Work Motivation: A Conceptual and Empirical Overview and Suggestions for the Future Avenues from the Perspective of Self-Determination Theory

Anja Van den Broeck[1]

Abstract

This contribution aims to break a lance for the use of Self-Determination Theory (SDT) to advance the understanding of motivation in the field of work and organizational psychology. SDT is an encompassing motivation theory detailing how individuals can thrive when displaying particular types of motivation. Starting from a positive view on mankind, SDT maintains that individuals feeling supported in their basic psychological needs will display optimal functioning and develop high quality motivation. This high quality motivation may take the form of the 'why' of motivation (i.e., autonomous and controlled motivation) as well as the 'what' of motivation (i.e. intrinsic versus extrinsic value pursuit). Herein a conceptual and empirical overview of SDT in the context of work is given and several pathways for future research are highlighted. As such, this contribution aims to inspire scholars to further the theoretical understanding work motivation assisting practitioners aiming to enhance motivation in organizations.

Key Words: Self-Determination Theory, Work motivation, Values, Needs

Work Motivation: A Perspective from the Self-Determination Theory

Motivation is a critical issue for employees and organizations: it adds to employees' well-being and performance, and hence contributes to organizations' productivity and competitive advance (Pinder, 2008). To date, work motivation has mostly been approached via Expectancy-Instrumentality-Valence Theory (Vroom, 1964), leading for example to research on the Theory of Planned Behavior and Goal-setting Theory (Latham & Locke, 2006). In addition to this literature, this editorial aims to foster research on work motivation in line with recent developments in motivation psychology using Self-Determination Theory (SDT; Deci & Ryan, 2000; 2008) as the conceptual framework.

Over the past four decades, SDT has developed into a grand theory of human motivation and optimal functioning. It has been applied to various life domains such as education, therapy and health psychology (Deci & Ryan, 2008, 2012) and gains momentum in the field of work and organizational psychology (Gagné & Deci, 2005). Although some of SDT's ideas share resemblance with other well-known concepts and theories in work and organizational psychology (see Van den Broeck, Vansteenkiste, & De Witte, & Andriessen, 2009), SDT is rather unique in providing a coherent and encompassing framework in which the quality, in addition to the quantity of motivation, is a key topic.

SDT encompasses five different mini-theories (Deci & Ryan, 2012; Vansteenkiste, Niemiec, & Soenens, 2010), but can be summarized in terms of three core concepts (Deci & Ryan, 2008; Van den Broeck, Vansteenkiste & De Witte, 2008): (1) basic need satisfaction, (2) autonomous versus controlled motivation or behavioral regulation and (3) intrinsic and extrinsic goal pursuit. This editorial aims to highlight this three core concepts and to provide an overview of the research in the field of work and organizational psychology. It concludes with some suggestions for future research which may stimulate scholars to employ SDT to further the understanding of employees' motivation and the development of SDT.

---
[1] Human Relations Research Group, HUBrussel, Belgium
Research Group Work, Organizational and Personnel Psychology, K.U. Leuven, Belgium
Adresa de corespondență: anja.vandenbroeck@hubrussel.be

Meta-theories and basic psychological needs

SDT starts off from the assumption that individuals are active, growth-oriented organisms who actively interact with their environment (Deci & Ryan, 2000). Rather than being passive, reactive entities which need to be forced into particular behaviors, SDT maintains that individuals are active human beings, striving towards intra- and interpersonal growth. On the personal level, individuals are naturally inclined to realize their potential, learn, develop their talents, and integrate their experiences into a coherent and meaningful sense of self. On the social level, individuals are apt to interconnect with others, to engage in meaningful relationships based on mutual care and respect. Rather than being just influenced by their surrounding, SDT furthermore maintains that individuals equally act upon and influence the environment.

However, the environment plays an important motivational role. SDT assumes that individuals' inherent active growth orientation does not automatically come to expression, but needs to be nourished by the social environment. Just as one's biological needs must be fulfilled to maintain physical health, SDT argues that individuals' psychological needs must be satisfied in order for them to function psychologically well. At least three psychological needs are considered essential for individuals to thrive, that is, the needs for autonomy, relatedness, and competence (Deci & Ryan, 2000), which are also referred to as Autonomy, Belongingness and Competence, or the ABC of SDT (Van den Broeck, Vansteenkiste, & De Witte, 2008).

