

# **SELF-DETERMINATION THEORY**

## **A THEORETICAL AND EMPIRICAL OVERVIEW IN OCCUPATIONAL HEALTH PSYCHOLOGY**

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### **CHAPTER OVERVIEW**

The present chapter presents Self-Determination Theory (SDT; Deci & Ryan, 2000; Vansteenkiste, Ryan, & Deci, in press) and points at its applicability for occupational health psychology. Over some 40 years of research, SDT has developed into a grand theory of human motivation and optimal functioning. The theory has been applied to various life domains including education, exercising, development, parenting and relationships. Recently, the theory was introduced in the field of occupational health psychology and several empirical contributions have now provided support for its validity (Gagné & Deci, 2005; Scheldon, Turban, Brown, Barrick, & Judge, 2003). Within this chapter, we provide a conceptual overview of SDT and review the empirical findings that have supported its theoretical assumptions. We start with an outline of SDT's meta-theoretical assumptions. We then describe three important themes within SDT, that is, 1) the distinction between qualitative different types of behavioural regulation, labelled as the 'why' of behaviour, 2) the differentiation between qualitative different goal orientations, conceptualised as the 'what' of behaviour and 3) the concept of basic psychological need satisfaction. We furthermore discuss job design and leadership style, which represent two important organisational aspects to which SDT has been fruitfully applied. We conclude with a summary of SDT's most important contributions for occupational health psychology.

### **META-THEORETICAL ASSUMPTIONS**

The starting point for SDT is its organismic dialectic meta-theory. Within this meta-theory it is suggested that individuals are growth-oriented organisms who actively interact with their environment (Deci & Ryan, 2000). SDT maintains that individuals are endowed with an innate striving to actualise their potentials, that is, to elaborate their knowledge, cultivate their interests, seek challenges and explore the world. They strive to integrate

and meaningfully organise these new experiences into a harmonious and authentic sense of self. The tendency to extend and organise one's experiences is accompanied by the natural inclination to interconnect with other people. As much as human beings strive for self-development, according to SDT, they aim at a harmonious and authentic integration in the larger social environment. At their best, people give direction and meaning to their behavior and act in a volitional and self-integrated manner (Vansteenkiste, 2005). Within SDT, it is, however, also acknowledged that individuals can become passive and counter-productive (Ryan & Deci, 2000). The assumption that humans are inherently active organisms does not imply that this tendency can be taken for granted or happens automatically. In contrast, SDT maintains that the growth oriented nature of individuals requires fundamental nutrients. The growth oriented nature can only come about if individuals have built sufficient inner resources to nourish this inherent tendency or found the necessary support in the environment. The social context can thus support and nurture or deny and frustrate individuals' inherent growth tendency.

From these assumptions, it becomes clear that SDT takes into account both individuals' optimal functioning (bright side) and malfunctioning (dark side) and studies the conditions which stimulate the former or elicit the latter (Ryan & Deci, 2000). Explicating SDT's meta-theory is not only of theoretical importance. From a practical point of view these assumptions suggest that individuals can best be motivated by supporting their endogenous potential. Thus, according to SDT, employees are likely to display optimal performance and well-being in a context in which their inherent tendency is cherished and encouraged. If the work environment is over-challenging, overly controlling or rejecting, individuals' vulnerabilities will dominate and their dysfunctions will become apparent.

The idea that individuals can act as active agents or passive entities has previously been put forward in psychology. When comparing SDT's viewpoint with the writings of, for instance, the humanistic psychologist McGregor (1960), it is evident that both acknowledge individuals' instances of active engagement as well as their moments of alienation. McGregor (1960) outlined two sets of beliefs about human nature which occupational health psychology scholars and practitioners might hold, that is, Theory X and Theory Y. Within Theory X, employees are considered to dislike work. They are assumed to avoid investing energy and contributing to the organisational goals, unless they are strictly directed and controlled. Within Theory X, coercion is not only considered necessary, the average employee is also assumed to prefer being controlled. The second set of beliefs, Theory Y, holds that work is as natural as rest and play. It assumes

that under the right conditions employees want to develop their skills, seek responsibility and take initiative. Within Theory Y, not coercion, but the provision of self-direction is the most important means through which employees contribute to the organisations' objectives.

Although they both acknowledge individuals' optimal and maladaptive functioning, SDT seems to differ from McGregor's point of view in at least two aspects. First, unlike SDT, McGregor considers that both Theory X and Y can be valid depending on employees' level of need satisfaction, as defined by Maslow (1943). If employees lack satisfaction of Maslow's lower needs such as physiological sustainability or safety, McGregor assumes they can best be motivated by the promise of rewards and the threat of punishments, which build on Theory X. If employees have satisfied these lower needs, they are theorised to strive for higher order needs such as self-esteem and self-actualisation (Maslow, 1943). Only, in that case, interventions based on Theory Y are assumed to become applicable (McGregor, 1960). SDT, in contrast, maintains that all individuals are always optimally stimulated if their inherent growth oriented nature is appealed to. The second difference is that humanistic psychology in general and McGregor in particular have refrained from conducting empirical research to examine their theoretical claims, whereas SDT's meta-theoretical framework is, in part, inductively derived from previous empirical research (Deci & Ryan, 2000).

