Spicing up employee engagement - A case study of an open source program

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Abstract: The thesis explores the interrelationships between employee engagement and extrarole behaviour and activity through a mixed method case study. The case in question provides a highly interesting example of how the embodiment of extrarole behaviour and activities (ERB/A) in a program could serve to shape the circumstances under which employee engagement should form given earlier findings in terms of antecedents and mediators of engagement. Moreover, the study constitutes a response to an identified lack of both qualitative research and insights into the IT-industry in the field of engagement.

The study follows a pragmatist approach in two phases. Focus lies on studying the digital services company Futurice' voluntary employee program Spice aimed at encouraging and supporting free-time open source coding. The first phase is constituted of a quantitative assessment of engagement at the company using the UWES-9 scale. The second phase makes use of qualitative research in a set of interviews aimed at forming an understanding of how extrarole activities is perceived by program participants to affect their employee engagement.

The findings indicate substantial correlation between reported effects from extrarole activity through program participation and antecedents as well as mediators of employee engagement as documented in previous research. Such correlation would suggest that ERB/A is more than a product of a one-directional relationship with employee engagement at the foundation.

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1   INTRODUCTION

The shaping and maintaining of a driven workforce has for long been a central focal point of managers and researchers respectively. As the understanding of workplace motivation as a concept has evolved, new concepts have spawned around this core discussion. One of the later concepts to have gained significant attention is that of engagement, a positive, fulfilling, work-related state of mind, characterised by vigour, dedication and absorption (Schaufeli and Bakker 2004a). Bearing several of the hallmarks of the concept of motivation, engagement still differs in at least one critical aspect; whereas motivation is to be moved to do a specific task (Ryan and Deci 2000), engagement is not task-specific, as it in addition to motivation also refers to cognition (absorption) as well as affect (vigour), and thus provides us with a superior predictor of job performance (Bakker 2011). Since the inauguration of the concept of work engagement there has been an ever-increasing interest in the topic, an interest that according to Schaufeli and Bakker (2004a), as well as Schaufeli, Bakker and Salanova (2006), is justified, indeed needed, due to an apparent call for research in the field of positive psychology.

Not only is engagement an intriguing concept for researchers, it is also of high managerial relevance. As research has indicated, work engagement is negatively correlated with burnout, and should thereby be of high interest, even for that simple reason. It is, however, more than a mere positive antipode of burnout (Schaufeli, Bakker and Salanova 2006). Namely, increased levels of employee engagement lead to increases in competitive advantage (Shuck and Rose 2013). Being negatively related to burnout, it can namely be argued that engagement has an effect on turnover-intent (as burnout correlates with turnover-intentions), but moreover, as Bakker (2011) pinpoints, engaged employees are likely to work harder as a result from increased discretionary effort compared with those who are disengaged.

Finally, it would also seem that ever more individual employees are adopting expectations on their employers to provide them with interesting, motivating and engaging work, and not only a simple instrumentalist expectation in terms of receiving monetary compensation for the work that is done. Rollinson (2008: 206), in his discussion on Hertzberg's two-factor theory, emphasises how especially professional and quasi-professional employees indeed tend to hold job interest and enrichment as one of the most important features of work. Given such a situation, it becomes vital for

an expert-company employing these kinds of professional and / or quasi-professional employees to be capable of providing engaging work settings.

1.1. Problem background

One example of such an aforementioned expert business is the IT-business that keeps growing at a high pace and thus gains increasing importance in terms of its relative portion of western economies in conjunction with the relative increase of service industries in general, to product-centred industries.

In terms of engagement research this field is yet as good as uncharted land, despite its economic importance. Indeed, the research to date has been highly concentrated on educators and the healthcare sector, which is the case in terms of research conducted in Finland as well. There is thus a subsequent call for additional research to broaden the coverage of current engagement research to cover not only previously unresearched businesses, but also arguably a special need for research on engagement in the IT-business.

Shuck and Wollard (2010) provide an insightful definition, encompassing behavioural, cognitive and emotional aspects, of employee engagement as being *"an individual employee's cognitive, emotional, and behavioral state directed toward desired organizational outcomes"*. Here, and as has been pointed out before, the direction of the engagement is not towards a specific task, rather it is directed towards organisational outcomes as a whole. Thus, appropriate actions and circumstances that support engagement within the context of an organisation as a whole, should arguably allow for greater levels of engagement, whether these actions and circumstances are directly linked to the tasks of any affected individual. However, research has thus far not explicitly provided support for the idea that activities, other than work, within the context of the organisation could increase employee engagement, and thus provide subsequent benefits.

Therefore, the aim of this thesis is to shed light on the relationship between extrarole activities within the work context and overall levels of engagement, in an IT-business setting.

1.2.   Purpose of the study

The aim of this thesis is to identify and understand interrelationships between extrarole activities and employee engagement in the setting of the IT- industry. The digital service company Futurice' employee program "Spice" is studied to provide better understanding of whether and how such activities could be effectively used to increase employee engagement. To be more precise the thesis aims to answer the following research question:

How could work-related, extrarole activities, such as exemplified by "Spice", affect employee engagement?

In order to form an understanding about the question at hand and subsequently answer it, the thesis will form an understanding of:

Does program participation have an impact on engagement?

How can the above-mentioned impact (or lack thereof) be explained?

Not only is the case at hand descriptive of a work context revolving around the company (Futurice), with both a clear set of actual work-tasks, and a set of extrarole activities, it is, as shall be seen, also an example of a case that is uniquely interesting per se.

1.3.   Scope

This thesis strives to shed light on the interrelationship between extrarole activities and employee engagement. This is done in the form of a case study. Therefore the scope of the thesis does not extend beyond the strict sample of the specific case organisation at hand, and is thus limited to professionals, and quasi-professionals in a Finnish IT-services company. Moreover, the scope of the thesis is limited to contrasting program participants with non-participants, and will thus not provide insights in terms of the evolution of potential effects on engagement over time. In conclusion, this thesis will only provide early indications in terms of the studied phenomena in order to open up for further discussion, and research in this niche of employee engagement research, as a contribution to expand current theory through analytic generalisation, rather than statistical generalisation.

1.4. Key concepts

The concepts presented below are first and foremost such concepts that play a central role in the study. Moreover, closely related concepts are presented to aid the reader in understanding important distinctions. Key concepts used in this thesis for the sake of the study at hand are engagement, which for the sake of clarity is put in contrast to the closely related concept of motivation, as well as the negative counterpart of engagement, namely burnout.