According to SDT, the need for autonomy is satisfied when individuals experience authorship of their actions and feel psychologically free. Such feelings can be achieved when individuals chose their own behavior. The need for autonomy can however be equally satisfied when individuals volitionally follow others' instructions, for example because they can fully concur with the requested behavior. The need for belongingness or relatedness is satisfied when individuals feel connected to others, when they feel loved and cared for and they can love and care for others. Finally, individuals feel competent when they master their environment and bring about desired outcomes. Employees will experience need satisfaction when they conduct their work with a sense of volition, feel part of a team and feel they can effectively reach their goals.

In defining needs as essential nutriments, SDT takes a particular approach to the concept of needs. Other theories detailing individuals' needs (e.g., Murray, 1938) typically focus on inter-individual differences in need strength, which drives individuals' behavior until the needs are satisfied. In contrast, SDT considers the degree to which needs are satisfied as the most important motivational mechanism and maintains that all individuals benefit from experiencing satisfaction of the inherent needs for autonomy, belongingness and competence, as this energizes their behavior and well-being.

In support of SDT, several studies evidence that the satisfaction of these basic needs co-occurs with optimal functioning, in terms of well-being (e.g., higher job satisfaction and engagement and less burnout), positive attitudes (e.g. higher organizational commitment and readiness to change), and adaptive behavior (e.g. higher performance and less organizational deviance; see for example Lian, Ferris & Brown, 2012; Lynch, Plant & Ryan, 2005; Van den Broeck, Vansteenkiste, De Witte, Soenens, & Lens, 2010). Work related basic need satisfaction is furthermore suggested to affect live outside work, as it relates for example to higher general adjustment (Baard, Deci, & Ryan, 2004) and self-esteem (Ilardi, Leone, Kasser, & Ryan, 1993).

Moreover, in line with SDT, several studies indicate that basic need satisfaction functions as a mediator explaining the impact of the social environment on employees' functioning. Deci, Ryan, Gagné, Leone, Usunov and Kornazheva (2001), for example, showed that supervisory and environmental autonomy support adds to employees' engagement, self-esteem and decreased anxiety via the satisfaction of the basic needs. Van den Broeck, Vansteenkiste, De Witte and Lens (2008) furthermore specified that demanding and resourceful job characteristics relate to basic need frustration and satisfaction, respectively, and therefore associate with burnout and work engagement. At the more general level, Greguras and Dieffendorf (2009) likewise indicated that feelings of fitting into the organization, team and job contributed to the satisfaction of the needs for autonomy, relatedness and

competence and therefore relate to organizational commitment and performance.

Apart from relating to the various aspects of employees' functioning, according to SDT, the basic needs also co-occurs with high quality motivation, both in terms of the 'why' of behavior, that is, the reason why individuals engage in particular behavior, and the 'what' of behavior or the type of goals they pursue (Deci & Ryan, 2008). These core concepts of SDT are detailed below.

The 'why' of behaviour: Autonomous and controlled motivation

The conceptual development of SDT took off with the differentiation between intrinsic and extrinsic motivation (Deci, 1975). Intrinsic motivation is defined as the engagement in an activity for its own sake, i.e. for the inherent satisfaction and enjoyment experienced while performing the activity as such. Extrinsic motivation, in contrast, concerns the engagement in an activity to obtain an outcome that is separable from the activity. Rather than just adding up to a general inclination to engage in particular behavior, early studies in the realm of SDT revealed a complex interplay between these two types of motivation (see Deci, Koestner, & Ryan, 1999 for a meta-analysis). This has led to the differentiation of four types of extrinsic motivation, which differ in the degree to which the reason for conducting the behavior is external to the individual or internalized as part of one's self (Ryan & Connell, 1989).

First, external regulation refers to the engagement in an activity to obtain external material or social rewards or to avoid punishments. Externally pressured employees may, for instance, work hard to obtain a bonus or to prevent disgrace. Second, introjected regulation refers to being motivated by internally pressuring reasons such as a desire to attain pride or avoid guilt and shame contingent upon the behavior. Working overtime to offset guilt would be an example of introjected regulation. As little or no internalization took place, external and introjected regulation are accompanied by feelings of pressure, and are therefore grouped as controlled motivation (Deci & Ryan, 2000).

