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RELATEDNESS NEED SATISFACTION IN SENIOR EXECUTIVES

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ABSTRACT

This research investigated relatedness need satisfaction in senior executives in three studies (two qualitative/ one quantitative). In study 1, we identified a matrix of coping strategies (MoCS) as conceptualization of senior executives' behavioral responses to perceived social rejection or exclusion. Study 2 found that senior executives' level of relatedness need satisfaction as a potential indicator of self-regulation failure was not significantly different from the rest of us. However, every sixth senior executive participant and every fourth senior executive participant from large organizations had a very low relatedness need satisfaction score with very large effect size. The final study 3, identified a relatedness loop model (RLM) as a theoretical framework for relatedness need satisfaction processes. In summary, our work offers an empirical foundation for future research as well as for practical tools and applications in the field of senior executive psychology.

Key words: relatedness need satisfaction; self-regulation failure; senior executives

1. Introduction

Modern society has been described as a “society of organizations” (Etzioni, 1964, p. 110). More recent literature has supported Etzioni’s (1964) postulate by highlighting the substantial effects of organizational behavior on society and social welfare (Garriga & Mele, 2004; Porter & Kramer, 2006). Further appreciation of the consequences of organizational behavior has been called for by European (European Commission, 2011) and U.S. (CSR Initiative, 2013) public policies emphasizing private enterprises’ social responsibilities. Academic studies have identified senior executive actions as a predictor of corporate functioning, behavior, and performance (Carmeli, Schaubroeck, & Tishler, 2011; Finkelstein & Hambrick, 1990; Ganster, 2005; Jacquart, Antonakis, & Ramus, 2008; Peterson, Galvin, & Lange, 2012). Hambrick et al. (2005) suggest that senior executives are “finite flawed human beings” who “reside in jobs where the stakes associated with their humanness – both positive and negative – are enormous” (p. 503). For example, the present economic crisis has been proposed by literature, at least in part, to be a result of senior executives’ actions related to negative aspects of humanness such as unethical behavior (Finkelstein, 2011; Galperin, Bennett, & Aquino, 2011; Piff, Stancato, Coté, Mendoza-Denton, & Keltner, 2012). Given the potentially far-reaching negative implications of senior executives’ behavior for organizations and society, this research examined senior executives’ inner lives, specifically relatedness need satisfaction in senior executives’ as antecedent of their behavior.

Senior executives have been underexplored in the organizational sciences (Berson, Oreg, & Dvir, 2008; Ganster, 2005; Hambrick, et al., 2005). A first suggestion of why such research has been limited is that researching senior executives is particularly challenging for academic scholars. For example, on behalf of the researcher, it requires substantial credentials and contacts (Odendahl & Shaw, 2002), mobility for coordination (Conti & O’Neil, 2007), flexibility in terms of responding to ad-hoc changes in senior executives’ calendars (Conti & O’Neil, 2007), funding for travel (Conti & O’Neil, 2007), specific executive terminology (Easterby-Smith, Thorpe, & Jackson, 2008), and self-confidence in dealing with power and authority (Easterby-Smith, et al., 2008; Lindlof & Taylor, 2002; Rubin & Rubin, 2005). Furthermore, senior executives need to make a charitable contribution of their time (Conti & O’Neil, 2007), often calculated at well over 1,000 USD an hour. Finally, collecting psychographic data from senior executives appears to represent a particular obstacle (Berson, et al., 2008; Carpenter, Geletkanycz, & Sanders, 2004; Priem, Lyon, & Dess, 1999) as it requires substantial trust on behalf of the senior executive inspired by a setting of confidentiality to be created by the researcher.

A second explanation of the limited research is that the above challenges seem particularly relevant in the context of what Amabile and Kramer (2007) call “inner life” studies. With the exception of a few studies, for example, McClelland (1985) and McDonald and Westphal (2011), there has been no line of research investigating senior executives’ inner life or as Ryan and Deci (2000) define it, “the inner resources for personality development and behavioral self-regulation” (p. 68) as antecedent of senior executive behavior. Hambrick et al. (2005) call for further research in the field of “executive cognitions” (p. 503) proposing it as one of the most “fertile terrain in the organizational sciences” (p. 503).

Thirdly, there seems to be a debate in literature over whether senior executives are distinct from non-executive individuals. Several studies have indicated an association between managerial level and personality (Hahn, Dormann, & Stock-Homburg, 2010; Moutafi, Furnham, & Crump, 2007; Sims, Sziglgyi, & Keller, 1976) implying that non-executive research findings should not be projected out to senior executives. In contrast, Hambrick et al. (2005) suggest that “scholarly attention to executives is warranted not because they are different from the rest of us but precisely because they are *not* different from the rest of us” (p. 503). Future research on executive behavior from a psychological perspective is required to further knowledge on the debate.

We conclude that the potential impact of senior executives' inner lives on organizations and society has not been reflected in academic research activity in the organizational sciences. Our research overcame the challenges of senior executive research to address these limitations. Specifically, the aim of our work was to study relatedness need satisfaction in senior executives, to (a) promote an inner-resource line of inquiry in the field of senior executives, (b) contribute to the debate over senior executive distinctiveness, and (c) provide an empirical foundation for future research into senior executives as well as practical applications to evaluate, monitor, and manage senior executives' inner lives.

1.1 Self-determination theory

This research was conducted within the theoretical framework of self-determination theory (SDT). The origins of SDT go back to initial work in the 1970s (Deci, 1971, 1975). Since then, the theory has gone through several developmental stages (Deci, 1980; Deci & Ryan, 1980a, 1980b, 1985, 1991, 2000, 2008a). However, the dynamic relationship between the person and the social environment in the context of psychological need satisfaction has been a major focus throughout its evolution (Vallerand & Pelletier, 2008).

As a macro-theory of human motivation SDT is based on five mini-theories and suggests the satisfaction of three basic psychological needs (a) autonomy, (b) competence, and (c) relatedness, as predictors of individuals' behavioral self-regulation leading to optimal functioning, that is, pro-social and self-growing behaviour (Ryan & Deci, 2000). These needs are considered universal and developmentally persistent (Ryan & Deci, 2000) and play a central role in the investigations applying SDT to different areas.

In the context of organizations, SDT postulates that basic psychological need satisfaction leads to better work outcomes such as performance, job satisfaction, organizational citizenship behaviour, and psychological well-being (Gagné & Deci, 2005) which has been supported by a long list of research studies (Baard, Deci, & Ryan, 2004; Blais & Briere, 1992; Breugh, 1985; Deci, Connell, & Ryan, 1989; Deci, et al., 2001; Gagné, Koestner, & Zuckerman, 2000; A. M. Grant & Berry, 2011; Sheldon & Elliot, 1998; Stone, Deci, & Ryan, 2009). When basic psychological needs are thwarted, individuals can fail to self-regulate leading to ill-effects involving behavioral coping strategies such as anti-social and self-defeating behaviour (Baumeister & Leary, 1995; Ryan & Deci, 2000). Literature on self-regulation failure may contribute a perspective on the scope of potential anti-social and self-defeating behaviours that senior executives may engage in when their basic psychological needs are thwarted.