Engagement

Engagement is "a positive, fulfilling, work-related state of mind, characterised by vigour, dedication and absorption" (Schaufeli and Bakker 2004a: 295). This state of mind can be specified as "an individual employee's cognitive, emotional, and behavioral state directed toward desired organizational outcomes" (Shuck and Wollard 2010: 103). In contrast to flow, engagement refers to a longer performance episode, whereas flow might last for an hour or less (Bakker 2011).

Motivation

Motivation can be defined as "a state arising in processes that are internal and external to the individual, in which the person perceives that it is appropriate to pursue a course of action (or actions) directed at achieving a specified outcome (or outcomes) and in which the person chooses to pursue those outcomes with a degree of vigour and persistence" (Rollinson 2008: 196). In short, it is "to be moved to do something" (Ryan and Deci 2000: 54). Hence, motivation refers primarily to dedication, in contrast with engagement, which additionally refers to cognition (absorption) as well as affect (vigour) (Bakker 2011).

Extrarole behaviour

Extrarole behaviour (ERB) may refer to "the extent to which employees go beyond role requirements in carrying out their jobs" (Blader and Tyler 2009: 445). However, a somewhat more comprehensive definition would be that it is "employee behaviour that goes beyond role expectations in a way that is organisationally functional" (Morrison and Phelps 1999: 403), indicating that extrarole behaviour not only refers to carrying out one's own job, but potentially also to generally acting in an organisationally functional way.

Flow

Flow can be defined as the holistic sensation that people feel as they are acting with total involvement (Csikszentmihalyi 1975, in May, Gilson and Harter 2004), characterized by concentration, control and enjoyment, a sensation that is intrinsically motivating in itself (Guo and Ro, 2008). This is a state in which there is little difference between the self and the environment (May et al. 2004). It is an autotelic, optimal experience that remains conceptually very consistent regardless of context (Csikszentmihalyi 1988: 29).

Burnout

"Burnout is a metaphor that is commonly used to describe a state of mental weariness" (Schaufeli, Taris and van Rhenen 2008: 175). According to Maslach, Schaufeli and Leiter (2001), burnout is a prolonged response to chronic emotional and interpersonal stressors on the job and is defined by the three dimensions of exhaustion, cynicism and inefficacy. Burnout is mainly predicted by job demands and is related to health problems as well as turnover intention (Schaufeli and Bakker 2004a).

Open source

Open source (OS) refers to a specific type of software license that "must permit non-exclusive commercial exploitation of the licensed work, must make available the work's source code, and must permit the creation of derivative works from the work itself" (St. Laurent 2004: 8). The official definition is propounded by the Open Source Initiative (OSI) (St. Laurent 2004:8) and encompasses ten criteria according to the OSI (Open Source Definition):

1. Free redistribution
2. Source code has to be included
3. Derivative works and modifications must be allowed
4. Integrity of the author's source code
5. No discrimination against persons or groups
6. No discriminations against fields of endeavour
7. Distribution of license must have all rights attached to the program apply to all
8. Licence must not be specific to a product
9. License must not restrict other software
10. Licence must be technology neutral

1.5. Acknowledgements

This thesis is licenced under a creative commons attribution 3.0 licence as a gesture of appreciation to Spice, and the open source community.

2   LITERATURE REVIEW

This chapter will discuss the key concepts that are treated in this thesis, starting with that of employee engagement, what it is, and how it relates to other concepts. Thereafter follows a review and discussion of the concept of extrarole behaviours and activities, concluding with a discussion of employee engagement in connection with extrarole activities. The aim of the chapter is to provide sufficient insight into what the key concepts of the research at hand are, how they have come to be and evolved, how they relate to other concepts, critiques and challenges, and finally, to present the theoretical framework that is chosen for the research in question.

2.1.   Employee engagement

> "In such uncertain and challenging economic environments coupled with an evolving 21st-century workforce, engaging employees, no matter the industry, has become a strategic imperative and important leverage point for HRD professionals hoping to reshape the current organizational outlook." (Shuck 2011: 317)

Employee engagement has enjoyed popularity among industry professionals in from late nineties into the early 21st century, but has received academic interest on a large scale only later (Anitha 2014). The practitioner approach however varies from the academic approach to employee engagement in terms of both purpose and outcome (Shuck, 2011). The practitioner approach is mainly concerned with the usability of the construct, as well as actionable outcomes (e.g. improved retention, commitment or productivity) in order to aggregate data for practice on a macro level (Wefald and Downey 2009). The academic approach however, according to Wefald and Downey (2009), is rather concerned with issues of defining and validating the concept itself on what is more of a micro level focus.

The perspective adopted for this thesis and the subsequent research is that of the academic, trying to increase the understanding of the construct itself and how it works. Yet, some degree of practical implications will also be discussed in latter parts of the paper.

2.1.1.   *What is employee engagement?*

In order to briefly present the historical background of the concept of employee engagement it is appropriate to start in the year of 1990. Employee engagement, from the academic perspective as it is discussed in this thesis, goes back to Kahn's (1990)

conceptualisation of engagement in a work setting in his article *Psychological Conditions of Personal Engagement and Disengagement at Work* (Anitha 2014; Shuck 2011; Shuck and Rose 2013; Shuck and Wollard 2010). This first conceptualisation builds on an ethnographic study of 32 employees, 16 summer camp counsellors and 16 financial professionals about psychological conditions at work and their individual and contextual sources (Kahn 1990). The point of departure that Kahn (1990) takes in the aforementioned paper is the different roles individuals take on in different situations. In these terms, Kahn (1990) defines personal engagement as

> "…the simultaneous employment and expression of a person's "preferred self" in task behaviors that promote connections to work and to others, personal presence (physical, cognitive, and emotional), and active, full role performances." (700).

Later studies by Maslach, Schaufeli and Leiter (2001) place engagement in constellation with burnout "…a prolonged response to chronic emotional and interpersonal stressors on the … defined by the three dimensions of exhaustion, cynicism and inefficacy." (397). Defining engagement as "…a persistent positive affective-motivational state" (417) proposing that it (engagement) is the positive antithesis of burnout (Maslach et al. 2001).

May, Gilson and Harter (2004), later on test Kahn's (1990) concepts of meaningfulness, safety and availability as psychological conditions influencing employee engagement empirically in a U.S. Midwestern insurance company. The study showed positive correlations between the three conditions (especially in terms of meaningfulness) and engagement, and also posited the concept of engagement as one close to both the concept of job involvement as well as that of flow.