Identified and integrated regulation are the two remaining types of extrinsic motivation (Ryan & Connell, 1989). In case of identified regulation, the goal of the behavior is personally endorsed and considered important. Integration goes one step further and requires that the behavior fits into one's broader set of values and beliefs. A scholar identifying or internalizing with teaching, would considers this task valuable, or as an inherent aspect of their personality, respectively. Both in case of identified and integrated regulation, individuals enacted with a sense of volition. These types of motivation are therefore grouped as autonomous motivation, together with intrinsic motivation, which reflects individuals' inherent spontaneous interests (Deci & Ryan, 2000). Rather than focusing upon intrinsic and extrinsic motivation, SDT-scholars consider the differentiation between autonomous and controlled motivation as most important to understand individuals' motivation.

According to SDT, controlled motivation likely frustrates the basic psychological needs and therefore leads to less beneficial outcomes, while autonomous motivation is accompanied with basic need satisfaction and therefore leads to optimal functioning. A multitude of studies supported these assumptions. Van den Broeck, Vansteenkiste, De Witte, Soenens et al. (2010) for example indicated that controlled motivation does not support the basic needs, while autonomous motivation relates positively to the satisfaction of each of the basic needs. Fernet (2011) furthermore showed that autonomous types of motivation related to higher job satisfaction and organizational commitment and lower burnout, while controlled motivation showed the reversed pattern. Gagné, Forest, Gilbert, Aubé, Morin, and Malorni (2010) expanded these results, indicating that autonomous motivation for work related to lower turnover intentions and higher general well-being and even better physical functioning, while controlled motivation was unrelated or even negatively related to these outcomes.

Mirroring the research on basic need satisfaction, autonomous motivation has been modeled as the underlying process in the relationship between aspects of the work environment and employees' functioning. Autonomous motivation explains for example the impact of job demands such as overload on

the development of burnout (Fernet, Guay, Senécal, & Austin, 2012). Similarly, perceived organizational support assists employees in adapting to change because it increases their autonomous motivation (Mitchell, Gagné, Beaudry, & Dyer, 2012). Finally, autonomous and controlled motivation have also been modeled as moderators. As such high quality motivation is considered to play the role of a personal resource making employees more apt to benefit from positive events as outlined in the Conservation of Resources Theory (Hobfoll, 2002). Specifically, employees holding high autonomous and low controlled motivation have been shown to benefit more from job control, both in terms of direct well-being effects of job control and via the stronger buffering effect of job control on the negative impact of job demands (Fernet, Guay, & Senécal, 2004; Parker, Jimmieson, & Amiot, 2010). High levels of autonomous motivation and low levels of controlled motivation also assist employees in engaging wholeheartedly in their work behavior, leading to increased performance (Grant, Nurmohamed, Ashford, & Dekas, 2011).

The 'what' of behavior: Intrinsic and extrinsic work values

A third important concept figuring in SDT refers to the goals or - on a more abstract level - values individuals can pursue. Specifically, SDT makes a distinction between intrinsic values, such as contributing to the community, affiliating to others, and self-development, and extrinsic values, such as accumulating wealth, acquiring fame and achieving power (Kasser & Ryan, 1996). As intrinsic values allow for the satisfaction of the basic psychological needs, SDT maintains that the pursuit of these values leads to more adaptive outcomes than the pursuit of extrinsic values, which are less likely to contribute to, and may even distract one from basic need satisfaction (Vansteenkiste et al., 2007).

Following this reasoning, the pursuit of intrinsic values has been shown to be more beneficial than the pursuit of extrinsic values, particularly in the long run (Vansteenkiste et al., 2007). Although holding extrinsic values might be tempting, as it leads to momentary feelings of satisfaction, it has a negative relation

with more enduring aspects of well-being, such as job satisfaction and work engagement. It furthermore relates to higher burnout, more work-family conflict and increased turnover intention, which suggests that a predominant extrinsic orientation may not only yield negative consequences for employees, but also for their organizations (Vansteenkiste et al., 2007).

Apart from these main effects, SDT's value orientation has also been examined in terms of a personal resource adding to individuals' optimal functioning. Specifically, Van den Broeck, Van Ruysseveldt, Smulders, and De Witte (2010) revealed that intrinsic oriented employees benefit more from the availability of learning opportunities and autonomy in terms of enhanced work engagement and decreased exhaustion, as compared to employees attaching less importance to these intrinsic values.