1.2 Self-regulation failure

Self-regulation has been defined as "the capacity to control or alter one's responses" and further been described as "a vital mechanism for producing adaptive and socially desirable behaviour" (Baumeister, DeWall, Ciarocco, & Twenge, 2005, p. 590). The foundations of self-regulation theory go back to early 'Test, Operate, Test, Exit' (TOTE) models (Miller, Galanter, & Pribram, 1960) and Kanfer and Karoly's (1972) three stage model of beta-regulation. Both frameworks have been applied as a blueprint by researchers to add to the understanding of self-regulation. The most recent and widely used conceptualization of self-regulation is Carver and Scheier's cybernetic feedback loop model (Baumeister & Vohs, 2004; Carver & Scheier, 1981). When comparing the Carver and Scheier model (CSM; 1981) assumptions to SDT, it can be concluded "that Carver and Scheier have been more concerned with the how of goal pursuit once a goal has been selected, whereas SDT has been more concerned with the what and why of goal selection and pursuit" (Deci & Ryan, 2000, p. 258). There has been a seminal debate over how to interpret SDT in the context of the CSM (Carver & Scheier, 1999a, 1999b; Ryan & Deci, 1999). At the time,

it was concluded that both frameworks work at conceptually different levels (Deci & Ryan, 2000). Since then a number of empirical studies have supported SDT's perspective on self-regulation and self-regulation failure (Deci & Ryan, 2008b).

For example, self-regulation failure experiments found anti-social and self-defeating behaviour such as aggression (Twenge, Baumeister, Tice, & Stucke, 2001), violence (Baumeister, Bushman, & Campbell, 2000), unhealthy food choices (Baumeister, et al., 2005), addiction (Baumeister, 2003), increased spending (Baumeister, DeWall, Mead, & Vohs, 2008; Mead, Vohs, & Baumeister, 2007), and less physical activity (Barkley, Salvy, & Roemmich, 2012). Experimental research studies further identified phenomena such as the seeking of short-term benefits accompanied by long term costs (Baumeister, et al., 2005), impulsive temptations (Baumeister, et al., 2005), impaired logical reasoning (Baumeister, Twenge, & Nuss, 2002), cognitive impairment (Baumeister, et al., 2005; Twenge, Catanese, & Baumeister, 2003), foolish and disproportional risk-taking (Twenge, Catanese, & Baumeister, 2002), inappropriate and risky goals beyond performance and capability (Baumeister, Heatherton, & Tice, 1994), violation of rules and guidelines (Baumeister, Vohs, & Tice, 2007), procrastination (Twenge, et al., 2002), reduced stamina (Vohs, Baumeister, & Ciarocco, 2005), arrogance (Vohs, et al., 2005), egotism (Vohs, et al., 2005), disclosure of confidential information (Vohs, et al., 2005), lethargy (Twenge, et al., 2003), and depression (DeWall, Gilman, Sharif, Carboni, & Rice, 2012) as behavioral patterns related to self-regulation failure.

Perceived social rejection and exclusion and its impact on individuals' relatedness need satisfaction has been the most widely studied predictor of self-regulation failure (Baumeister, et al., 2005; Baumeister & Heatherton, 1996). However, behavioral patterns associated with perceived social rejection and relatedness need satisfaction have not been investigated in senior executives from an empirical perspective. Psychological studies have shown that, for example, higher social class (Piff, et al., 2012) and "the idea of money" (Vohs, Mead, & Goode, 2006, p. 1154) were associated with anti-social and self-defeating behaviour. Higher social class and wealth have been associated with the pursuit of self-interest and feelings of independence (Piff, et al., 2012) which, in turn may convey perceptions of social rejection or exclusion. In response to the important role of senior executives' behaviour for organizational and societal outcomes and the limitations of literature examining senior executives' inner lives, our initial research question was:

RQ1: What are senior executives' behavioral responses to perceived social rejection or exclusion?

1.3 Relatedness need satisfaction

The need for relatedness has been the most extensively examined of the three basic psychological needs in the context of perceived social rejection and exclusion resulting in self-regulation failure. Baumeister and Leary (1995) propose the fundamental ingredients of the need for relatedness as (a) frequent personal interactions marked by (b) stability, and mutual affective concern (p. 500). With specific reference to relatedness in SDT literature, the need for relatedness has been defined as "feeling connected with others and having a sense of belonging within one's community. Relatedness satisfaction entails a sense that one is significant to others, which is often manifest in others' willingness to care for one or to receive the care one has to offer" (Ryan & Deci, 2008a, p. 658). In the majority of investigations on self-regulation failure, relatedness need satisfaction was manipulated in experimental designs so that participants would feel immediate or anticipated social rejection, social exclusion, or ostracism (Barkley, et al., 2012; Baumeister, et al., 2008; Baumeister, et al., 2002; DeWall, Twenge, Gitter, & Baumeister, 2009; Mead, et al., 2007; Twenge, et al., 2002, 2003; Vohs, et al., 2005). Subsequently, the behavioural patterns of rejected participants were compared to control groups, for example, (a) participants experiencing social inclusion, (b)

participants facing adversities other than rejection, or (c) participants with no specific experiences. None of these laboratory investigations studied self-regulation failure associated with social rejection in organizational settings. A popular proverb suggests that 'it's lonely at the top' indicating that relatedness need satisfaction may be lower for senior executives than for the rest of us, potentially indicating a higher likelihood of perceived social rejection and associated self-regulation failure. However, there is little empirical foundation to support this hypothesis. Research studying 'loneliness at work' in senior executives may have been a promising line of inquiry contributing a perspective on relatedness need satisfaction and perceived social exclusion in senior executives.

Empirical investigations studying 'loneliness at the top' have yielded inconsistent findings. For example, Lindorff (2001) found that Australian managers perceived significantly more social support from non-work relationships than from work related contacts. Lee and Tiedens' (2001) meta-analytical research associated 'power holders' with Deci and Ryan's (2008a) basic psychological need theory. Specifically, Lee and Tiedens (2001) suggest that powerful people can satisfy both their basic need for independence, expressed by the needs for autonomy and competence, and their basic need for interdependence, expressed by the need for relatedness at the same time. Commercial research on corporate CEOs showed that two thirds of CEOs felt disconnected from others at work (Adamson & Axmith, 2003). More recently, Wright (2011) suggested that literature on loneliness was dated, lacked theoretical foundation, and did not really report on loneliness. In three empirical studies the author did not find any significant difference between managers and non-managers in terms of 'loneliness at work' (Wright, 2011).

Given the high stakes associated with senior executives' actions for organizations and society, it may be hypothesized that the individuals progressing to senior executive positions are less likely to engage in anti-social and self-defeating behaviour associated with perceived social rejection and exclusion. For example, senior executives' levels of relatedness need satisfaction may be higher than non-executive individuals' levels making senior executives more robust against perceived social rejection and exclusion.

Taking the above limitations of literature and the implications of relatedness need thwarting for individuals' anti-social and self-defeating behaviour into consideration, we established the following research question:

RQ2: Is the level of relatedness need satisfaction significantly higher in senior executives than in non-executive individuals?

