

Modes of Self-Regulation

Assessment and Locomotion as Independent Determinants in Goal Pursuit

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In a general sense, the notion of self-regulation refers to the governing and directing of attention, resources, or actions towards one's adopted goals. This is consistent with the everyday conception of goal-directed action, in which a person is thought to evaluate available pursuits, select the most desirable option, and engage in behaviors designed to attain the goal. For example, a person may consider various potential life paths following graduation from high school and ultimately decide that he or she would like to earn a bachelors degree, which would then lead to behaviors such as attending (often boring) lectures and reading (often dry) textbooks. Such understanding of self-regulation makes two functions apparent. First, the person *assesses* the value of potential goals and the various means that serve each goal. Second, the individual *locomotes*, or moves away from, the current state towards a desired goal state. As such, assessment and locomotion as a body form part and parcel of all self-regulatory activity.

Assessment refers to a determination of the rate, amount, size, value, or importance of something; it concerns critical appraisal for the purpose of understanding or interpreting, or as a guide in taking action. Thus the value or importance of both the current state and the end state can be independently assessed, and so can the value or utility of the means used to move toward or away from that end state. According to regulatory mode theory, assessment "constitutes the comparative aspect of self-regulation concerned with critically evaluating entities or states, such as goals or means in relation to alternatives in order to judge relative quality" (Kruglanski et al., 2000, p. 794). For example, an individual may assess preferences among alternatives, and how well he or she performed in the past. Individuals strong in assessment mode are preoccupied with these kinds of comparative judgments.

By contrast, locomotion refers to moving from place to place. According to field theory (see Deutsch, 1968; Lewin, 1951) locomotion concerns any change of position occurring in any region whatsoever within the life space. Thus the main concern of persons high on the locomotion dimension is simply to move in an experiential or psychological sense. According to regulatory mode theory, the locomotion mode “is the self-regulatory aspect concerned with movement from state to state and with committing the psychological resources that will initiate and maintain goal-directed progress in a straightforward manner, without undue distractions or delays” (Kruglanski et al., 2000, p. 794). In the locomotion mode, individuals emphasize “getting on with it,” and “making something happen” rather than engaging in critical evaluation. Indeed, individuals strong in the locomotion orientation might refrain from critical evaluation if stopping to reflect impedes continuous movement from state to state, and instead “just do it.” As such, locomotion involves merely moving away from a current state, with no particular direction or destination in mind. As the intent to locomote gets translated into the specifics of actual movement, the direction of the motion will become determined, but the specific destination might still be left indeterminate.

An individual’s temperament and socialization result in varying degrees of concern for the locomotion and assessment modes. These individual differences in locomotion and assessment tendencies have been measured using the Regulatory Mode Questionnaire (RMQ; Kruglanski et al., 2000). Importantly, a person’s chronic level of assessment is orthogonal to his or her chronic level of locomotion. This shouldn’t be surprising. After all, the reasons why individuals may crave movement or progress (i.e., locomotion) would seem quite unrelated to reasons why they may develop a concern for standards and for critically evaluating alternatives (i.e., assessment). Because of such independence, it is possible for individuals to be high on both assessment and locomotion, low on both, or high on one and low on the other.

Within a general personality architecture (Cervone, 2004), assessment and locomotion best belong in the category of self-regulatory systems identified by Mischel (1973). More specifically, they pertain to generalized modes of self-regulation, representing broad emphases regarding the way in which goals are pursued. High (vs. low) assessors’ preferred mode of self-regulation consists of appraising; that is, carefully evaluating potential moves against standards and alternatives. In contrast, high (vs. low) locomotors’ preferred mode of self-regulation consists of doing; that is, carrying out acts believed to promote rapid advancement toward goal attainment. In other words, the assessment and locomotion constructs pertain to self-regulatory functions that may receive different degrees of emphasis in the course of goal pursuit. As such, they occupy a middle ground between general personality patterns tapped by the Big Five personality factors (McCrae & Costa, 1987) and specific values, goals and standards differentiating among individuals. In this way, higher order personality traits (e.g., the Big Five) may serve as strategic channels for the satisfaction of the regulatory modes.

In addition to individual differences in the chronic degree of assessment and locomotion, situations may arouse the operation of one mode over the other. In this sense, assessment and locomotion represent both individual difference and situational

variables. For example, time pressure may heighten locomotion tendencies, whereas the presence of a critical observer may heighten assessment tendencies. Previous research has manipulated regulatory mode by having participants recall times in which they engaged in assessment or locomotion. The recall of such instances is assumed to activate the mode associated with the memories, priming the participants to regulate their subsequent behavior in line with the activated mode (Avnet & Higgins, 2003).

Although these two functions of self-regulation are contained in all major models of self-regulation (see Carver & Scheier, 1990; Gollwitzer, 1990; Higgins, 1989; Kuhl, 1985; Miller, Galanter, & Pribram, 1960; Mischel, 1974, 1981), they are typically construed as functionally interdependent parts of a single self-regulatory process rather than the independent modes we have outlined here. According to such an analysis, the relative emphasis on assessment and locomotion should work in harmonious concert, jointly covarying with the perceived importance of a given self-regulatory activity. For example, control theory (Carver & Scheier, 1990) suggests that individuals continually assess the discrepancy between a current state and a desired state, and the detection of such a discrepancy instigates locomotion to reduce the discrepancy, with continuous assessment of the rate and state of progress towards the goal, terminating locomotion when the standard has been reached. These feedback loops are conceptualized in such a way that locomotion cannot commence until a discrepancy has been detected, with locomotion always directed towards a specified end. Moreover, assessment of progress and locomotion towards the goal are jointly carried out in parallel.

In contrast, regulatory mode theory suggests that the independence of the two modes operates such that assessment and locomotion can work in opposition to each other in the demand for resources (e.g., time, energy, attention), leading to the inhibition of one mode in favor of the other. Sometimes, the detection of a discrepancy leads to rumination about past failures or a pessimistic assessment of the attainability of the goal, leading to stagnation rather than forward movement. At other times, the desire for locomotion may lead to hastened movement towards the first accessible activity without the consideration of alternatives. Similarly, the momentum gained from locomotion may lead the person to continue beyond the original goal that was set without monitoring the progress that was made. Hence, compared to classic theories of self-regulation, regulatory mode theory is concerned with the assessment and locomotion functions more generally and as independent from one another. (For a review of the differences between regulatory mode theory and other self-regulatory constructs, see Higgins, Kruglanski, & Pierro, 2003).

The independence of the two modes allows for a possible predominance of one mode over the other. Generally, assessment should lead to greater consideration of possible routes to goal pursuit, guiding the self in specified directions. However, a person operating predominately in the assessment mode may engage in excessive musing, always looking but never leaping. Generally, locomotion should improve the performance of many tasks through its emphasis on doing something, increasing attainment. However, a person operating predominately in the locomotion mode may engage in much activity without any particular end in mind, essentially running around

like a chicken with its head cut off. Optimal self-regulation should usually utilize both modes of the self-regulatory system. For example, assessment should significantly contribute to goal attainment by exerting a guiding constraint on locomotion. As such, blind locomotion may often result in various mistakes, potentially avoidable if a modicum of assessment was in place. Similarly, the assessment of the best goal and the most appropriate means of attaining it is not beneficial unless the individual engages in locomotion towards the goal.