SDT shares its empirical approach and encompassing view on individuals' well-being and behaviour with the general positive psychology movement (Seligman & Csikszentmihalyi, 2000) and positive occupational psychology in particular (Luthans, 2002). Like SDT, positive psychology dissociates itself from a disease model in which the focus is on individuals' weaknesses and the reparation of ill-being. The positive psychology movement is oriented towards the study of positive subjective experiences and individual traits, as well as the social factors that nurture individuals' strengths and development. The positive psychology movement studies various concepts ranging from pleasure and hope to self-efficacy. As SDT's development is coherently guided by its meta-theoretical assumptions, it is argued to provide a coherent framework in which positive psychology can be grounded (Deci & Vansteenkiste, 2004). The following sections deal with SDT's theoretical developments.

## **THE 'WHY' OF BEHAVIOR**

The conceptual development of SDT started off with the empirical examination of the interplay between intrinsic and extrinsic motivation

(Deci, 1975). Subsequent research provided the impulse for a more refined view in which different types of extrinsic motivation are distinguished (Deci & Ryan, 1985). These types of extrinsic motivation are expected to yield different relations with employees' optimal functioning. Intrinsic motivation and the different types of extrinsic motivation all concern particular reasons for engaging in activities or behavioral regulations. Within SDT, they are therefore referred to as the 'why' of behaviour (Deci & Ryan, 2000).

### *The interplay between intrinsic and extrinsic motivation*

Several motivation theories (e.g., Atkinson, 1964; Vroom, 1964) consider intrinsic and extrinsic motivation to be additive, such that both types of motivation would need to be summed up to arrive at individuals' total motivation. Intrinsic motivation is defined as the engagement in an activity for its own sake, that is, for the satisfaction and enjoyment experienced during the course of the activity itself. An intrinsically motivated employee is genuinely interested in his job and experiences enjoyment while working. Extrinsic motivation, in contrast, concerns the engagement in an activity to obtain an outcome that is separable from the activity. Extrinsically motivated employees put effort in their jobs to obtain, for example, a bonus. In the additive view, providing monetary rewards for doing an inherently interesting task would increase individuals' total amount of motivation. If the reward would subsequently be removed, the person's motivation is expected to decrease to the pre-rewarded baseline.

Deci (1971), however, challenged these assumptions. In a set of experiments he showed that individuals who had been paid for working on intrinsically motivating puzzles, subsequently displayed less intrinsic motivation compared to both their own pre-rewarded baseline and compared to a control group of individuals who had never been paid (Deci, 1971). If individuals' behavior was not extrinsically reinforced by financial rewards, but was followed by positive feedback, no such decrease in intrinsic motivation occurred. Numerous follow-up studies confirmed that, in general, external contingencies such as monetary rewards, threats and deadlines undermined intrinsic motivation, whereas verbal rewards (i.e., positive feedback) enhanced one's intrinsic motivation (Deci, Koestner, & Ryan, 1999, 2001). Further studies also pointed at some important moderators. First, it was shown that the interpersonal context in which these external contingencies were administered might alter their average relationship with intrinsic motivation. For instance, if positive feedback is given in a supportive way, it enhances intrinsic motivation, whereas it diminishes intrinsic motivation if it is administered in a controlling way

(Ryan, 1982; Ryan, Mims, & Koestner, 1983). Second, it was shown that tangible rewards only undermine intrinsic motivation if they are expected and made contingent upon task engagement, task completion or performance. Tangible rewards that are not expected or do not require doing the task, completing the task or achieving a particular performance standard, do not undermine intrinsic motivation.

Within SDT these differences are explained by referring to the meaning attributed to these external contingencies. In general, external contingencies, such as monetary rewards and feedback, can serve an informational and a controlling function (Deci, Koestner, & Ryan, 1999). To the extent that they provide individuals with information about how well they performed a task, they enhance intrinsic motivation. The controlling aspect of extrinsic contingencies on the other hand causes a cognitive shift from attributing task engagement to personal interest and enjoyment towards the obtainment of the external reward. The locus of causality for engaging in the activity thus changes from an internal to an external one (deCharms, 1968). The more external contingencies are perceived as controlling, the more intense the shift and the more they forestall intrinsic motivation. Verbal rewards such as praise are typically highly informational and little controlling. Therefore, they enhance intrinsic motivation. Unexpected tangible rewards are not controlling either, as they are only given post hoc and thus can never come to control one's behaviour. Expected tangible rewards, in contrast, are likely to become the reason for doing the activity and hence their controlling function is likely to rule out their informational function. This is especially the case when external contingencies are conditional upon engagement in or completion of the task (Deci, Koestner, & Ryan, 1999). As performance contingent rewards are only given when a normative standard is met, they provide a good deal of competence information and undermine intrinsic motivation less compared to the other reward contingencies (e.g., Luyten & Lens, 1981).

Within occupational health psychology and related fields, the positive effect of feedback on intrinsic motivation has been generally acknowledged (e.g., Hackman & Oldham, 1976). Despite the extensive research within SDT, however, psychologists have been rather reluctant to consider the problematic characteristics of monetary rewards (Sheldon et al., 2003). As findings obtained within the framework of SDT were mainly based on laboratory studies, various psychologists questioned their ecological validity (Rynes, Gerhart, & Parks, 2005). Financial rewards were assumed to be more complex in the occupational health context and to affect employees' functioning differently compared to what had been found in laboratory studies. Payment is indeed a fundamental aspect of employment