1.4 Relatedness need satisfaction as a process

Using the level of relatedness need satisfaction as a diagnostic tool for senior executives' potential anti-social and self-defeating behavior requires the understanding of senior executives' perceptions of relatedness need satisfaction for the development of potential interventions in theory and practice. For example, future research may enable identification of potential factors associated with individual constituents of relatedness need satisfaction, and in turn, senior executives' actions. Also, such empirical foundation could provide an evidence base for practical interventions, for example, managing senior executive behavioral risk through coaching by focusing on individual constituents of relatedness need satisfaction.

There have been comparatively few investigations on the conceptualization of the need for relatedness, even fewer in the context of organizational settings (Sheldon & Filak, 2008). SDT-based studies have proposed relatedness need satisfaction as a 'relational process' without providing a generic theoretical process model for relatedness need satisfaction. For example, La Guardia and Patrick's (2008) research on

close relationships suggested several potential directions for future research on the need for relatedness, “given the relative infancy of SDT-based research on relational processes” (p. 206). Moller, Deci et al.’s (2010) study investigated the processes around person-level relatedness and the incremental value of relating. Weinstein and Ryan’s (2010) work identified a reciprocal relationship between helper and recipient. Recently, Sheldon, and Schueler (2011) integrated motive disposition theory (MDT) (McClelland, 1985) and SDT into a new conceptualization for need satisfaction processes, including relatedness need satisfaction, which they labelled ‘sequential process theory’. Finally, Lavigne, Vallerand, and Crevier-Braud (2011) identified two relatedness orientations, a growth orientation and a deficit-reduction orientation, as part of their belongingness orientation model (BOM).

In conclusion, there seems to be consensus in SDT literature in terms of conceptualizing relatedness need satisfaction as a process. However, research focusing specifically on the development of an underlying process model for relatedness process model integrating previous findings has been missing from literature. Thus our third research question was:

RQ3: What are the processes underlying senior executives’ perceptions of relatedness need satisfaction?

1.5 Overview of the present research

To address our research questions, we applied qualitative and quantitative research methods. Most investigations into relatedness need satisfaction, perceived social rejection and exclusion and potential self-regulation failure have used experimental designs. However, given the challenges of senior executive research, experiments were considered inappropriate for collecting psychographic data from senior executives. Therefore, in Study 1, we used the qualitative, inductive technique of grounded theory for exploring senior executives’ behavioral responses to perceived social rejection and exclusion. Following Locke (2001), the grounded theory approach was adapted to the characteristics of senior executives by using more structure in the data collection process, for example, an interview checklist or topic guide leading to a semi-structured, guided open interview process. Although Study 1 had high validity in terms of identifying behavioral responses to perceived social rejection and exclusion in senior executives, it also had the limitation of potentially low reliability. In Study 2, we addressed this shortcoming by comparing survey data on the level of relatedness need satisfaction, as potential indicator of anti-social and self-defeating behavior, in a sample of senior executives to a meta-analytical, non-executive sample of previous SDT investigations. Finally, Study 3 extended the findings of Studies 1 and 2 by exploring the processes underlying relatedness need satisfaction by using an adapted grounded theory technique.

2. Studies

2.1 Study 1

2.1.1 Method

To address Research Question 1, a total of 21 senior executives were interviewed. Participant eligibility was determined as only C-level senior executives who, self-reportedly, fulfilled at least four of the five core qualifications (leading change, leading people, results driven, business acumen, and building coalitions) of the senior executive service of the U.S. Government (SeniorExecutiveService, 2012). Additionally, participants were required to be fluent in English.

Participants' average age was 43.8 years and ranged from 33 to 63. Five (24%) were female and 16 (76%) were male. Nine senior executives' organizations had more than 1,000 employees, four had less than 100. Participants' industry backgrounds included finance [3], consumer products [3], energy/resources [3], technology [2], media [2], logistics [2], pharmaceuticals [1], telecommunications [1] and services (legal and tax consulting [2], management consulting [2]). Ten participants were Australian, four American, four German, and three English.

A combination of snowball sampling and purposive sampling was used for the recruitment process based on the researcher's network of senior executive contacts. Potential participants were invited to participate in an 'International research project on workplace motivation'. No incentives were provided to senior executives for participation in the project. Following institutional ethical approval and informed consent, all interviews were conducted separately, with only the participant and the researcher present. Semi-structured interviews have been described as guided open interviews (Easterby-Smith, et al., 2008). A checklist was developed as guidance for the open interviews in phases one (identifying emerging concepts) and two (relationships between identified concepts and categories) (Easterby-Smith, et al., 2008; Jones, 1985). In accordance with Rubin and Rubin (2005), three types of questions were applied to guide an interview: main questions, follow-up questions, and probes. However, the initial interview guide (for example, "Take a few seconds to imagine a situation in which you felt excluded or rejected!" How did the participant feel (a) physically, (b) emotionally, (c) what did he think?, (d), how did he perceive others? (e) how did he behave?) was "not a set of questions that must be asked with particular words and in a particular order" (Babbie, 2007, p. 306). Instead, as an open interview proceeded, the interviewer ticked the respective topic area as covered by the participant allowing for the exploration of specific areas without precluding interviewees from providing further information. By applying this procedure, interviews delivered responses to a standardized set of open questions plus additional unstructured information. Following the "continuous nature of qualitative interviewing" (Babbie, 2007, p. 305) in general and, specifically, the constant comparison technique of grounded theory (Babbie, 2007; Strauss & Corbin, 1998), the interview guide was amended throughout phases one and two on the basis of the ongoing analysis of interview transcripts. Phase three interviews still had a semi-structured format, however, investigated specific issues for integrating and refining theory. Interview duration was between 45 and 67 minutes in phase one, between 37 and 62 minutes in phase two, and between 21 and 39 minutes in phase three. All interviews were audio recorded and subsequently transcribed. In addition to the interview transcripts, the researcher took notes as a form of complementary data collection. These notes were, for example, based on the interviewer's observation of participants' body language (Silverman, 1993).

Academic literature provides very little guidance on sample sizes prior to data collection in qualitative research. One of the main factors impacting qualitative sample sizes is the quality of collected data (Morse, 2000) which is difficult to be foreseen when designing an investigation. This present study was based on 21 face-to-face interviews: 12 interviews in phase one, seven interviews in phase two and two

interviews in phase three. At that point in the research process, it was felt that data collection had reached saturation with further participants not adding anything to the emergent framework (Strauss & Corbin, 1998). A sample size of 21 is also consistent with the few guidelines offered by literature, for example Creswell (1998), and Griffin and Hauser (1993) who both suggest 20 to 30 interviews. Other suggestions conclude that “little new comes out of transcripts after 20 interviews” (Green & Thorogood, 2009, p. 120) .

The NVivo software package (Miles & Huberman, 1994; Richards, 2005) was used to analyse interview transcripts with regards to the above technique. Firstly, open coding identified individual nodes which correspond to concepts that emerge from data. The researcher reviewed the concepts, grouped them into categories by means of tree nodes. Subsequently, appropriate names were selected for nodes, concepts, and categories (Miles & Huberman, 1994). As a next step, axial coding identified potential relationships between various nodes, concepts, and categories. Following axial coding, selective or theoretical coding was performed which has been defined as “the process of integrating and refining the theory” (Strauss & Corbin, 1998, p. 143). This was based on the previous two stages of coding and represented the point in the process where no new “properties, dimensions, or relationships emerge during analysis” (Strauss & Corbin, 1998, p. 143), also referred to as theoretical saturation. This third stage of the coding process was aimed at condensing the analysis to a dynamic, interrelated set of categories that best supported the evolving and emergent theory.