The operation of the regulatory modes has implications for attitudes, perceptions, emotions, and behaviors for individual goal pursuit, interpersonal relations, organizational processes, and cultural differences. We will review the evidence for the distinct influence of locomotion and assessment in each of these domains as derived from regulatory mode theory as well as the evidence for the complementary role the two modes play in self-regulation. The review locates the modes in a general personality architecture while also suggesting that the activation of each mode is jointly determined by individual differences and situational forces.

Individual Goal Pursuit

Individual goal pursuit represents quintessential self-regulation, with the assessment and locomotion modes used as methods of guiding the self towards desired ends. As discussed above, regulatory mode concerns the “how” question in goal pursuit, with locomotion and assessment leading to distinct ways of pursuing goals. High locomotion should be associated with greater effort invested in activities that afford movement, whereas high assessment should be associated with greater effort invested in activities that afford comparisons and critical thinking. In addition, locomotion and assessment should be associated with different strategies for deciding among alternative goals and means. The preference for forward movement should lead high locomotion to be characterized by a preference for activity flow. Because locomotion should be associated with perpetual movement, it should also be negatively related to counterfactual thinking and regret, as each would disrupt the flow of activity. In contrast, assessment should be positively related to counterfactual thinking and regret, as well as critical and comparative thinking about the self, influencing the way in which the self is perceived. Most tasks should require the successful operation of both modes, such that the most functional self-regulation should utilize both modes in a complementary fashion.

Effort Investment

Some activities should naturally afford locomotion, whereas other activities naturally afford assessment. Taylor and Higgins (2002) investigated the types of goals that would

fall into each category and measured the extent to which locomotion and assessment were correlated with effort devoted to each activity. In the first phase of the study, an initial sample generated potential activities. In the next phase, a new sample rated the reason for doing each activity. To assess the link between locomotion and each activity, participants rated the extent to which the reason for doing the activity is “because it involves action or movement away from the current situation. It satisfies my need for change, to do something, anything different, regardless of what I am currently doing.” To assess the link between assessment and each activity, participants rated the extent to which the reason for doing the activity is “because it involves evaluating, measuring, or interpreting information. It satisfies my need for critically appraising and evaluating something in order to be sure I am doing it correctly.”

Activities primarily associated with locomotion included playing sports, exercising, playing video games, dancing, and partying. Activities primarily associated with assessment included thinking, attending cultural events, academic activities, financial duties, obtaining news, correspondence, and meditation. Activities such as traveling and going places in general were associated equally with locomotion and assessment. In a subsequent study, Taylor and Higgins (2002) tested the relation between scores on the locomotion and assessment scales and willingness to invest energy into four of the activities. Locomotion (but not assessment) scores were positively related to the energy participants would put into the prototypical locomotion tasks of playing sports and exercising. Assessment (but not locomotion) scores were positively related to the energy participants would put into the prototypical assessment activities of financial duties and academic activities.

Together, these studies suggest that some tasks allow greater locomotion whereas other tasks allow greater assessment, and individuals are willing to invest more energy into tasks that fit their regulatory mode. That is, locomotors are willing to invest more energy into tasks that allow for movement than into tasks that allow for critical evaluation, while assessors are willing to invest more energy into task that allow critical evaluation than tasks that allow for movement.

Judgment and Decision Making

Deciding among a set of alternative goals or means can be conducted through two common strategies relevant to locomotion and assessment. First, through progressive elimination, the decision maker may evaluate the options based on the most important attribute and eliminate the object with the lowest perceived value on this attribute. Then, the decision maker would do the same for the second most important attribute, followed by the third, and so on until a single item remains. This decision strategy should fit locomotion because the process changes the set of the alternatives at the conclusion of each phase, signifying movement. This strategy should not fit assessment because each phase results in fewer items to be evaluated, which reduces the number of comparisons that can be made. Another common strategy is the full

comparison approach, in which every alternative is compared on all relevant attributes. The decision is then made based on a complete evaluation of all attributes. This decision strategy should fit assessment because it creates as many comparisons as possible, leading to maximum evaluation, but should not fit locomotion because it signifies a lack of progress.

In order to test the above predictions, Avnet and Higgins (2003) manipulated participants' situational levels of locomotion and assessment by having them recall instances in which they acted in accordance with one of the modes. To do this, participants were presented with 3 of the items from the regulatory mode questionnaire (Kruglanski et al., 2000), and were asked to think about a time they behaved in a manner consistent with the item, and to briefly describe the episode. Participants were then presented with an array of reading lights and asked to select the one they would prefer to own (all participants selected the same, superior light). Consistent with the hypotheses, participants in the locomotion condition were willing to pay more for the reading light when it was chosen using the progressive elimination strategy than when it was selected using the full comparison strategy, and were willing to pay more than participants in the assessment condition who used the full comparison strategy. Conversely, participants in the assessment condition were willing to pay more for the reading light when it was chosen using the full comparison strategy than when it was selected using the progressive elimination strategy, and were willing to pay more than participants in the locomotion condition who used the full comparison strategy. This suggests that locomotors experienced regulatory fit (Higgins, 2000) when using the progressive elimination strategy and assessors experienced regulatory fit when using the full comparison strategy, increasing the value of the reading light due to the positive experience of making the decision using a strategy consistent with their active regulatory mode.

In addition to general fit between a regulatory strategy and a person's regulatory mode, locomotion and assessment should orient people toward different features of potential choices when making decisions. Because high (vs. low) locomotors prefer to remain in perpetual motion, they should pay particular attention to the expectancy of attainment that each goal provides because attainable goals promise reliable movement, whereas unattainable ones signal possible obstacles or thwarting of movement. In contrast, high (vs. low) assessors should pay particular attention to a goal's value or importance because of their concern with pursuing the right goals, the best goals, or the goals that will reflect on them most positively if attained.

To test this possibility, Kruglanski et al. (2000) asked participants to list five personal attributes they wanted to attain. Participants listed attributes such as "outgoing" and "knowledgeable." Next, participants were asked to list all the means they could use to attain each goal. Finally, they rated the value of the goal and their likelihood of attaining the goal. Consistent with the hypotheses, locomotion was positively related to the attainability of the goals listed, but was unrelated to the perceived value of the goals. In addition, assessment was positively related to the perceived value of the goals, and negatively related to the attainability of the goals.

These results support the hypothesis that locomotors prioritize attainability over value, whereas assessors prioritize value over attainability.

An orientation towards different aspects of means and goals should lead locomotion and assessment to differentially relate to the number of means generated and considered when pursuing a particular goal. That is, assessors should prefer to have many potential means to evaluate in order to select the best possible route. Locomotors should not be concerned with such evaluations, and therefore locomotion should not be related to the number of means generated. Supporting this expectation, assessment was positively related to a greater number of means generated for the attribute goals, whereas locomotion was not correlated with the number of means generated.

Although locomotors are not concerned with the critical evaluation of means, they should want to “get on with it.” That is, they should prefer to select a means quickly in order to continue moving through tasks rather than getting “hung up” in thoughts regarding the selection of a particular path. Assessors on the other hand should not be concerned with the speed with which decisions are made, but rather with the correctness of each decision. To test this prediction, immediately following their evaluation of the goals’ expectancy and value, participants were instructed to type as quickly as possible the best means of attaining their personal attribute goals. As predicted by regulatory mode theory, high (vs. low) locomotion was associated with rapid responses to the query, whereas assessment was unrelated to the speed of response.