and compensation specialists tend to link financial rewards with increased individual performance and organisational success (Rynes, Gerhart, & Parks, 2005). Lately, economists and management scholars have, in line with SDT, advocated that the increased effort and performance resulting from raised payment (i.e., price effect) might be counteracted by the decrease in intrinsic motivation following the provision of rewards (i.e., crowding out effect). It has even been suggested that the net effect of both tendencies might turn out negatively for employees' motivation and performance (Frey & Osterloh, 2005). Economists, management scholars and psychologists have increasingly examined the boundary conditions of the motivational effects of compensation systems (Gagné & Forest, *in press*). Specifically, the negative effects of incentives are now shown to hold for qualitative, but not for quantitative aspect of performance (Jenkins, Mitra, Gupta, & Shaw, 1998), and for complex, interesting tasks which involve intrinsic motivation but not for simple, boring tasks which excite little inherent enjoyment (Stajkovic & Luthans, 2001). Finally, scholars warrant for the hidden costs of compensation systems in terms of decreased mental health (Gagné & Forest, *in press*). Mental health problems are generally neglected in compensation research, but do represent an economic burden for organisations and the economy as a whole (Groot & van den Brink, 1999). Although more research is needed, these studies might warn HR-professions about the use of merit pay for complex, intrinsically motivating tasks.

In sum, SDT holds a nuanced view on the interplay between intrinsic and extrinsic motivation. Whereas other theories considered intrinsic and extrinsic motivation to be simply additive, SDT points out that financially rewarding individuals for intrinsically motivating tasks might decrease their inherent enjoyment and interest. Within the occupational health psychology context, this assumption might help to understand the influence of incentives on employees' motivation more deeply. The research on the impact of external contingencies on intrinsic motivation stimulated SDT scholars to examine the nature of extrinsic motivation more closely as not all types of extrinsic motivation seemed to be detrimental for individuals' optimal functioning. This led to the formulation of qualitatively different types of extrinsic motivation.

#### *Qualitative different types of extrinsic motivation*

Most motivational theories (e.g., Vroom, 1964) consider motivation from a quantitative point of view. The degree to which individuals are motivated (high or low) is considered a critical predictor of their optimal functioning. SDT, however, considers optimal functioning not only to be determined

by the strength or quantity of motivation, but also by the type or quality of motivation. More specifically, SDT maintains that extrinsic motivation can vary in the degree to which individuals have internalised and integrated the reason for behavioural engagement, that is, the degree to which they experience the reason for a particular action as part of their self. Within SDT, four different types of extrinsic motivation have been distinguished (Ryan & Connell, 1989). These can be ordered on a continuum from low to full personal endorsement (Deci & Ryan, 2000).

First, external regulation refers to the engagement in an activity to meet external expectations, to obtain rewards or to avoid punishments provided by the environment. The reason for conducting the behaviour is thus situated external to the individual (Deci & Ryan, 2000). The pressuring aspects could be material as well as social. For instance, external regulated employees might work hard to obtain a bonus or to get the recognition of their supervisor. External regulation is the only type of regulation emphasised in operant theory (e.g., Skinner, 1974). Within the second type of extrinsic motivation, labelled introjection, behaviour is guided by internally pressuring reasons. Engagement in an activity is a means to attain personal pride or to avoid guilt or shame. In case of introjection, people thus buttress their behaviour with internally administered rewards and punishments. In contrast to external regulation, the contingencies for introjected behaviour have been partially taken in. Whereas some employees might, for example, work overtime to meet their supervisor's expectations (i.e., external regulation), others might work long hours because they would feel guilty otherwise. Both external regulation and introjection are characterised by an external perceived locus of causality (deCharms, 1968). As no or only a little internalisation has taken place, individuals are likely to feel pressured in executing behaviour out of external or introjected regulation. Therefore, these two types of extrinsic motivation are considered to be controlled (Deci & Ryan, 2000) and are often combined in empirical research to form a controlled composite score (e.g., Vansteenkiste, Zhou, Lens, & Soenens, 2005).

Identified and integrated regulation are the two remaining types of extrinsic motivation (Ryan & Connell, 1989). Both are said to be characterised by an internal perceived locus of causality (deCharms, 1968), that is, individuals perceive the behaviour as their own because they identify with the reason for the activity. For identified regulation, the goal of the behaviour is personally endorsed and considered important. Internalisation is, however, not complete until integration has occurred. Only in the case of integration one engages in an activity because this activity fits one's broader set of values and beliefs. Identified behaviours do not necessarily



concord with other aspects of one's self. For instance, a nurse might put effort in her job because she personally values her job which she believes is useful and meaningful (i.e., identified regulation) or because she believes her job as a nurse is in line with her other values referring to helping others (i.e., integrated regulation). In the case of identified and integrated regulation, the reason for performing the behaviour is personally accepted and internalised. The behaviour is said to be enacted with a sense of volition. Therefore, identified and integrated regulation are considered to be autonomous types of motivation (Deci & Ryan, 2000). Note that intrinsically motivated behaviour is the most autonomous type of motivation because people spontaneously and freely follow their interests when being intrinsically motivated (Deci & Ryan, 2000). Within SDT the focus shifted from the distinction between intrinsic and extrinsic motivation towards the differentiation between autonomous versus controlled motivation (Sheldon *et al.*, 2003). According to SDT, extrinsic motivation is not necessarily negative, as long as the reason underlying the behaviour is internalised so that one is autonomously motivated in executing the activity. Importantly, the differentiation between the qualitative types of extrinsic motivation must not be considered as a stage theory (Gagné & Deci, 2005). Individuals can integrate different behaviours to various degrees and can at any point in time internalise behaviours that were not assimilated previously.

