

## CHAPTER 10

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# Volitional and Emotional Correlates of the Motivational Structure Questionnaire: Further Evidence for Construct Validity

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**Synopsis.**—This chapter presents relationships between the Motivational Structure Questionnaire (MSQ) and personality and clinical questionnaires as well as behavioral measures that contribute to the construct validity of the MSQ. The MSQ showed theoretically consistent relationships with a personality disposition toward state versus action orientation and clinical measures of depression and anxiety. In addition to interindividual differences in motivational structure, MSQ indices reflected intraindividual differences in motivational characteristics between wishes, duties, and intentions. Furthermore, MSQ indices predicted difficulties with subsequent actual goal enactment, as retrospectively rated by participants. Consistent relationships were found not only for self-report measures but also for implicit, nonreactive measures of self-infiltration (i.e., false self-attribution of externally controlled goals or activities) and alienation (i.e., difficulties in perceiving and enacting emotional preferences). The experimental data suggest that specific motivational structures may be interpreted as instances of volitional inhibition or self-inhibition. In sum, findings contribute to the validity of the MSQ.

The study on which the present chapter\* is based was originally designed to examine determinants of self-infiltration (Baumann & Kuhl, in press; Kazén, Baumann & Kuhl, 2002), and to explore self-infiltration effects in the context of personal goals and goal pursuit (Baumann, 1998). Self-infiltration is defined in terms of a confounding between self-congruent and self-alien (e.g., assigned) goals and activities. Operationally, misperceiving an assigned activity as self-selected in retrospective memory is taken as a measure of self-infiltration. Self-infiltration can be regarded as an indicator of poor self-awareness and self-accessibility.

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When people lose access to self-related knowledge, their ability to discriminate between self-congruent and externally controlled goals and actions is impaired. Consequently, they may strive for more goals with which they do not identify (e.g., striving because they believe in the importance of a goal) but introjected (e.g., striving because they feel that they ought to and because they would feel ashamed or guilty if they didn't). The type of internalization (or degree of self-integration of goals) and appropriate commitment are important aspects of motivation that have consequences for effort investment, goal attainment, and subjective well-being (Baumann, 1998; Brunstein, Schultheiss, & Graessman, 1998; Deci & Ryan, 2000; Sheldon & Elliot, 1998; Sheldon & Kasser, 1995).

Individual differences in the maintenance of self-access when exposed to aversive experiences (e.g., failure) are captured by the personality disposition toward *state versus action orientation* (Kuhl, 1994a). It consists of three components:

1. Failure-related action orientation (AOF) describes the ability to return to action quickly after a negative experience in contrast to ruminating about it (disengagement versus preoccupation). It is associated with the ability to self-regulate or top-down reduce negative affect and to maintain self-access in the presence of aversive events.
2. Decision-related action orientation (AOD) describes the ability to act upon decisions quickly instead of hesitating to initiate an intended activity (initiative versus hesitation). It is associated with the ability to self-generate positive affect that is needed for action, especially when difficult intentions are active and uncompleted.
3. Performance-related action orientation (AOP) describes the ability to become immersed in a pleasant activity in contrast to premature shifting between activities (persistence versus volatility). These individual differences in volitional action control are thought to influence a person's current concerns and motivational structure.

As clinical parameters, depression, and anxiety were assessed in the study described in this chapter. Depression has been related to negative thinking (Beck, 1967; Dykman, 1996; Rude et al., 2001; Wenzlaff & Bates, 1998), unrealistic belief systems (Chang, 1997; Ellis, 1977), and—as a common pathway to various aspects of depression—the maintenance of degenerated intentions (Kuhl & Helle, 1986). These aspects of depression should be reflected in typical patterns of MSQ indices. In turn, individuals with a dysfunctional motivational structure should experience higher depressive and anxious symptoms over time.

Other data reported in this chapter show that MSQ indices meaningfully differentiate between different categories of goal pursuits (i.e., wishes, duties, and intentions) and demonstrate theoretically consistent relationships with additional goal characteristics (e.g. “self-congruence,” “perceived effort”) and actual goal performance after one week. In addition, there were interesting relationships between MSQ indices and measures of self-infiltration and alienation from one's preferences. Findings further contribute to the validity of the MSQ and are discussed in the context of the theory of Personality Systems Interactions (PSI, Kuhl, 2000) on which the study is based.