2.1.2 Results

Table 1 Study 1 findings

Constituent	Representative comments	
	Situational rejection/exclusion	Continuous rejection/exclusion
<u>In-group coping strategies</u>		
Category 1: <i>Attention:</i> Behavior to raise awareness, display competence, or offer support to prompt relatedness cues from environment	“I responded by emphasizing my crucial role in this process”, “They ignored my concerns....I lost it, just tried to get their attention by making provoking comments”, “When they sacked me, I left the room. After 10 minutes or so they came looking for me”	“I did not know what I was doing back then just trying to get some attention I guess”, “I went to every talkshow to make them understand that I was important”, “After they appointed the other guy, I sent them annoying emails to prompt reactions, I did not think straight”
Category 2: <i>Power:</i> Aggressive behavior to intimidate, irritate, or discomfort others to force relatedness cues from environment	“At that moment, I felt abandoned and fought back, to win support”, “In that situation, I was alone, nothing to lose, so I threatened them to force their commitment to me and my position in the firm, I was out of my mind”	“I felt left out and developed a very short fuse in my interactions with shareholders”, “When I was alone, in that corner, I started leveraging my position, putting pressure on them to include me in the process”
<u>Out-group coping strategies</u>		
Category 3: <i>Compensation:</i> Behavior aimed at deriving relatedness cues from alternative sources	“When they told me [on the phone], they had dropped me, I went straight back home to my family”, “In such situations, a good whiskey is always a good friend... I could no longer control myself ”	“As an executive you are no longer considered a member of an organizational club, so I joined a Ferrari club instead” “I felt like I had to have a new car each month”
Category 4: <i>Retreat:</i> Behavior of capitulation, giving up, no longer trying to relate to others	“I did not respond to their blames, I was tired,...I just quit”, “I did not want to talk to anybody anymore, just sit there and not do or think anything”	“ I do no longer need anybody”, “Why try I’d rather invest time and effort in myself than others”, “I had checked out!”

The research question to be addressed in Study 1 was what senior executives' behavioral responses to perceived social rejection and exclusion were. Specifically, when participants were asked to imagine situations when they felt rejected or excluded, they provided insights into their inner life at the time of perceived rejection or exclusion as they recalled it. For example, from a physical perspective senior executives felt "sluggish", "downbeat", "low on energy", "tired", "suboptimal", "sick", or "flat". Emotionally, they found themselves "upset", "bogged down", "unhappy", "anxious", "dissatisfied", "unsettled", "hurt", "down", "withdrawn", "sad", or "angry". Thoughts included being "let down", "left out", "isolated", "irritated", "negative", "something is wrong", or "to hell with them". Others were perceived as "controlling", "not supportive", "threatening", "arrogant", or "unfriendly". As a consequence, participants seemed to report on forms of losing control over their behavioral responses, for example, "I lost it", "I was out of my mind", "I could no longer control myself", "a very short fuse", "I did not think, I just quit". The behavioral patterns appeared to fall into one of the following four categories: Attention, power, compensation, or retreat (see Table 1). In two of the four coping categories, participants' behavior seemed to focus on the environment from which their perceived social rejection or exclusion originated (in-group coping strategies). It could be inferred from our data that participants' behavior for 'attention' and 'power' was aimed at re-connection. In contrast, turning to sources outside the rejecting or excluding environment, that is, the self, others, or material things such as Ferraris and alcohol ('retreat' and 'compensation'), appeared to be a alternative behavioral patterns for senior executives (out-group coping strategies).

Several participants reported experiences of social rejection or exclusion that had occurred over longer periods of time. In these cases, senior executives seemed to display more than one form of behavioral response patterns fitting into more than one of the four coping categories. For example, one senior executive described his behaviour as a sequence of behavioral patterns over a year when his company was taken over by a competitor.

"I could not think straight, I just felt I needed to be near the new management, I don't know why, maybe offer them my co-operation and support? (attention).....They did not seem to care much...that hurt....I had a lot of leverage as our employees were very loyal to me and our management team. I tried to force new management to make those concessions based on my ability to cause them a lot of trouble (power).....Over the months this power-play took a lot of energy out of my system.....It was a difficult time. I let myself go and became more detached from the company, met with recruitment agents, played golf frequently, went to wine tastings with friends, or on holiday with my family, which I had not done before (compensation)....I do not know what I was thinking back then but this obviously did not help me in that situation with our shareholders. I felt more and more isolated in the company, all in all, a draining experience. At one point, I felt so empty, life had become meaningless, I just quit to get away from all of that (retreat)."

This finding suggests persistent anti-social and self-defeating behavior as a longer-term dimension of coping strategies related to continuous rather than single situational perceptions of social rejection or exclusion. Senior executives did not report any behavioral pattern that had not been captured by previous research on anti-social and self-defeating behaviour associated with perceived social rejection and exclusion.

2.1.3 Discussion

Our findings suggest that experiencing social rejection or exclusion can lead to immediate anti-social and self-defeating behavioral responses in senior executives. If perceptions of social rejections or exclusion persist over time, behavioral responses can follow a sequential pattern. We propose a 2x2 (in-group/out-group vs. situational/continuous) matrix of coping strategies (MoCS) to capture senior executives' behavior associated with perceived social rejection and exclusion as identified in our data analysis. The results further indicate that sequential patterns including two or more behavioral categories are possible without suggesting a particular order.

Firstly, given literature's definition of self-regulation failure, that is, not being able to control and alter one's behavioral responses, senior executives' behavioral responses as captured by the MoCS seem to qualify as self-regulation failure (Baumeister, et al., 2005; Baumeister & Leary, 1995; Ryan & Deci, 2000). Given that our participants did not appear to report any coping strategies inconsistent with previous literature, it could be hypothesized that there is no difference between senior executives and the rest of us in terms of potential behavioral responses related to self-regulation failure associated with social rejection and exclusion. This infers that all coping strategies identified by previous research studies such as the seeking of short-term benefits accompanied by long term costs (Baumeister, et al., 2005), impulsive temptations (Baumeister, et al., 2005), foolish and disproportional risk-taking (Twenge, et al., 2002), inappropriate and risky goals beyond performance and capability (Baumeister, et al., 1994), violation of rules and guidelines (Baumeister, et al., 2007), or depression (DeWall, et al., 2012) could occur in senior executives. If that is so, senior executives' inner lives and resulting behavior could be described as risk factors for organizations and society.

Secondly, the results extend our understanding of behavioral responses to perceived social rejection and exclusion by contributing the conceptual framework of the MoCS matrix to literature. Previous research has concentrated on examining immediate, situational behavior in response to manipulated social rejection or exclusion (Baumeister, et al., 2005). Our findings suggest a further dimension of continuous behavioral patterns based on continuous perceptions of social rejection and exclusion.