According to SDT, adopting an autonomous versus controlled regulation style yields positive effects in terms of higher well-being and better performance (Deci & Ryan, 2000). This assumption has been validated in various sub-domains of I/O psychology such as the work context (Richer, Blanchard, & Vallerand, 2002), the process of career exploration (Guay, Senécal, Gauthier, & Fernet, 2003; Guay, 2005) and unemployment (Vansteenkiste, Lens, De Witte, & Feather, 2005; Vansteenkiste, Lens, Dewitte, De Witte, & Deci, 2004). These findings have been shown when assessing one's regulations for a specific task (Fernet, Sen, Guay, Marsh, & Dowson, 2008), in a specific domain (e.g., Richer, Blanchard, & Vallerand, 2002), or for one's work-related goals (Bono & Judge, 2003).

With respect to the work context, being autonomously compared to controlled regulated for one's job has been found to relate positively to job satisfaction, life satisfaction, feelings of professional efficacy and general mental health, whereas it is negatively related to emotional exhaustion and cynicism (e.g., Fernet, Guay, & Senécal, 2004, Judge, Bono, Erez, & Locke, 2005). Holding a predominantly autonomous job regulation associates positively with self-rated job performance and relates negatively to turnover intentions (Millette & Gagné, 2008; Richer *et al.*,



2002). Autonomous versus controlled regulation might also be seen as a personal resource that helps one to shape the environment, as highly autonomously motivated employees make use of job control, as defined by Karasek (1979), to reduce the health impairing effect of job demands (Fernet et al., 2004).

Within the context of career exploration, being autonomously instead of controlled regulated is associated with less career indecisiveness and reduced procrastination in job seeking (Guay et al., 2003; Sénécal, & Guay, 2000). Within unemployed, autonomous regulation to search for a job is associated with less feeling of worthlessness, meaninglessness and social isolation, and greater general health. Feeling coerced to search for a job is associated with negative feelings and health problems (Vansteenkiste et al., 2004; Vansteenkiste, Lens, et al., 2005). Interestingly, the more unemployed individuals feel coerced to search for a job, the less job search behaviour they reported (Vansteenkiste et al., 2004). Controlled individuals thus do not only feel more negative, they also seem to undertake less action to end the unemployment situation they experience as negative (Vansteenkiste et al., 2004). In line with SDT's assumption regarding the importance of the quality of motivation, autonomous and controlled job-search regulation were found to matter in predicting unemployed individuals' optimal functioning after controlling for the strength of their motivation to search. More specifically, autonomous job search regulations related positively to job search intensity and well-being after taking into account the quantity of unemployed individuals' motivation to find a job as conceptualised within Expectancy-Value Theory (Vansteenkiste, Lens, et al., 2005).

In sum, within SDT different types of extrinsic motivation are distinguished ranging from controlling (i.e., external regulation and introjection) to more autonomous (i.e., identified and integration) types. Intrinsic motivation is assumed to be the most autonomous type of motivation, as individuals follow their personal interests when performing intrinsically motivating activities. The differentiation between these qualitative types of motivation is considered useful to understand why employees could be qualitatively motivated for both intrinsically and extrinsically motivating tasks (Sheldon et al., 2003). Furthermore, the recognition that not all types of extrinsic motivation are necessarily experienced as controlling and alienating implies that there are different avenues for managers and companies to optimally motivate their employees for tasks that are not intrinsically appealing (Sheldon et al., 2003). SDT maintains that individuals can best be extrinsically motivated by stimulating their autonomous instead of controlled motivation. This can be achieved through emphasising the personal importance and significance of tasks, such that employees will

begin to identify with these tasks and might integrate them. The provision of rewards, punishments or the appeal to individuals' self-esteem, in contrast, can better be avoided as they are likely to elicit external regulation and introjection and thus result in controlled motivation (Gagné & Deci, 2005).

Both the interplay between intrinsic and extrinsic motivation and the distinction of different types of extrinsic motivation deal with individuals' reasons for acting ('why' of behaviour; Deci & Ryan, 2000). In addition, within SDT, also the content of goal striving is considered important for individuals' optimal functioning which is referred to as the 'what' of behaviour (Deci & Ryan, 2000).

## THE 'WHAT' OF BEHAVIOUR

The motivational influences of goals are well-known within occupational health psychology. Goal Setting Theory (Locke & Latham, 2002), which is commonly applied in occupational health psychology, maintains, for instance, that individuals will best be motivated if they pursue specific rather than general goals, goals of optimal difficulty, and self-set rather than other-imposed goals. The specificity, difficulty and origin of goals are thus considered important motivational features. SDT equally suggests optimally challenging goals to be more motivating (Deci & Ryan, 2000). However, SDT also maintains that individuals will be optimally stimulated if they are autonomously instead of controlled motivated to obtain a particular goal (Sheldon *et al.*, 2003). Autonomous motivation to strive for a particular goal is achieved when a self set goal is perceived to emanate from one's true self or when a goal which is set by others aligns with one's personal values.

SDT furthermore focuses on the content or the quality of one's goals (Deci & Ryan, 2000). Specifically, within SDT a differentiation is made between intrinsic goals, such as contributing to the community, affiliation, and self-development, and extrinsic goals, such as accumulating wealth, acquiring fame and pursuing attractive physical looks (Kasser & Ryan, 1996). Working hard as an employee may, for instance, serve an intrinsic goal because a higher ranked job offers new challenges and growth opportunities. It may, however, also serve extrinsic goal attainment because the higher ranked job is likely to provide status and social recognition. As no distinction is made between qualitative different types of goals within Goal Setting Theory, both goals would be assumed equally motivating. In contrast, according to SDT the pursuit of intrinsic goals is likely to yield more adaptive outcomes than the pursuit of extrinsic goals (Kasser & Ryan, 1996; Vansteenkiste,

Lens, & Deci, 2006). Intrinsic goals are theorised to be a manifestation of individuals' organism's growth-oriented nature and to stimulate actualisation of one's inherent potential. Extrinsic goals, in contrast, are characterised by an outward orientation. Extrinsic goal oriented individuals predominantly strive to obtain external signs of worth and might even renounce their intrinsic interests to impress others. Extrinsic goal pursuit is thus likely to detract individuals from their inherent growth orientation. The pursuit of extrinsic goals at the expense of intrinsic goals is therefore hypothesised to be detrimental for employees' well-being and performance.