## **THEORETICAL BACKGROUND OF THE STUDY**

A central assumption of PSI theory is that the activation of cognitive systems (intention memory, behavioral output control, extension memory, and an object recognition system)

is modulated through positive and negative affect. Different modes of volitional action control can be described in terms of typical interactions of the four cognitive and two affective systems (see Kuhl, 2000; Kuhl & Fuhrmann, 1998). The activation dynamics of these basic systems may also contribute to differences in motivational structure. For example, finding appropriate and self-compatible goals is supported by a broad associative network system (*extension memory*) providing implicit self-representations of one's own feelings, preferences, and needs, and making many action alternatives simultaneously available on the basis of autobiographical experiences (Kuhl, 2000). The self-related aspects of extension memory are called the *self-system*. An example of a content of extension memory that is not part of the self-system is a polysemantic representation of a word including simultaneous implicit awareness of its alternative meanings (e.g., "bank" of a river and as a money transaction place) and its relationships with other concepts. It is assumed that the representation of *persons* (including oneself and other people) requires this representational format of extended parallel and implicit semantic networks because of the complexity of persons. Without access to this holistic system, a person cannot be perceived in his or her full complexity (i.e., as a whole), but only in terms of specific aspects that are singled out from the full, holistic representation—for instance, because these aspects are instrumental for the perceiver's current intentions and purposes.

The *negative affect modulation hypothesis* of PSI theory states that unless negative affect can be down-regulated, it reduces access to the self-system and facilitates elementary sensations and attentional orienting toward novel or self-incongruent stimuli. The inability to down-regulate negative affect once aroused is expected to reduce the ability to view people (oneself and others) as a whole and increase the tendency to perceive them as "objects." According to PSI theory, object perception is supported by a system that isolates a bunch of details forming an "object" from the context. This decontextualization is useful when attention is to be focused on unexpected or dangerous details and when these details are to be recognized on a later occasion (e.g., as a warning cue). However, self-integration and realization of personal goals often require top-down inhibition of the unexpected or unwanted thoughts and feelings that are ushered in by negative affect. State-oriented pre-occupation is conceived of as a low ability to self-regulate negative affect. When negative affect (e.g., life-stress) is high, state-oriented individuals lose self-access and have difficulties in integrating social expectations, personal needs, and preferences and in developing self-determined goals and life perspectives.

The *positive affect modulation hypothesis* of PSI theory states that positive affect facilitates the implementation of difficult intentions through re-establishing the connection between the intention memory and its output system (Kuhl, 2000). One crucial adaptive function of forming an intention is to inhibit its immediate enactment because a problem needs to be solved or an appropriate opportunity needs to be awaited (Kuhl & Kazén, 1999). This inhibition is released through positive affect. When situational demands are high and intentions are difficult, people may lack the positive affect to put their intentions into action. State-oriented hesitation is conceived of as a low ability to self-generate positive affect. It can lead to a motivational structure characterized by conscious awareness of intentions, high motivation and feelings of low efficiency in the implementation of intentions.

To summarize, PSI theory predicts a modulating influence of positive and negative affect on cognitive systems. Individual differences in self-regulated coping with affect (i.e., action versus state orientation) lead to specific system configurations that are expected to correlate with motivational structure.

## DESCRIPTION OF THE STUDY

Forty-seven participants (30 women and 17 men) were recruited through flyers around the University of Osnabrück. Their mean age was 28 years (range 19 to 51). Participants, who were remunerated for their participation, were tested individually. At the beginning of the experimental session they filled out a mood adjective checklist with four negative items (“sad,” “depressed,” “anxious,” “sorrowful”) and four positive items (“happy,” “joyful,” “sociable,” “interested”), the Action Control Scale ACS-90 (Kuhl, 1994b), the Beck Depression Inventory BDI (Beck, 1967), and the Beck Anxiety Inventory BAI (Beck et al., 1988). As part of a nonreactive method to measure self-infiltration, they were introduced to a computer-aided simulation of a secretary’s working day (Kuhl & Kazén, 1994). First, participants rated the attractiveness of 48 simple office activities (e.g., “sharpening pencils,” “sorting letters”). Office activities were median split into items of high versus low attractiveness. Taking the role of a secretary, participants selected some of the activities for later enactment. The experimenter, taking the role of the boss, additionally assigned some activities to them while other activities remained not chosen. The computer program allowed for complete balancing of item attractiveness, self-selection, and external assignment. Thus, equal numbers of highly attractive and unattractive activities were originally (a) selected by both participant and experimenter, (b) self-selected by the participant, (c) assigned by the experimenter, and (d) unselected and unassigned, respectively.