Also the unemployed may experience long term benefits of pursuing particularly intrinsic values. Van den Broeck, Vansteenkiste, Lens, and De Witte, (2010) indicated that extrinsic values might withhold the unemployed from adapting flexibly to the labor market, although such a flexible approach might increase their chances on finding employment. Interestingly extrinsically oriented unemployed are particularly not willing to lower their reservation wage. At the same time they however refuse to attend additional training to increase their skills. As such, they seem to be looking for a high outcome, without showing the willingness to put additional effort, a conclusion which has also previously been supported among children (Vansteenkiste, Timmermans, Lens, Soenens, & Van den Broeck, 2008). Intrinsically oriented unemployed on the other hand likely are flexible. Moreover, they seem to display particularly these types of flexibility which might assist them in finding high quality employment, such as the flexibility to attend additional training.

Some avenues for future research

From the presentation of the core concepts of SDT, it becomes evident that SDT received already quite some empirical support in the field of work and organizational psychology. Several interesting issues however remain

relatively understudied, for example, relating to the antecedents, consequences and roles of the different motivational states.

First, future research could further tap into the antecedents of high quality motivation in terms of need satisfaction, autonomous versus controlled motivation and intrinsic as opposed to extrinsic values. In addition to the research on task (e.g. job demands and resources) or team characteristics (e.g. supervisory support) as outlined above, scholars might examine the impact of broader human resources strategies such as training and education, recruitment and selection, organizational culture and remuneration practices on employees' motivational states. Such research, expanding the scope of the antecedents of employees' motivation, might build on previous research on organizational fit (Greguras & Dieffendorft, 2009) and earlier work of Gagné and Forest (2008) on compensation systems. Such research might not only be timely in the realm of SDT, but might also answer the call for opening the black box through which human resource practices lead to the organizations' competitive advantage (Collins & Clark, 2003). Particularly research on the antecedents of employees work values seems most welcome, as within SDT intrinsic and extrinsic values are mostly considered to be passed on from parents to their children (e.g. Duriez, 2011). The impact of organizational socialization on these values is yet to be examined. Such an impact might however exist, particularly at the entrance of the labor market, as during that period individuals seem to experience a shift in work values (Jin & Rounds, 2012).

A second potential route for future research pertains to the outcomes of high quality motivation. Although the associations between high quality motivation and aspects of optimal functioning have been well established, research on the dark side of employees' functioning has been relatively scarce in the realm of SDT. In addition to the research on organizational deviance (Lian et al., 2012), future research could tap into more specific counterproductive behavior such as workplace bullying, social loafing or sabotage. In addition, scholars might aim to uncover some unexpected outcomes of the different aspects of high quality motivation. Does need frustration, for example, always turn employees into passive entities, as would be expected from SDT's

meta-theory? Or could the inborn active tendency also lead employees to change their environment in which need satisfaction might become prominent? Such a reasoning might be build on earlier need theories, in which the urge to satisfy particular needs is said to stimulate individuals' behavior (e.g. Murray, 1938). In a similar vein, scholars might examine whether autonomous as opposed to controlled motivation might have downsides. Initial research, for example already indicates that autonomous motivation, and particularly identified motivation, associates with excessive work, a component of workaholism (Van Beeck, Hu, Schaufeli, Taris, & Scheurs, 2012; Van den Broeck, Scheurs, De Witte, Vansteenkiste, Germeys, & Schaufeli, 2011), suggesting that identified motivation might lead to being over-committed to work. Future research might shed further light on this finding and explore for example whether being highly identified with work yields negative consequences for one's task approach and social interactions at work.

Third, future research employing SDT to understand employees' motivation needs to take into account the aspect of time. In contrast to the current cross-sectional approach, such studies could shed light on the development of high quality motivation and its causal relations with environmental aspects of employees' functioning. On the one hand, such research could take a long term approach and examine inter-individual motivational dynamics over the course of several months or years. On the other hand, it could scrutinize short term intra-individual dynamics within days or weeks via diary studies. Previous longitudinal (e.g. Sheldon & Krieger, 2007) and shortitudinal (e.g. Ryan, Bernstein, & Brown, 2010) SDT-related research in other life domains might serve as a source of inspiration to also uncover the motivational dynamics in the field of work and organizational psychology.