Various studies focusing on people's intrinsic versus extrinsic life aspirations have validated this claim (see Kasser, 2002 for an overview). Within the context of work, it has been shown that adopting an extrinsic rather than intrinsic work value orientation is negatively related to employees' job satisfaction, dedication, vitality and general well-being and positively related to emotional exhaustion, turnover intentions and the experience of work-home interference (Vansteenkiste et al., 2007).

Goal-content does not only yield implications for employees' well-being and job experiences. Among unemployed individuals, type of goal pursuit has been found to be related to one's attitudes towards the labour market, as indexed by the degree and types of flexibility unemployed individuals are willing to display when searching for a job (Van den Broeck, Vansteenkiste, Lens, & De Witte, 2008). Whereas the pursuit of extrinsic goals associates with a less flexible attitude towards the labour market, the pursuit of intrinsic goals is related to a greater degree of flexibility as well as to more adaptive types of flexibility. Holding an intrinsic goal orientation goes along with more flexibility to follow additional training and more flexibility to accept jobs that are less well paid. As these types of flexibility do not imply the renouncement of the content of one's job, these types of flexibility are likely to result in finding an interesting and stimulating job (Feldman, Leana, & Bolino, 2002).

The pursuit of extrinsic goals might, however, be tempting as its attainment is likely to provide some short-lived satisfaction, a construct tapping employees' superficial positive feelings which follow successful goal attainment (Vansteenkiste et al., 2007). These hedonic feelings of happiness and contentment, however, quickly disappear, such that again extrinsic goals need to set. Extrinsic goal pursuit is therefore likely to lead to a hedonic treadmill, in which one is hardly really satisfied with one's goal attainment (Diener, Lucas, & Scollon, 2006). As mentioned, intrinsic goal pursuit goes along with a deeper and more long-lasting, eudaimonic sense of psychological well-being such as job engagement (Vansteenkiste et al., 2007).

Within the literature on intrinsic and extrinsic goal pursuit, different moderators have been suggested to alter the negative impact of extrinsic over intrinsic goals on optimal functioning (see Vansteenkiste, Soenens, & Duriez, in press). First, it has been suggested that the differential associations between intrinsic versus extrinsic goal orientations and individuals' well-being and behaviour must be attributed to differences in attainability and attainment of these types of goals. However, the negative associations of extrinsic over intrinsic goal pursuit have been found both when goal importance and attainability were assessed (Kasser & Ryan, 1996). Extrinsic goal pursuit was also found to be detrimental for employees who already had attained the extrinsic goal of financial success. For instance, Vansteenkiste and his colleagues (2007) found no interaction between level of income and type of goal pursuit in the prediction of job satisfaction, life satisfaction, and happiness, while extrinsic goals negatively predicted these outcomes. This implies that the pursuit of extrinsic, relative to intrinsic, goals is detrimental for employees with both a high and low income.

Second, within the person-environment-fit literature (Kristof-Brown, Zimmerman & Johnson, 2005) the degree to which one's personal goals match with the values that are promoted in the context is also assumed to moderate the impact of extrinsic versus intrinsic goal pursuit. In this view, employees holding intrinsic values would benefit from working in an environment in which intrinsic goals are promoted, whereas extrinsic oriented employees would function optimally in a context in which extrinsic goals are advocated. Empirical research, however, fails to confirm this claim (Kasser & Ahuvia, 2002; Vansteenkiste, Duriez, Simons, & Soenens, 2006). More specifically, in line with SDT, business students attaching high importance to a high status and appealing appearance have been found to experience less well-being compared to business students predominately oriented towards self-development and affiliation, although business schools generally promote extrinsic goals over intrinsic goals.

In sum, from a SDT perspective, the content of employees' goals matters and the pursuit of intrinsic goals has been shown to be more strongly associated with optimal functioning than the pursuit of extrinsic goals (Deci & Ryan, 2000). HR-professionals might therefore encourage employees to formulate their personal strivings in terms of intrinsic rather than extrinsic goals. In addition to studying the differential outcomes of intrinsic versus extrinsic goals and autonomous versus controlled motivation, SDT has also focused on the process, that is, basic psychological need satisfaction underlying the 'what' and 'why' of behaviour (Deci & Ryan, 2000).

## BASIC PSYCHOLOGICAL NEEDS

The concept of needs has received quite some attention within psychology (Latham & Pinder, 2005). For example, Maslow (1943) postulated the concepts of inborn needs for self-actualisation and social recognition and Murray (1938) started the tradition on socialised needs for achievement, power and affiliation. Empirical evidence, however, failed to support Maslow's theorising (Porter, Lawler, & Hackman, 1975). Attention for the concept of needs waned when cognitive psychology became dominant (Reeve, 2005). Cognitive psychologists consider internal mental processes such as expectations, self-efficacy or attributions rather than needs or desires as the key variables to understand individuals' motivation. SDT scholars, however, assume that both individuals' regulatory style and goal directed behaviour cannot be understood completely without addressing the process that energises and directs behaviour (Deci & Ryan, 2000). Satisfaction of the basic psychological needs is said to represent this process.

