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SELF-DETERMINATION THEORY AND THE EMERGING FIELDS OF RELATIONSHIP SCIENCE AND NICHE CONSTRUCTION THEORY**

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In this paper we summarise the basic tenets of Self-Determination Theory (SDT). As a special occasion for this overview, we review two recently published edited books on relationship motivation (WEINSTEIN 2014) and work motivation (GAGNÉ 2014) because both of them rely extensively on SDT concepts and principles while they extend the conceptual frames of the theory to several directions and applied fields. Furthermore, we argue that the basic propositions of SDT may contribute to the emerging field of the so called Relationship Science, the continuously forming interdisciplinary knowledge base on close relationships. On the other hand we propose that SDT could and should be further enriched by broader system theoretical approaches. Therefore we outline the evolutionary theoretical principles of human agency as represented in Niche Construction Theory and its applications in social sciences. While a complete theoretical integration exceeds the frames of a review, we draw a series of conclusions that may point in this direction.

Keywords: Self-Determination Theory, Relationship Science, Niche Construction Theory, motivation, human relationships

Selbstbestimmungstheorie und die neu entstehenden Bereiche der Beziehungswissenschaft und der Nischenkonstruktionstheorie: In diesem Artikel fassen wir die grundlegenden Lehrsätze der Selbstbestimmungstheorie (SDT) zusammen. Der besondere Anlass für die Besprechung sind zwei kürzlich erschienene Bücher über die Beziehungsmotivation (WEINSTEIN 2014) und die Arbeitsmotivation (GAGNÉ 2014), weil sich beide sehr stark auf Konzepte der SDT stützen, während sie den Begriffsinhalt der Theorie in mehrere Richtungen und auf diverse Anwendungsbereiche ausweiten. Darüber hinaus behaupten wir, dass die grundlegenden Thesen der SDT einen Beitrag zu der im Entstehen begriffenen sogenannten Beziehungswissenschaft, dem sich ständig wandelnden interdisziplinären Wissen über enge Beziehungen, leisten können. Andererseits sind wir der Ansicht, dass die SDT durch ein weiter gefasstes System theoretischer Ansätze weiter

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bereichert werden könnte und sollte. Deshalb skizzieren wir die theoretischen evolutionären Grundsätze des menschlichen Handelns, wie sie in der Nischenkonstruktionstheorie vorkommen, und ihre Anwendungen in den Gesellschaftswissenschaften. Da eine vollständige theoretische Integration den Rahmen einer Besprechung sprengen würde, ziehen wir eine Reihe von Schlussfolgerungen, die in diese Richtung weisen können.

Schlüsselbegriffe: Selbstbestimmungstheorie, Beziehungswissenschaft, Nischenkonstruktionstheorie, Motivation, zwischenmenschliche Beziehungen

1. Introduction

There is a famous – although imprecise – quote attributed to Freud saying that mental health would mean the ability ‘to love and work’. While the quote cannot be found in Freud’s works¹ it does reflect the common human experience that enriching human relationships and satisfying work are both important ingredients of a life fully lived. Consequently, these topics are important for contemporary personality and social psychological theories as well. Therefore, below we outline the basic tenets of Self-Determination Theory (SDT; cf. RYAN & DECI 2000a; 2000b), a prominent example of these theories. As a parallel of the ‘love and work’ thematic in SDT, we will refer to two recently published edited books on relationship motivation (WEINSTEIN 2014) and work motivation (GAGNÉ 2014) because both of them rely extensively on SDT concepts and principles while they extend the conceptual frames of the theory to several directions and applied fields. In addition, we will present two lines of theoretical and empirical approaches that we consider important for further development of SDT and the psychology of relationships in general: relationship science (RS) and niche construction theory (NCT).