Future research tapping into the motivational processes might also take into account the different organizational levels influencing employees' motivation. Rather than tapping into employees' overall work motivation, previous research might for example explore motivation at the task level, as previous research already suggested that teachers or principles might hold different levels of autonomous and controlled motivation

across different tasks (Fernet, 2011, Fernet, Senécal, Guay, March, & Downson, 2008). Future research could expand these results towards other occupational groups and explore need satisfaction rather than autonomous and controlled motivation. Furthermore, scholars could also tie in with recent developments in work and organizational psychology examining (the dynamics of) team level motivation (see also Schaufeli, 2012) as employees are increasingly becoming interdependent (Parker, Wall & Cordery, 2001). Future research also needs to explore whether SDT's propositions are generalizable across organizations of different sectors, ranging from profit to non-profit organizations, SME's to multinationals. Although SDT has been supported across different context, including even different countries (Deci et al., 2001), few studies take into account employees particular organizational context, which might however alter individual dynamics (Rousseau & Fried, 2001). Such studies might particularly tap into the question whether SDT holds in each organizational context or whether a fit in organizational dynamics (i.e., autonomous and controlled motivation or the pursuit of intrinsic versus extrinsic values) between employees and their colleagues, supervisors or organizational culture might yield addiotnal beneficial results, as suggested by the person-environment fit literature (Kristof-Brown, Zimmerman, & Johnson, 2005)

Summary and Conclusion

Self-Determination Theory is a broad motivation theory assisting in understanding individuals' motivation across domains as diverse as education, health promotion and psychotherapy (Deci & Ryan, 2012). SDT has also been fruitfully applied to the context of work. Research indicated that high quality motivation in terms of basic psychological need satisfaction, autonomous as compared to controlled motivation and intrinsic relative to extrinsic values may spur employees' optimal well-being, positive attitudes as well as performance. It furthermore explains the motivational effects of particular organizational phenomena such as job design and leadership. It also serves as a personal resource assisting employees to adapt to and make optimal use of motivational sources in the work environment.

To expand our knowledge, it seems worthwhile to further scrutinize the antecedents of high quality motivation, also at the organizational level and to explore its consequences beyond optimal functioning, although such consequences might not be expected at first sight. Scholars furthermore need to take into account the dynamics of employee motivation over time and the organizational level on which these dynamics occur.

This is not an exhaustive list of interesting avenues for future studies, but just some suggestions which might stimulate scholars to shed further light on the complex phenomenon of employee motivation. Understanding when and why employees might be motivated and knowing what the consequences are of the different aspects of motivation, might assist practitioners to enhance employee motivation, for the benefit of the organizations and employees alike.

Acknowledgements:

References

Baard, P. P., Deci, E. L., Ryan, R. M. (2004). Intrinsic need satisfaction: A motivational basis of performance and well-being in two work settings. *Journal of Applied Social Psychology*, *34*, 2045-2068.

Collins, C. J. & Clark, K. D. (2003). Strategic human resource practices, top management team social networks, and firm performance: The role of human resource practices in creating organizational competitive advantage. *Academy of Management Journal, 46*(6), 740-751

Deci, E. L. (1975). *Intrinsic motivation*. New York: Plenum.

Deci, E. L., & Ryan, R. M. (2000). The 'what' and 'why' of goal pursuits: Human needs and the self-determination of behaviour. *Psychological Inquiry, 11,* 319-338.

Deci, E. L., & Ryan, R. M. (2008). Facilitating optimal motivation and psychological well-being across life's domains. *Canadian Psychology, 49,* 14-23.

Deci, E. L., & Ryan, R. M. (2012). Self-determination theoryIn P. A. M. Van Lange, A. W. Kruglanski, & E. T. Higgins (Eds.), *Handbook of theories of social psychology: Vol. 1* . (pp. 416-437). Thousand Oaks, CA: Sage.

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

Deci, E. L., Ryan, R. M., Gagné, M., Leone, D. R., Usunov, J., & Kornazheva, B. P. (2001). Need satisfaction, motivation, and well-being in the work organizations of a former Eastern Bloc country. *Personality and Social Psychology Bulletin*, *27*, 930-942.

Duriez, B. (2011). Adolescent ethnic prejudice: Understanding the effects of parental extrinsic versus intrinsic goal promotion. *Journal of Social Psychology, 151,* 441-454.

