between individuals with a dominant promotion focus or prevention focus impossible. It seems to suggest a general mixing of the regulatory focus scores with individual speed of processing.

Study 2

Method

The sample for the second study, conducted in October 2005, comprised 200 participants, of whom 154 (77%) were women, with an average age of 25. Participants were students taking psychology courses at the University of Vienna as well as employed individuals taking courses at the University of Economics (Wirtschaftsuniversität) in Vienna. The test administered consisted of the 10 RFS items.

Results and Discussion

The item loadings on the four factors, calculated using exploratory factor analysis, proved to be largely similar to those from Study 1. However, the confirmatory factor analysis model replicated from Study 1 only poorly satisfied the requirements for a good model fit ($\chi^2(33) = 123.1$, $p = < .001$, $AGFI = .81$, $RmSEA = .12$, $CFI = .74$), although the loading structure was similar to the model in Study 1 based on the level of the coefficients. Since the structure of this model can be explained well on a theoretical level, in a further step, a post hoc adjustment to the model was carried out. This was achieved by allowing a loading of Sense of Obligation onto Item 6 ("Rules and regulations are helpful and necessary for me.") relating to the factor Autono-

my, and a negative loading of Autonomy onto Item 31 ("I often think about what other people expect of me.") relating to the factor Orientation to the Expectation of Others. Both changes can be justified on a theoretical level. Additional measurement error correlations between individual manifest variables were then necessary to improve the fit of the model. These are shown in Figure 1. Modified in this way, the model (Figure 1) provided a satisfactory fit ($\chi^2(27) = 43.2$, $p = .25$, $AGFI = .91$, $RmSEA = .05$, $CFI = .96$).

General Discussion

In the Regulatory Focus Scale, a new, valid, and economical instrument for recording dispositional regulatory focus pursuant to Higgins (1997, 1998) is available for the Ger-
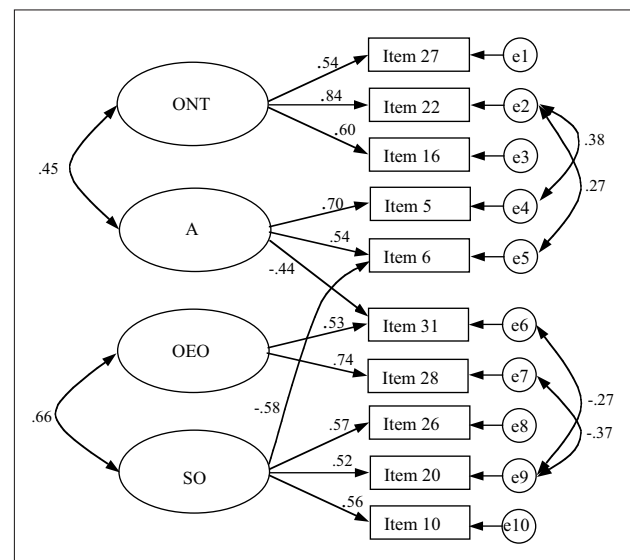

Figure 1. Diagram of the adapted model from Study 2.
Notes. ONT = Openness to New Things; A = Autonomy; OEO = Orientation to the Expectations of Others; SO = Sense of Obligation.

man-language area. From an original pool of 33 items, the 10 items most suitable for measuring dispositional regulatory focus were determined. These self-statements, with a present-day orientation, characterizing security needs and growth needs and reflecting pursuit of one's goals and satisfying the expectations of others, are to be rated using a 7-point scale. The structure of the RFS, derived from the results of Study 1 and largely confirmed in Study 2, comprises the promotion factors Openness to New Things and Autonomy and the prevention factors Sense of Obligation and Orientation to the Expectations of Others.

In agreement with the view of promotion and prevention advanced in Kluger and Ganzach (2004), as two dimensions independent of one another in the monitoring mode, only a very low negative correlation was found between the promotion scale and the prevention scale in this study (Table 1). When there is no acute need to take action, security-oriented behavior and the advancement of personal growth appear to exclude one another. In both samples studied, promotion and prevention can be considered largely mutually independent, orthogonal constructs.