Within SDT, basic psychological needs are conceptualised as 'those nutrients that must be procured by a living entity to maintain its growth, integrity and health' (Deci & Ryan, 2000, p. 326). Just as the satisfaction of physical needs (e.g., hunger, shelter) is crucial for one's physical survival, SDT assumes the satisfaction of psychological needs to be crucial for one's optimal psychological functioning. Three innate basic psychological needs are distinguished: that is, the need for Autonomy, the need for Belongingness and the need for Competence, which can be remembered with the acronym of ABC-needs.

The need for autonomy is defined as an inherent desire to act with a sense of choice and volition, that is, to be the author of one's actions and to feel psychologically free (Deci & Ryan, 2000). SDT's concept of autonomy differs from the conceptualisation of autonomy in terms of independence or discretion as it is frequently held in psychological research (Morgeson, & Humphrey, 2006). In fact, the need for autonomy is relatively orthogonal to independence (Soenens et al., 2007; Vansteenkiste, Zhou, et al., 2005). If employees are, for instance, asked to execute a particular task, they might exert little if any discretion about which task to accomplish. If they perceive the task as fun, interesting or meaningful, however, they are likely to engage in them with a sense of volition and psychological freedom (Ryan & Deci, 2006). Although employees do not act independently in such a case, they thus might still act volitionally, indicating that the experience of volition might not only accompany independent acting, but might also be experienced when employees follow their supervisors' requests.

The need for belongingness is conceptualised as the inherent propensity to feel connected to others, that is, to be a member of a group, to love and care and be loved and cared for (Baumeister & Leary, 1995, Deci & Ryan, 2000). The need for relatedness is satisfied if people experience a sense of communion and maintain close and intimate relationships. Employees who feel part of a team and feel free to express their personal concerns and joys are more likely to have their need for belongingness met compared to employees who feel lonely and lack social support. The concept of relatedness is in line with developmental approaches such as attachment theory (Bowlby, 1969) which emphasise the importance of secure and nurturing attachment bonds. The need for belongingness is not controversial within psychology. Its importance is emphasised in concepts such as social support (Viswesvaran, Sanchez, & Fisher, 1999) and loneliness at work (Wright, Burt, & Strongman, 2006).

Finally, the need for competence represents the desire to feel capable to master the environment and to bring about desired outcomes (Deci & Ryan, 2000; White, 1959). It is prominent in individuals' propensity to explore and actively seek out challenges in which one can extend one's physical and psychological skills. Satisfaction of the need for competence helps individuals to develop their skills and adapt to complex and changing environments. Like the need for belongingness, the need for competence is rather uncontroversial within psychology. Similar constructs have been proposed in cognitive oriented models, such as Vroom's (1964) construct of the expectancy to obtain valued outcomes and Bandura's (1997) self-efficacy concept.

The construct of needs as conceptualised within SDT is different from other need conceptualisations such as McClelland's (1965), in which the focus is on individuals' need strength. McClelland maintains that individuals differ in the value they attach to different needs, because they have learned to attach positive and negative feelings to particular situations in their personal socialising processes (McClelland, 1965). In this perspective, the pursuit and attainment of a need will be valued more or less depending on one's developmental trajectory. Inter-individual differences in the importance attached to different acquired needs would determine to what degree a particular need fuels behaviour and the degree in which the satisfaction of that desired need is beneficial. For example, individuals with a high need for achievement are likely to be stimulated by the possibility of successful performance, as these individuals are ambitious and focused on achieving high performance standards. Individuals with a low need for achievement, in contrast, are unlikely to benefit from the eventuality of high performance. Within SDT, needs are, in contrast, postulated to be primary, innate propensities (Deci & Ryan, 2000). As the basic needs

for autonomy, belongingness and competence are essential to individuals' functioning, SDT does not focus on need strength, but on need satisfaction. Put differently, not the degree to which individuals express a particular need, but the degree to which one is able to satisfy each of one's basic psychological needs is considered important. The offer of choice and positive feedback, for example, are regarded to be beneficial for all employees, as they satisfy the inborn needs for autonomy and competence respectively. Note that unlike Maslow's (1943) needs, the inborn needs for autonomy, belongingness and competence are not assumed to be hierarchically organised. All three needs are thus considered to be equally important, as it is assumed that none can be ignored to experience well-being and growth (Sheldon & Niemiec, 2006).

Various studies have confirmed the positive versus negative consequences of the satisfaction versus frustration of the basic psychological needs (Deci & Ryan, 2000). Within the occupational health context, need satisfaction has, for instance, been shown to relate positively to employees' work related well-being in terms of task and job satisfaction; their general well-being as indexed by decreased insomnia, anxiety and depression; their attitudes in terms of self-esteem, attitudes towards customers and organisational commitment; and self-rated performance (e.g., Baard, Deci, & Ryan, 2004; Lynch, Plant, & Ryan, 2005, Vansteenkiste et al., 2007). These results have been found across professional levels, sectors and cultures (e.g., Deci, Ryan, et al., 2001), which is in line with the claim that satisfaction of these needs yield universal positive associations. The positive relationship between need satisfaction and employees' optimal functioning also remains significant after controlling for employees' salary and organisational status, with need satisfaction even accounting for more variance in these outcomes compared to salary and status (Ilardi, Leone, Kasser, & Ryan, 1993). Optimal functioning at work is thus not predominately determined by organisational rewards, but also, and even more, by basic need satisfaction. Interestingly, satisfaction of the basic needs for autonomy, belongingness and competence also positively predicts average earnings. Kasser, Davey and Ryan (1992) have shown that employees' level of need satisfaction goes along with work participation, performance and, therefore, monthly wages.