Later studies, and most notably Saks (2006) as the first one, research into antecedents and outcomes of employee engagement, and thereby identify employee engagement as a distinct and unique construct. Saks (2006) also suggests that it is possible that the antecedents and consequences of engagement might depend on the kind of engagement is in question, pertaining to the idea of different types of engagement.

Another noteworthy study is that of Macey and Schneider (2008) who introduce a distinct conceptualisation of different types of employee engagement, namely trait, state, and behavioural engagement as separate constructs in a causal direction, suggesting also that engagement can be regarded as directly observable behaviour.

In a seminal review of the foundations of employee engagement, Shuck and Wollard (2010) attempt to synthesise the definitions that the authors have proposed for employee engagement, and propose the following emergent definition of the concept:

> "Employee engagement can be defined as "an individual employee's cognitive, emotional, and behavioral state directed toward desired organizational outcomes." (103).

2.1.2. *Perspectives on employee engagement*

This part intends to dig deeper into the different perspectives of employee engagement. Shuck (2011) literature review *Four Emerging Perspectives of Employee Engagement* provides a good starting point for such an endeavour. As the title suggests, the article in question divides preceding literature on employee engagement into four main categories, based on the perspectives proposed in earlier research. The four groups that the author suggests are firstly a *Needs-Satisfying*, secondly *Burnout Antithesis*, third *Satisfaction-Engagement*, and finally a *Multidimensional* perspective (Shuck 2011).

The needs-satisfying perspective pertains to Kahn's (1990) early conceptualisations, as have been described earlier, followed by, among others, the also aforementioned work of May et al. (2004) (Shuck 2011). What can be drawn from this is thus that this perspective lays its focus on the basic needs that are to be fulfilled in what could be deemed Freudian terms, with employee engagement as a subsequent result of fulfilled needs. May et al. (2004) draw upon Kahn's (1990) suggestion that each person has a self and a role, which exist in a dynamic, negotiable situation, and argue that such engagement where the individual dives personal energies into a role and displays the self within it, serves to fulfil the human spirit at work.

The second of the perspectives termed burnout antithesis takes stance in Maslach et al. (2001) conceptual work positioning employee engagement as a positive antithesis of burnout (Shuck 2011). What Maslach et al. (2001) set out arguing is that burnout is the erosion of engagement where energy turns into exhaustion, involvement into cynicism and efficacy into ineffectiveness. As a result of this it is proposed that engagement could be measured by the opposite pattern of scores on the Maslach Burnout Inventory (MBI) (Maslach et al. 2001). Similar suggestions have been made concerning the Oldenburg Burnout Inventory (OLBI), where it is suggested that researchers can recode the negatively framed items in order to assess engagement (Bakker and Demerouti 2008). Maslach et al (2001) do however state that Schaufeli has taken a different approach to the concept of engagement arguing that engagement may be the positive antithesis of

burnout, but without the presumption that it is assessed by the opposite profile of MBI scores. Pertaining this logic, Schaufeli et al. (2006) establish a shortened 9-item version Utrecht Work Engagement Scale (UWES) dedicated to assessing engagement specifically, based off Schaufeli, Salanova, González-Romá and Bakker (2002) original 17-item scale building on a definition of employee engagement as "… a positive, fulfilling, work-related state of mind that is characterized by vigor, dedication and absorption." (74). Vigour is here defined as being characterised by "…high levels of energy and mental resilience while working, the willingness to invest effort in one's work, and persistence also in the face of difficulties." (Schaufeli and Bakker 2004a: 295). The authors (Schaufeli and Bakker 2004a) define dedication on the other hand is characterised by "…a sense of significance, enthusiasm, inspiration, pride, and challenge." (295), and absorption as characterised by "…being fully concentrated and happily engrossed in one's work, whereby time passed quickly and one has difficulties with detaching oneself from work." (295). To date UWES is the most widely used instrument for measuring employee engagement and is suggested to be the most reliable measure available (Jose and Mampilly 2014).

Satisfaction-engagement builds on Harter, Schmidt and Hayes (2002) study of business-unit-level relationship between employee satisfaction and engagement departing from positive psychology (Shuck 2011). Harter et al. (2002) uses a meta-analysis of 7, 939 business units in 36 companies to show that not only do business-unit-level employee satisfaction and engagement have positive correlations with customer satisfaction, productivity profit, employee retention and employee safety, but these correlations generalise across organisations for all business-unit outcomes without substantial variations. The correlation between employee engagement and business outcomes was thus proven meaningful also from a practical perspective (Harter et al. 2002). Since, researchers have continued to provide evidence for such a connection as well as correlations with wellbeing (Shuck 2011).

The multidimensional approach is the fourth and final perspective Shuck (2011) outlines based on Saks's (2006) article *Antecedents and Consequences of Employee Engagment*. As has been stated earlier, Saks (2006) is the first to examine antecedents and consequences to employee engagement in academic literature (Shuck 2011; Shuck and Wollard 2010), and shows that employee engagement is related but distinct from other constructs in organisational behaviour (OB) such as organisational citizenship behaviour (OCB), organisational commitment, and job involvement. As shall be seen

later on, other academics have followed Saks' initiative and conducted further academic research into antecedents of engagement (Wollard and Shuck 2011). Based on the antecedents identified Saks (2006) shows that they vary between two emerging constructs defined as job engagement and organisational engagement. Hence the definition of said perspective as a multidimensional one (Shuck 2011), which differs from earlier studies that according to Saks (2006) have mainly focused on job engagement. The division also relates back to Kahn (1990) in terms of roles in the workplace, as job engagement, predicted by job characteristics, reflects engagement in the role of the individual's particular job, and organisational engagement, predicted by procedural justice, to the role as an organisational member (Saks 2006).