A German adaptation of the MSQ was administered (Cox et al., 1995). Participants listed their current concerns and rated them along several dimensions that allowed calculation of the following MSQ indices:

(1) *Number of Concerns*, that is, the total number of concerns that participants named throughout a list of major life areas. (2) *Commitment*, that is, the degree to which participants feel committed to achieving the goals that they have named. (3) *Inappropriate Commitment*, that is, the degree to which participants are committed to achieving goals for which they expect little chance of success and/or (b) from which they expect to derive little emotional satisfaction. (4) *Anticipated Sorrow in Excess of Joy*, that is, the number of concerns that participants have in which the amount of sorrow that they expect to experience if they do *not* reach their goal exceeds the amount of joy that they expect to experience if they *do* reach their goal. (5) *Ambivalence*, that is, the number of goals for which participants expect to experience joy and unhappiness that are close in intensity. (6) *Emotional Intensity*, that is, the sum of participants’ anticipated affect upon reaching or failing to reach their goals. (7) *Hopelessness*, that is, the degree to which participants feel that they have little chance of success in reaching their goals. (8) *Inefficacy*, that is, the degree to which participants feel that their chances of succeeding at their goals are the same, regardless of whether or not they take action. (9) *Goal Distance*, that is, the degree to which participants perceive that their actual attainment of the goals that they are striving for will occur far in the future. (10) *Preparation Time*, that is, the degree to which participants perceive that there is a long interval between (a) the time that they must start taking action if they are to succeed at their goals, and (b) the time of their actual goal attainment. (Cox, Klinger, & Blount, 1999).

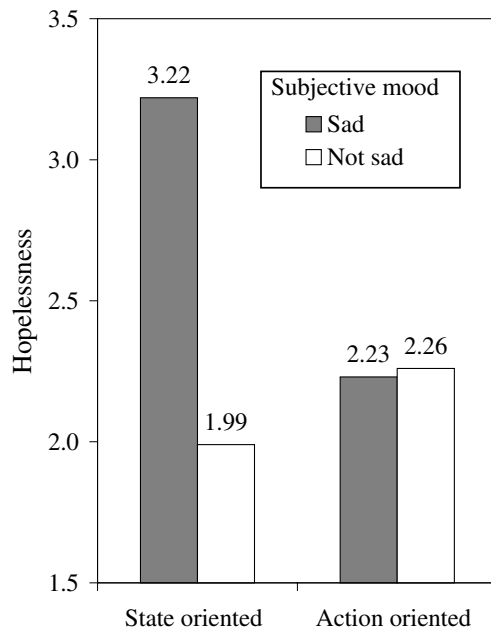
Subsequently, an unexpected memory test was carried out for the initial source of office activities. Participants were asked to classify each activity as previously self-selected or not self-selected. Self-infiltration was assessed by a significantly higher rate of false self-ascriptions of assigned unattractive activities compared to unassigned and unselected unattractive activities (i.e., falsely classifying an assigned activity as self-chosen in the retrospective memory test). Finally, participants made a final choice about the office activities. They were asked to successively mark any 24 activities according to their preferred

order of enactment. *Alienation* was assessed by a deficit in making final choices according to one's preferences—that is, a low tendency to select highly attractive activities earlier and more often than unattractive activities. The experimental session lasted about 90 minutes.

## STATE AND ACTION ORIENTATION

State-orientated preoccupation is conceived of as a low ability to self-regulate or reduce negative affect. As a result, state orientation (i.e., low AOF) should be associated with a decreased access to holistic representations and an increased focus on single, decontextualized objects such as thoughts, emotions, and persons perceived as “objects” rather than in their complexity. As long as access to self-representations can be maintained, a person has an extended feeling of what belongs to his or her current concerns, goals, and preferences and what does not. Access to this implicit knowledge is necessary to identify and inhibit whatever is not wanted at the moment—for example, distracting thoughts and emotions. Thus, for state-oriented individuals, whose distracting thoughts ushered in by negative affect and other unwanted experiences are not inhibited as long as negative affect that impairs self-access cannot be down-regulated, goals may not be checked for self-compatibility, and an extended network of action alternatives is not available.

As shown in Table 10.1, AOF or disengagement (from rumination and unrealistic goals) was associated with more current concerns, lower commitment as well as lower inappropriate commitment, lower emotional intensity, and shorter goal distance. Interestingly, the number of current concerns was not indicative of preoccupation and low volitional control. In a similar vein, Klinger and Murphy (1994) found action-oriented individuals to engage in daydreams to the same extent as state-oriented individuals but to feel more accepting of their daydreams. Rumination or daydreaming per se can be controllable or uncontrollable (Klinger, 1981; Martin & Tesser, 1989). In the present study, current concerns were indeed related to uncontrollable (state-oriented) preoccupation when they referred to goals that promised little chance of success and/or little emotional satisfaction (i.e., inappropriate commitment). Action-oriented individuals were less committed to achieving such inappropriate goals. In contrast, they identified more short-term goals. Concentrating on smaller subgoals and concrete action steps might increase chances of success and facilitate disengagement in case of failure because they are alternative means to an end. The finding that failure-related state orientation (i.e., low AOF) is associated with increased commitment combined with increased inappropriate commitment is consistent with the theoretical assumption that state orientation is characterized by an impaired access to self-representations when exposed to failure or other aversive events. When personal needs and priorities and personal experiences concerning the attainability of a goal are not readily accessible, it is difficult to identify inappropriate commitments—that is, commitments that are not compatible with one's needs and priorities or that cannot be expected to be accomplished on the basis of one's personal experiences with comparable goals and activities. This view is also compatible with the assumption that inappropriate commitment may represent a low threshold for commitment (Man, Stuchlíková, & Klinger, 1998; see also Klinger & Cox, Chapter 1, this volume). Action-oriented individuals need to feel self-compatibility before committing to goals, but state-oriented individuals may commit themselves to goals even without feeling self-compatibility and merely because of social expectations. The positive