Further testing the idea that locomotors would like to “get on with it” and that assessors are willing to wait as long as it takes to find the correct or right option, Klem, Higgins, and Kruglanski (1996) told participants that they would be a part of a “nationwide study on the utility of 9 different tasks for evaluating creativity” and that some students found each task very interesting and some students found each task very boring. Participants were told that there were such wide individual differences in preferences for the tasks that the researchers would provide them with background information on all the tasks so they could choose the task that best suited them. Finally, participants were informed that the software that would provide the background information was not working properly, so it would take 5 minutes or more for the information to appear on the screen. However, if they would like, they could start one of the tasks immediately by pressing a number between 1 and 9. If they chose to wait and grew tired of waiting, they were told they could press a number between 1 and 9 at any time to begin one of the tasks. In fact, the background information never appeared on the screen and the waiting time was terminated after 10 minutes.

This design allowed for two dependent measures. The first dependent measure was whether the participant entered a number immediately or waited for background information. The second dependent measure was how long participants who chose to wait lingered before pressing a key to begin. Consistent with the conceptualization of each regulatory mode, locomotors preferred to move, whereas assessors preferred to wait for information that would shed light on the best decision. High (vs. low) locomotors

were more likely to begin a task immediately rather than wait for background information. In addition, assessment was positively correlated with the time spent waiting once the decision to wait was made.

In a second study, Klem et al. (1996) told participants that they would be selecting one task from five possible tasks to complete, with the same cover story regarding the variation among respondents in terms of their interest in each task. In this study there was no delay until participants were presented with background information. Instead, the quality of the background information was manipulated, with low quality information presented in one condition (i.e., where the task was developed, who had developed the task, and the number of items in the task), and high quality information presented in the other condition (i.e., how much other students at their university liked the task, what they would actually be doing in the task, and what types of people would enjoy the task). Participants were instructed that when they asked for information about a task, they could look at one, two, or all three of the different types of information available. At any point, they could begin one of the tasks by clicking its associated key.

This design allowed Klem et al. (1996) to investigate two dependent variables: specifically, the number of tasks considered prior to making a decision and the number of total sets of information studied prior to making a decision served as the dependent measures. Consistent with the results from Study 1, assessment was positively related to both indexes of the amount of information considered, and locomotion was negatively related to both indexes of the amount of information considered. Moreover, assessment was more strongly related to the amount of information processed when the information was of high quality than when the information was of low quality, suggesting that high quality information better fulfills the evaluative aims of those high on assessment.

In order to provide further evidence that locomotors wish to move quickly through tasks and that assessors are concerned with evaluations according to comparative standards, Kruglanski and colleagues (2000) asked participants to engage in a proof-reading exercise. During this task, participants were given two copies of a passage, one marked "master copy" and the other labeled "sample copy." Participants, with red pen in hand, were asked to mark any points in the sample copy that were different from the master copy. Consistent with regulatory mode theory, high (vs. low) locomotion was associated with less time spent completing the task, and high (vs. low) assessment was associated with a larger number of errors marked. In other words, locomotion was associated with moving quickly through the task, whereas assessment was associated with critical evaluation and attention to the comparative standard.

Taken together, these results consistently demonstrate, using several different methodologies, that locomotion is associated with a concern for rapid forward progress in decision making, whereas assessment is associated with an exhaustive comparison of possible standards. The strategy used to make a decision can even lead to greater perceived value for alternatives processed using a strategy that fits the currently active regulatory mode.

Activity Flow

In addition to the decision to engage in goal pursuit, locomotion should involve greater commitment to maintain action. Therefore, high (vs. low) locomotors should exhibit a stronger task orientation, which reflects the tendency to attend to an activity and persist conscientiously until completion. Confirming this expectation, locomotion is positively correlated with measures of flow (e.g., “I tend to be quite wrapped up and interested in what I am doing”; Huba, Aneshensel, & Singer, 1981) and vitality (Ryan & Frederick, 1997).

Although a steady flow of activity is likely to characterize the behavior of locomotors, assessors should be more likely to break the flow in order to evaluate, leading to greater distraction, rumination, and postponed movement. In contrast, locomotion should be positively related to maintaining control over one’s attention and decision making. As suggested by this analysis, assessment is positively associated with volitional inhibition (tapping such distraction and rumination; Kuhl & Fuhrmann, 1998), while locomotion is negatively associated with volitional inhibition (Higgins, Pierro, & Kruglanski, 2002). In addition, locomotion, but not assessment, was positively correlated with self-regulatory competence and self-maintenance, including maintaining control over attention. Similarly, locomotion was positively related to the behavioral activation system, whereas assessment was positively related to the behavioral inhibition system (Higgins et al., 2002). This suggests that the activation of the locomotion mode heightens the desire to maintain a course of action, whereas the activation of the assessment mode increases the detection of problems and reconsideration of plans.

Counterfactual Thinking and Regret

Assessors’ main aim is to decide the best course of action. Because a negative outcome implies having failed to make accurate evaluations, individuals with a strong assessment orientation should be more prone to engage in the generation and consideration of counterfactuals and, as a consequence, to experience more regret about their choice. In contrast, individuals with a strong locomotion orientation are less likely to pay attention to a decision outcome. They want to move on to the next goal pursuit, to just “get on with it” rather than dwell on the past. Therefore, high locomotion should lead to less counterfactual thinking and regret.

To test these predictions, Pierro et al. (2008) conducted three studies. In the first study, participants read a scenario about a computer purchase with a negative outcome. To assess counterfactuals after reading the scenario, participants were asked to write down the thoughts that had come to their mind. Participants also filled out a rating scale measuring regret. In support of the hypotheses, assessment was positively related to both counterfactual thinking and regret, whereas locomotion was negatively

related to counterfactual thinking and regret. To test the hypotheses again, for decisions that the participants had actually made, a second study asked participants to describe a purchase they had made that had a negative outcome. Next, participants responded to an item that read “How much did you regret your purchase?” Finally, participants responded to an item measuring counterfactual thinking:

When rethinking about negative experiences like the one you described, people often develop thoughts such as “If only . . . it would have gone better.” Please indicate how many thoughts like that came to your mind when you originally had the experience you described above.

Participants responded to this item on a scale ranging from 1 (*no thoughts like that*) to 7 (*many thoughts like that*). Replicating the results of the first study, assessment was positively related to counterfactual thinking and regret, whereas locomotion was negatively related to counterfactual thinking and regret.

To provide further support for the hypotheses, Study 3 manipulated locomotion versus assessment by asking participants to recall three times in which they acted as a locomotor or three times in which they acted as an assessor (as in Avnet & Higgins, 2003). Following the manipulation of locomotion or assessment, participants completed the same purchase scenario and the same regret scale as Study 1. Participants also completed the counterfactual thinking item used in Study 2. Participants in the assessment condition reported more counterfactual thinking and regret, as compared to participants in the locomotion condition. In addition, the influence of locomotion and assessment on regret was mediated by counterfactual thinking. This suggests that assessment increases the amount of counterfactual thinking that individuals engage in following a failure, and that such thought leads to feelings of regret. Conversely, locomotion inhibits counterfactual thinking, leading to decreased feelings of regret.