An even more advanced multidimensional construct is proposed, on a conceptual level, by Macey and Schneider (2008). They present a triadic framework based on trait, state, and behavioural engagement as separate, yet related constructs (Macey and Schneider 2008). Trait engagement, or engagement as a disposition, can be regarded as an "…inclination or orientation to experience the world from a particular vantage point" (Macey and Schneider 2008: 5). This vantage point, the authors argue, could be e.g. positive affectivity (PA) characterized by feelings of enthusiasm, which in turn is reflected in psychological state engagement, conceptualised as an antecedent of behavioural engagement. Quite notably then, the authors not only suggest a more nuanced division of the concept of employee engagement, but also a causal direction where the different constructs follow each other. Behavioural engagement, preceded by state engagement characterised by feelings of energy and absorption, is, according to Macey and Schneider (2008), in fact characterised by extrarole behaviour such as OCB, proactive or personal initiative, and role expansion. This contradicts several earlier suggestions by e.g. Saks (2006) and that explicitly differentiate the concept of employee engagement from that of extrarole behaviour. Nevertheless, it needs to be kept in mind that earlier conceptualisations also differ from that of Macey and Schneider (2008).

Figuratively taking a few steps back and reassessing the employee engagement construct (hence also beyond Shuck's 2011 four perspective division) are Shuck and Rose (2013), adopting what might qualify as an emerging fifth perspective. They suggest we turn our focus back to the roots of the engagement construct, most notably so by proposing that "the manifestation of engagement, and by empirical linkage, increased levels of performance is a by-product… a secondary consequence to work that is interpreted as meaningful and purpose-driven." (343). Hence, the authors reframe

employee engagement within this context; meaning and purpose, which they argue implies that we should study meaning in the context of engagement through the lens of contribution, influence and reward, and purpose (being outcome focused rather than internally focused as meaning) in terms of what is valued by the self, and what is valued by others.

Given the explorative nature of this research using the UWES-9 survey, the definition that is adopted is that of engagement "a positive, fulfilling, work-related state of mind characterised by vigour, dedication and absorption" (Schaufeli and Bakker 2004a: 295). The following parts will provide a closer look at the relation employee engagement has to burnout, and thereafter its relation to other closely related or overlapping concepts such as employee satisfaction, flow and organisational commitment.

2.1.3.   *Employee engagement and burnout*

As was mentioned earlier a fair share of attention in engagement research has been directed at the relationship between engagement and burnout. Indeed, Maslach et al. (2001) suggest that engagement could even be measures as, and subsequently be regarded as, a positive antipode of burnout. In fact, Schaufeli, Taris and van Rhenen (2008) attribute the very emergence of the engagement concept to burnout research, stating that engagement was conceived to cover the entire spectrum from well-being to burnout.

Whether we consider employee engagement as a function of burnout or as a unique concept, there is a widespread consensus among researchers that the two concepts are related. This is however strongly based in the so-called burnout antithesis perspective (Shuck 2011) emerging from Maslach et al.'s (2001) burnout based studies. Hence, also researchers that criticise the view on engagement as simply being an antipode of burnout at the opposite end of a continuum, hardly extend beyond this perspective. These researchers tend to use the UWES instrument for the measurement of engagement. Employee engagement as measured by UWES is independent of burnout but negatively correlated with it (Schaufeli and Bakker 2004a; Schaufeli et al. 2002).

A more comprehensive perspective is provided by Hakanen, Bakker and Schaufeli (2006), by studying employee engagement and burnout among teachers in the context of the Job Demands-Resources (JD-R) model. Here it is suggested that job demands

lead to burnout and ill health, whereas job resources lead to engagement and organisational commitment, where job resources refer to physical, social and organisational aspects of the job that may in turn reduce job demands, be functional in achieving goals and stimulate personal growth and development (Hakanen et al. 2006).

As has been illustrated, whereas burnout has an important position in constellation with employee engagement, there are other significant concepts that affect, correlate or partly overlap the engagement concept. The following part will provide a further discussion on such findings.

2.1.4. *Other related concepts*

As engagement is a fairly young concept it still lacks the level of convergence that older established concepts enjoy in terms of definition and rigour. Moreover, it is a rather large construct which thereby is bound to bear some resemblance to other concepts in the highly researched field of organisational behaviour. Indeed, Saks (2006) states that engagement often overlaps with other constructs, although researchers have defined it as a unique construct consisting of cognitive, emotional and behavioural components, in academic literature.

Given these overlaps, it is important to establish more specifically how the concept of employee engagement is positioned in relation to other similar concepts. One of, or perhaps even the closest related concept is that of flow (May et al. 2004). Flow can be defined as the holistic sensation that people feel as they are acting with total involvement (Csikszentmihalyi 1975, in May et al. 2004). Whereas engagement can be considered "a chronic and persistent positive affective-cognitive state towards one's job" (Wefald and Downey 2009: 92), flow represents a more complex concept (Schaufeli and Bakker, 2004a), consisting of a unique peak conceptualized and measured primarily as cognitive involvement with an activity (Bakker 2011; May et al. 2004).

Engagement seen as a positive affective-cognitive state towards the job takes us close to the concept of organisational commitment. In fact, moderate correlations between employee engagement and organisational commitment have been shown (Demerouti, Bakker, de Jonge, Janssen, and Schaufeli 2001; Schaufeli et al. 2008). Schaufeli and Bakker (2004) also showed that engagement is negatively related with intention to quit, which could be interpreted as a proxy for organisational commitment (Schaufeli et al.

2008). In contrast to engagement however, organisational commitment refers to a person's attitude towards the organisation, whereas engagement is the level of attention and absorption in the role (Saks 2006). So despite the correlations, engagement forms a concept different from organisational commitment. Interestingly, Anitha (2014) lists organisational commitment among the consequences of engagement, and Macey and Schneider (2008) as one of the manifestations of state engagement. Clearly then there is a certain level of divergence in terms of the interrelationship between the two concepts. In spite of this, there is a clear understanding between researchers in the field that the concepts form unique constructs.

Also satisfaction bears notable resemblance with employee engagement. As many conceptualisations of engagement classify it in a general way as positive affect (Wefald and Downey 2009) or a function thereof (e.g. Harter et al. 2002), which takes it close to satisfaction. Just as with organisational commitment, Anitha (2014) suggests that job satisfaction is a consequence of engagement. The engagement concept is however distinct from satisfaction (Maslach et al. 2001). Whereas engagement is focused on the long-term cognitive-affective motivation at work, satisfaction is limited to affect (Wefald and Downey 2009).

As can be observed in Maslach et al.'s (2001) definition of engagement as a persistent, positive affective-motivational state, motivation is yet another closely related concept. Wollard and Shuck (2011) note motivation as an antecedent to engagement, as do Bakker and Demerouti (2008). The concepts do however differ in that whereas engagement refers to cognition (absorption), affect (vigour) and motivation

Finally it should be noted that researchers have hypothesised around engagement as a sub construct to eustress, a good kind of stress connoted with positive outcomes of an event (Wefald & Downey 2009). Such speculations, interesting as they may be, are however beyond the scope of this study and the application of the engagement concept.