Fernet, C. (2011). Development and validation of the Work Role Motivation Scale for School Principals (WRMS-SP). *Educational Administration Quarterly*, *47*, 307-331.

Fernet, C., Guay, F., & Senécal, C. (2004). Adjusting to job demands: The role of work, self-determination and job control in predicting burnout. *Journal of Vocational Behavior*, *65*, 39-56.

Fernet, C., Guay, F., Senécal, C., & Austin, S. (2012). Predicting intraindividual changes in teacher burnout: The role of perceived school environment and motivational factors. *Teaching and Teacher Education, 28*, 514-525.

Fernet, C., Senécal, C., Guay, F., Marsh, H., & Dowson, M., (2008). The Work Tasks Motivation Scale for Teachers (WTMST). *Journal of Career assessment, 16,* 256-279.

Gagné, M., & Deci, E. L. (2005). Self-determination theory and work motivation. *Journal of Organisational Behaviour, 26,* 331-362.

Gagné, M., & Forest, J. (2008). The study of compensation systems through the lens of self-determination theory: Reconciling 35 years of debate. *Canadian Psychology*, *49*, 225-232.

Gagné, M., Forest, J., Gilbert, M. H., Aubé, C., Morin, E., & Malorni, A. (2010). The motivation at work scale: Validation evidence in two languages. *Educational and Psychological Measurement*, *70*, 628–646.

Grant, A. M., Nurmohamed, S., Ashford, S. J., & Dekas, K. D. (2011). The performance implications of ambivalent initiative: The interplay of autonomous and controlled motivations. *Organizational Behavior and Human Decision Processes*, *116*, 241-251.

Greguras, G. J., & Diefendorff, J. M. (2009). Different fits satisfy different needs: Linking person-environment fit to employee commitment and performance using self-determination theory. *Journal of Applied Psychology, 94,* 465-477.

Hobfoll, S. (2002). Social and psychological resources and adaptation. *Review of General Psychology*, *6*, 307-324.

Ilardi, B. C., Leone, D., & Kasser, T. (1993). Employee and supervisor ratings of motivation: Main effects and discrepancies associated with job satisfaction and adjustment in a factory setting. *Journal of Applied Social Psychology*, *23*, 1789-1805.

Jin, J. & Roundsz, J. (2012). Stability and change in work values: A meta-analysis of longitudinal studies. *Journal of Vocational Behavior, 80,* 326–339.

Kasser, T., & Ryan, R. (1996). Further examining the American dream: Differential correlates of intrinsic and extrinsic goals. *Personality and Social Psychology Bulletin, 22,* 280-287.

Kristof-Brown, A., Zimmerman, R., & Johnson, E. (2005). Consequences of individuals' fit at work: A meta-analysis of person-job, person-organisation, person-group, and person-supervisor fit. *Personnel Psychology, 58,* 285-342.

Latham, G. P., & Locke, E. A. (2006). Enhancing the benefits and overcoming the pitfalls of goal setting. *Organisational Dynamics, 35,* 332-340.

Lian, H., Ferris, D. L., & Brown, D. J. (2012). Does taking the good with the bad make things worse? How abusive supervision and leader–member exchange interact to impact need satisfaction and organizational deviance. *Organizational Behavior and Human Decision Processes*, *117*, 41–52.

Lynch, M. F., Plant, R. W., Ryan, R. M. (2005). Psychological needs and threat to safety: Implications for staff and patients in a psychiatric hospital for youth. *Professional Psychology*, *36*, 415-425.

Mitchell, J. I., Gagné, M., Beaudry, A., Dyer, L. (2012). The role of perceived organizational support, distributive justice and motivation in reactions to new information technology. *Computers in Human Behavior*, *28*, 729-738.

Murray, H. A. (1938). *Explorations in personality.* New York: Oxford University Press.

Parker, S. K., Wall, T. D. & Cordery, J. L. (2001) Future work design research and practice: Towards an elaborated model of work design. *Journal of Occupational and Organisational Psychology, 74,* 413-440.

Parker, S.L., Jimmieson, N.L., & Amiot, C.E. (2010). Self-determination as a moderator of demands and control: Implications for employee strain and engagement. *Journal of Vocational Behaviour, 76,* 52–67.

Pinder, C. (2008). *Work motivation in organisational behaviour (2nd ed.).* New York: Psychology press.