Self-Perception

Similar to their comparisons among goals and means, high (vs. low) assessors should focus on evaluations of their actual self in comparison with alternative standards, including social comparison, self-consciousness, and self-discrepancies. Self-evaluation should be less relevant to high (vs. low) locomotors. Consistent with this prediction, responses to the assessment scale are positively related with responses to scales measuring public self-consciousness, private self-consciousness, and the need for social comparison (Kruglanski et al., 2000). Also as predicted, locomotion bears little or no relation to these variables.

A self-evaluative focus may guide attention to discrepancies between one’s actual self as one state and the desired self as an alternative state (Higgins, 1987). As a consequence, high (vs. low) assessors may exhibit more pronounced negative affect and lower optimism and self-esteem. Furthermore, because locomotion (i.e., forward

movement) contributes to a sense of progress, high (vs. low) locomotion may be characterized by a greater degree of positive affect and higher optimism and self-esteem. Consistent with these predictions, research has found that assessment scores are positively correlated with social anxiety and depression, and negatively correlated with self-esteem and optimism (Kruglanski et al., 2002). In contrast, locomotion scores are negatively correlated with social anxiety and depression, and positively correlated with self-esteem and optimism. In addition, assessment is positively related to stress-related feelings (Higgins et al., 2002). Similar to the finding that locomotion is related to lesser regret following poor decisions, locomotion is associated with lesser feelings of guilt and shame following previous failures to do the right thing (Higgins et al., 2002).

In addition to the general increase in negative affect, high (vs. low) assessors should exhibit greater emotional instability than high (vs. low) locomotors because they may perpetually evaluate themselves, and such evaluations may evoke varying affective reactions. The varying reactions are likely due to the large number of comparative standards used, including times in which the self exceeded the comparison point and times in which the self fell short of the standard. Indeed, assessment is positively correlated with emotional instability among American and Italian respondents (Kruglanski et al., 2002), as well as Germans (Higgins et al., 2002).

Even though assessors are likely to experience negative and unstable affect as a result of their constant evaluations, the evaluations are carried out in an attempt to attain accuracy in judgments and decision making. In order to feel that one is correct, it is necessary to feel certain about the conclusions one has reached. Ambiguity regarding the best option should be unsettling for assessors who are striving to determine the best or right course. Therefore, assessors should be uncomfortable with ambiguity. In two empirical tests of this hypothesis (Higgins et al., 2002; Kruglanski et al., 2002), assessment was positively related to the discomfort with ambiguity subscale of the Need for Cognitive Closure Scale (Webster & Kruglanski, 1994), whereas locomotion was unrelated to discomfort with ambiguity.

Considered together, this body of research strongly supports the notion that assessment is characterized by increased attention to comparative standards, whereas locomotion is characterized by a lack of such comparisons. The result for assessors is greater vulnerability to negative appraisals and instability regarding such appraisals. Locomotors, on the other hand, seem to be relatively invulnerable to negative appraisals and instability because they are not critical of their performance. Instead, greater locomotion seems to be characterized by greater optimism and self-esteem, facilitating attention towards forward progress.

Achievement

Successful self-regulation towards one's goals requires the selection of appropriate strategies, prioritizing of tasks according to importance, and effective managing of one's time. In addition, such success requires the initiation and maintenance of movement

towards the goal, including a relative lack of procrastination and satisfactory handling of potential obstacles. As such, achievement should be fostered by a combination of high assessment and high locomotion. This prediction was tested in two very different contexts, with clear measures of self-regulatory success in participants' important real-life goal pursuits.

In a university setting, locomotion, assessment, and the interaction between locomotion and assessment were used as predictors of student grade point average in a regression analysis (Kruglanski et al., 2000). Students' SAT scores were controlled for in the analysis because they strongly predict college grade point average. Locomotion was a significant predictor of grade point average, but was qualified by a significant interaction between locomotion and assessment. For students who scored below the median on assessment, locomotion was unrelated to grade point average. However, for students who scored above the median on the assessment scale, locomotion was a strong predictor of grade point average. These results suggest that college achievement is due to a combination of both high locomotion and high assessment.

In a military setting, locomotion and assessment scores were used to predict successful completion of an elite combat training unit in the US Army (Kruglanski et al., 2000). The program is highly selective and the training is extremely demanding. The majority of soldiers who attempt the training fail to complete it. Statistical analysis controlled for variables suggested by US Army researchers, including scores from a general technical survey and from a spatial abilities test, whether applicants were commissioned officers or enlisted soldiers, and whether applicants had completed an advanced training course in the Army Rangers. In a logistic regression analysis, high locomotion predicted likelihood of successful completion of the training, but was qualified by an interaction between locomotion and assessment. For soldiers who scored below the median on assessment, locomotion was unrelated to success. However, for soldiers who scored above the median on the assessment scale, locomotion was strongly predictive of success. These results replicate the findings from the university setting regarding the joint determination of achievement by locomotion and assessment, suggesting once again that a combination of high locomotion and high assessment is most conducive to successful goal attainment.

Taken together, the results from these two studies suggest that assessment and locomotion complement one another and that self-regulation is most successful when both modes are active. Even the academic activities, earlier identified by participants as predominantly associated with assessment (Taylor & Higgins, 2002) was better accomplished by those high in both assessment and locomotion.

Conclusions: Individual Goal Pursuit

High assessment generates effort directed towards activities that offer the opportunity to engage in critical thinking whereas high locomotion generates effort directed towards activities that offer the opportunity to advance through tasks. Furthermore,

locomotion and assessment are characterized by different strategies used in judgment and decision making. Throughout the course of goal pursuit, locomotion reflects perpetual motion, resulting in decisiveness in preparation for goal pursuit and a lack of counterfactual thinking and regret following goal pursuit. In contrast, assessment reflects critical and comparative thinking, resulting in a delay of movement until the best alternative can be identified prior to goal pursuit, and prevalent counterfactual thinking and regret following goal pursuit. Similarly, high assessment is associated with vulnerable and unstable self appraisals, whereas high locomotion is associated with optimism and positive appraisals. Moreover, a combination of high locomotion and high assessment was associated with successful self-regulation in two notable contexts.

Interpersonal Phenomena

Typically, humans pursue their goals in a rich social context wherein other people provide a great deal of information regarding the appropriateness of standards and goals. The tendencies toward assessment and locomotion should be related to individuals' reactions and sensitivity to such information. As we have noted, the assessment tendency is related to sensitivity to standards, and to discrepancies from standards resulting in a negative sense of self. It may be expected, therefore, that assessment would be positively related to sensitivity to socially normative goals, positively associated to sensitivity to social feedback, and negatively related to self-perceptions of emotional intelligence. In contrast, locomotion has been linked to insensitivity to comparative standards, and a generally positive view of the self. Therefore, locomotion should be negatively related to sensitivity to social feedback and positively related to self-perceived emotional intelligence. The pattern of findings regarding assessment and locomotion suggests that more adaptive regulation of emotionally charged social problems will be exhibited by high (vs. low) locomotion, but less adaptive regulation of such problems will be exhibited by high (vs. low) assessment.

