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# Chapter 3

# THE RELATIONSHIP OF SELF-REGULATORY PROCESSES, MOTIVATIONAL CONDITIONS, AND TEMPORAL FRAMEWORKS WITH PSYCHOLOGICAL WELL-BEING

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**ABSTRACT**
Recent reviews have pointed out that understanding long-term issues of well-being requires other theories besides the prevailing cognitive-behavioral ones. This chapter reviews the relationship of well-being to compatibilities among self-regulatory processes, motivational conditions, and temporal frameworks. When pursuing long-term goals, experiential self-regulatory processes, such as autonomy and enjoyment, are associated with well-being. When pursuing short-term goals, cognitive-behavioral self-regulatory processes, such as goal progress and self-reinforcement, are associated with well-being. The review provides new insights regarding the roles of motivational conditions and temporal frameworks in the management of adaptive and maladaptive behaviors and offers suggestions for effective interventions for long-term well-being.

*Keywords:* self-regulation, motivation, goal conditions, well-being.

## 1. INTRODUCTION

Recent reviews have pointed out that understanding long-term issues of mental health requires other models and concepts besides the prevailing cognitive-behavioral ones (Hall & Fong, 2007; Ryan & Deci, 2008). The present review attempts to extend our understanding of such long-term issues with considerations of other psychological models, especially those from Self-Determination Theory (SDT) which describe motivational and experiential self-regulatory processes involved in satisfying core needs and desires (Deci & Ryan, 2000; Ryan & Deci, 2000). Long-term processes of adjustment and maladjustment and interventions for them involve unique psychological conditions and requirements which theories of motivation and experiential self-regulation can address.

Psychological well-being is based on our capacities to cope with various psychological situations and conditions. Research has established that psychological adaptation and well-being depend on our perceptions of our environment, capabilities, and resources to cope (Lazarus, 1991; Lazarus & Folkman, 1984). Past research has also drawn attention to the fact that our appraisals and coping with our life situations are interwoven in dynamic relationships. The various types of coping methods we utilize are influenced by how we appraise our life situations and psychological resources (Folkman, Lazarus, Dunkel-Schetter, DeLongis, & Gruen, 1986; Peacock, Wong, & Reker, 1993). When we extend this model further and consider other forms of self-regulation such as those based on motivation, we can gain further insights into the persistence of both long-term adaptive and maladaptive behaviors and the appropriate interventions for them.

Much of past research on coping has focused on managing threatening and stressful situations and conditions. Much less research has examined the relationships of different self-regulatory and coping approaches with long-term psychological well-being. For a more complete understanding of adaptive and maladaptive behaviors in the long-term, we need further clarification of how different psychological conditions, including pursuing our goals under various temporal frameworks, require different coping and self-regulatory approaches. Recent reviews have identified the importance of motivational processes and temporal frameworks in the development of long-term maladjustments and their effective treatments

(Hall & Fong, 2007; Ryan & Deci, 2008). For example, whether our actions result in adjustment or maladjustment depends on the temporal framework of our motivations and our self-regulatory capacities (Hall & Fong, 2007). While maladaptive behaviors are often under the influence of more proximal or immediate consequences, long-term adaptive behaviors require and make use of more complex regulatory capacities and motivational processes. Following this line of reasoning, applying insights from research on self-determined motivation, experiential self-regulation, and the temporal frameworks under which they operate might extend our understanding of the nature of adaptive behaviors, the intransigent nature of maladaptive behaviors, and suggest more appropriate and effective interventions for them.

As stated above, analogous to the understanding of the conditions which promote maladaptive and adaptive behaviors, the effects of pursuing short-term and long-term goals on well-being depend on different motivational and self-regulatory processes. The following review proposes that experiential self-regulatory approaches promote well-being in the pursuit of long-term goals. On the other hand, for the promotion of well-being in more immediate situations and in the pursuit of short-term goals, behavioral and self-regulatory approaches appear to be appropriate and effective. Behavioral and experiential self-regulatory approaches have often been examined in terms of their effects on psychological well-being (Mezo & Short, 2012; Ryan & Deci. 2000). The present review followed previous conceptualizations of psychological well-being in behavioral and self-determination research as a multidimensional construct, including focus on mental health, affect, and self-esteem (Ryan & Deci, 2000; Sheldon & Kasser, 1998).