Thirdly, our data seem to contradict aspects of the social re-connection hypothesis which suggests that individuals perceiving social exclusion aim at identifying alternative sources of belonging, avoiding the specific perpetrator of exclusion (Maner, DeWall, Baumeister, & Schaller, 2007). Our results support Maner, et al. (2007) in so far that senior executives reported coping strategies aiming at re-connection. However, they did not exclude the originator of their exclusion as a potential source for re-connection. It could be hypothesized that senior executives are less likely to quit and look for alternative social bonds, which, for example, may be related to higher perceived stakes of breaking relationships.

Research data in Study 1 was high on validity but potentially low on reliability. To resolve this potential limitation, Study 2 used a survey methodology. Thwarting relatedness need satisfaction has been identified by experimental designs as an indicator of anti-social and self-defeating behavior. Therefore, Study 2 compared the level of relatedness need satisfaction in senior executives to a meta-analytical sample of non-executives individuals surveyed in previous SDT studies.

2.2 Study 2

2.2.1 Method

To address Research Question 2, a total of 93 C-level senior executives participated in this study. Additionally, participants fulfilled, self-reportedly, at least four of the five core qualifications (Leading change, Leading people, Results driven, Business acumen, and Building coalitions) of the senior executive service of the U.S. Government (SeniorExecutiveService, 2012). Average age was 44.3 years and ranged from 27 to 65. Twenty- three (21%) were female and 70 (79%) were male. Thirty (32%) senior executives' organizations had more than 1,000 employees, 21 (22%) organizations had less than 10 employees. Participants' came from the industries of services [21], consumer products [13], finance [11], technology [9], energy [6], resources [5], pharmaceuticals [4], chemicals [3], automotive [2], media [2], telecommunications [2], health [2], air transport [1], and other [12]. Forty-seven of the participants were Germans, 26 were Australian, 8 came from the US, 6 from the UK, 2 from Austria and the Netherlands respectively, 1 from South Africa and 1 from Ireland.

Procedure and measure

Following institutional ethical approval, an email containing a link to a web-based survey (SurveyMonkey) with a participant information sheet and informed consent was sent to all participants from Study 1 inviting them to take part in the survey. Participants were also asked to forward the email to contacts they considered potential eligible participants for this study. The survey was completed online. No incentives were provided for senior executives participating in the survey.

The relatedness subscale (eight items; e.g., I get along with people I come into contact with) of the 21-item Basic Psychological Need Satisfaction Scale-General (BPNS-G) (Gagné, 2003) was used to assess senior executives' level of relatedness need satisfaction. Responses were made on a 7-point Likert-type scale, ranging from 1 (not at all true) to 7 (very true). The BPNS-G has been shown to be a reliable and valid tool. Cronbach's α for the the relatedness subscale for this sample was at an acceptable level of .83.

2.2.2 Results

Table 2 Means and standard deviations for relatedness need satisfaction as reported by comparable previous research and compared to Study 2 data

Study	Participants	R-NS ^(a)	Type of Scale
<u>Non-work-related studies</u>			
Gagné (2003)	Undergrad students ($N = 121$)	5.60(1.20)	21-item, G, 7-point
Wei, et al. (2005)	Undergrad students ($N = 299$)	5.67(0.92)	21-item, G, 7-point
Ntoumanis (2005)	High school students ($N = 460$)	4.74(1.06)	21-item, PE, 7-point
Sheldon and Niemiec (2006)	Undergrad students ($N = 315$)	5.81(1.06)	9-item, G, 7-point
Vansteenkiste ,et al. (2006)	Chin. stud. applicants ($N = 42$)	5.93(0.61)	21-item, G, 7-point
	Chin. stud. sojourners ($N = 79$)	4.97(0.83)	21-item, G, 7-point
Meyer, et al. (2007)	Models ($N = 56$)	5.60(0.70)	21-item, G, 7-point
	Non-models ($N = 53$)	5.90(0.76)	21-item, G, 7-point
Schueler and Kuster (2011)	Adults ($N = 140$)	5.54(0.76)	21-item, G, 7-point
Sheldon and Schueler (2011)	Undergrad students ($N = 104$)	5.65(0.83)	9-item, G, 7-point
Weighted average of non-work-related samples ($N = 1669$) ^(b)		5.65	
<u>Work-related studies</u>			
Deci, et al. (2001)	Bulgarian workers ($N = 431$)	3.94(0.74)	21-item, W, 5-point
	US workers ($N = 128$)	3.89(0.69)	21-item, W, 5-point
Baard, et al. (2004)	Bank employees ($N = 59$)	14.61(3.56)	23-item, W, 5-point
	Investment bankers ($N = 528$)	40.13(7.63)	23-item, W, 7-point
Present study	Senior executives ($N = 93$)	5.61(0.87)	21-item, G, 7-point

^(a)R-NS = Relatedness Need Satisfaction

^(b) Weighted average scores were calculated by multiplying each mean score by the number of participants in that study, adding these numbers and dividing the sum by the total number of participants for non-work-related meta-analytical samples ($N = 1669$)

For the analysis of potential mean differences in absolute need satisfaction scores, a weighted average need satisfaction score was computed for the non-work-related samples which had used a 7-point Likert-type BPNS. The weighted average mean of the level of relatedness need satisfaction for ten samples ($N = 1669$ participants) was 5.65. One sample t -tests with an α of .05 were used to test for significant differences between the meta-analytical sample score and the senior executive sample score. The mean difference in relatedness need satisfaction was lower for the senior executive sample but not statistically significant $t(92) = -0.48, p = 0.63, d = 0.05$. When the distribution of relatedness need satisfaction scores was analyzed for the senior executive sample, 15 senior executives, that is, every sixth participant, had scores that were more than 2 SDs below the mean of the senior executive sample. Eight of these 15 senior

executives came from organizations with more than 1,000 employees. This infers that 27%, about every fourth participant, of the 30 surveyed senior executives from organizations with more than 1,000 employees had a score that was more than 2 *SDs* below the mean of the senior executive sample.

2.2.3 Discussion

The findings from Study 2 suggest that senior executives do not seem to differ from the rest of us in terms of their level of relatedness need satisfaction. The difference between our senior executive sample and a meta-analytical sample of mostly students (85%) was statistically insignificant. However, a single senior executive's behavior can have substantial organizational and societal implications. As a result, we propose that our results deserve a more individual consideration beyond statistical analysis.

Assuming (a) the level of relatedness need satisfaction as an indicator of potential anti-social and self-defeating behaviour and (b) the magnitude of 2 *SDs* in difference between an individual score and the sample mean score as large and a potential predictor of likelihood and extent of anti-social and self-defeating behavior, then, every sixth senior executive (every fourth from large organizations over 1,000 employees) in potential danger of bringing substantial agony and distress to organizations, all or parts of society seems a pretty high number.

The level of relatedness need satisfaction could be suggested as a diagnostic tool for identifying potential dysfunctional behavior in senior executives. However, diagnostics require appropriate consequential antidotes to be meaningful. Study 3 explored how senior executives perceived the processes underlying their relatedness need satisfaction to form a basis for potential theoretical and practical interventions.

2.3 Study 3

2.3.1 Method

To address Research Question 3, thirty-two senior executives were interviewed in Study 3. Participant eligibility, sampling, data collection, and data analysis mirrored the methodology applied in Study 1. The semi-structured interview guide (for example, 'How would the interviewee define a relationship?', How is the interview assessing social contacts?') is attached as Appendix A.