2.1.5. *Antecedents of employee engagement*

The study builds on the suggestions of Kahn (1990) in terms of requirements for engagement, namely meaningfulness, safety and availability. It is suggested that meaningfulness is achieved when individuals feel useful and valued, that safety is a product of an environment perceived as safe, and finally, that availability refers to the

physical and emotional vitalities that influence possibilities to take part in actions (Kahn 1990).

As employee engagement is related to, or overlapping with other concepts it is of interest to comprehend how these relationships are spread over a continuum, in order to fully understand this rather large concept. Several researchers have performed research directed at identifying both antecedents and outcomes of employee engagement. This part is concerned with such antecedents, whereas the following one will move on to describing outcomes.

A notable body of research on this topic is that of Saks (2006). As has been noted, the study does make a distinction between job and organisation engagement, and it is stated that there are differences between the antecedents of the two constructs. Nevertheless, they do share common antecedents, determined through a survey study of 102 employees from a variety of jobs and organisations. Job characteristics along with perceived organisational support, as well as perceived supervisor support are all proven to be antecedents of employee engagement (Saks 2006). Drawing from this, it can be concluded that antecedents are to a significant extent subjective, and pertain to personal perception, thereby having serious implications for managers aiming at increasing employee engagement. However, and as Shuck and Rose (2013) underscore, despite the fact that managers or employers cannot directly create engagement among employees, it is very much in their power to affect and create the prerequisites, and environment for employee engagement to thrive. Further examples put forth by Saks are rewards and recognition, as well as procedural and distributive justice, where distributive justice refers to the *perceived* justice of decision outcomes and procedural justice to the *perceived* fairness of means and processes used to determine distribution of resources.

Anitha (2014) consolidates a number of factors that have proven to be significant in contributing towards the original three-piece (meaningfulness, safety, availability) construct of psychological conditions of employee engagement. The seven factors that Anitha accounts for are work environment, leadership, team and co-worker relationship, training and career development, compensation, organisational policies, and workplace wellbeing.

The factors that Anitha (2014) presents bear significant resemblance to those of Saks (2006). A somewhat different and perhaps even more individual antecedent is

professional efficacy, suggested by Schaufeli, Bakker and Salanova (2006), however yet to be more rigorously tested. Another antecedent in the same line, identified by Shuck, Reio and Rocco's (2011) study (n=283) of the links between job fit, affective commitment, and psychological climate, is affective commitment, drawing close to organisational commitment as discussed in the previous part. The study also showed convincing proof that also job fit and psychological climate are antecedents to employee engagement, which would indicate that recruitment could have a significant effect on the possibilities for employee engagement to form.

In an extensive literature review of research into the antecedents of employee engagement, Wollard and Shuck (2011) gather several additions to the aforementioned antecedents. The most notable of these arguably being those that have undergone empirical scrutiny, e.g. absorption, dedication and vigour as suggested by Schaufeli and Bakker (2004a), being examples of individual antecedents to employee engagement. Added to these are higher levels of corporate citizenship, perceived organisational support, and willingness to direct personal energies. Organisational level antecedents on the other hand are e.g. corporate social responsibility, supportive organisational culture, and perceived workplace safety (Wollard and Shuck 2011).

2.1.5.1.   *The Job demands-resources model (JD-R)*

The aforementioned 2004a article by Schaufeli and Bakker suggest that burnout is mainly predicted by job demands and resources. Following a burnout antithesis perspective these factors bear implications for employee engagement alike. The job demands-resources model holds that there are two different underlying psychological processes that affect job strain, motivation, as well as ultimately burnout or job engagement (Bakker and Demerouti 2007). The first of these processes is the energetical process deriving from job demands, which leads towards burnout and ultimately ill health, whereas the second process, the motivational process, is fuelled by job resources, leading towards engagement, and ultimately organisational commitment (Hakanen, Bakker and Schaufeli 2006). Hence, job resources, defined as resources to complete the job (Shuck and Rose 2013), divided into on the one hand job resources (e.g. autonomy and learning opportunities) and personal (e.g. self-esteem and ability to perceive and regulate emotions) on the other (Bakker 2011). Mauno, Kinnunen and Ruokolainen (2007) provide us with a Finnish perspective on the JD-R model in their longitudinal study of Finnish health care personnel. The study indicates that the model

holds also in a Finnish context, and offers indications for that job control bears particular responsibility for engagement, suggesting that sufficient job control is a crucial antecedent in the given context.

The question of correlation of antecedents and consequences over cultural boundaries is an intriguing one (Schaufeli, Martínez et al. 2002). Despite some exeptions (e.g. Hu, Schaufeli et al. 2014), national and cultural deviations are however yet rather scarcely researched, and hence the current body of research can only be assumed to be appropriately representative of European and western cultures.

Table 1   Overview of suggested antecedents of employee engagement

Researcher(s):	Antecedents Identified:
Anitha (2014)	• Work environment • Leadership • Team and co-worker relationship • Training and career development • Compensation • Organisational policies • Workplace well-being

Bakker (2011)	• Job resources:
	  o Social support from colleagues
	  o Performance feedback
	  o Skill variety
	  o Autonomy
	  o Learing opportunities
	
	• Personal resources:
	  o Self-esteem
	  o Self-efficacy
	  o Locus of control
	  o Ability to perceive & regulate emotions

Saks (2006)	• Job characteristics
	• Perceived organisational support
	• Perceived supervisor support
	• Rewards and recognition
	• Procedural justice
	• Distributive justice
Schaufeli, Bakker and Salanova (2006)	• Professional efficacy
Shuck, Reio and Rocco (2011)	• Job fit
	• Affective commitment
	• Psychological climate

(sources: Anitha 2014; Bakker 2011; Saks 2006; Schaufeli, Bakker and Salanova 2006; Shuck, Reio and Rocco 2011)

2.1.6. Outcomes of employee engagement

Outcomes, or consequences, of employee engagement have attracted the interest of both practitioners as well as academics. In academic research Saks 2006 paper is clearly one of the most notable contributions to this facet of the employee engagement research. Whereas it is possible that consequences (and antecedents alike) vary depending on the type of engagement, Saks (2006) offers insights into what could form a universal basis of consequences to employee engagement. The consequences that are identified are first and foremost job satisfaction. Added to this come organisational commitment, intention to quit, as well as organisational citizenship behaviour (Saks 2006). This correlates with aforementioned suggestions by Macey and Schneider (2008) suggesting that OCB is the manifestation of behavioural engagement.