### 1.1. Goals, temporal frameworks, and self-regulation

The type of psychological process most relevant to coping with and managing our different psychological environments for the promotion of well-being is self-regulation. Cognitive-behavioral and motivational processes have been proposed to account for the promotion of psychological well-being in theories of self-regulation (Mackenzie, Mezo, & Francis, 2012; Sheldon & Elliot, 1999; Sheldon & Kasser, 1995, 1998). Motivational processes fall under the rubric of experiential self-regulation. As part of this review, we examine the relationship of behavioral, cognitive, and motivational self-regulatory processes with well-being under different goal conditions and temporal frameworks. Striving for goals is one of the central features in different types of self-regulations. However, few studies have examined the compatibilities of different self-regulatory processes with goal conditions under different temporal frameworks for the promotion of well-being. As a consequence, our understanding of the relationship of self-regulation, goal striving, and well-being remains fragmented and incomplete.

Construal-level theory (CLT; Liberman & Trope, 1998; Trope & Liberman, 2010; Trope, Liberman, & Wakslak, 2007) is pertinent to these relationships because it outlines which psychological goal conditions might be compatible with different self-regulatory processes. Construal-level theory proposes that individuals make use of general and abstract constructs to conceptualize psychologically distant objects and specific and concrete constructs to conceptualize psychologically close objects. According to CLT, general constructs represent the core features of objects and goals. In contrast, specific constructs represent the peripheral features of objects and goals. Construal-level theory has also been applied to examine the psychological correlates of different types of goals. For more distant goals, the correlates reflect the essence of things whereas for more proximal goals the correlates reflect pragmatic and situational factors. For example, research has shown that general, abstract, and distal goals are associated with experiential attributes such as desirability, enjoyment, and interest (Trope et al., 2007). In contrast, more specific, concrete, and proximal goals are associated with behavioral dimensions such as feasibility and efficiency to achieve goals.

Following construal-level theory, under proximal goal conditions peripheral aspects of motives, such as meeting situational requirements, are thought to be activated, compatible with behavioral and cybernetic self-regulations (Horvath & McColl, 2013). Under distal goal conditions, however, core aspects of motives, such as interest and enjoyment, are thought to be

activated which are compatible with experiential self-regulation. A closer match on attributes shared by goal conditions and self-regulatory processes are adaptive and associated with greater psychological well-being. For example, specific goals in situations are compatible with cognitive and behavioral self-regulatory processes that depend on feedback and control. On the other hand, general or abstract goals have core attributes such as desirability and enjoyment that are compatible with experiential self-regulatory processes that involve pursuing intrinsic interests. Accordingly, under more circumscribed conditions, such as in the pursuit of short-term goals in specific situations, cybernetic and behavioral self-regulatory processes, such as perception of goal progress and self-reinforcement, are associated with psychological well-being (Horvath & McColl, 2013). In the pursuit of more general or personal goals, however, experiential self-regulatory processes, such as enjoyment of an activity, are associated with psychological well-being.

## 2. BACKGROUND

### 2.1. Behavioral and cybernetic self-regulation

Self-regulation has been conceptualized as the management and control of behavior in order to acquire goals (Bandura, 1997; Carver & Scheier, 1998; Endler & Kocovski, 2000; Kanfer, 1970). Theories of self-regulation were developed within behavioral, cognitive, and cybernetic models (Bandura, 1997; Carver, & Scheier, 1998; Kanfer, 1970). The main components of cybernetic and behavioral self-regulation include goal setting, planning, feedback, self-monitoring, self-evaluation, and self-reinforcement (Endler & Kocovski, 2000; Kocovski & Endler, 2000; MacKenzie et al., 2012; Mezo, 2009). Striving for goals is a core aspect of self-regulation and is thought to energize and guide behavior (Carver, & Scheier, 1998; Locke & Latham, 2002). Behavioral and cybernetic self-regulations share similar processes involving the control of behavior to acquire desired goals. In cybernetic regulation, however, there is relatively more emphasis on cognition and the role of information feedback to guide behavior, while in behavioral self-regulation there is relatively more focus on motivational components such as self-reinforcement. However, unlike enjoyment in experiential self-regulation, in behavioral self-regulation the reward is externally applied and the consequent experience of pleasure is differentiated from the act being reinforced. For example, one student might study for a course because of intrinsic interest in the material itself, whereas another student might use externally applied incentives, such as treats, to persist in their studies.