As mentioned, within SDT, the three fundamental needs are not only considered important as such, but also because they represent the underlying mechanism of the 'what' (qualitatively different types of goals) and 'why' (qualitatively different types of motivation) of motivation (Deci & Ryan, 2000). Within SDT, both the need for competence and the need for autonomy are put forward to explain the differential effects of external contingencies such as monetary and verbal rewards on intrinsic motivation



(Deci, Koestner, & Ryan, 2001). More specifically, the informational function of these rewards is said to appeal to individuals' competence, whereas their controlling function is expected to relate to individuals' need for autonomy. The need for belongingness is said to be less prominent in explaining the effects of external contingencies on intrinsic motivation. People indeed do not necessarily need to experience a sense of intimacy and connectedness to engage in intrinsically motivating activities such as reading a book or computer programming (Deci & Ryan, 2000). Feeling connected to others is, however, considered fundamental for the personal endorsement and internalisation of socially prescribed norms and values (Deci & Ryan, 2000). Norms and values are often introduced by others and pursued in an attempt to gain or maintain the love and care of socialisation figures who introduced them. Satisfaction of the need for belongingness may facilitate internalisation of social norms and values to the degree of introjection. The transition from external regulation to introjection, however, also requires some understanding of the meaning of the behaviour and feelings of competence to engage in the activity. Satisfaction of the need for competence thus also represents a necessary condition for introjection to occur. True internalisation in terms of identification and integration requires support for the need for autonomy (Deci & Ryan, 2000). To assimilate activities with one's other values and goals, people need to feel psychologically free in enacting them and to volitionally endorse their importance.

A couple of studies have examined the relationship between need satisfaction and autonomous versus controlled motivation. More specifically, the satisfaction of the needs for competence and relatedness was shown to relate positively to employees' autonomous versus controlled work regulation, which in turn predicted well-being, willingness to follow job training and reduced turnover (Richer *et al.*, 2002; Vansteenkiste, De Witte, & Lens, 2006). Need satisfaction is, however, not only likely to predict, but also to follow from autonomous versus controlled engagement, as it was found to account, at least partially, for the positive relationships between employees' autonomous regulation and optimal functioning (Hendriks, 2004). Although these results stem from cross-sectional research, it is possible that autonomous regulation and need satisfaction mutually reinforce each other, so that autonomously oriented individuals get involved in an upward spiral of need satisfaction and adaptive regulations over time (Deci & Ryan, 2000).

Besides explaining the 'why' of motivation, the three needs are also considered to be crucial in understanding the 'what' of motivation in terms

of intrinsic versus extrinsic goal pursuit (Kasser, 2002; Vansteenkiste, Soenens, & Duriez, in press). Intrinsic goals comprise the pursuit of affiliation and personal development, which are likely to go along with the satisfaction of the needs for belongingness and competence respectively. As intrinsic goals align with the inherent tendency for personal development and affiliation, they are furthermore likely to be executed volitionally and hence satisfy the need for autonomy. Extrinsic goals for status, wealth and power, in contrast, are more likely to be associated with interpersonal comparison and competition, which are likely to forestall the needs for autonomy, belongingness and competence (Vansteenkiste et al., in press). Empirical evidence indeed confirms that need satisfaction is an important process that can account for the relation between intrinsic goal pursuit and employees' functioning (Vansteenkiste et al., 2007).

To summarise, within SDT the satisfaction of the needs for autonomy, belongingness and competence is considered to fuel optimal functioning. It furthermore drives autonomous versus controlled regulations and intrinsic, relative to an extrinsic, work goals. Based on this research (e.g., Ilardi, et al., 1993; Lynch, et al., 2005) employers might be advised not to restrict their motivation policies to monetary rewards, but also to consider subordinates' basic needs satisfaction to enhance their well-being and performance. This can be done by encouraging autonomous rather than controlled regulation and stimulating intrinsic over extrinsic goal pursuit. The job context does also offer a variety of possibilities to enhance employees' need satisfaction, as described in the following section.

## **ORGANISATIONAL FACTORS STIMULATING MOTIVATION**

Within the framework of SDT, various organisational aspects are considered to have a motivational impact. In an exemplary study, Deci and his colleagues (1989) examined the general impact of supportive job design and leadership from one's supervisor and the top-management. This general support related positively to employees' well-being in terms of work engagement, self-esteem and reduced anxiety, which validates SDT's claim that supportive work contexts are beneficial for employees' optimal functioning. In addition to this study, a number of other studies have focused on the motivational effects of organisational aspects (Sheldon et al., 2003). In the following paragraphs we turn to the studies that examined job design and leadership style from a SDT perspective. These domains represent respectively a structural and a social aspect of organisations which can enhance employees' motivation.

### *Job design*

Within occupational health psychology, job design is regarded as an important and effective way to motivate employees. Various job characteristics models have been formulated, such as the Demands-Control model (Karasek, 1979), the Effort Reward Imbalance model (Siegrist, 1996) and the Job Demands Resources model (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001; Schaufeli & Bakker, 2004). Within these models, however, little attention has been paid to the processes underlying the relationships between job characteristics and employees' well-being. Different studies have shown that SDT can help shed light on this issue.