Nevertheless, the loadings allowed in Study 2 (involving the factor Sense of Obligation and Item 6 ["Rules and regulations are helpful and necessary for me."] relating to the factor Autonomy, on the one hand, and the factor Autonomy and Item 31 ["I often think about what other people expect of me."] relating to the factor Orientation to the Expectation of Others, on the other) are comprehensible. It seems self-evident that the needs for autonomy and sense of obligation are not independent of one another in every instance. In a similar manner, the negative connection between autonomy and the importance of what other people think (Item 31) can also be explained well on a theoretical level.

When generating the 33 new items, from which the 10 RFS items were ultimately selected, we placed value on referencing the items to the present day, in contrast to the RFQ. At the same time, we attempted to avert the problems linked to social desirability bias by using forms of words that were as value-neutral as possible. Fundamentally, it appears that several different methods can determine dispositional regulatory focus. The questionnaire format was chosen above all for economic reasons and due to its broad range of applications. The RFS can be administered as part of an online investigation or in the laboratory via computer or even in paper-pencil format. In the research context, this means that it is possible to rapidly categorize participants into dispositionally promotion-oriented and prevention-oriented individuals which should facilitate and further advance research on regulatory focus in the German-language area.

Author Note

References

Atkinson, J. W. (1964). *An introduction to motivation.* Princeton, NJ: Van Nostrand.

Brendl, C. M., & Higgins, E. T. (1996). Principles of judging valence: What makes events positive or negative? In M. P. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 28, pp. 95–160). New York: Academic Press.

Crowe, E., & Higgins, E. T. (1997). Regulatory focus and strategic inclinations: Promotion and prevention in decision-making. *Organizational Behavior & Human Decision Processes, 69,* 117–132.

Deci, E. L., Koestner, R., & Ryan, R. M. (1999). A meta-analytic review of experiments examining the effects of extrinsic rewards on intrinsic motivation. *Psychological Bulletin, 125,* 627–668.

Dweck, C. S., & Leggett, E. L. (1988). A social-cognitive approach to motivation and personality. *Psychological Review, 95,* 256–273.

Fazio, R. H. (1986). How do attitudes guide behavior? In R. M. Sorrentino & E. T. Higgins (Eds.), *Handbook of motivation and cognition: Foundations of social behavior* (pp. 204–243). New York: Guilford Press.

Fazio, R. H. (1995). Attitudes as object-evaluation associations: Determinants, consequences, and correlates of attitude accessibility. In R. E. Petty & J. A. Krosnick (Eds.), *Attitude strength: Antecedents and consequences* (pp. 247–282). Mahwah, NJ: Erlbaum.

Förster, J., Higgins, E. T., & Bianco, A. T. (2003). Speed/accuracy decisions in task performance: Built-in trade-off or separate strategic concerns? *Organizational Behavior and Human Decision Processes, 90,* 148–164.

Freitas, A. L., Liberman, N., Salovey, P., & Higgins, E. T. (2002). When to begin? Regulatory focus and initiating goal pursuit. *Personality and Social Psychology Bulletin, 28,* 121–130.

Friedman, R. S., & Förster, J. (2001). The effects of promotion and prevention cues on creativity. *Journal of Personality and Social Psychology, 81,* 1001–1013.

Greenwald, A. G., McGhee, D. E., & Schwartz, J. L. K. (1998). Measuring individual differences in implicit cognition: The implicit association test. *Journal of Personality and Social Psychology, 74,* 1464–1480.

Herzberg, F., Mausner, B., & Snyderman, B. B. (1959). *The motivation to work.* New York: Wiley.

Higgins, E. T. (1997). Beyond pleasure and pain. *American Psychologist, 52,* 1280–1300.

Higgins, E. T. (1998). Promotion and prevention: Regulatory focus as a motivational principle. *Advances in Experimental Social Psychology, 30,* 1–46.