Participants' average age was 46.2 years and ranged from 30 to 65. Of the 32 participants, 14 (44%) were female and 18 (56%) were male. Thirteen senior executives came from organizations exceeding 1,000 employees, six from companies with less than 100. Participants came from the following industries: finance [10] (banking , insurance , private equity & venture capital), energy [3], resources [5], pharmaceuticals [1], automotive [4] (design, manufacturing, logistics, marketing) and services [9] (legal and tax consulting, management consulting). Thirteen participants were Australian, eleven American, 4 German, and four English. All spoke fluent English.

2.3.2 Results

Table3 Study 3 findings

	Constituent	Representative comments
Category 1:	Areas of Life: Participants' perceptions of social belongingness in terms of life domains	"My family gives me this sense of belonging." "I feel as an integral part within my neighbourhood." "I get a lot of affection from my staff at work."
Category 2:	Return: Others' behaviour perceived as relatedness by participants	"You are great. Here is a pat on the back for you." "You belong to our team, we will support you all the way." "I am a respected board member of this firm."
Category 3:	Investment: Participants' behaviour to prompt behaviour from others potentially conveying relatedness	"I am contributing to the firm, not sure, but I think with the expectation to get something in return, [pause], not just money, maybe respect or, [thinking], recognition."
Category 4:	Investment/return loop: Circular causal relationship between investment and return	"the more you contribute, the more you feel you are a part of it." "when you feel the respect of employees, it motivates you to work extra hard on these issues."
Category 5:	Energy: A reservoir or resource participants drawn on for investments and replenished by returns	"It is important to separate good people from negative ones - in order to conserve energy.", "I can feed off others' energy when they are around me."
Category 6:	Physical distance: The role of physical proximity for feelings of relatedness	"I miss the face-to-face contact.", "I felt excluded when I could not participate in that overseas project" "I am up here and they are down there, I do not feel as close to them as when I lived there"
Category 7:	Drain and burden: Participants' perceptions of investments without returns	"I often take on other people's burden, and put a lot of energy into it. I had some very draining experiences where this had become a one way street."
Category 8:	Unconditional return: Participants' perceptions of receiving returns without investing	"You are very much accepted for what you are, no need to make any effort to put up a front."
Category 9:	Investment focus: The degree to which participants invest in one area of life	"My job is my life." "No area in life should be more important than another but I just cannot let go."
Category 10:	Cross-subsidies: Dynamic relationship between life domains with regards to investments and returns	"The support from family and friends is what I rely on as a manager when I go through tough times." "I feel like with my family's support, it gives me the strength to take on anything in business, or life in general."

The aim of Study 3 was to explore the processes underlying relatedness need satisfaction in senior executives. Three sub-categories emerged from the data when participants were interviewed in the context of their relationships. Relatedness need satisfaction seemed to originate from one of three *areas of life*: Family, work/occupation or social life.

Our findings further suggest that there are two dimensions of how participants perceived relatedness: (a) a tangible ("pat on the back") and (b) an intangible ("respected by my team") dimension. Senior executives consistently commented on their own behavior ("helping", "contributing", "organizing", "giving",

“making better”, “improving”) with the goal of prompting relatedness cues from the respective environment. Based on the following quote from a senior executive in a private equity firm, it was decided to label the category including all of the above terms as *investment*: “But I think what happens is that decision makers make investments, in people, in capital, and in reputation, however, ultimately, they are investing in themselves, in their own lives and careers”. In turn, senior executives’ perceptions of relatedness were termed *return*.

Early on, at the first stage of semi-structured interviewing, it emerged from our data that there may be a relationship between the categories of investment and return. On the one hand, investment seemed to lead to return (“my knowledge and dedication are what makes me feel I am being valued by the team of people who work for us”). Alternatively, return appeared to prompt investment (“when I knew that both boards were 1000 percent behind me, I was extra motivated to succeed in those merger negotiations.”) The researcher explored this issue further and found additional evidence. For example, “I am an important part of my company, and that motivates me to get up every morning at 5:30, get organized and go to work” or “we were very close knit. It manifested itself in being willing to commit much longer hours to the task”.

The term *energy* was used consistently by interviewees in relation to investment and return. Participants referred to two aspects of energy in the context of relatedness, a physical aspect and a mental aspect. A senior executive felt like, he did not want to change jobs as he did not want to “spend all that mental and physical energy on moving and creating new bonds and business contacts”. Conversely, the managing partner of a management consultancy who had worked for his company for over 30 years contributed the following quote: “Working with people globally who you have grown up with in this firm gives you this particular energy boost, in your head and in your body”.

Participants further commented on the role of physical proximity for satisfying their need to belong. A female board member of a large listed insurance company described her perception on the role of physical distance as follows: “You can only have a certain amount of connection when you are in different places. This is one of the challenges of global business, getting close enough to people to do good business with them, within the firm and externally”.

Senior executives who felt that they invested without receiving appropriate returns frequently referred to feelings of *drain or burden*. Participants also indicated the need to manage their relationships in terms of limiting potential “black holes of energy outflows”, possibly by breaking those social bonds. In contrast, several participants referred to a concept of *unconditional return* by indicating that their need for relatedness was satisfied without own investments (“these people do not expect you to do something, they just like you for who you are”). In most cases, this relatedness need satisfaction seemed to originate from the family area of life.

The category *investment focus* was identified on the basis of participants regularly referencing one specific area of their lives, work/occupation, as focus for investing their energy, which was labelled *investment focus*. For example, “I am almost completely focusing on my job here”, and “Over those years, I had dedicated almost my entire life to building that business”.

In the process of coding the investment and return categories, it emerged from the data, that the investment-return relationship was not separate for each area of life but rather inter-related between life areas. Investments into one area seem to have potential return effects that allowed for investments in other life areas and vice versa, a concept which we termed *cross-subsidies*. For example, senior executives reported on cross-subsidizing the investment focus of work/occupation with returns from family and social life (“they are all interlinked, because if one area fails or falls down then it does affect the other parts of your life, and vice versa.”)

2.3.3 Discussion

Our final study explored the processes underlying related need satisfaction in senior executives. Specifically, our results support a relatedness loop model as conceptualization of relatedness need satisfaction processes in senior executives. The constituents of the relatedness loop model are consistent with literature and add new aspects to previous findings.

Firstly, senior executives reported three areas of life from which they derived relatedness need satisfaction. The concept of individuals' daily lives evolving around different areas has been researched under various labels, such as "spheres" (Baumeister & Leary, 1995, p. 500) or "life domains" (Deci & Ryan, 2008a, p. 14; Kirchmeyer, 2000, p. 81). The majority of empirical studies have focused on "two dominant spheres of life: work and family" (Greenhaus, Collins, & Shaw, 2003, p. 510). However, the responses from participants support the proposition that senior executives consider the area of 'social life' as a third and separate, potentially equally important, field of investigation in the context of relatedness need satisfaction.