For instance, employees' autonomous versus controlled job regulation was found to account for the positive contribution of task significance, feedback and skill variety to employees' work satisfaction and their negative relation with emotional exhaustion (Richer *et al.*, 2002). Basic need satisfaction was also shown to be useful to understand the motivational impact of job characteristics. Gagné, Senécal and Koestner (1997) showed that meaningfulness, autonomy, impact and competence played an explanatory role in the associations between stimulating job characteristics such as task significance and feedback, and intrinsic motivation. Although these mediating variables were framed in terms of the empowerment concept, they are closely related to SDT's needs for autonomy and competence. Recently, the role of basic need satisfaction as an explanatory mechanism in the relation between resourceful job characteristics (*i.e.*, social support, opportunities for skill utilisation) and employees' well-being was confirmed (Van den Broeck, Vansteenkiste, De Witte, & Lens, 2008). Need satisfaction was also shown to explain the associations between demanding job characteristics (*i.e.*, emotional demands, work-home interference) and employees' functioning in terms of burnout and engagement (Van den Broeck *et al.*, 2008).

### *Leadership styles*

Within SDT, it is assumed that besides structural environmental aspects such as job design, also interactional aspects such as leadership can yield a motivational impact. Within the context of occupational health psychology, leadership is considered a crucial variable in the motivation of employees (Kaiser, Hogan, & Craig, 2008). SDT maintains that supervisors can stimulate employees by adopting an autonomy-supportive supervisory style which comprises a) the acknowledgement of subordinates' feelings, b) the offer choices and c) the provision of rationales for requests (Deci, Eghrari, Patrick, & Leone, 1994). An autonomous leadership style increases subordinates' satisfaction with supervisors, job design, pay, benefits and

enhances their trust in the organisation (Deci, Ryan, et al., 1989). Adopting an autonomy-supportive leadership style during organisational change results in more acceptance of these changes from the part of the employees (Gagné, Koestner & Zuckerman, 2000). A controlling leadership style in contrast is likely to yield negative outcomes (Richer & Vallerand, 1995). Controlling leaders direct employees' behaviour and intrude upon their thoughts and feelings. In contrast to autonomy-supportive leaders, they manipulate employees psychological functioning (Soenens, Vansteenkiste, Duriez, & Goossens, 2006). In line with the expectations derived from SDT, controlling supervisors decrease subordinates' motivation (Richer & Vallerand, 1995).

The influence of an autonomy-supportive versus controlling leadership style can be explained by need satisfaction. Richer and Vallerand (1995) showed that autonomy-supportive supervisors stimulate autonomy and competence satisfaction, whereas controlling supervisors thwart subordinates' needs. Further research showed that the positive effects of autonomy support on employees' well-being are mediated by satisfaction of employees' needs for autonomy, competence and relatedness (Baard et al., 2004). In sum, these studies show that supervisors' autonomy-supportive leadership style yields a positive impact on employees' well-being and performance.

## **CONCLUSION**

Within this chapter we provided an overview of SDT and point at its applicability to the context of occupational health psychology. We started with an outline of SDT's meta-theory. As mentioned, SDT scholars assume individuals to be endowed with a natural tendency to grow and develop (Deci & Ryan, 2000). This natural inclination manifests itself in individuals' behavioural regulation (the 'why') and the type of goals they pursue (the 'what'; Vansteenkiste, 2005). Within SDT, individuals are considered to have a natural tendency to spontaneously engage in inherently interesting and enjoyable activities, that is, to be intrinsically motivated (Deci, 1975). This tendency is, however, likely to be thwarted by the provision of external contingencies (Deci & Ryan, 1985). From SDT's point of view, external contingencies, such as bonuses, are to be avoided. Within SDT, individuals are furthermore considered to be inclined to internalise initially external regulated behaviour and to move from more controlled to more autonomous types of behavioural regulation (Deci & Ryan, 2000). Not all types of extrinsic motivation are supposed to yield negative outcomes. Autonomous types of extrinsic motivation (i.e., identified and integrated)

in which the reasons for performing is internalised, are likely to foster optimal functioning (e.g., Richer *et al.*, 2002; Vansteenkiste, Lens, *et al.*, 2005). Finally, individuals are presumed to be oriented towards intrinsic rather than extrinsic goal pursuit, which is likely to result in optimal well-being and performance (Kasser, 2002; Vansteenkiste *et al.*, 2007).

Individuals' natural growth orientation must, however, be nurtured for individuals to flourish and to actualise their potential (Deci & Ryan, 2000). More specifically, within SDT it is assumed that the social context must satisfy the inherent basic psychological needs for autonomy, belongingness and competence. Within SDT, satisfaction of these needs is considered as crucial for individuals' thriving as water and sunlight is for plants to flourish (Deci & Ryan, 2000). An important role is thus assigned to social contexts, such as the work environment, to bring out the best in people. This can, for instance, be achieved through autonomy supportive leadership (Baard *et al.*, 2004) and stimulating job design (Van den Broeck *et al.*, 2008). Need satisfaction might thus offer a promising tool to align different HR-practices.

A considerable amount of research has now provided evidence for the usefulness of SDT in occupational health psychology. SDT deals with the 'why' and 'what' of employees' behaviour and considers need satisfaction as the underlying process of optimal functioning (Deci & Ryan, 2000). Therefore, SDT might be considered a coherent grand theory of motivation (Reeve, 2005) and might serve as a general framework for the study and practice of employees' optimal functioning (Deci & Vansteenkiste, 2004).

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