2. Self-determination Theory: overview and basic tenets

Self-Determination Theory (SDT) is a growing and flourishing psychological meta-theory of human self-regulation, motivation, personal growth and well-being. The founding fathers are Edward Deci and Richard Ryan from Rochester University. Since its origins go back to the 80’s, concepts of SDT are well grounded both theoretically and methodologically and are organised around some major themes. Last but

¹ ‘This formula was cited by Erik Erikson but it is not to be found in Freud’s works, although the sentiment is sometimes implied. During his long engagement Freud stated that his own ambition in life was to have Martha as his wife and to be able to work (e.g. ‘Couldn’t I for once have you and the work at the same time?’ Freud-Martha Bernays 21 Oct. 1885). Freud also referred to Eros and Ananke [Love and Necessity] as the foundations of society. In ‘Civilization and Its Discontents’ (1930) he wrote: ‘The communal life of human beings had, therefore, a two-fold foundation: the compulsion to work, which was created by external necessity, and the power of love’. (S.E. XXI.101) see <https://www.freud.org.uk/about/faq/>.

not least, SDT inspired a great number of studies and by now it has a growing international community of scholars and practitioners as well. A quick search on Google Scholar demonstrates this. If we search only for those publications that have *in their title* the explicit term ‘self-determination theory’, we get 165 hits from 2014, 158 hits from 2015 and 115 hits from 2016 (21 Sept 2016), mostly in the form of ‘a self-determination theory perspective’, ‘a self-determination theory approach’ or ‘a self-determination theory analysis’. Obviously, an inclusion of more fine-grained search criteria for SDT based studies and search in the non-English language literature would come up with even more results. This alone indicates that SDT is a viable and inspiring framework for the psychological and behavioural sciences. Therefore, first we give a rough outline of the main tenets of the theory. Theoretically, SDT has a series of features that make this approach unique.

2.1. Foundations in humanistic psychology

SDT holds a humanistic view of the psychological Self and the person and directly refers to the psychology of Carl Rogers. The human person is seen embedded in social systems and relationships while at the same time functioning according to an intrinsically developing and self-organising self-system.

2.2. Evolutionary framework

SDT refers to evolutionarily based principles of human functioning and assumes that basic psychological needs (as outlined below) are universally evolved human phenomena that are independent of culture. The Self as a self-organising system is connected to the evolutionary heritage of the human species, and more proximally, to the brain and the functioning of the body.

2.3. Individual variations

While the recognition of universal human tendencies is clearly present in SDT, the existence of individual differences and cultural variations is also recognised. The basic question is whether they may lead to different outcomes in terms of mental health and positive functioning. For example, importance of life goals that individuals and communities pursue may depend on the cultural and interpersonal context but excessive striving for materialistic goals may undermine well-being (MARTOS & KOPP 2012).

2.4. Modularity

SDT may be regarded as a continuously developing conceptual network of theoretical modules, also called ‘mini-theories’. These modules describe different basic premises and hypotheses that are yet in connection with each other. Up to the present day, six such modules have been developed but there is no definitive reason to assume that later development could not add further modules as well. We outline the most important propositions below.

2.5. Methodology

On the methodological side of research, SDT researchers have developed a series of psychometrically sound scales and questionnaires to assess SDT-related concepts, experiences and characteristics. Indeed, the great majority of SDT research was conducted by means of self-administered questionnaires. On the SDT homepage www.selfdeterminationtheory.org more than 40 questionnaires are available for free use and translation and there may be lots of adaptations of these measures to different research topics and questions.

3. Examples of mini theories in SDT

While it is an almost impossible mission to make a short list of the major topics of SDT, in the following points below we summarise those themes that have been under much scrutiny.

1. Focus on intrinsic motivation. Intrinsically motivated states are characterised by behaviours and inner processes that are pursued without any external reward. In this way, intrinsic motivation is close to the ‘flow’ state of mind as described by Mihály Csíkszentmihályi (1991; Privette 1983). Along with the investigation of intrinsically motivated processes much scientific effort has been given to understand its sustainability as well. Indeed, the roots of SDT go back to the studies on the paradoxical effect of external reinforcement of intrinsic motivation and performance (the ‘undoing effect’).
2. Later, theorising extended the intrinsic-extrinsic dichotomy. The concept of ‘perceived locus of causality’ (PLOC) posited an extrinsic-intrinsic continuum of the subjective motivation. Instead of two distinct motivational states (intrinsic or extrinsic), the PLOC approach defines different types of external motivations (external, introjected, identified and integrated regulation) that are all forms of more or less externally fuelled self-regulation; however, they differ substantially in the subjective experience of autonomy, causation and internalisation. Identified and integrated regulations represent autonomously regulated motivation and behaviour that contribute to optimal human functioning. Moreover, more

autonomous types of motivation were found to be personally more satisfying and more efficient and creative at the same time (DECI & RYAN 1985; WEINSTEIN et al. 2012; WONG 2000).