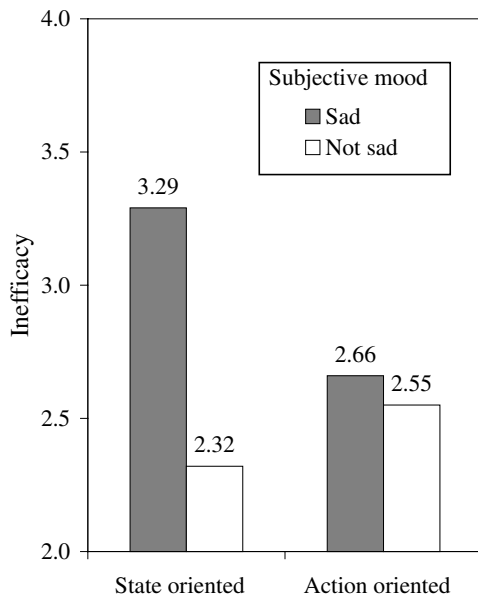
**Figure 10.1** Mean hopelessness as a function of failure-related state and action orientation and subjective sadness

correlation between inappropriate commitment and self-infiltration (discussed below) further supports this assumption.

Another way to test state-oriented participants' reduced self-access when negative affect is high was to look for interaction effects between state and action orientation and subjective mood. Therefore, MSQ indices were analyzed using a 2 (state versus action orientation) by 2 (low versus high subjective sadness) analysis of variance. Results yielded a marginally significant AOF  $\times$  Subjective Sadness interaction for "Hopelessness,"  $F(1, 43) = 3.80$ ,  $p < .06$ . As depicted in Figure 10.1, state-oriented participants reporting high sadness were more pessimistic about their chances of success than state-oriented participants reporting low sadness. The independent-samples  $t$  test was significant,  $t(22) = 3.47$ ,  $p < .002$ . Action-oriented participants were less influenced by their momentary mood. They did not feel very hopeless in either mood state.

In addition, there was a significant AOF  $\times$  Subjective Sadness interaction for "Inefficiency,"  $F(1, 43) = 4.19$ ,  $p < .05$ . As depicted in Figure 10.2, state-oriented participants who were sad felt more inefficient in goal attainment than state-oriented participants who were not sad. The independent  $t$  test was significant,  $t(22) = 4.15$ ,  $p < .001$ . In contrast, action-oriented participants did not feel inefficient, irrespective of their momentary mood.

According to PSI theory, these findings can be explained on the basis of the functional characteristics of extension memory, which integrates numerous personal experiences (constituting the self). Subjective expectancies are based on implicit access to extended networks (in extension memory) of personal experiences that specify successful action alternatives (Kuhl, 2001, p. 261). According to this view, a person has a high expectancy of success when he or she *feels* (on the basis of past experiences) that there are several action alternatives



**Figure 10.2** Mean inefficacy as a function of failure-related state and action orientation and subjective sadness

available even if these alternatives cannot be consciously enumerated. When the number of successful personal experiences retrieved from implicit autobiographical memory (extension memory) is low, either because one has not experienced a sufficient number of successes or because access to this knowledge base is inhibited (e.g., due to a momentary sad mood), subjective probability of success and analogous efficacy judgments should be reduced. The present findings are consistent with this assumption.