Higgins, E. T., Friedman, R. S., Harlow, R. E., Idson, L. C., Ayduk, O. N., & Taylor, A. (2001). Achievement orientations from subjective histories of success: Promotion pride versus prevention pride. *European Journal of Social Psychology, 31,* 3–23.

Higgins, E. T., Shah, J., & Friedman, R. (1997). Emotional responses to goal attainment: Strength of regulatory focus as moderator. *Journal of Personality and Social Psychology, 72,* 515–525.

Idson, L. C., & Higgins, E. T. (2000). How current feedback and chronic effectiveness influence motivation: Everything to gain versus everything to lose. *European Journal of Social Psychology, 30,* 583–592.

Kluger, A. N., & Ganzach, Y. (2004). Two Faces of Excellence: Perfection versus Eminence. In G. B. Graen (Ed.), *New Frontiers of Leadership* (pp. 67–97). Greenwich, CT: Information Age Publishing.

Liberman, N., Idson, L. C., Camacho, C. J., & Higgins, T. E. (1999). Promotion and prevention choices between stability

and change. *Journal of Personality and Social Psychology, 77,* 1135–1145.

Liberman, N., Molden, D. C., Idson, L. C., & Higgins, E. T. (2001). Promotion and prevention focus on alternative hypotheses: Implications for attributional functions. *Journal of Personality and Social Psychology, 80,* 5–18.

Lockwood, P., Jordan, C. H., & Kunda, Z. (2002). Motivation by positive or negative role models: Regulatory focus determines who will best inspire us. *Journal of Personality and Social Psychology, 83,* 854–864.

McClelland, D. C. (1951). *Personality.* New York: Holt, Rinehart & Winston.

McClelland, D. C. (1961). *The Achieving Society.* Princeton, NJ: Van Nostrand.

Roese, N. J., Hur, T., & Pennington, G. L. (1999). Counterfactual thinking and regulatory focus: Implications for action versus inaction and sufficiency versus necessity. *Journal of Personality and Social Psychology, 77,* 1109–1120.

Roney, C. J., Higgins, E. T., & Shah, J. (1995). Goals and framing: How outcome focus influences motivation and emotion. *Personality and Social Psychology Bulletin, 21,* 1151–1160.

Schwartz, S. H., Lehmann, A., & Roccas, S. (1999). Multimethod probes of basic human values. In J. Adamopoulos & Y. Kashima (Eds.), *Social psychology and cultural context: essays in honor of Harry C. Triandis* (pp. 107–123). Newbury Park, CA: Sage.

Shah, J. Y., Higgins, E. T., & Friedman, R. S. (1998). Performance incentives and means: How regulatory focus influences goal attainment. *Journal of Personality and Social Psychology, 74,* 285–293.

Van Dijk, D., & Kluger, A. N. (2004). Feedback sign effect on motivation: Is it moderated by regulatory focus? *Applied Psychology: An International Review, 53,* 113–135.

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Appendix

Thirty-three Newly-Constructed Items to Measure Promotion and Prevention (Translated Version)