3. The concept of basic psychological needs (BPN) is another core assumption in SDT. Basic psychological needs are those conditions that are necessary for the human person to grow psychologically and to actualise their full potential. To put it in another way, BPNs are those ‘nutriments’ that are necessary for a healthy development and functioning. In SDT three basic psychological needs are postulated: autonomy (the need for free, volitional acts and existence), competence (the need for being an active and efficient agent in one’s pursuits) and relatedness (the need for supporting, caring relationships). Another assumption of SDT is that an equally high level of satisfaction of these needs is indispensable for healthy functioning. It is also important to note that the need concept of SDT differs considerably from other concepts that treat needs as individual difference features: in SDT the main concern is not about how individuals differ from each other in the strength of their actual or long term needs. Instead, the question is – in SDT terms – how social environments are different from each other in providing these basic needs for the individuals. Empirical studies demonstrated that personal experience of higher satisfaction of BPNs, autonomy, competence and relatedness was connected to higher well-being and better psychological health in everyday settings (REIS et al. 2000; RYAN et al. 2010) and close relationships (PATRICK 2007).
4. One corollary of the above described concepts concerns the relationship between values, psychologically healthy goal striving, need satisfaction and well-being. Several studies demonstrated that intrapersonal experience of autonomy and ownership in one’s strivings and life goals supports the realisation of need satisfaction (in terms of BPN) and thus it may lead to better functioning and well-being (RYAN et al. 1996; SHELDON 2014; SHELDON & HOUSER-MARKO 2001).
5. Since its inception, SDT has been deeply concerned with specific forms of autonomy support and control strivings in different kinds of human relationships. Specifically, much attention was paid to the questions how autonomy and control processes work in different interpersonal settings and what their consequences are. A great part of SDT-inspired research is aimed at how people who have impact on others (e.g. parents, health professionals, teachers, coaches and supervisors) facilitate behavioural change (e.g. smoking cessation, acquiring new skills) and/or attitude change (e.g. value internalisation) and support persistence. As a general principle, controlling (non-autonomy-supporting) relationship acts and the subjective interpretation of being controlled in a relationship are regarded as detrimental for growth, healthy functioning and good quality of relationships (for supporting data see DECI & RYAN 2008; GUAY et al. 2013; HAERENS et al. 2015; RATELLE & DUCHESNE 2014; ROTH & WEINSTOCK 2013). Even more generally, several studies demonstrated that need supporting

attitude and behaviour (in terms of BPN satisfaction) are in fact necessary prerequisites for these desirable outcomes in several settings.

Although the above outlined core topics capture only the rough structure of the many aspects of SDT, it has probably become salient so far that SDT has a lot to say about several life domains and several questions of the functioning of the human personality and relationships. Recently, two edited books were released that demonstrate the plasticity of the theory; both summarise an enormous amount of empirical research and present applications of the basic theory for two – partly overlapping – domains of human experience, that is, close relationships and work. (Just recall again the words attributed to Freud.) First we give a short overview of the two volumes then we will look for similarities and common features in the theoretical and practical advancements. Finally, from a more distal perspective, we pinpoint some questions and potential theoretical approaches that are underdeveloped in SDT in general and in these volumes in particular but that may enrich and extend the original theory.