Prospective, decision-related action orientation (AOD) was not significantly correlated with AOF ( $r = 0.15$ ) and showed a different pattern of correlations with MSQ indices (see Table 10.1). Initiative (i.e., high AOD) was associated with stronger commitment, higher emotional intensity, less hopelessness, and less inefficacy. State-oriented hesitation (i.e., low AOD) can be conceived of as a low ability to self-generate positive affect when positive affect is dampened after non-attainment of a goal or after formation of a difficult intention (i.e., an intention that cannot be carried out immediately). Thus, intentions remain disconnected from intuitive behavioral routines necessary for their implementation as long as that dampened positive affect cannot be restored. The motivational structure of action-oriented individuals characterized by high commitment, high efficacy, and low hopelessness, confirms this system configuration. An individual's commitment toward achieving a goal can be interpreted in terms of an activation of an intention. According to this interpretation, the feeling, associated with prospective state orientation (i.e., low AOD), that one has little chance of success in reaching a goal (i.e., feelings of inefficacy) reflects the actual difficulty in releasing the inhibition between intention memory and its output system; and the fact that state-oriented participants (i.e., those scoring low on AOD) cannot easily restore positive and facilitating affect after forming a difficult intention can explain their feeling of inefficacy. In sum, these findings confirm the assumption that feelings of hopelessness and inefficacy can

**Table 10.1** Correlations between MSQ indices and Failure-related Action Orientation (AOF), Decision-related Action Orientation (AOD), Performance-related Action Orientation (AOP), Beck Depression Inventory (BDI), and Beck Anxiety Inventory (BAI). ( $N = 47$ )

	AOF	AOD	AOP	BDI	BAI
Number of Concerns	.28 <sup>†</sup>	-.15	-.19	.14	.13
Commitment	-.33*	.29*	.45**	-.20	-.20
Inappropriate Commitment	-.49**	.08	.30*	.00	.04
Sorrow in Excess of Joy	.20	-.04	-.01	.09	.03
Ambivalence	-.13	.11	.16	.25 <sup>†</sup>	.30*
Emotional Intensity	-.27 <sup>†</sup>	.27 <sup>†</sup>	.42**	.10	.13
Hopelessness	-.04	-.39**	-.32*	.26 <sup>†</sup>	.31*
Inefficacy	-.06	-.33*	-.25	.31*	.32*
Goal Distance	-.25 <sup>†</sup>	-.03	.14	.47**	.39**
Preparation Time	-.22	-.07	.23	.37**	.25 <sup>†</sup>

<sup>†</sup> $p < .10$  (2-tailed) \* $p < .05$  (2-tailed) \*\* $p < .01$  (2-tailed)

be interpreted as consequences of volitional inhibition, that is, the inhibition of the pathway between the memory for difficult intentions and the system that controls behavior (Kuhl & Kazén, 1999). In contrast to preoccupied participants (i.e., those scoring low on AOF) who have reduced access to the extended memory system on which subjective expectancies are based, hesitant participants (i.e., those scoring low on AOD) probably have experienced a smaller number of successes due to actual difficulties in enacting goals, or may have invested more effort to reach their goals despite these difficulties.

Whereas AOD and AOF describe the ability to escape a state-oriented mode of action control when necessary, performance-related action orientation (AOP) describes the ability to stay in an action-oriented mode while performing a pleasurable activity. It was not significantly correlated with AOD ( $r = .16$ ) and negatively correlated with AOF ( $r = -.37$ ,  $p < .01$ ). As shown in Table 10.1, motivational persistence (AOP) was associated with stronger commitment, higher inappropriate commitment, higher emotional intensity, less hopelessness, and less inefficacy. It seems plausible that commitment, intense emotions, and volitional efficacy help to stay involved in activities and, vice versa, a dispositional tendency to become immersed in pleasant activities increases experiences of commitment, intense emotions and volitional efficacy. However, the correlation with inappropriate commitment is less plausible. On the one hand, persisting in pleasant activities should reduce the probability for becoming involved in goals that offer little chances of success and/or little emotional satisfactions. On the other hand, a dispositional tendency to become immersed might be associated with a lower threshold for commitment to any kind of goals—even those with little chances of success and/or little emotional satisfaction. An alternative approach was to check whether the relationship was due to the significant correlation between AOP and AOF dimensions in the present sample. Whereas partial correlations between AOP and commitment, emotional intensity, hopelessness, and inefficacy remained significant, there was no significant relationship between AOP and inappropriate commitment ( $r = .13$ ) when controlling for AOF. In contrast, AOF was still significantly correlated with inappropriate commitment ( $r = -.43$ ,  $p < .05$ ) when controlling for AOP. Findings suggest, that motivational persistence is more related to “appropriate commitment” and autonomous reasons for acting (Sheldon & Elliot, 1998) than to inappropriate commitment.