Rousseau, D. M., & Fried, Y. (2001). Location, location, location: Contextualizing organisational research. *Journal of Organisational Behaviour, 22*, 1-13.

Ryan, R. M., & Connell, J. P. (1989). Perceived locus of causality and internalization: Examining reasons for acting in two domains. *Journal of Personality and Social Psychology, 57,* 749-761.

Ryan, R. M., Bernstein, J. H., & Brown, K. W. (2010). Weekends, work, and well-being: Psychological need satisfactions and day of the week effects on mood, vitality, and physical symptoms. *Journal of Social and Clinical Psychology, 29,* 95-122.

Schaufeli, W.B. (2012). Work engagement: What do we know and where do we go? *Romanian Journal of Applied Psychology, 14,* 3-10.

Sheldon, K. M., & Krieger, L. S. (2007). Understanding the negative effects of legal education on law students: A longitudinal test of self-determination theory. *Personality and Social Psychology Bulletin, 33*, 883-897.

Van Beek, I., Hu, Q., Schaufeli, W.B., Taris. T., & Schreurs, B.H. (2012). For fun, love or money. What drives workaholic, engaged and burned-out employees at work? *Applied Psychology: An International Review, 61*, 30-55.

Van den Broeck, A., De Witte, H., Vansteenkiste, M., Lens, W., & Andriessen, M. (2009). De Zelf-Determinatie Theorie: Kwalitatief Goed Motiveren op de Werkvloer. *Gedrag & Organisatie, 22,* 316-335.

Van den Broeck, A., Schreurs, B., De Witte, H., Vansteenkiste, M, Germeys, F., & Schaufeli, W.B., (2011). Understanding Workaholics' Motivations: A Self-Determination Perspective. *Applied Psychology: An International Review,60,* 600-621.

Van den Broeck, A., Van Ruysseveldt, J., Smulders, P. & De Witte, H. (2011) Does an Intrinsic Work Value Orientation Strengthen the Impact of Job Resources? A Perspective from the Job Demands-Resources Model. *European Journal of Work and Organisational Psychology, 20,* 581-609.

Van den Broeck, A., Vansteenkiste, M., & De Witte, H. (2008). Self-determination theory: A theoretical and empirical overview in occupational health psychology. In J. Houdmont & S. Leka (Eds.). *Occupational Health Psychology: European Perspectives on Research, Education, and Practice. Vol. 3.* (pp. 63-88). Nottingham: Nottingham University Press.

Van den Broeck, A., Vansteenkiste, M., De Witte H., & Lens, W. (2008). Explaining the relationships between job characteristics, burnout and engagement: The role of basic psychological need satisfaction. *Work & Stress, 22,* 277-294.

Van den Broeck, A., Vansteenkiste, M., De Witte, H., Soenens, B., Lens, W. (2010). Capturing autonomy, competence, and relatedness at work: Construction and initial validation of the Work-related Basic Need Satisfaction scale. *Journal of Occupational and Organizational Psychology*, *83*, 981-1002.

Van den Broeck, A., Vansteenkiste, M., Lens, W., & De Witte, H. (2010). Unemployed individuals' work values and job flexibility: An explanation from expectancy-value theory and self-determination theory. *Applied Psychology: An International Review, 59,* 296 - 317.

Vansteenkiste, M., Neyrinck, B., Niemic, C., Soenens, B., De Witte, H., & Van den Broeck, A. (2007). Examining the relations among extrinsic versus intrinsic work value orientations, basic need satisfaction, and job experience: A self-determination theory approach. *Journal of Occupational and Organizational Psychology, 80,* 251-277.

Vansteenkiste, M., Niemiec, C. P., Soenens, B. (2010). The development of the five mini-theories of self-determination theory: An historical overview, emerging trends, and future directionsIn T. C. Urdan & S. A. Karabenick (Eds.), *Advances in motivation and achievement, v. 16A—The decade ahead: Theoretical perspectives on motivation and achievement* . (pp. 105-165). London: Emerald Group Publishing Limited.

Vansteenkiste, M., Timmermans, T., Lens, W., Soenens, B., & Van den Broeck, A. (2008). Does extrinsic goal framing enhance extrinsic goal oriented individuals' learning and performance? An experimental test of the match-perspective vs. self-determination theory. *Journal of Educational Psychology, 100,* 387-397.

Vroom, V. (1964). *Work and motivation.* New York: Wiley.