4. Self-determination Theory, relationships and work motivation

The book *Human Motivation and Interpersonal Relationships: Theory, Research, and Application* edited by Netta WEINSTEIN (2014) focuses on the relational side of human motivation. It explicitly formulates and relies on the sixth ‘mini-theory’ of SDT, the Relationship Motivation Theory (DECI & RYAN 2014). Most of the articles are reviews with many references to previous empirical studies and only a few of them present original data and analysis. The book organises these contributions around three main topics. The first couple of chapters deal with broad theoretical aspects of interpersonal relationships from an SDT perspective. Not surprisingly, one of the most detailed questions throughout the three chapters is the fundamental role of autonomy in human functioning and particularly in human relationships. Autonomy is a centrepiece of the theoretical construction of SDT: need for autonomy, subjective experience of autonomy, providing support in ways that support the need for autonomy as well, dispositional vs situational determinants of autonomy – these are well discussed topics both in SDT literature and in the chapters. Given its central role in the theory, it is worth shortly presenting what autonomy is and what it is not from an SDT point of view. The latter is probably the easier question: theorists of SDT often claim that autonomy is not individualism, egocentrism, or disconnection from others. Rather, as CHIRKOV (2014) points out, psychological autonomy refers to the inner capacity of self-direction, either in general, in the individual’s life as a whole (personal autonomy) or in a specific domain (motivational autonomy, e.g., in health behaviour, in relational decisions, etc.). Psychological autonomy refers to: 1) a set of self-generated and meaningful life-goals and values where inner capacity for self-direction refers to the ability of choosing and pursuing such goals; 2) awareness and reflections on bodily, sensual and affective impulses where autonomy lies also in using appropriate skills for dealing

with these impulses; and 3) the awareness and understanding of cultural and social norms and expectations along with an inner capacity to freely decide whether to follow or reject them. Cultures and social settings may greatly differ in the endorsement of an autonomous personal position but the dilemmas are similar.

DECI and RYAN (2014) describe Relationship Motivation Theory as one of the so called 'mini-theories' within SDT, positing that the feeling of relatedness alone is not enough to build and maintain satisfactory relationships. Mutual support of autonomy and competence are also vital ingredients of every well functioning relationship. The authors refer for example to the possibility of conflict between autonomy and relatedness: although they may be often experienced as contradictory demands, they are not necessarily antitheses of each other. In fact, the theory of basic psychological needs posits that both are prerequisites for healthy human functioning. In contrast, conditional regard and the resulting relationship-contingent self esteem (see also the chapter of ASSOR et al. 2014) represent the darker side of the relationships: these ways of relationships offer relatedness at the cost of autonomy, that is, they build on interpersonal control.

After this introduction the next part unfolds several theoretical aspects of the basic principles for a series of relevant domains. These chapters deal with the importance of need support in different types of social experiences; the different forms of the automatic us-them divide and the accompanying defensiveness; the role of an authentic self-concept in relationships; conflict processes in romantic relationships; the role of autonomy in intergroup process and the role of autonomous self-disclosure in developing a healthy LGBT identity. It is very compelling how the relatively simple basic principles and theoretical propositions of SDT can be connected to other scientific conceptions. We would like to cite two examples more in detail: the automatic us-them divide and conflict resolution processes in relationship with autonomy support.

The automatic us-them divide refers to the well-known social psychological phenomenon of differentiation between in-group and out-group members. This is a basic social cognitive process that can be very easily activated. However, the authors question the view that this differentiation should inevitably lead to defensive inner processes (motivated downward evaluation of out-group and upward evaluation of in-group members that can reduce anxiety in persons) and the resulting social distinction. They argue that experiences of intrinsic motivation and autonomy relate to lower self-defensiveness and lead to more positive and non-defensive social experiences like pro-social behaviour, gratitude to others, taking interpersonal responsibility and joint creativity. More interestingly, the authors make linkages between the autonomous self-functioning and the Buddhist perspective of Self; especially the praxis of mindful meditation. Mindful acceptance of inner states and experiences is also a more and more investigated therapeutic praxis even in Western behavioural and psychological sciences that may contribute to decoupling the first automatic link between us-them cognitions and the resulting defensive reactions. Autonomy as well as mindfulness creates an extra symbolic 'space' both in the mind and in the relationships that in turn makes more relaxed and non-judgemental relationships possible.