## DEPRESSION AND ANXIETY

The many possible antecedents of depression (e.g., separation, loss) are thought to lead to a depressive disorder only when they result in the overmaintenance of degenerated intentions (Kuhl & Helle, 1986). According to this model, a fully-developed intention is characterized by four components: (1) a context component specifying conditions (e.g., time and place) for action; (2) a subject component specifying the self as the agent of an intended action; (3) an object component specifying actions or action alternatives to reach a desired goal state; and (4) a relation component specifying the degree of commitment through which the other components are connected (“related”). If one or more components are missing or ill-defined, the intention is degenerated. Some MSQ indices are examples of ill-defined components: a large goal distance and a long preparation time indicate that conditions for action are not well specified or concrete action steps are missing. Hopelessness and inefficacy indicate that actions are not elaborated or that action alternatives are not available. Ambivalence points to an ill-defined relation component because individuals have a problem with their commitment when the expected unhappiness about reaching a goal is close in intensity to the expected experience of joy. These examples of maintenance of degenerated intentions were thought to correlate with depressive symptoms as measured by the Beck Depression Inventory (BDI).

Interestingly, the BDI had a similar pattern of correlations with MSQ indices as the Beck Anxiety Inventory (BAI). This may be due to the highly significant correlation between BDI and BAI ( $r = .85, p < .001$ ). Both showed positive correlations with ambivalence, hopelessness, inefficacy, goal distance, and preparation time. Findings were consistent with the theoretical link between degenerated intentions and depression. Furthermore, individuals with dysfunctional motivational structures were found to develop more depressive and anxious symptoms.

## ADDITIONAL GOAL CHARACTERISTICS

In addition to MSQ ratings, participants were asked to categorize each goal as something they desire even if it is unrealistic (*wish*), something they must do even if they do not like to (*duty*), or as something they are personally committed to do (*intention*). According to Kuhl and Goschke (1994), these goal categories differ along two dimensions: realizability and self-compatibility. Intentions are high in realizability and high in self-compatibility, whereas duties are high in realizability and low in self-compatibility. In contrast, wishes are low in realizability and high in self-compatibility. As shown in Table 10.2, these goal characteristics were reflected in MSQ indices and calculated separately for different goal categories. Consistent with Kuhl and Goschke (1994), participants listed more intentions and wishes than duties. Anticipated sorrow was higher and emotional intensity lower for duties than for wishes, indicating their lower self-compatibility or self-congruence. Hopelessness and inefficacy were significantly higher for wishes than for duties and intentions, indicating their low realizability. MSQ indices not only distinguish individuals according to their motivational structure but also meaningfully differentiate between different goal categories.

The correlations between MSQ indices and some additional goal ratings were in accord with theoretical expectations and might further contribute to evidence for the validity of

**Table 10.2** Mean MSQ indices for different goal categories ( $N = 37$ )

	Wishes	Duties	Intentions	Effect size (●)
Number of Concerns	6.73 <sup>a</sup> (3.94)	2.95 <sup>b</sup> (2.12)	7.50 <sup>a</sup> (5.42)	.279
Sorrow in Excess of Joy	.10 <sup>a</sup> (.13)	.25 <sup>b</sup> (.34)	.17 (.23)	.095
Emotional Intensity	15.09 <sup>a</sup> (2.63)	13.40 <sup>b</sup> (4.11)	14.58 (2.93)	.128
Hopelessness	3.15 <sup>a</sup> (1.74)	1.57 <sup>b</sup> (1.57)	2.02 <sup>b</sup> (1.11)	.335
Inefficacy	3.19 <sup>a</sup> (1.06)	2.13 <sup>b</sup> (.95)	2.45 <sup>b</sup> (.87)	.329

Note. Different superscripts indicate significant differences between goal types in post-hoc comparisons.

**Table 10.3** Correlations between MSQ indices and additional goal ratings during an experimental session ( $N = 46$ ) and after one week ( $N = 41$ )

	Self-congruence	Perceived effort	After one week	
			Action opportunities	Goal enactment
Commitment	.36*	-.21	.39*	.40**
Inappropriate commitment	.21	-.02	.32*	.32*
Sorrow in excess of joy	-.49**	.34*	.24	.02
Emotional intensity	.41**	-.18	-.08	.13
Hopelessness	-.24	.30*	-.41**	-.37*
Inefficacy	-.09	.28 <sup>†</sup>	-.45**	-.34*

<sup>†</sup> $p < .10$  \* $p < .05$  \*\* $p < .01$  (2-tailed)

MSQ indices. As shown in the left column of Table 10., there was a negative correlation between self-congruence of goals and anticipated sorrow in excess of joy: participants with higher anticipated sorrow reported less self-congruent goals. Alternatively, one might argue that the possibility of not attaining important, self-congruent goals should be associated with high sorrow. However, anticipated joy upon goal attainment should be equally high or even higher if a goal is really important and self-congruent. Consequently, anticipated sorrow upon failure exceeding anticipated joy upon success indicates extrinsic rather than intrinsic motivation and, more specifically, a guilt-driven, internally controlled (i.e., introjected) type of regulation (Deci & Ryan, 2000). Consistent with this interpretation, anticipated sorrow was characteristic of duties (see Table 10.2). There were positive correlations between self-congruence and commitment and emotional intensity. Participants with stronger commitment and higher emotional intensity reported more self-congruent goals. In addition, there were positive correlations between perceived effort of enactment and anticipated sorrow and hopelessness (see Table 10.3): the higher participants scored in anticipated sorrow and hopelessness the higher was their perceived effort of enactment, which has been associated with a more controlled type of regulation (Kuhl, 2001; Sokolowski, 1993).