Shuck, Reio and Rocco (2011) add to this with two additional outcomes; discretionary effort and intention to turnover. The authors refer to discretionary effort as a willingness to perform above the normal job responsibilities of the employee. From a business or organisational perspective on the other hand, Harter, Schmidt and Hayes (2002) provide us with a somewhat different set of outcomes. It is shown that employee satisfaction and engagement are positively correlated with business outcomes, such as customer satisfaction, productivity, profit, employee turnover and accidents.

Table 2 **Overview of suggested consequences of employee engagement**

Researcher(s):	Consequences identified:
Harter, Schmidt and Hayes (2002)	• Customer satisfaction • Productivity • Profit • Employee turnover • Accidents
Saks (2006)	• Job satisfaction • Organisational commitment • Intention to quit • Organisational citizenship behaviour
Shuck, Reio and Rocco (2011)	• Discretionary effort • Intention to turnover

(sources: Harter, Schmidt and Hayes 2002; Saks 2006; Shuck, Reio and Rocco 2011)

2.1.7. *Mediators of employee engagement*

To grasp the entire context that employee engagement is shaped and maintained in, we need to understand not only the antecedents and outcomes, but also what mediating factors there are that affect the process. Blader and Tyler (2009) suggest that social identity is a critical ingredient for understanding the basis of people's engagement with their groups. In addition to this, the psychosocial safety climate (PSC), referred to as policies, practices and procedures for the protection of an employee's psychological safety, is believed to have a negative effect on job demands, as described in the JD-R model (Dollard and Bakker 2010). Thereby it is suggested that PSC does help in mediating the creation of employee engagement.

The three psychological conditions of Kahn's 1990 ethnographic study have also been studied as mediators (see May, Gilson and Harter 2004). It would seem that the line between mediators and antecedents of employee engagement is somewhat blurred, and it is not entirely unlikely that the role of these factors may vary from case to case. As it has been suggested by Saks (2006) that antecedents and consequences of engagement

may depend on the type of engagement, it seems logical that this applies to mediators to an equal extent.

2.1.8. Measuring employee engagement

To this date the most widely used instrument for the measurement of employee engagement is the 17-item UWES scale by Schaufeli et al. (2002) (Jose and Mampilly 2014). There are however several other instruments, the most notable of which are the use of opposite pattern scores of the MBI (Maslach et al. 2001) or OLBI (Bakker and Demerouti 2008). Nevertheless, researchers have uttered their doubts about the measurement of engagement simply by using burnout instruments (Jose and Mampilly 2014; Schaufeli et al. 2002), as it would imply that the concepts of burnout and engagement are each other's complements (Schaufeli and Bakker 2004a). As has been pointed out before, engagement has been shown to correlate negatively with burnout, but does, as a concept, extend beyond being simply its counterpart.

Another instrument brought forth by May et al. (2004) uses three components of psychological engagement; cognitive, emotional and physical, based on Kahn's (1990) early work, bearing remarkable resemblance to the three dimensions of the UWES scale; vigour, dedication and absorption (Jose and Mampilly 2014). Saks (2006) also presents an alternative instrument, in line with Kahn's dimensions, however not base on them, but rather on two dimensions termed job engagement and organisational engagement, which are seen as two separate types of engagement.

Compelling as these instruments may be, the scales of May et al. (2004) as well as Saks (2006) are yet to be validated and psychometrically tested to constitute a solid foundation for research. Both the 17- and 9-item versions of the UWES scale have been validated and determined psychometrically sound (Schaufeli et al. 2006). Hence it is only reasonable to consider the UWES the most reliable tool for the study at hand, and more specifically to use the UWES-9 given its shorter nature.

2.1.9. Critiques towards employee engagement

Employee engagement has not escaped criticism in terms of potentially harmful effects. Halbesleben, Harvey and Bolino (2009) ask whether too high a level of engagement could have adverse effects outside of the work context. The study raises the question whether one can be too engaged, i.e. engaged to a stage where work interferes with

family. Schaufeli, Taris and van Rhenen (2008) however state that although engagement is related with working excess time, family, hobbies and social functioning is left unimpaired. There are indications that some personality traits may aid in reducing such potential conflicts (Halbesleben et al. 2009), hence a risk that some conflicts however can emerge. However, in contrast to workaholics, engaged employees do not neglect their social life outside work (Schaufeli et al. 2008).

Shuck and Wollard (2010) express another poignant critique towards employee engagement research. They argue that most of the existing literature is opinion, rather than evidence-based. Unfortunate as it may be, it is still an understandable condition of a field of research that perhaps is not new anymore, but nevertheless is rather young. Hence, this critique only further underscores the need for continued research and testing of the assumptions of employee engagement.

2.2. Extrarole behaviour and extrarole activities

Blader and Tyler provide us with a definition of extrarole behaviour (ERB) suggesting that it is concerned with the extent to which employees are prepared, and do go beyond outspoken requirements of their work roles in carrying out their jobs (Blader and Tyler 2009). This can be contrasted to in-role behaviour, i.e. "behaviour which is required or expected as part of performing the duties and responsibilities of the assigned role (Van Dyne, Cummings and Parks, 1995: 222) Morrison and Phelps (1999) on the other hand provide an earlier, but more comprehensive, definition of ERB as pertaining to employee behaviour that exceeds role expectations in a manner that is organisationally functional. A yet slightly different definition is provided by Van Dyne et al. (1995). They suggest extrarole behaviour is "21ehaviour that benefits and/or is intended to benefit the organization, which is discretionary and which goes beyond existing role expectations" (Van Dyne et al. 1995: 218). This is in line with the aforementioned definitions as is underscores that the actions need to be voluntary and with a positive outcome or intention, and naturally discretionary and beyond role expectations. Van Dyne et al. however narrow their definition down further by specifying that the actions need to be beneficial and/or intended to be beneficial to the organization. This is however too narrow a definition for the studied case at hand as the actions that are studied cannot be argued to be exclusively, or even primarily intended to be beneficial for the organization itself.