This interpretation may be further strengthened by the thoughts of KNEE and colleagues (2014) who explore the relationship between conflict regulation and different aspects of self-determined way of living. According to the authors, SDT may be linked and at the same time can be contrasted to other well-established theories of romantic relationship dynamics, for example self-expansion theory (ARON & ARON 1996), attachment theory (BOWLBY 1969) and interdependence theory (KELLEY et al. 2003). KNEE and colleagues (2014) analyse the basic propositions and assumptions of these approaches and compare those with SDT which seems unique with its focus on need for autonomy and the assumed importance of autonomy support. However, while the authors acknowledge these features and build on them, they still have to admit that SDT's basic premises refer to the relationship of the individual and her larger social environment and thus largely lack the dyadic aspect of relationships. At the same time, this may shed light on a promising future research direction – a conclusion that is much in line with ours as we present below.

The third part of the volume presents applied domains and special applications, mostly connected to several aspects of health and physical activity. The chapters cover many important topics on different forms of supporting relationships: sport educators, health practitioners, counsellors and other actors of the social environment. The evidence presented here is a good summary and support for the basic SDT tenets: regardless of the actual type of the relationship, more support for autonomy, competence and relatedness is associated with better outcomes, adherence to treatment regimes and better therapeutic relationships. While these associations are important to be emphasised again and again, there is also a less worked-out point. We find the proposition of LA GUARDIA and PATRICK (2014) especially promising in this regard. They mention that relationships often function as if romantic partners had a specific 'relational contract' between them (LA GUARDIA & PATRICK 2008). Relational contracts are created about the expectations each romantic partner has for themselves and for the other and they are constructed of a hierarchical system of basic as well as elaborate functions that let the relationship work in a stable way. This idea is close to an early formulation of relationship contracts, named marriage contract by SAGER (1976) and may show again toward a potential approach between SDT and relationship science. Unfortunately, the idea of 'relational contracts' is not detailed further in the chapter although an SDT based framework would be very interesting in this domain.

The other volume of our special concern, *Oxford Handbook of Work Engagement, Motivation, and Self-Determination Theory* (GAGNÉ 2014) addresses work experiences and work contexts in the light of SDT. The basic structure of the volume is similar to the above mentioned book. After the first chapters that cover the general theoretical foundations, middle level connections are explored between the basic principles and several mid-range characteristics, for example the role of leadership in promoting healthy motivation, different types of passion for work, thriving and flow in work and the causes and processes of workplace violence; all these and other topics through the lens of SDT. The various chapters map both individual aspects

(e.g. the role of attachment experiences in the maintenance of autonomous motivation) and organisational and contextual considerations (e.g., the role of compensation as well as the possibility of providing training and development in the sense of SDT). The final chapters provide insight into certain domains of practical application: teacher motivation, health promotion at the workplace, and the pursuit of various values and goals at the workplace.

While the chapters of the book as a whole balance well between positive and negative phenomena (e.g., thriving and violence), there is still a positive overall message that can be clearly read from the studies. Workplaces can and should be constructed in a way that may lead to positive motivation, authentic passion and long term commitment for self-determined goals. However, the main line of research in SDT (as applied for workplace motivation and close relationships) imply a mostly linear view of effects that focuses on the role of the stronger and broader actors in the system, i.e. those with more power and potential to influence others. In the world of organisations these agents are bosses, leaders (and more generally the organisational culture) and it follows that change can be effectively facilitated through them.

One excellent example of this basic approach is the overview of PELLETIER and AITKEN (2014). They summarise those ways how leaders and social context in an organisation may promote positive change towards environmentally responsible actions in employees. It was shown previously that pro-environmental behaviour (PEB) of individual employees can have a distinctive effect on the environment therefore it is of utmost importance to support PEB in workplaces. Since several activities that are associated with PEB are not intrinsically enjoyable, identification with and integration of these actions, that is, autonomous motivation for PEB is a key factor in achieving sustainable change. Correspondingly and in line with SDT principles, the main route to this change is an organisational culture and practice that satisfy the basic psychological needs of employees. The study gives a broad overview of several pathways from information provision through overt pro-environmental organisational policies to the supervisor's interpersonal behaviour towards the employees.

To summarise our overview shortly, Self-determination Theory provides a well-founded account of many aspects of human specific motivation and as a main contribution to psychology and behavioural sciences it clearly emphasises the role of specific social contexts and relationships in development of motivated states and processes. One aspect, according to our view, is underdeveloped in SDT. It is a basic assumption in SDT that human beings are active, growth oriented organisms. However, when it comes to the role division between the person and their social context, we find that there is much more emphasis on those effects that the context may have on the person (context to person effects) than the effects in the opposite direction (person to context effects). Below we refer to two broad theoretical frames, Relationship Science and Niche Construction Theory, that may enrich SDT by their specific concern with a mutual and circular account of this relationship.