Perception of the Self in Relation to Others

The activation of a particular regulatory mode should influence the way in which individuals perceive the self in a social context. Because high (vs. low) assessment should lead to a large number of social comparisons, it should be related to the degree of variability in the judgments reached. In addition, those judgments should be more negative for high versus low assessors, who are unlikely to detect as many self-discrepancies or compare themselves to as many superior performers. Conversely, high (vs. low) locomotion should lead to lower variability in self evaluations, and a general positivity bias due to the focus on movement that is facilitated by such an optimistic outlook. To test these possibilities, Higgins et al. (2002) measured participants'

responses to the regulatory mode questionnaire and the social self-esteem scale (Heatherton & Polivy, 1991). As predicted, high (vs. low) assessment was associated with greater variance in responses and more negative social self-esteem. High (vs. low) locomotion, on the other hand, was associated with less variance in responses, and with more positive social self-esteem.

A congruent hypothesis would state that high (vs. low) assessment should lead to greater variability in perceptions of closeness to important others in their social network, and to generally feel less close to others. By contrast, the locomotion dimension is not expected to bear a systematic relation to variability in perceived closeness or to the feeling of closeness to others. To test these predictions, participants in the Higgins et al. (2002) study completed the Regulatory Mode Questionnaire (Kruglanski et al., 2000) and the Social Network Inventory (Treadwell, Leach, & Stein, 1993), which asks participants to list the names of significant persons that affect their life. Next, each participant rated how close he or she feels to the other person. Finally, each participant was asked to take the perspective of the other person and estimate how close that individual thinks he or she is to the participant. As predicted, there was greater variance in responses by high (vs. low) assessors for both the ratings from the perspective of self and the ratings from the perspective of other. Furthermore, high (vs. low) assessors generally perceived less closeness to their social network members. In contrast to the findings for assessment, locomotion was unrelated to either the variance of closeness ratings or the magnitude of closeness ratings.

Normative Social Goals and Social Feedback

Just as individuals high on assessment orientation critically evaluate the self according to self-standards, they should be sensitive to social criticism, representing the standards of others. On the other hand, individuals high on locomotion orientation perceive the self favorably and should therefore be relatively immune to social criticism. To test this hypothesis, Higgins et al. (2002) had German participants complete the regulatory mode questionnaire and a measure of self-critical and insecure personality (Kuhl & Kazén, 1997). As expected, assessment was positively correlated with sensitivity to social criticism, whereas locomotion was negatively correlated with sensitivity to social criticism (Higgins, et al., 2002). Such a concern with social criticism should lead to anxiety related to such criticism. Consistent with this expectancy, assessment was positively associated with feelings of anxiety in social interactions, whereas locomotion was negatively associated with feelings of anxiety.

Just as individuals with an assessment orientation are concerned with selecting the right or correct goal according to personal standards, they are also concerned with doing what is considered best or right according to others. This concern with social standards should lead to a greater concern for social norms. In a study of participants who had registered for gym classes in Rome, assessment was positively related to behavioral intentions to engage in regular exercise for the next 6 months (Pierro, Mannetti,

Higgins, & Kruglanski, 2002). However, this positive relation was only found when participants also perceived regular exercise as desirable according to social norms. This study also allowed Pierro et al. (2002) to test the extent to which participants achieved this goal by recording participants' actual exercise behavior. Based on the research discussed so far, we would expect that although high assessors are more likely to plan to work out, actual exercise requires an additional high level of locomotion to get the participants moving towards the objective. Consistent with this prediction, the data showed a significant interaction between locomotion and assessment in predicting actual exercising at the gym such that a combination of high assessment and high locomotion led to greatest actual extent of reported exercising at the gym.

The foregoing study illustrates the role that locomotion and assessment play in self-regulation. Assessment, in this case, led to a detection of the discrepancy between the self and the social norm (or comparison point). However, the detection of this discrepancy did not lead to behaviors designed to reduce this discrepancy for all participants. Only participants high on the locomotion orientation as well as high on the assessment orientation actually engaged in behaviors that would reduce the discrepancy between the comparative standard and the self. In a sense then, assessment facilitates the detection of social norms, and locomotion facilitates the adherence to social norms.

Emotional Intelligence and Problem Solving

In the research reviewed so far, assessment, but not locomotion, has been characterized by affective vulnerabilities and emotional instability. Because assessment is related to affective vulnerabilities and a critical view of self, assessment may also be associated with (a) the perception that the self is low in emotional intelligence, and (b) less effective socioemotional problem solving. In contrast, because locomotion is associated with positive self-perceptions, it should be positively related to perceptions of emotional intelligence. Moreover, the concern with moving forward coupled with stable emotions and a lack of extreme negative appraisals should contribute to a positive relation between locomotion and socioemotional problem solving.

Two recent studies by Shalev, Orehek, and Kruglanski (2007) explored these hypotheses. The first study was designed to measure the association between the regulatory modes and the reflective emotional process using the Trait Meta-Mood Scale (TMMS; Salovey, Mayer, Goldman, Turvey, & Palfai, 1995). Consistent with the predictions, high (vs. low) assessment was associated with low perceived emotional intelligence, whereas high (vs. low) locomotion was associated with high perceived emotional intelligence.

The findings support the notion that perceived emotional intelligence is associated with activated regulatory modes, and it also stimulates a related question as to whether assessment and locomotion are associated with actual effectiveness of socioemotional processing. To address this question, Shalev et al. (2007) measured the

association between regulatory mode and social problem solving. Social problem solving requires the successful construction of means–end strategies appropriate to the problem at hand. This includes the ability to generate possible solutions, and the construction of step-by-step processes necessary to perform the adopted solutions. The latter processes include a consideration of the motivations of both the self and others and the identification of potential obstacles. This requires awareness and sensitivity to potential interpersonal problems (socioemotional skills) and consideration of the effects of one's behavior on oneself and others (Platt & Spivack, 1975).

To assess this ability, Shalev et al. (2007) used an adapted version of the Means–Ends Problem Solving Procedure (MEPS; Platt & Spivack, 1975). Participants were provided with a description of a problem situation that ends with a successful resolution. Their task was to provide the necessary means for reaching such a resolution. Specifically, participants were presented with four problems: (a) you realize that a friend is avoiding you, (b) your dating partner tells you that he or she is very angry with you, (c) your professor writes you that you may fail a class, and (d) you realize that the suggestions of a committee of which you are a member will not work. To score the ratings of problem solving effectiveness, researchers initially presented each of the four situations to five independent judges and instructed them to list the steps or solutions involved in what they believed to be a “model” response to each situation. The responses were compiled to form a list of model solutions and a list of counterproductive solutions. There was a high degree of consensus among the judges regarding the steps that should be included in each of these indexes. For example, the model solutions for the situation involving a close friend included (a) seeking a personal meeting with the friend, (b) approaching the issue in a tactful way, and (c) making comments aimed to reaffirm the friendship. Examples of solutions that were considered counterproductive were (a) avoiding the friend, (b) acting toward the friend in a mean or insensitive manner, and (c) blaming or criticizing the friend when discussing the issue.