An interesting feature of extrarole behaviour that provides valuable insights as to the dynamics of the phenomenon is that of the implications of value alignment on extrarole behaviour. In a study of eight gas and electric utilities across the US (N=600), Deckop, Mangel and Circa (1999) examined how pay-for-performance plans (i.e. compensations linked to employee performance) affect extrarole behaviour. Integrating the seemingly contradictive agency theory and theories of aligned interest between employee and employer, the authors theorise that value alignment should be essential for pay-for-performance plans not to have a negative effect on ERB, as they would have a discouraging effect on performing any kind of actions other than those explicitly rewarded by the plan. Their study served proof that this line of theory indeed was accurate and that pay for performance plans did have a negative impact on extrarole behaviour for employees low in value alignment. The next part will provide a look at further prerequisites and factors supporting the formation of extrarole behaviour.

2.2.1. *Formation of extrarole behaviour*

As has been shown, extrarole behaviour, not being explicitly required (nor necessarily explicitly rewarded although it is shown to affect supervisory ratings, see e.g. Werner 1994) demands some level of value base as a driver of said behaviour. Blader and Tyler (2009) studies the formation from the perspective of the group engagement model, suggesting that social identity is a key driver of extrarole behaviour pertaining to the assumption that extrarole behaviour may be especially open to influence by intrinsic motivation (Tyler and Blader 2000), and social identity being an example of such an intrinsic motivator. The group engagement model suggests that social identity is critical for understanding the psychological basis of people's engagement with groups and organisations (Blader and Tyler 2009). The study in question provided proof that social identity, indeed plays a fundamental role in shaping such behaviour, and does so as a function of on the one hand procedural justice, and economic outcomes on the other. The procedural justice refers to the perceived justice of organisational processes. Economic outcomes in turn are comparable with methods such as the aforementioned pay-for-performance plans, i.e. economic outcomes that are regarded favourable by the employees and encourage them to link their social identities to the organisation. Furthermore, information privacy has been shown to support extrarole behaviour (Alge, Ballinger, Tangirala and Oakley 2006). Information privacy, i.e. the degree of control that the organisation gives its employees to collect, store, disseminate and use their data, as well as the extent to which these practices are seen as legitimate, was

suggested to further psychological empowerment, which in turn would further ERB and more specifically organisational citizenship behaviour (OCB) (Alge et al. 2006). OCB, a very central type of extrarole behaviour is discussed in greater detail in next part. Other types of ERB to be noted before taking a closer look at OCB are ProSocial Organisational Behaviour (PSOB), Whistle-Blowing (WB), and Principled Organisational Dissent (POD) (Van Dyne, Cummings and Parks 1995). PSOB refers to behaviour that is intended to promote the welfare of an individual, group or organisation with which an organisational member interacts, whereas whistle blowing refers to the action of disclosing illegal, immoral or illegitimate practices and POD to protests to change what is in disharmony with the organisational member's principles (Van Dyne, Cummings and Parks 1995).

2.2.2. *Extrarole behaviour and OCB*

The most heavily researched form of extrarole behaviour is organizational citizenship behaviour (OCB) (Morrison and Phelps 1999), with other examples being proactive or personal initiative, and role expansion (Macey and Schneider 2008). OCB is in itself a collection of several different actions or behaviours that shape OCB. A comprehensive definition that seems to have been accepted and adopted by a multitude of academics is that of Organ (1988:4) defining extrarole behaviour as:

> "individual 23ehaviour that is discretionary, not directly or explicitly recognized by the formal reward system, and that in the aggregate promotes the effective functioning of the organization. By discretionary, we mean that the 23ehaviour is not an enforceable requirement of the role in the job description, that is, the clearly specifiable terms of the person's employment contract with the organization; the 23ehaviour is rather a matter of personal choice, such that its omission is not generally understood as punishable."

Podsakoff, MacKenzie, Paine and Bachrach (2000) provide us with a comprehensive list of the different types of OCB that have been identified and studied over the years. Before taking a closer look at this however, it is appropriate to note the broader division of OCB into OCBO – i.e. organisational citizenship behaviour benefitting the entire organisation in general, and OCBI – i.e. organisational citizenship behaviour benefitting specific individuals (Werner 1994). Moving on from this broad division of the concept we can take a look at the different categories that Podsakoff et al. (2000) have identified. Firstly, there is helping behaviour, e.g. altruism, interpersonal helping, courtesy, peace-making and cheerleading, in other words, behaviour that is characterised by actively helping colleagues. In addition to helping behaviour we have sportsmanship, the act of tolerating inevitable inconveniences, as well as organisational

compliance, characterised by e.g. generalised compliance, a more impersonal form of conscientiousness, organisational obedience, spreading goodwill as well as endorsing, supporting and defending organisational objectives (Podsakoff et al. 2000). Furthermore, the authors list individual initiative, e.g. conscientiousness, personal industry (performing tasks above the call of duty), and individual initiative, and finally civic virtue that encompasses organisational participation, volunteering, job dedication and protecting developing oneself.

As we can see, especially those types of extrarole behaviour that are defined as *civic virtue* bear remarkable resemblance with some of the characteristics of the engaged employee. Indeed, Saks (2006) explicitly names OCB as one of the outcomes of employee engagement, but similarities can also be seen with the discretionary effort that Shuck et al. (2011) point out as an outcome of employee engagement. Before continuing the examination how employee engagement and extrarole activities relate to each other, it is necessary, for the context of this specific study, to consider a variation of the extrarole behaviour concept; namely extrarole activities.

2.2.3. *Extrarole activities*

For the sake of the study at hand, a slight variation of the ERB concept is of interest, namely what could be called extrarole activities. The Spice program that is examined in this study cannot be said to either match, not fit within behaviours such as prosocial organisational dissent, whistle-blowing or principled organisational dissent. Whereas there are some similarities between the program and PSOB, as the program forms and promotes social bonds it the intention is not purely aimed at benefitting the organisation itself (See part 3.4.1). As WB and POD are concerned with actively stopping or altering what is deemed conflicting with some set of principles it could be argued that the program to some extent is an outcome of some form of POD, as it in part is a product of an ethical discourse about giving back to the open source community. Nevertheless, this cannot be said about the current more evolved state of the program. A comparison with OCB gives us some similarities with individual initiative, and especially personal industry as well as civic virtue in terms of developing oneself, as well as perhaps organisational participation. Despite all of these similarities however, there is a fundamental difference in terms of the underlying assumption that OCB is not recognised by the formal reward system. It further, at least by the definition

of Van Dyne et al. (1995), differs from extrarole behaviour to the extent that it does not fulfil the criterion of behaviour that is intended to benefit the organisation.