5. Self-determination Theory and Relationship Science

Relationship science (RS) is an emerging interdisciplinary field of research and partly of praxis as well that places the functioning of human connections and relationships in the focus of scientific scrutiny. This shift in focus from the individual characteristics to the relational ones is not a haphazard change but a logical corollary of many experiences that humans, human behaviours and human phenomena can be better explained when considering individuals together with their connectedness to specific others. RS can be followed back to such broad theories like attachment theory, interdependence theory or evolutionary psychology (FINKEL & SIMPSON 2015).

As we could see, SDT too places a definite accent on the ways how persons relate to each other; how they satisfy each other's basic psychological needs; how they experience themselves and others in connection. Therefore, we deeply agree with the basic message of the above presented works saying that SDT has not only been a motivational theory but also a fundamental theory of human relationships, even since the beginning of its formulation (LA GUARDIA & PATRICK 2008). Systemic relationships are present throughout the theoretical formulations of SDT in two ways. First, and more evidently, there is an interpersonal circle of self-regulation and relationship behaviour. Earlier approaches in SDT emphasised mostly linear relationship dynamics, concentrating on the effects that the basic need supporting behaviour of one agent (e.g. parent, teacher or healthcare provider) may have on the behaviour, motivation, and well-being of the other agent (adolescent, student or patient). In contrast to this rather one-sided approach to the relationship between persons and their 'social contexts', newer formulations include more interdependent and circular models of interpersonal processes. For example, in their theoretical overview, WEINSTEIN and DEHAAN (2014) present a tentative model where autonomous motivation in the individual and need supporting behaviour of relational figures are mutually interrelated and continuously support each other in a positive way. Or, in contrast, negative feedback may deteriorate this healthy functioning both from the relational and the individual side of the process. We see this as a very promising extension of the original SDT principles since it gives a more complex description of how individuals themselves are active agents in the formation of their relationships. At this point, SDT is also in accordance with the system theoretical approaches of Relationship Science: in many ways individual self-regulation is a function of relationships (FINKEL & FITZSIMONS 2011) and also serves as a motivational basis for specific relational perceptions and acts (FITZSIMONS & FINKEL 2011). For example, Transactive Goal Dynamics (TGD) Theory (FITZSIMONS et al. 2015), a newly developed theoretical approach in RS is concerned with interpersonal processes of self-regulation. TGD is based on the assumption that individual self-regulation processes may only be understood as parts of a broader interpersonal and interdependent system of self-regulation. These propositions are at present rather theoretical in nature but they are open to empirical investigation and also they suggest that SDT and Relationship Science can move along similar pathways to gain a deeper understanding of human relationships.

The second aspect of a systemic approach to relationships that is inherently present in SDT concerns the relationship of the person with their inner Self. SDT driven research on mindfulness (DECI et al. 2015) as well as theoretical considerations on autonomy (CHIRKOV 2014) authenticity (RYAN et al. 2005) and the nature of self-esteem (RYAN & BROWN 2003) present this line of investigation. We think that this aspect may be best represented in a second circular model of inner self-regulation processes and this way it could be added to the interpersonal circular model of WEINSTEIN and DEHAAN (2014). Intra- and interpersonal levels of self-regulation are interdependent circular processes, however, both levels have their own autonomy and may have mutual effect on each other. Since human systems are open systems, we think that SDT could profit from research on circular relationship processes.