Each student's responses to the four situations were rated along a global dimension of problem solving effectiveness on 7-point Likert scales with response alternatives ranging from *not at all effective* (1) to *extremely effective* (7). When making this rating, raters were instructed to consider the entire set of solutions or strategies offered by students in each particular response. Consistent with previous findings, high (vs. low) assessment was associated with a greater number of potential means generated. However, high (vs. low) assessment was related to low social problem solving ability, whereas high (vs. low) locomotion was associated with high social problem solving ability.

Taken together, these findings suggest that high, as opposed to low, assessment is associated with low perceived emotional intelligence and negatively related to the ability to successfully regulate emotions in relationships. Because assessment is associated with a critical view of the self and others, it may hinder adaptive emotional responses. For example, in the current scenarios, even though assessment may have led to a greater sensitivity to the problem it also involved a critical evaluation of the other, preventing the person from generating effective strategies for moving forward toward resolving

the interpersonal dilemma. In contrast, high, as opposed to low, locomotion appears to be associated with high perceived emotional intelligence as well as the ability to regulate social and emotional problems. Though the foregoing findings are consistent with regulatory mode theory, their specific underlying mechanisms require further empirical probing for their elaboration. This represents a task for future research.

Conclusions: Interpersonal Phenomena

The assessment mode is associated with greater criticism of the self and others in interpersonal contexts, leading to more negative and less stable perceptions of the self in relation to others. In addition, assessment is associated with greater sensitivity to information in the social environment, leading to an increased likelihood of adopting social norms and being influenced by social feedback. This vulnerability and instability is consistent with the finding that high assessment is associated with low perceived emotional intelligence and poor socioemotional regulation. In contrast, locomotion is related to favorable and stable perceptions of the self in relation to others. In addition, locomotion is associated with lesser sensitivity to information in the social environment, leading to decreased attention to social norms and relative insensitivity to social feedback. Consistent with these findings, locomotion is positively related to perceptions of emotional intelligence and successful socioemotional regulation.

Organizational Phenomena

Many organizations provide external reward structures to motivate individuals, which should be attractive to high assessors because of their concern with social feedback. On the other hand, high locomotion should lead to a perception of work as a reward independent of external compensation because it is viewed as an end in itself. Just as locomotion and assessment are associated with preferred decision-making strategies, they should relate to preferences for different styles of leadership, with assessors preferring those that allow for much critical thought on the part of employees, and locomotors preferring those that allow for swift and efficient movement through objectives. Locomotion should also be positively associated with positive attitudes and outcomes regarding organizational change. Such change should foster significant movement, allowing high locomotors to thrive.

Intrinsic and Extrinsic Task Motivation

Organizational contexts present the possibility for both intrinsic as well as extrinsic task motivation. The individual may be internally motivated by the potential for

movement towards objectives, or may be extrinsically motivated by the rewards and/or punishments that come with varying levels of success. Based on regulatory mode theory, we would expect that locomotion would be positively related to intrinsic task motivation because high locomotion is characterized by a propensity to remain in motion and promotes an increased level of experiential involvement in various tasks (e.g., Csikszentmihalyi, 1975). leading goal-related behavior to be rewarding as an end in itself. In contrast, high assessment is associated with social comparison and sensitivity to social feedback, which should lead to a positive relation between assessment and extrinsic task motivation.

Pierro, Kruglanski, and Higgins (2006a) tested this expectation in four Italian organizations, including the Postal Service, Italian Army, and Multinational Electric-Energy Company. Data from employees in these organizations confirmed the hypotheses, as locomotion was positively related to intrinsic motivation whereas assessment was positively related to extrinsic motivation. In addition, these relations were found even when other personality inventories (e.g., the Big Five) were controlled for, suggesting that these two regulatory modes explain something beyond more general personality constructs. To test this finding in a laboratory setting, Study 2 manipulated external reward (payment for participation vs. no payment) using a college student sample. Consistent with Study 1, high (vs. low) locomotors reported being more interested and involved in a puzzle task, irrespective of the presence of an external reward. However, high (vs. low) assessors reported greater interest and involvement in the puzzle task when an external reward was present than when no such reward was present.

These data suggest further that locomotion is positively related to investment and interest in goal pursuits without regard for goal value, whereas assessment is positively related to investment and interest in goal pursuits to the extent that the goal is deemed valuable. A third study further elaborated the relation between locomotion, task involvement, and intrinsic motivation. Using a sample of employees at an Italian insurance agency, Pierro et al. (2006a) found that intrinsic motivation partially mediated the relation between locomotion and effort commitment. This suggests a potential causal chain such that locomotion leads to greater intrinsic motivation, which in turn leads to greater commitment of effort to the goal. Although effort investment may generally increase goal-relevant behaviors, this effort is likely to go to waste if not mitigated by assessment of goal progress throughout the course of activity. Consistent with this prediction, a fourth study of employees of a computer company replicated the mediational chain found in Study 3, and additionally found that goal attainment was predicted by an interaction between locomotion and assessment such that individuals high on both modes were most likely to attain their goals.

To further test the relation between locomotion and effort investment in organizations, Pierro, Kruglanski, & Higgins (2006b) tested the relation among firemen, bank clerks, and employees in the Ministry of Education, in Rome. In all three samples, there was a strong positive relation between individual differences in locomotion and self-reported work effort investment. However, effort should only be exerted to the extent that locomotion increases involvement in the work. Supporting this prediction,

Pierro et al. (2006b) found with a sample of registered nurses in a Rome hospital that job involvement partially mediated the relation between locomotion and effort investment. A fourth study, completed by employees at an insurance agency in Rome, replicated the results of Studies 2 and 3.

Leadership Styles

Kruglanski, Pierro, & Higgins (2007) investigated the link between regulatory mode and preference for advisory and forceful leadership styles. An advisory leadership style involves counseling, consultation, and participation, including providing guidance and advice. Typically, options and alternatives are discussed and compared according to potential standards. Hence assessment should be positively related to preferences for style of leadership, whereas locomotion should not. In contrast, a forceful leadership style is demanding, directive, and coercive. Through this leadership style, disruptions are minimized, and subordinates are encouraged to move forward. Thus locomotion should be positively related to preferences for a forceful leadership style, whereas assessment should not. In a study of bank clerks, these expectations were confirmed, as assessment (but not locomotion) was positively related to preferences for advisory leadership, and locomotion (but not assessment) was positively related to preferences for forceful leadership. A second study, with a sample of firefighters, replicated this pattern of findings.

Closely related to advisory and forceful leadership styles are participative and directive leadership styles. Participative leaders encourage subordinates to share in the decision-making process, facilitating the evaluation of alternatives on the part of subordinates. The evaluation of alternatives comes at the expense of quick movement. Hence assessment should be positively related to preference for a participative leadership style, while locomotion should not.

Directive leaders issue subordinates explicit instructions about tasks, including what is to be done, how to do it, and when to do it, facilitating movement. This rapid movement comes at the expense of critical thinking on the part of the subordinate. Hence locomotion should be positively related to preference for a directive leadership style, whereas assessment should not. Confirming these predictions, assessment (but not locomotion) was positively related to preference for participative leadership, whereas locomotion (but not assessment) was positively related to preference for directive leadership. Overall, assessors seem to prefer leaders who allow for maximum involvement in evaluation of alternatives, whereas locomotors prefer leaders who afford efficient movement toward goals.