In both cybernetic and behavioral self-regulations, behavior is adjusted to reduce discrepancies from set goals (Carver & Scheier, 1998; Endler & Kocovski, 2000). The proximity of actions to set criteria is a determinant of adjustment, self-worth, and positive affect (Ahrens, 1987; Hyland, 1987; Siegert, McPherson, & Taylor, 2004). In cybernetic self-regulation, positive affect occurs when the person perceives that adequate progress is being made toward goals (Carver & Scheier, 1998). In contrast, negative affect occurs if the person does not perceive that adequate progress is being made. A meta-analysis of relevant research has confirmed that goal progress is associated with increased positive and decreased negative affect (Powers, Koestner, Lacaille, Kwan, & Zuroff, 2009). In addition, perceived goal progress in behavioral self-regulation leads to subsequent self-reinforcement (Endler & Kocovski, 2000; Kocovski & Endler, 2000). Positive self-evaluations and self-reinforcement for reaching goals result in positive affect (Ahrens, 1987; Endler & Kocovski, 2000; Kocovski & Endler, 2000). On the other hand, low frequencies of self-reinforcement in behavioral self-regulation are associated with emotional distress and depression (Kocovski & Endler, 2000).

### 2.2. Experiential self-regulation

Self-Determination Theory describes the motivational and experiential self-regulatory processes involved in satisfying core needs and desires (Deci & Ryan, 2000; Ryan & Deci, 2000). Self-determined individuals are able to exercise freedom over their choice of motivated actions. Self-determined motivation is associated with the capacity and freedom to select and pursue intrinsically interesting and satisfying goals rather than extrinsic ones (Deci & Ryan,

2000; Owens, Mortimer, & Finch, 1996; Ryan & Deci, 2000). From the perspective of SDT, individuals have a propensity to satisfy their basic or primary needs for autonomy, competence, and relatedness (Deci & Ryan, 1987; Ryan & Deci, 2000). Goals and interests that meet these basic psychological needs are intrinsically motivating and satisfying. In intrinsic motivation the reward is the spontaneous experience of interest and enjoyment (Deci & Ryan, 1995; Ryan & Deci, 2000). Examples of intrinsic motivation include the pursuit of goals for affiliation, personal growth, and community relations. In contrast, extrinsic motivation includes the pursuit of goals for wealth, fame, and self-image that at best indirectly satisfy basic needs.

According to SDT, experiential self-regulation has been conceptualized to function along an autonomously and internally regulated to controlled and externally regulated continuum (Deci, Eghrari, Patrick, & Leone, 1994; Deci & Ryan, 1987). Experiential self-regulations vary in the degree to which the person pursues motives and values that have been internalized and integrated all the way from intrinsic motivation to extrinsic motivation and amotivation (Ryan & Deci, 2000). To reflect these processes, global measures have been developed to evaluate levels of experiential self-regulation from intrinsic motivation to amotivation (see Pelletier et al., 2007).

Based on theoretical and empirical grounds, however, some researchers have also conceptualized autonomous and controlled regulation as distinct experiential self-regulatory processes (Barbeau, Sweet, & Fortier, 2009; Koestner, Otis, Powers, Pelletier, & Gagnon, 2008). Autonomously regulated individuals feel free and empowered to choose intrinsically satisfying goals and enjoy their activities (Ryan & Deci, 2000; Sheldon & Elliott, 1999; Sheldon, Ryan, Deci, & Kasser, 2004). Autonomous regulation is associated with a number of positive psychological conditions including positive self-esteem (Owens et al, 1996; Sheldon & Kasser, 1995) and psychological well-being (Ratelle, Vallerand, Chantal, & Provencer, 2004; Sheldon & Kasser, 1995; Sheldon et al., 2004). In contrast, individuals using controlled regulation choose their goals in response to external forces. They perceive external constraints or demands which they feel they need to comply with. In controlled regulation, the individual does not feel free to choose intrinsically satisfying goals. In such conditions the individual is less likely to be motivated, satisfied, or successful. The pursuit of extrinsic or externally imposed goals results in less effort, basic need fulfillment, and psychological well-being in such individuals (Crocker, Brook, Niiya, & Villacorta, 2006; Sheldon et al., 2004).