6. Self-determination Theory and Niche Construction Theory

We considered the aspects of Relationship Science in order to reflect on the SDT approach to close relationships (the ‘love’ side of the ‘love and work’ dichotomy). Now we turn to another scientific innovation, that is, the evolutionary theory of Niche Construction, because we think that it may give a broader outlook on the often cited examples of the SDT approach to work and work motivation. To summarise it shortly, Niche Construction Theory (NCT; ODLING-SMEE et al. 2003) describes evolutionary processes as constant and cyclical transactions between the organisms, their socio-physical environment and their genetic heritage. The core assumption behind NCT is that the changes organisms perform in their environments become evolutionary forces themselves. Therefore, adaptation is not a unidirectional process that leads only from environment and environmental pressures to gene selection but there is an opposite direction as well. Organisms are to some extent co-authors of their (and also others’) evolution. For the best and the worst, human beings are among the most successful niche constructors on the Earth: our intelligence and culture gives us enormous tools to modify our social and physical environment in a way that may support the fitness of the species *Homo Sapiens*. In turn, these modifications exert new selective pressures that have effects both on the biological and on the cultural level (e.g., values, preferred and rewarded traits). In recent years, many applications of NCT arose outside of evolutionary theorising.

Principles of niche construction have been applied to cultural differences and heritage (KENDAL 2011; LALAND, & O’BRIEN 2011; YAMAGISHI, & HASHIMOTO 2016), to modern economy (DEW & SARASVATHY 2016), to individual developmental processes and its social context (FLYNN et al. 2013), and on the psychological level to interpersonal relationships, for example friendships (BAHNS et al. 2016; PAPADOPOULOU 2016). Niche construction seems to prevail as a universal phenomenon in every domain and at every level of the human-environment socio-ecological systems: both on the micro and the macro level, both on a life-span and on an evolutionary time scale.

If we come back to our main focus, we might ask whether the basic tenets of NCT may add new aspects to SDT (and especially to its application to work domain)? NCT emphasises the potential of lower level systems (e.g., organisms) being active agents towards higher level systems (the environment) in a way that would affect (benefit) the functioning of the lower level systems. As we pointed out earlier with reference to the interpersonal relationships, this circular effect largely lacks in the basic conceptualisations of SDT: social environment is assumed to be need satisfying or need thwarting to a certain extent but there is no theoretical feedback loop from the individual to its environment. However, if we look at work environments as constructed niches, we may hypothesise that they are partly dependent on the constructing processes of the subordinate system levels, that is, the employees and workgroups. Obviously, not all individuals have the same potential to influence their work environment: individual characteristics (e.g., dispositional autonomy, assertive competencies) and status capacities may help one to have more impact on the organisational processes than others. There is still a missing link and we believe that a niche construction approach could broaden the horizon of motivational and self-regulation processes at the workplace, just as a systemic view of interpersonal relationships adds to the understanding of close relationships and SDT.

To give an example, GREGURAS and colleagues (2014) review several approaches to different forms of person-environment fits and misfits: person-organisation fit, person-job fit and person-group fit, among others. They argue that these fit experiences are important ingredients of the well-being and positive work functioning of the employees on the one side and they may be results of a need supporting environment on the other. While these processes are fundamental to the self-determination theoretical description of a work environment, the reader still asks whether there are alternative routes for employees to reach a congruence between their self and their work conditions, job demands or the functioning of their team. The authors themselves do not confront this question explicitly; however, they still identify social network theory as a guiding principle that helps to understand how employees and their relationships contribute to the different fits. Individuals are not alone, they are embedded in a network of strong ties and this gives them a certain amount of freedom in shaping their conditions. This way, social networks are vehicles of a niche construction process – and they are themselves niches as well.

It is important to note that besides profiting from the above outlined aspects of NCT, SDT may also offer a lot for the future models of psychological niche construction. If we accept the notion that basic psychological needs are universal then search for and support for need satisfaction can serve as basic interpersonal rules that make some social niche construction processes successful or else they can provide explanations for failures of others.

7. Self-determination Theory: conclusions

While our special concern was to give an overview on two recently issued edited books on Self-determination Theory, we also wished to put this living and developing branch of theories into a broader context. Both basic assumptions of Relationship science and Niche Construction Theory are supportive of SDT when they emphasise the importance of a supporting environment in individual functioning; however, both approaches provide also an alternative route where individuals actively contribute to their own environmental conditions by selecting and/or altering them. Researchers and theorists in the SDT tradition did excellent job in investigating several aspects of self-regulation and its social contexts. However, it is a good opportunity for the next generation that there are still a lot of things both about love and work that have to be understood.

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