## GOAL PURSUIT

In a follow-up questionnaire one week after the experimental session, participants had to rate their goals along several dimensions. How often participants thought about their goals during the past week was highly correlated with emotional intensity ( $r = .50$ ,  $p < .001$ ):

participants with emotionally intense goal structures reported more thoughts about their goals. Although intensity has emerged as an important predictor of uncontrollability of thoughts (England & Dickerson, 1988), participants did not seem to experience their goal-related thoughts as particularly uncontrollable in the present study. There was no significant correlation between emotional intensity of goal structure and controllability of thoughts about goals ( $r = -.20, p < .22$ ). However, emotional intensity had different effects for state- and action-oriented participants (i.e., scoring low and high on AOF, respectively). Whereas there was no significant relationship between intensity and controllability for action-oriented participants ( $r = .05$ ), state-oriented participants with higher emotional intensity were less able to control their thoughts ( $r = -.43, p < .05$ ). One possible explanation for this finding is that there is no relationship between emotional intensity and control for the lower part of the distribution of emotional intensity and a moderate to strong relationship for the higher part of the distribution. Accordingly, state-oriented participants would have difficulties to control thoughts about emotional intense goals because they have a tendency to experience higher levels of emotional intensity (“overmotivation” or “overcommitment”) in Table 10.1. However, state orientation is defined as a difficulty in self-regulating affect. Thus, the tendency for state-oriented participants to experience higher levels of emotional intensity is more likely to be one of the results of their low volitional control than its cause. In any case, the negative relationship between emotional intensity and control underlines the state-oriented participants’ need for help when self-regulation of emotional reactions is required.

MSQ indices had meaningful relationships with goal pursuit. As shown in the right-hand column of Table 10.3, the percentage of actually enacted goals was positively correlated with commitment and inappropriate commitment, and negatively correlated with hopelessness and inefficacy. The higher participants’ commitment and the lower their feelings of hopelessness and inefficacy the more goals they enacted during one week. Moreover, and somewhat counter-intuitively, the higher participants’ inappropriate commitment the more goals they enacted during one week. The same pattern of correlations was found for perceived opportunities to enact the goals during the past week (see Table 10.3). Perceiving an action opportunity was positively correlated with commitment, and inappropriate commitment, and negatively correlated with hopelessness and inefficacy. The higher participants’ commitment and inappropriate commitment, the more action opportunities they had (or recognized) during one week. The higher participants’ hopelessness and inefficacy, the fewer action opportunities they had (or recognized) during one week.

According to PSI theory, the positive correlation between inappropriate commitment and goal enactment may be explained in terms of behavioral facilitation through preprogramming of intuitive behavioral routines, a mechanism that is similar to Gollwitzer’s (1999) delegation hypothesis—i.e., when time and place of execution and the action steps are specified, no volitional intervention is needed because the behavior will automatically be performed as soon as relevant cues are encountered. This type of automatic behavior control can work not only without volitional support, but also without motivational support (as exemplified by the two aspects of inappropriate commitment: little chance of success and little emotional satisfaction). Automatic behavior control is mediated by a system that is largely independent of self-compatibility and incentive checking. On the neurobiological level, this system can be related to the nigrostriatal dopaminergic system, which can facilitate behavior through a route that does not include the limbic or prefrontal systems. In everyday life we experience this type of behavioral facilitation when we rely on habits and routines (e.g., I brush my teeth in the morning automatically, no matter whether or not I enjoy it

or have access to my self-congruent feeling about dental care). Therefore, the paradoxical relationship between enactment and inappropriate commitment can be explained in terms of the functional characteristics of automatic behavior control (Kuhl, 2001, pp. 420ff).

Correlations between goal enactment and MSQ indices were not significant when controlling for action opportunities. However, the correlation between action opportunities and inefficacy was still significant when controlling for goal enactment ( $r = -.32, p < .05$ ). This suggests that inefficacy (i.e., the degree to which chances for success are not rated higher due to one's own action compared to taking no actions) is more strongly associated with a deficit in perceiving action opportunities than in actually taking action when given the opportunity to do so. These findings are consistent with the negative affect modulation assumption of PSI theory: when access to extension memory is inhibited, participants cannot perceive action opportunities and become inefficient.