Secondly, the finding of cross-subsidizing effects between senior executives' three areas of life supports prior research about potential substitution effects between different spheres in life (Baumeister & Leary, 1995; Kahneman, Diener, & Schwarz, 1999). This finding represents an extension to previous research whose scope was limited to effects of "'spill-over' from job to home and from home to work" (Kahneman, et al., 1999, p. 395) theorizing that "strong family ties [should] compensate for aloneness at work" (Baumeister & Leary, 1995, p. 500). Our results seem to indicate that senior executives cross-subsidize a perceived lack of relatedness need satisfaction from the area of work/occupation with relatedness need satisfaction generated from the life domains of family and social life.

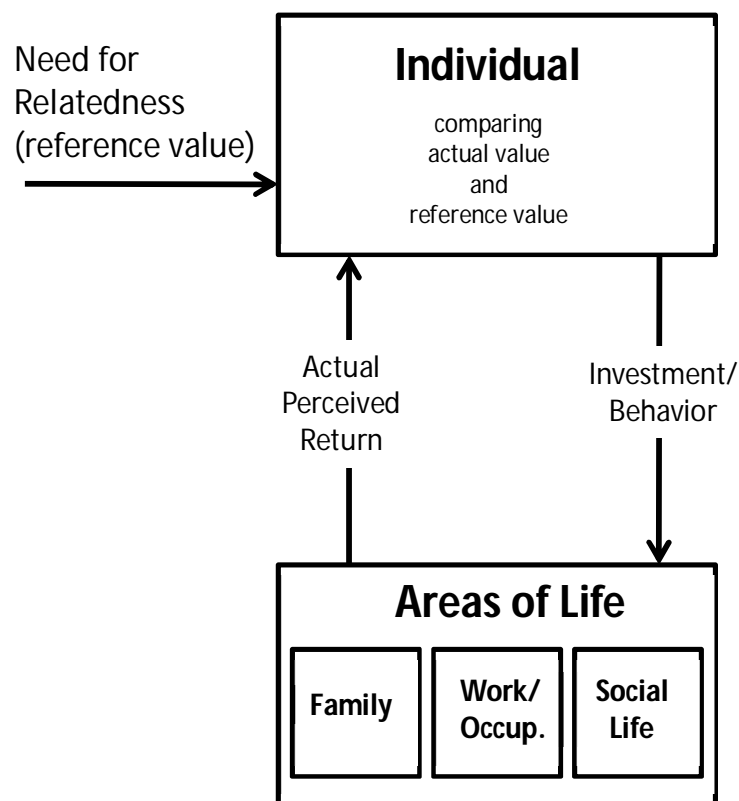
Thirdly, our research identified physical distance as a social contextual factor with an attenuating effect on feelings of relatedness. This finding adds to previous work in the field of proximity (Festinger, Schachter, & Black, 1950; Nahemow & Lawton, 1975; Wilder & Thompson, 1980) as well as more recent literature on social presence theory in the field of communication (Lombard & Ditton, 1997; Short, Williams, & Christie, 1976). SDT-based research investigated the impact of motivational aspects of presence on online community participation and found that the dimensions of presence were related to individual need satisfaction in online communities (Shen & Khalifa, 2008). In the context of organizational settings, Hellriegel and Slocum (2011) propose that one of senior executives' core challenges in a globalized business world is to influence others that are physically removed from their own location. Based on our results, we suggest that aspects of these challenges may be attributed to the attenuated satisfaction of the need for relatedness in senior executives associated with physical distance.

Fourthly, the concept of energy seems to indicate some affiliation with Ryan and Deci's (2000) term of an "inner resource" (p. 68) in SDT. In contrast, the energy aspect has no mention in Baumeister and Leary's (1995) conceptualization of relatedness. Many scholars have grappled with the energy issue. Introduced by Freud (1900), psychic energy was first described as a limited psychic resource best modeled by an economic framework which suggests an interesting perspective in the context of senior executives' self regulation failure. Investing energy in defence or resistance was theorized to deplete an individual's reserve of energy. More recently, the concept of energy has played a central role in experimental designs examining self-regulation failure (Baumeister, 2003; Muraven & Baumeister, 2000) where glucose was identified as contributor to a store of self-regulatory energy (Gailliot & Baumeister, 2007). In case of depletion, individuals have been suggested to fail to self-regulate leading to anti-social and self-defeating behavior (REFs on depletion). Our results suggest that senior executives consider energy as an important

factor in the context of relationships trying to actively influence their store of energy. For example, they seem to carefully monitor their level of energy and vigorously limit substantial energy outflows. With regards to life domains, senior executives tend to concentrate their energy on one area of life, namely, work/occupation, which overlaps with literature on workaholism (Scott, Moore, & Miceli, 1997).

Finally, taking the 10 core constituent categories into consideration, the relatedness loop model (RLM) is proposed as a process model for relatedness need satisfaction in senior executives (see Figure 1). The process model integrates the categories of three areas of life with the circular causal investment/return relationship and accounts for a potential cross-subsidizing effect between the areas of life regarding relatedness with investments in one area yielding returns that support motivation to invest in other areas. The categories of drain and burden, unconditional return and investment focus are also captured by the relatedness loop operating on the basis of a certain unspecified energy.

Figure 1 Relatedness Loop Model: Processes underlying relatedness need satisfaction in senior executives



The proposed process model of a relatedness loop represents an adaptation of a feedback loop model (Carver & Scheier, 1981) to the field of relatedness need satisfaction in senior executives. The findings of a dynamic relationship between investment and return support and add to previous research in fields such as self-determination theory (Ryan & Deci, 2000), sequential process theory of psychological needs (Sheldon, 2011; Sheldon & Schueler, 2011), self-regulation theory (Baumeister & Vohs, 2004; Carver & Scheier, 1981), and social exchange theory (Homan, 1958).

In SDT, there have several studies in recent years investigating aspects of a potential dynamic conceptualization between investment and return (Deci, La Guardia, Moller, Scheiner, & Ryan, 2006; La Guardia & Patrick, 2008; Moller, et al., 2010; Ryan & Deci, 2008b; Sheldon, 2011; Sheldon & Schueler, 2011; Weinstein & Ryan, 2010). For example, two recent SDT papers, Sheldon (2011) as well as Sheldon and Schueler (2011), propose a sequential process theory of psychological needs suggesting needs as both, motives and requirements. Weinstein and Ryan's (2010) paper "When helping helps" (p. 1) specifically supports the finding of this study in terms of the impact of 'helping' on helpers' need satisfaction as "help" and "helping" were the most frequently used terms in this present study to describe participants' own behaviour (investment or motive) targeted at relatedness need satisfaction (return, nutriment, or requirement).

Carver and Scheier (1981) have contributed their cybernetic control model to self-regulation research. Feedback loop models compare actual, measured values to reference values or goals in order to identify the difference for error and adjusting behaviour. In respect to Carver and Scheier's (1981) model, the proposed relatedness loop model could be considered an adaptation of their model to the concept of relatedness need satisfaction. Aspects of Carver and Scheier's (1981) feedback loop model have been applied to the construct of relatedness before. Lavigne, Vallerand, and Crevier-Braud's (2011) belongingness orientation model (BOM) proposes two belongingness need orientations, a growth orientation and a deficit-reduction orientation, which appear consistent with Carver and Scheier's (1981) distinction of discrepancy-enlarging and discrepancy-reducing feedback loops.