### 2.3. Goal conditions and self-regulation

Current studies on motivation have drawn distinctions between motivational content (e.g., interests and goals) and self-regulatory processes, or the ways and reasons for acting on motivational content (Deci & Ryan, 2000; Sheldon & Elliot, 1999; Sheldon & Kasser, 1995, 1998; Sheldon et al., 2004). Motivational content has been formulated in various but complementary ways in the literature. Proponents of Self-Determination Theory have differentiated between intrinsic goals which are pursued because they are inherently enjoyable and extrinsic goals which are pursued for secondary reasons (Deci & Ryan, 1987; Ryan & Deci, 2000). Carver and Scheier (1998) placed goal pursuits in a hierarchy, from ideal and general goals at the top to specific routines, programs, scripts, and behaviors at the bottom. The general goals are pursued through the execution of specific and concrete acts at the bottom of the hierarchy. A related differentiation considers whether one is pursuing distal or proximal goals (Locke & Latham, 2002; Trope et al., 2007; Zimmerman & Schunk, 2001). The external situation is seen as more salient for individuals pursuing proximal rather than distal goals. Others have differentiated between implicit and explicit goals and motives (Thrash & Elliot, 2002). Implicit motives are based on internal needs and are less in conscious awareness whereas explicit motives are consciously formulated. The former are better at predicting long-term behaviors and achievement whereas the latter are better at predicting short-term behaviors or what people will do in specific situations (Spangler, 1992).

Certain goal types or conditions appear to be more compatible with some forms of self-regulation than others. Behavioral and cognitive forms of self-regulation tend to be applied

to the situational requirements of short-term goal pursuits (Locke & Latham, 2002; Zimmerman & Schunk, 2001). Behavioral strategies and tactics target the specific requirements of situations. Implementation planning, a component of cognitive-behavioral self-regulation, has been found to increase progress on goals and to achieve behavioral change within short time intervals (Koestner et al., 2008). Perception of goal progress, in turn, has resulted in increased well-being within short time intervals (Sheldon & Elliot, 1999; Sheldon & Kasser, 1998). In contrast, experiential aspects of self-regulation, such as intrinsic enjoyment of an activity, appear to play a more prominent role in promoting adjustment and well-being in the pursuit of long-term goals. Experiential self-regulation has been found to predict well-being after a time interval of one year (Sheldon et al., 2004), whereas its effects on well-being in short time intervals of one or two-weeks were mixed (Sheldon & Kasser, 1995, 1998). These findings suggest that the effects of different types of self-regulations on well-being may depend on the types of goals individuals are pursuing and the conditions under which they operate.

The above reviewed findings point towards several observations. First, the above conceptualizations of goals fall into two main types. More general, distal, and implicit goals, although not identical, appear to be similar constructs. Likewise, more specific, proximal, and explicit goals appear to be similar constructs. Second, different self-regulatory processes appear to have differential applicability and effectiveness in addressing these two types of goals. Some evidence suggests that experiential self-regulation might be more appropriate for general, distal, and implicit goal pursuits. On the other hand, behavioral and cognitive self-regulations have been successfully applied to specific, proximal, and explicit goals in more circumscribed situations. Accordingly, general and long-term goals appear to involve core psychological attributes which are more compatible with experiential self-regulation. In contrast, specific and short-term goals contain situational requirements which appear to be more compatible with cybernetic and behavioral self-regulations.