## SELF-INFILTRATION

The experimentally derived measure of self-infiltration (baseline corrected number of false self-ascriptions of externally controlled activities) was correlated with MSQ indices. There was a positive partial correlation between inappropriate commitment and false self-ascriptions ( $r = .26, p < .09$ ): With higher inappropriate commitment participants had higher rates of false self-ascription of unattractive activities originally assigned by the experimenter, controlling for rates of false self-ascription of unattractive activities that were neither chosen by the participant nor by the experimenter in the self-infiltration experiment described earlier. Participants who were committed to unrealistic goals and to goals providing little satisfaction in their life showed a tendency to be "invaded" by the intentions of others in an experimental setting.

Although the correlation between inappropriate commitment and self-infiltration reached only marginal significance, it is striking because it relates a self-report measure of introjection generated in the broad context of personal goals to an implicit measure of introjection experimentally derived within the restricted context of office activities. The process of self-infiltration may cause participants to become committed to goals that provide little satisfaction in the first place. Reliance on automatic behavior control is an example of a process that is characterized as an uncoupling of behavior control from motivational and volitional systems, thus increasing the risk of alienation, that is, performance of activities that are neither self-congruent nor need-satisfying and pleasant. Pursuing goals that are unrealistic and provide only little satisfaction may in turn increase frustration and negative affect. According to the negative-affect modulation assumption of PSI theory (Kuhl, 2000), unattenuated negative affect reduces access to an extended associative network system (extension memory) and the implicit self. Thus, high levels of inappropriate commitment may further reduce access to the very system that is needed for finding alternative ways to actually reach goals and for generating more self-congruent, satisfying goals. In extreme cases, the person can be trapped in a vicious cycle of increasing alienation from his or her needs, emotional preferences, and self-congruent values.

## ALIENATION

As expected on the basis of the foregoing discussion, MSQ indices showed meaningful relationships with experimentally derived measures of alienation. Theoretically, two forms

of alienation can be distinguished. Whereas *manifest alienation* refers to a failure to plan, initiate or maintain emotionally preferred behavior, *latent alienation* refers to an impaired perception of emotional preferences or needs (Kuhl & Beckmann, 1994). The measures used in the present study may be interpreted in terms of manifest alienation, that is, a volitional inefficiency to behave according to one's preferences.

The proportion of highly attractive activities selected during the final choice was significantly correlated with anticipated sorrow ( $r = -.35, p < .02$ ): With increasing scores in anticipated sorrow fewer attractive compared to unattractive activities were selected in a free-choice period. Anticipated sorrow can be interpreted in terms of avoidance motivation (or prevention focus): behavioral facilitation is more strongly guided by the concern to prevent an aversive state from occurring than by positive concerns. Mean selection positions were calculated for unattractive activities. Lower scores (i.e., early selection positions) indicated an earlier choice and greater willingness to enact an activity. Thus, for both indices (selection proportion of attractive activities and position of unattractive ones) lower scores meant orientation toward activities of lower attractiveness (i.e., higher alienation). Selection positions of unattractive activities were significantly correlated with commitment ( $r = .39, p < .01$ ), hopelessness ( $r = -.34, p < .02$ ), and inefficacy ( $r = -.38, p < .01$ ): The weaker participants' commitment and the stronger their feelings of hopelessness and inefficacy in dealing with current concerns, the earlier they selected unattractive office activities and the later they selected highly attractive activities in a free-choice period.

Alternatively, one might argue that these participants were not alienated from their preferences but somehow "liked" unattractive office activities. This alternative interpretation was discounted by the fact that there were no significant correlations between MSQ indices and attractiveness ratings, neither for the median-split subsamples of 24 unattractive and 24 highly attractive activities nor for the total sample of 48 activities.

Anticipated "sorrow in excess of joy" means that participants feel that they have a lot to lose if they are unable to reach their goals, but not much to gain if they do reach their goals (stronger focus on prevention of aversive events than promotion of positive events). Anticipated sorrow is correlated with duties ("must"), low self-congruence, and effortful goal pursuit. This type of motivation is typical of a controlling mode of regulation characterized by rigid protection of introjected goals and suppression of conflicting needs and the self. In the loss-of-autonomy cycle, Kuhl and Beckmann (1994) describe how excessive control and self-suppression lead to accumulation of conflict, uncontrollable intrusive thoughts, and impairments of self-regulatory efficiency. In an effort to compensate for these impairments, participants may increase attempts to gain control and further suppress counter-intentional information and conflicting needs and preferences. It is not surprising that individuals with this self-controlled mode of regulation do not gain satisfaction from their goals and do not behave hedonistically in a free-choice situation. Findings further support the suggested link between anticipated sorrow and lack of commitment and a controlled mode of regulation and self-inhibition.

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