Organizational Change

Change promises dynamic movement from state to state that should be appealing to locomotors. As the essential locomotion motivation consists of the propensity to remain

in motion, the selection of new goals, and the confrontation of new experiences, locomotion-oriented individuals should be particularly attracted to organizational change. It follows that in organizational contexts individuals high (vs. low) on the locomotion dimension should have a more positive experience during episodic change and demonstrate superior coping with challenges that change brings about. Data regarding assessment levels was not collected in these studies.

To test this hypothesis, Kruglanski, Pierro, Higgins, and Capozza (2007) studied nurses in a hospital in Rome, who had been subjected to several role changes related to new rules regarding their profession. The new regulations altered the nurse's role by drastically changing it from the way the nursing profession had practiced previously, confronting its members with considerable threats and challenges. The results from this study confirmed the hypothesis, as locomotion was positively related to self-reported (successful) coping with change. A second study was conducted at a postal service center in central Italy which had been subjected to far-reaching changes including a revamping of the computer system and organizational shifts that considerably modified old habits and conventions of postal workers. Replicating the results from the first study, locomotion was positively related to successful coping with change. In a third study, employees in Rome who had undergone far-reaching reforms having to do with integration of various sectors and a reorganization of incentive systems, completed measures of locomotion, coping with change, and support for innovation within the organization. Locomotion was again positively related to coping with change. Importantly, the link between locomotion and coping was unaffected by the support for innovation within the organization. This was expected because locomotion should be related to movement, regardless of social norms and evaluative concerns.

The correlational nature of the first three studies leaves open the direction of causality. To improve on this limitation, the fourth study utilized a longitudinal design in which locomotion was measured a month prior to the other constructs. Data was collected from National Postal workers from three different geographical areas of Italy who went to a newly established institute for professional retraining. Among the various changes instituted, employees were requested to participate in a job mobility initiative whereby they underwent a period of retraining lasting one month. In the first session, locomotion, expectations about organizational change, job satisfaction, and commitment to the organization were measured. In the second session, the same organizational commitment and job satisfaction were completed again, as well as a coping with change measure.

Because locomotion is positively related to optimism and an orientation towards movement, it should lead to favorable expectations of change. Supporting this prediction, locomotion was positively related to favorable expectations of change. Replicating the findings from the earlier studies, locomotion was positively related to successful coping with organizational change. Consistent with these findings, locomotion was positively related to the time 2 measures of organizational commitment and job satisfaction. Moreover, coping with change mediated the relationship

between (a) locomotion and coping with change, and (b) locomotion and organizational commitment. This suggests that the experience (or perception) of successful coping induces positivity toward the new job whereas the experience of relatively unsuccessful coping reduces the amount of the positivity.

Conclusions: Organizational Phenomena

Consistent with finding in the interpersonal realm that assessment is associated with greater sensitivity to social feedback, data from the organizational context demonstrates a positive relation between assessment and motivation according to external rewards. Consistent with findings in the individual realm that assessment is associated with a preference for decision-making strategies that allow for numerous comparisons, assessment is positively related to a preference for advisory leadership styles. In contrast, locomotion is associated with lesser sensitivity to social feedback and greater concern with movement as an end in itself, demonstrated in the organizational context in the positive relation to intrinsic task motivation. The focus on activity flow and decision making that fosters it found with respect to individual goal pursuits is consistent with the positive relation here between locomotion and a preference for directive leadership styles.

Cultural Phenomena

Regulatory mode can be examined across cultures in two ways. First, cultures may vary in the relative levels of locomotion and assessment. Given that differences in the relative strength of each regulatory mode may vary across cultures, it is of interest to investigate whether the functioning of the regulatory modes within these nations also differs or whether such functioning is basically the same across cultures. Higgins, Pierro, and Kruglanski (2007) recently conducted a cross-cultural study to investigate both of these possibilities, including college student participants from England, India, Korea, Israel, Italy, Japan, Poland, Spain, and the United States.

The first type of analysis concerned the relative strength of locomotion and assessment tendencies in each culture. To test for this, Higgins et al. (2007) performed two statistical tests. First, they computed a score of regulatory mode predominance by subtracting each participant's assessment score from their locomotion score. In a second analysis, they performed a within-subjects repeated measure analysis, comparing each participant's locomotion and assessment scores. Across the two statistical tests, there was a clear picture of the relative operation of the two modes in each culture. Three cultures appear to be relatively pure locomotors. Italy, Spain, and India are each relatively high in locomotion and relatively low in assessment. Two cultures appear to be relatively pure assessors. Japan and Korea are relatively high in assessment and

relatively low in locomotion. The United States and Israel were relatively high in both locomotion and assessment, with no predominance between the two modes. England and Poland were relatively moderate in both locomotion and assessment, with no predominance of either locomotion or assessment.

The second analysis tested for relations between the two regulatory modes and other variables. It was expected that there would be great similarity in the strength and direction of these linkages across cultures. The cultures in which this data was obtained include India, Israel, Italy, Japan, and the United States. In the first analysis, predominant locomotion individuals were compared to predominant assessment individuals in their level of self-esteem and Big Five characteristics. In the second analysis, the partial correlations between locomotion (controlling for assessment) and each of the personality characteristics, and the partial correlations between assessment (controlling for locomotion) were computed for each of the personality characteristics.

High locomotion is associated with less critical self-evaluation and greater optimism about the future. High locomotion individuals use this confidence about the future as a strategy that allows them to continually move forward. In contrast, individuals high on assessment are oriented towards critical evaluation of themselves. Thus self-esteem should be higher for predominant locomotors than predominant assessors. Consistent with this, self-esteem scores of predominant locomotors were higher than self-esteem scores of predominant assessors in every nation studied (India, Israel, Italy, Japan, and the United States). In addition, there was a positive (partial) correlation between locomotion and self-esteem in every nation studied. In contrast, the (partial) correlation between assessment and self-esteem was negative in every country (but was significant in Israel, Japan, and the United States).

Extraversion reflects sociability, eagerness to meet new people, and being enthusiastic and carefree. These behaviors would strategically support moving ahead without hesitation or care. Thus extraversion should be higher for predominant locomotion than predominant assessment individuals. Consistent with this, in Israel, Italy, Japan, and the United States, the extraversion scores of predominant locomotion individuals were higher than the extraversion scores of predominant assessment individuals. The results for India were also in the same direction, but were not significant. In addition, there was a significant positive (partial) correlation between locomotion and extraversion in every nation studied. In contrast, the (partial) correlation between assessment and extraversion was negative in every country and was significantly negative in United States.

Conscientiousness refers to individuals who are practical, organized, thorough, planful, efficient, and responsible. Being organized, planful, practical, and efficient allows the goal pursuit process to flow smoothly. Thus conscientiousness would be a strategy for predominant locomotion individuals. Predominant assessment individuals may be associated with some aspects of conscientiousness, but not others. Assessors' tendency for critical evaluation could disrupt efficiency and practicality while contributing to thoroughness. Thus it is possible that conscientiousness would be higher for predominant locomotion than predominant assessment individuals. In all cultures

studied, the conscientiousness scores of predominant locomotion individuals were significantly higher than the conscientiousness scores of predominant assessment individuals. In addition, there was a positive (partial) correlation between locomotion and conscientiousness in every nation studied. In contrast, the (partial) correlation between assessment and conscientiousness was generally negative in every country and was significantly negative in Israel.