## 3. SELF-REGULATION AND PSYCHOLOGICAL WELL-BEING

This section reviews how different self-regulatory processes account for psychological well-being under different goal conditions and temporal frameworks. Cybernetic and behavioral self-regulatory processes are typically applied to the pursuit of short-term goals. In specific situations, a sense of accomplishment can come from success on particular tasks. Positive feedback and consequent reinforcement for success promote self-esteem and other psychological benefits (MacKenzie et al., 2012). However, cybernetic and behavioral self-regulatory processes differ, with more emphasis on the use of information feedback to manage behavior in the former and more emphasis on the use of external rewards to manage behavior in the latter. With regard to the promotion of well-being in long-term goal pursuits, experiential self-regulatory processes, such as intrinsic enjoyment of an activity, are more likely to be beneficial (Sheldon & Kasser, 1995; Sheldon et al., 2004). Processes in experiential self-regulation appeal to the satisfaction of core needs of the self, such as for autonomy, which sustain the individual emotionally over long periods of goal striving (Sheldon & Elliott, 1999) and also produce long-term beneficial therapeutic effects (Ryan & Deci, 2008).

In a study by Horvath and McColl (2013), participants completed global measures on their typical modes of behavioral and experiential self-regulations, as well as measures of psychological well-being. They also listed important intrinsic goals they pursued more generally and goals pursued in the short-term and rated their use of cybernetic, behavioral, and experiential self-regulatory processes. These processes included perception of goal progress, self-reinforcement for goal progress, and enjoyment of goal pursuits. The study employed self-report measures of mental health, self-esteem, and general affect to form a composite index of psychological well-being. These measures are commonly used indicators of subjective well-being (Koestner et al., 2008; Ratelle et al., 2004).

Consistent with construal-level theory, Horvath and McColl (2013) found that enjoyment of the activity, an experiential self-regulatory component, accounted for psychological well-being in the pursuit of goals more generally. In contrast, in the pursuit of

short-term goals, cybernetic and behavioral components in self-regulation, namely perception of goal progress and self-reinforcement for goal progress, accounted for well-being. The latter are notable findings given the fact that they occurred even in the pursuit of short-term intrinsic goals, when one might expect extrinsic goals to be more consistent with the situational focus of cybernetic and behavioral regulation. These results suggest, therefore, that cognitive and behavioral self-regulatory processes are applicable to managing the situational requirements of various types of short-term goals.

Overall, self-determination variables, such as autonomous regulation and enjoyment, were more strongly associated with psychological well-being than were cognitive and behavioral ones, such as perception of goal progress and self-reinforcement. These positive health effects were likely due to the contributions of self-determination processes, such as autonomy, to the satisfaction of basic needs (Barbeau et al., 2009; Deci & Ryan, 1987; Ryan & Deci, 2000; Thøgersen-Ntoumani & Ntoumanis, 2007) and the relation of self-determination variables to feelings of security and confidence (Ratelle et al., 2004). Consistent with past research, controlled regulation was negatively associated with well-being (Barbeau et al., 2009; Koestner et al., 2008; Sheldon et al., 2004). Controlled regulation had no associations with other benign processes, suggesting that it might contain various dysfunctional elements related to self-management. Besides the absence of autonomy in goal pursuits, the absence of significant correlations with enjoyment and positive reinforcement also suggested that controlled regulation likely involves a mix of both pleasant and unpleasant experiences. Unlike autonomous regulation, controlled regulation appears to lack positive approach tendencies and the intrinsic enjoyment of activities. These factors likely undermine its effectiveness to promote long-term satisfaction and well-being.

According to cognitive-behavioral and cybernetic theories, psychological well-being is a product of cognitive-behavioral coping (Bandura, 1997; Carver & Scheier, 1998, Kanfer, 1970). Individuals find cognitive and behavioral interventions helpful to cope with a variety of psychological problems (Febbraro & Clum, 1998). The contributions of cognitive and behavioural regulatory processes to well-being have also been recognized in the motivational and experiential regulatory literature (Sheldon & Elliot, 1999; Sheldon & Kasser, 1995, 1998). Sheldon and Kasser (1995) point out, however, that psychological health not only depends on how we achieve our goals but also why we seek them. While the cybernetic and behavioural self-regulations focus more on how to cope with specific tasks and situations, experiential self-regulations focus more on why we pursue goals. They tend to be more related to the core aspects of our motives and the self. The findings on the effects of motivational and experiential self-regulation on well-being have bearing on a number of challenging mental health issues, including how to deal with the intransigent nature of long-term maladaptive and addictive behaviors (see Hall & Fong, 2007). Whereas the beneficial effects of behavioral and cognitive treatment approaches on long-term maladaptive behaviors are often wanting, findings from research on experiential self-regulation and treatments based on SDT suggest that the satisfaction of core needs lead to sustained effort and long-term well-being (Ryan & Deci, 2008; Sheldon & Elliot, 1999). Such findings suggest that to sustain adaptive behaviors and to achieve long-term mental health, behavioral changes need to be tied to aspects of self-determined motivation. For example, the selection of constructive goals and actions might be challenging for clients. However, if with assistance they have opportunities to satisfy core needs for autonomy, competence, and relationships either in the therapeutic environment or outside of it and select goals and actions that also provide some intrinsic satisfaction, then they are more likely to have the emotional sustenance for coping and adaptation in the long term.