Finally, the process model also reflects aspects of Homan's social exchange theory (Homan, 1958). The theory seems particularly relevant in the context of senior executives as it integrates economics with small group psychology research to arrive at the proposition that individuals interact according to specific cost/reward expectations. Social behaviour is considered an exchange of material goods or non-material goods such as approval or prestige. The present findings of investment/return, tangible/intangible return, and energy store monitoring in senior executives are consistent with the above aspects of Homan's theory.

3. General Discussion

Senior executives' actions can have enormous implications for their organizations and society as a whole (Fryer, 2008). Therefore, it is surprising how little we know about the inner lives of senior executives as antecedents of their behavior. This limitation can partly be attributed to the difficulties associated with collecting data, psychographic data in particular, from senior executives. Also, literature has been debating whether senior executives are different from the rest of us. That infers that some scholars have worked on the assumption that senior executives were non-distinct individuals. As a result, a dedicated, direct, empirical exploration of senior executives' inner lives may have seemed superfluous to them. Instead, non-executive research findings may have been projected out to senior executives adding to the under-exploration of senior executives' inner lives in the management sciences.

This research studied senior executives' inner lives from the perspective of relatedness need satisfaction. Study 1 identified patterns of anti-social and self-defeating behavior which are consistent with behavioral responses outlined by previous research on self-regulation failure caused by perceived social rejection and exclusion. However, we found that senior executives reported re-connection tendencies with the perpetrator (in-group coping strategies) of their social rejection and exclusion were inconsistent with previous findings (Maner, et al., 2007). Our results extend literature by further contributing a longitudinal perspective on behavioral responses to relatedness need thwarting. When feelings of social rejection or exclusion persisted over time, senior executives may engage in sequential patterns of the four core coping strategies without indicating a particular order. The proposed matrix of coping strategies (MoCS) for senior

executives conceptualizes a two-dimensional construct of behavioral responses, namely, coping strategies (in-group/out-group) and time (situational/continuous). There was no apparent evidence in the data suggesting that senior executives' behavioral responses to social rejection and exclusion differed from other individuals. Applying the long list of potential coping strategies as highlighted in literature to senior executives who inhabit the highest positions of power in organizations lends support to our suggestion to consider senior executives' inner lives, specifically the level of relatedness need satisfaction, as risk factor for organizations and society.

In Study 2 we tried to understand whether senior executives operated at different levels of relatedness need satisfaction as potential indicator for anti-social and self-defeating behavior. Our findings lend support to literature in the field of 'loneliness at work' suggesting that senior executives do not feel any lonelier than other individuals. Alternatively, it could be argued that senior executives feel as lonely as the rest of society. However, there is one caveat to these results. Other individuals rarely have the power to influence other people's lives as substantially as senior executives can do through their corporate positions. In our study, every sixth senior executive participant and every fourth senior executive from a large organization had a very low relatedness need satisfaction score. On the assumption that the level of relatedness need satisfaction serves as an indicator of potential self-regulation failure, our findings suggest evaluating, monitoring, and managing senior executives' levels of relatedness need satisfaction as corporate and societal risk factor.

In our view, understanding the potential constituents of relatedness need satisfaction represents an important contribution to senior executive behavioral risk management in theory and practice. Therefore, Study 3 explored the processes underlying relatedness need satisfaction in senior executives. The results suggest the relatedness loop model (RLM) as a conceptualization of relatedness need satisfaction processes. According to the RLM, senior executives seemed to consider relatedness need satisfaction as a dynamic process of give and take (A. Grant, 2013) with physical distance as potential moderator. They appeared to be very aware of a personal store of energy which was reportedly depleted by investments in prompting environmental cues for relatedness. Alternatively, the level of energy seemed to be replenished by perceived relatedness cues derived from relational interactions. Senior executives' investments further seemed to concentrate on the life domain of work/occupation for satisfying their need for relatedness. Many participants reported perceived energy shortfalls from increasing investment levels in the field of work/occupation which they tried to cross-subsidize with potential surplus energy from the life domains of family and social life. A popular proverb on risk management in the finance industry warns investors not to 'put all their eggs in one basket'. Following this postulate, senior executives seem to pursue pretty risky strategies for relatedness need satisfaction vis-à-vis potential anti-social and self-defeating behavior. Instead of investing in a diversified portfolio of relatedness sources they appeared to focus their behavior on a single primary point of supply and rely on secondary 'free giving' of alternative sources such as family and social life.

4. Future research

There are several paths that future research may pursue based on our work. For example, quantification of the qualitative findings in Study 1 and 3 would contribute further perspectives on our results from a reliability point of view. In the case of senior executives, recruiting participants for experimental settings may be challenging, however, we trust the creativity of academic scholars in terms of appropriate designs. Measuring the constituents of the RLM and testing related hypotheses in the context of organizational outcomes would help the application of the model in future research and practice. Also, we suggest further investigations in the re-connection hypothesis (Maner, et al., 2007) examining potential

differences between senior executives and other individuals. Finally, there is a long list of literature suggesting self-regulation failure associated with perceived social rejection and exclusion. However, self-regulation failure has not been studied in the context of state- or trait-levels of relatedness need satisfaction so far. For example, how much of a blow to state or trait levels of relatedness does a particular form of social rejection represent? What are potential moderators and mediators of such a relationship? Is there a threshold level of relatedness need satisfaction below which self-regulation failure occurs? Is the level of relatedness need satisfaction associated with likelihood and extent of self-regulation failure?

Literature has suggested that a more inclusive society, that is, a society where fewer people feel excluded, could ease the substantial agony and distress often caused by self-regulation failure (Piff, et al., 2012). Given the potentially far-reaching, detrimental consequences for organizations and society, providing further academic insights into senior executives' self-regulation failure requires timely attention as a contribution to organizational and social welfare.

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Appendix A

The Meaning of Relatedness

How would the interviewee define a relationship ?	What does the interviewee understand by social contacts ?	What do social contacts mean for the interviewee ?
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The Constituents of Relatedness

How does the interviewee evaluate relationships ?	How is the interviewee assessing social contacts ?	What aspects /features of social contacts does the interviewee mention ?
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Personal Experience / Levels of Relatedness

What are the interviewee's relationships ?	How do the interviewee's relationships differ ?
How many relationships does the interviewee have ?	What would the interviewee's relationships be like under ideal conditions?
If the interviewee was to put them into categories, which ones ?	What would be the features of the interviewee's categories ?

Personal Experience / Need for Relatedness

What does it take for the interviewee to maintain social contacts ?	What do social contacts expect from the interview ?
How do the interviewee form new social contacts ?	What does the interviewee expect from (new) social contacts ?
Has the interviewee ever broken relationships, why and how ?	How have the interviewee's social contacts developed over time ?

Personal Experience Life Stories / Groups

Can the interviewee describe a situation where he/she felt as connecting or being part of sth?) How did the interviewee feel emotionally and physically ? How did the interviewee perceive others ?	Can the interviewee describe a situation where he/she felt he/she rejected or excluded ? How did the interviewee feel emotionally and physically ? How did the interviewee perceive others ?
How does the interviewee experience one/one relationships vs. being part of a group ?	Anything not covered the interviewee would like to add ?