Agreeableness reflects the tendency to be sympathetic, appreciative, warm, trusting, and forgiving rather than fault-finding. Because high assessment individuals critically evaluate the self and others, they are likely to be more fault-finding than sympathetic and appreciative. On the other hand, the tendency of high locomotion individuals to forego critical evaluation and, instead, just move on to the next project should make them engage in less fault-finding and to be more forgiving. Consistent with this expectation, in all cultures studied, the agreeableness scores of predominant locomotion individuals were significantly higher than the agreeableness scores of predominant assessment individuals. In addition, there was a positive (partial) correlation between locomotion and agreeableness in every nation studied, and was significant in every nation except Israel. In contrast, the (partial) correlation between assessment and agreeableness was significantly negative in every nation except India.

Openness reflects the tendency to be imaginative, original, curious, intellectual, and to have a wide range of interests. Openness as a strategy should be useful for both locomotion and assessment. Having a wide range of interests and high curiosity would facilitate engagement in many activities and provide ample opportunities for movement, which would fit the orientation of high locomotion individuals. On the other hand, imagination and curiosity also provides opportunities for making comparisons and evaluations, which would fit the orientation of high assessment individuals. Therefore, there should be a positive relation between each regulatory mode and openness, without a difference between predominant assessment and predominant locomotion modes. Indeed, in all cultures studied, the openness scores were moderately high for both predominant locomotion and predominant assessment individuals, producing no significant differences. In addition, there was a positive (partial) correlation between locomotion and openness in every nation studied, and the (partial) correlations were significant in every nation except Israel. In India, Japan, and the United States, there was also a significantly positive (partial) correlation between assessment and openness.

Neuroticism reflects the tendency to be emotionally unstable, moody, worried, tense, anxious, nervous, and self-punishing. Because of the critical nature of assessment, and the orientation towards an optimistic future for locomotion, neuroticism should be higher for predominant assessment than predominant locomotion individuals. Consistent with this, in all cultures studied the neuroticism scores of predominant assessment individuals were significantly higher than the neuroticism scores of predominant locomotion individuals (with India and Italy being marginally significant). In addition, there was a significant positive (partial) correlation between assessment and neuroticism in every nation studied. In contrast, the (partial) correlation between

assessment and neuroticism was negative in every country and was significantly negative in Israel.

Conclusions: Culture

The relative operation of locomotion and assessment varies across cultures, but each is related to other variables in a consistent manner across cultures. Assessment is positively related to openness and neuroticism, and negatively related to self-esteem, extraversion, conscientiousness, and agreeableness. In contrast, locomotion was positively related to self-esteem, extraversion, conscientiousness, agreeableness, and openness, but negatively related to neuroticism. These relations support the notion that regulatory modes reflect the level of self-regulatory systems within a general personality architecture, served by more general personality traits as strategic channels.

General Conclusions

Regulatory mode theory conceptualizes assessment and locomotion as independent of one another, such that each is considered a relatively stable individual difference variable but also significantly influenced by situational forces. Moreover, each of the modes have been categorized as self-regulatory systems within a general personality architecture, with more general personality traits serving as strategic channels of goal pursuit. Consistent with the conceptualization of assessment and locomotion as distinct self-regulatory modes, many cultures demonstrated a predominant orientation towards one mode over the other. For example, Italy, Spain, and India are each high in locomotion and low in assessment. Japan and Korea are high in assessment and low in locomotion.

Consistent with the conceptualization of regulatory modes as relatively stable individual difference variables, the assessment and locomotion scales repeatedly predicted other constructs, including cases in which regulatory mode was measured long before other variables. In addition, the conceptualization of the two modes as influenced by environmental or situational forces was supported by the success of laboratory manipulations and variation in the relative strength of the two modes across cultures. The conceptualization of the regulatory modes as self-regulatory systems within a general personality architecture was supported by the consistent relation between the two modes and personality variables as strategic channels across cultures and the success of the two modes in predicting outcome variables even when the Big Five personality variables were controlled for, suggesting that they account for something beyond the more general traits.

In summary, assessment reflects energy invested in activities that afford critical thought and evaluation according to comparative standards. This preoccupation with comparison

according to standards manifests as greater detection of self-discrepancies at the individual level, increased social comparison in interpersonal contexts, and a preference for extrinsic rewards in organizations. This heightened sensitivity to internal and external standards results in a vulnerability to negative appraisals and instability of self-perceptions. Assessment is also associated with a preference for decision making according to as many comparisons as possible, including a preference for leadership that will allow subordinates to participate in the evaluative process. Effort is invested in a complete analysis of all information even if this cognitive activity requires a stalling of movement towards goals. Prior to goal pursuit, assessment is positively related to sensitivity to social standards, increasing the adoption of socially normative goals. Following goal pursuit, assessment is positively related to counterfactual thinking and regret due to the heightened sensitivity to feedback. Consistent with these specific effects, assessment has been positively related to openness and neuroticism, and negatively related to perceived emotional intelligence, self-esteem, conscientiousness, agreeableness, and extraversion.

In contrast, locomotion reflects energy invested in activities that afford perpetual activity away from current states and toward desired states. This preoccupation with forward movement manifests as a penchant for activity flow, including decision-making strategies that allow for immediate progress and a preference for leadership that encourages action rather than evaluation. Because of the desire for movement, locomotion is positively related to intrinsic task motivation and successful coping with organizational change. Following goal pursuit, locomotion is negatively related to sensitivity to social feedback, counterfactual thinking, and regret, as each would disrupt the flow of activity. Consistent with these specific effects, locomotion has been positively related to perceived emotional intelligence, self-esteem, openness, conscientiousness, agreeableness, and extraversion, but negatively related to neuroticism.

These findings highlight the trade-offs involved with respect to each regulatory mode. High assessors are oriented to compare themselves to standards, which means they will compare themselves to high standards as well as to low standards. Generally, this self-evaluative style has the potential cost of increasing failure experiences from self-comparisons to high standards, and increased emotional instability from comparing oneself to both high and low standards. The value in this for assessors includes the willingness to consider alternative possibilities. In addition, high assessors might be more realistic and more accurate in their self-evaluations and might be able to utilize this information in attempts towards self-improvement.

Locomotion instigates high activity flow concerns that produce greater decisiveness, attentional control, vitality, conscientiousness, and openness to change, as well as activity engagement with higher intrinsic involvement, effort investment, behavioral activation, maintenance, and involvement. Once again, all self-regulatory orientations have trade-offs. Because locomotion is concerned with change per se, it is possible for resources to be committed to the pursuit of a goal that is not worth the resources allocated to it.

Although assessment and locomotion have different (and often opposing) effects on self-regulation, and each mode involves a trade-off, the two modes can operate as

complements to one another, with the most successful self-regulation generally occurring when both modes are active. Indeed, a combination of high assessment and high locomotion led to greater self-regulation in academic, military, and fitness contexts. Note that even though academic activities are generally perceived to reflect assessment, and fitness activities are generally perceived to reflect locomotion, the successful attainment of each of these pursuits required the activation of the alternative mode. Therefore, the opposing influence of each mode can balance the other such that the two modes are complementary.

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