A final point is that these various forms of self-regulation are also related. Autonomous regulation, a global experiential variable, and global self-reinforcement, a behavioral variable, have been found to be correlated with each other and with other self-regulatory processes (Horvath & McColl, 2013). These findings and those of others suggest that experiential and behavioral self-regulations are likely to be complementary to each other and make their unique contributions at different stages of the self-regulatory process.

## 4. FUTURE RESEARCH DIRECTIONS

The above review suggests that there is need for more comprehensive and encompassing conceptualizations of long-term psychological well-being and how it can be achieved. Also pointing in this direction are the findings from positive psychology that a number of different endeavors contribute to life satisfaction, including the pursuit of pleasure, engagement in activities, and finding meaning in life (Peterson, Park, & Seligman, 2005). The question arises as to how all these psychological constructs are related to each other with regard to the promotion of life satisfaction and well-being? Different self-regulatory processes appear to have specialized and unique compatibilities with our internal and external environments in the promotion of well-being which have to be taken into consideration. Cognitive and behavioral self-regulations appear to address the short-term requirements of specific situations. Experiential self-regulation, on the other hand, appears to address our internal needs and the self which can sustain well-being in the long term. However, these different forms of self-regulations also appear to share some processes in their activation and modulation of pleasant experiences. These points involve processes of motivation which are increasingly being recognized as important aspects in the attainment of mental health and effective interventions (Miller & Rollnick, 2002). The ways in which motivational processes contribute to the promotion long-term health behaviors and effective interventions need further investigation. Future research should examine various forms of self-regulations and the motivational conditions under which they contribute to long-term and short-term well-being. For example, research should examine the contributions of other self-regulatory processes, such as emotional regulation, to psychological well-being under different types of temporal frameworks and goal conditions. The control of our emotions is often related to our motivations and vital to the successful management of situations. Finally, more research is also needed to examine how these processes complement each other at different stages of the self-regulatory process.

## 5. CONCLUSION

In conclusion, consistent with predictions from construal-level theory, compatibilities between self-regulatory processes, temporal frameworks, and goal conditions appear to be related to psychological well-being. It makes sense that the impact of different self-regulatory processes would be related to their similarities to the conditions and requirements of our internal and external environments. Although each type of self-regulation appears to have its own niche, they are also complementary building blocks in the overall management of the self and of psychological well-being. Our review extends conceptualizations of psychological well-being by integrating cybernetic, behavioral, and experiential self-regulatory processes with motivational and temporal ones. Considerations of motivational processes appear to provide a powerful addition to the understanding and integration of issues of long-term adjustment and its management. Our review of experiential self-regulation suggests that it may have some aspects, such as its focus on motivational processes and the satisfaction of core needs, which could be used to address the intransigent nature of long-term maladaptive behaviors, their management, and the promotion of long-term psychological well-being, which more conventional behavioral and cognitive approaches have struggled with.

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(This paper provides a brief overview of the application of principles from Self-Determination Theory to issues of long-term health behaviour change and its maintenance.)

## KEY TERMS & DEFINITIONS

**Construal-level theory (CLT):** a psychological theory that examines the use of different levels of abstraction to conceptualize objects at different degrees of psychological distance.

**Psychological well-being:** a multidimensional construct that encompasses various psychological attributes such as mental health, affect, and self-esteem.

**Self-determination:** the capacity and exercise of freedom of choice over one's motivated actions.

**Self-determination theory (SDT**): a macro-theory of human motivation, personality development, and well-being.

**Self-regulation:** the management and control of various facets of human behavior by the person in order to acquire set goals.

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