1. I am afraid of not fulfilling the obligations on me.
2. For me, it is particularly important to be able to go my own way and do the things which interest me and which suit me.
3. I often think about how I can avoid failures in my life.
4. For me, it is particularly important to live in a stable environment.
* 5. I prefer to work without instructions from others.
* 6. Rules and regulations are helpful and necessary for me.
7. In new, unfamiliar situations I feel uncomfortable.
8. Changes make my life thrilling and worth living.
9. It is very important to me that I am satisfied with myself, regardless of what other people think.
* 10. For me, it is very important to carry out the obligations placed on me.
11. It is very important to me to develop myself further and to improve myself.
12. I admit that I make mistakes.
13. I set myself very high goals and risk not achieving them as a consequence.
14. I try to avoid risk as far as possible, as a rule.
15. Hobbies and leisure pursuits are an extremely important part of my life.
* 16. I generally solve problems creatively.
17. Financial security is extremely important to me.
18. In risk situations, I tend to go for it and take the risk.
19. If I do something well, it is important to me to be praised by other people.
* 20. I'm not bothered about reviewing or checking things really closely.
21. I am a fairly anxious person.
* 22. I like to do things in a new way.
23. I try to avoid changes in my life as far as possible.
24. New, unfamiliar situations represent a challenge for me.
25. I feel constrained by rules and regulations.
* 26. I always try to make my work as accurate and error-free as possible.
* 27. I like trying out lots of different things, and am often successful in doing so.
* 28. It is important to me that my achievements are recognised and valued by other people.
29. For me, it is very important not to do anything wrong.
30. Not being careful enough has often got me into trouble.
* 31. I often think about what other people expect of me.
32. I try to solve problems using tried and trusted methods.
33. I set myself goals which I am confident I will achieve.

Thirty-three Newly-Constructed Items to Measure Promotion and Prevention (Original Version)

1. Ich habe Angst davor, meine Verpflichtungen nicht zu erfüllen.
2. Für mich ist es besonders wichtig, meinen eigenen Weg gehen zu können und das machen zu können, was mich interessiert und mir entspricht.
3. Ich denke oft daran, wie ich Misserfolge in meinem Leben vermeiden kann.
4. Für mich ist es besonders wichtig, in einer stabilen Umwelt zu leben.
* 5. Ich bevorzuge es, ohne fremde Anleitung zu arbeiten.
* 6. Regeln und Vorschriften sind für mich hilfreich und notwendig.
7. In neuen, unbekannten Situationen ist mir nicht wohl.
8. Veränderungen machen mein Leben spannend und lebenswert.
9. Es ist sehr wichtig für mich, dass ich selbst mit mir zufrieden bin, unabhängig von der Meinung anderer.
* 10. Für mich ist es sehr wichtig, meinen Verpflichtungen nachzukommen.
11. Es ist für mich sehr wichtig, mich weiterzuentwickeln und zu verbessern.
12. Ich gestehe mir Fehler zu.
13. Ich setze meine Ziele sehr hoch und riskiere dadurch auch, sie nicht zu erreichen.
14. Ich versuche Risiko generell soweit wie möglich zu vermeiden.
15. Hobbys sind ein äusserst wichtiger Bestandteil meines Lebens.
* 16. Probleme löse ich meist auf kreative Art und Weise.
17. Finanzielle Sicherheit ist für mich äusserst wichtig.
18. In riskanten Situationen neige ich dazu zu riskieren.
19. Wenn ich eine Sache gut mache, ist es für mich wichtig, von anderen gelobt zu werden.
* 20. Dinge ganz genau zu überprüfen bzw. zu kontrollieren liegt mir nicht.
21. Ich bin ein eher ängstlicher Mensch.
* 22. Ich erledige Dinge gerne auf eine neue Art und Weise.
23. Ich versuche Veränderungen in meinem Leben so weit wie möglich zu vermeiden.
24. Neue, unbekannte Situationen stellen für mich eine Herausforderung dar.
25. Von Regeln und Vorschriften fühle ich mich eingeschränkt.
* 26. Ich versuche immer möglichst genau und fehlerfrei zu arbeiten.
* 27. Ich probiere gerne viele verschiedene Sachen aus und habe auch oft Erfolg damit.
* 28. Es ist wichtig für mich, dass meine Leistungen von anderen anerkannt und geschätzt werden.
29. Für mich ist es sehr wichtig, nichts falsch zu machen.
30. Mangelnde Vorsicht hat mich schon des Öfteren in Schwierigkeiten gebracht.
* 31. Ich denke oft darüber nach, was andere von mir erwarten.
32. Probleme versuche ich auf bewährte Art und Weise zu lösen.
33. Ich setze mir nur Ziele, von denen ich mir sicher bin, dass ich sie auch erreichen werde.

* Regulatory Focus Scale Items