Given these discrepancies, this paper, rather than adopting a loose interpretation of the ERB concept, will use the term extrarole activity (ERA). This implies *voluntary, discretionary behaviour which is related to the work context but without any requirements for the activity to benefit or be intended to benefit the organisation, but which may nonetheless be rewarded by the organisation*. This then resembles the definition provided by Blader and Tyler (2009) apart from not being activities aimed at explicitly carry out one's job. Although extrarole activities essentially are a looser interpretation of extrarole behaviour, it constitutes potentially important variations to classic definitions of ERB, and hence, for the sake of clarity, the term extrarole activity will be used for the type of activities studied in here.

2.3. Employee engagement and extrarole activities

As was mentioned before, there seems to be a certain level of similarities between ERB and employee engagement, where it has been suggested that ERB or at least OCB are outcomes of employee engagement (Saks 2006) or even the embodiment of behavioural engagement (Macey and Schneider 2008). It would seem likely that the same holds for extrarole activities as the term is defined here, as long as there is an alignment of value as suggested by Deckop et al. (1999) in order to evade negative effects from formal (monetary) rewards, in conjunction with other requirements e.g. privacy (as suggested by Alge et al. 2006), as well as sufficient possibilities for the employee(s) to link their social identity to the organisation, assuming that the same drivers or mediators hold for ERA as do for ERB. Whereas privacy perhaps serves mostly a mediating role, social identity and value alignment could have active roles in promoting both employee engagement and extrarole activity.

Turning the focus to the roots of the employee engagement concept, Kahn (1990) suggests that the requirements for employee engagement are meaningfulness, safety and availability. These three requirements for employee engagement bear striking resemblance with aforementioned drivers of extrarole behaviour. Starting with meaningfulness it can be considered comparable with the idea of value alignment. Kahn (1990: 705) explains meaning as a "sense of return on investments of self in role performances", experienced as feeling able to give and receive from work and others in work. It might seem as quite a stretch to compare this with value alignment, but a

closer look should provide two theoretically plausible connections. Firstly, return on investment of the self is clearly connected to what the employee experiences that he or she receives from performing job tasks. This return could take many forms. Conventional return on work performance would be monetary return, however they could also take the shape of more intrinsically oriented value-based sense of return in terms of doing something good, or the right thing to do, and the self-rewarding effects this has. Secondly, value alignment would increase the experienced return on investment of the self in the role, along with the sense of ability to also give to the work and others at work, as both investment and return would have a good fit with the values of the individual.

Moving on to availability, Kahn (1990: 705) provides us with the definition that it is a "sense of possessing the physical, and psychological resources necessary for investing self in role performances", experienced through feeling "capable of driving physical, intellectual, and emotional energies into role performance". Whereas psychological availability is mainly concerned with the personal readiness of the individual employee (May et al. 2004), it is still a resource-based factor that depends not only on psychological but also physical resources e.g. money. Blader and Tyler (2009) suggest that social identity as well is related to monetary resources, or and incentives, for furthering the coupling of social identity with the organisation. Furthermore, the procedural justice, listed by the authors as the second driver of extrarole behaviour, is concerned with fair decision-making processes, which is likely to facilitate driving cognitive and emotional energies into role performance, by shaping a safer work environment. Hence, both concepts concern investing or coupling the self, one's social identity with one's work. There is a slight difference to the extent that one emphasises incentives for doing so and the other on resources for doing so, hence enabling such behaviour, however they do both boil down to physical and psychological resources for investing the self in work.

Finally addressing safety, by Kahn (1990: 705) defined as a "sense of being able to show and employ self without fear of negative consequences to self-image, status, or career", experienced through a feeling that "situations are trustworthy, secure, predictable, and clear in terms of behavioural consequences". This obviously coincides to some degree with the aforementioned procedural justice, but also related to privacy, which as suggested by Alge et al. (2006) is related to higher levels of extrarole behaviour, in a framework where information privacy furthers intrinsic motivation and psychological

empowerment. Privacy in these terms translates into greater freedom for the employee to work without the fear of the employer looking over his or her shoulder. In such terms privacy and subsequent psychological empowerment presents a certain overlap with a sense of safety in the workplace in that it concerns personal freedom within the job role. Such freedom should minimise the perceived and actual risks of committing a mistake, and support fearless employment of self in the work role, hence the psychological empowerment and possibility for intrinsic motivation that Alge et al. (2006) propose.

As can be seen, even if these concepts are not entirely the same, they maintain significant overlaps. This would in turn provide for greater likelihood of employee engagement where extrarole activities are abundant and vice versa. It is not the intention or purpose of this paper to make premature claims in terms of compatibility or interchangeability of these concepts. Rather, these rough intersections of the two studied concepts form a heatmap that guides the research at hand. Engagement will always depend on the employee, but in spite of this the empowerment of engagement lies proportionately with the organisation (Shuck and Rose 2013). The same can be said about ERA/ERB as it by definition is voluntary and beyond requirements of the job.

Hence it would seem that by creating the circumstances for one of the two (employee engagement or ERA) one could potentially receive both as an outcome. This could have important implications since ERA being far more concrete in that it is indeed concrete physical performance of an action, it is more easily conceived, and conveyed than employee engagement can ever be, even on a theoretical level.

2.4. Summary and theoretical framework

It is clear that there appears to be some form of linkage between extrarole behaviour and/or activities and employee engagement. To this date, research has pointed out extrarole behaviour or at least organisational citizenship behaviour as an outcome of employee engagement, or as a form of physical manifestation of engagement. In the light of the previous discussion of extant research in the fields of employee engagement and ERB/A such a narrow understanding of the interrelation between these phenomena appears far too limited. Rather, employee engagement as based in Kahn's (1990), and the research of Schaufeli and Bakker, who represent the most referenced definitions of the construct (Jose and Mampilly 2014), seems to be formed from very similar circumstances as ERA. Indeed, the two could form independently from each

other given the appropriate organisational climate. This interrelationship is portrayed in figure 1 below.

Figure 1   Theoretical framework integrating antecedents of employee engagement and ERB-theory

| Meaningfulness | Availability | Safety | ⟶ | Empl. Eng. |
| Value Alignment | Social Identity | Privacy | ⟶ | ERB |
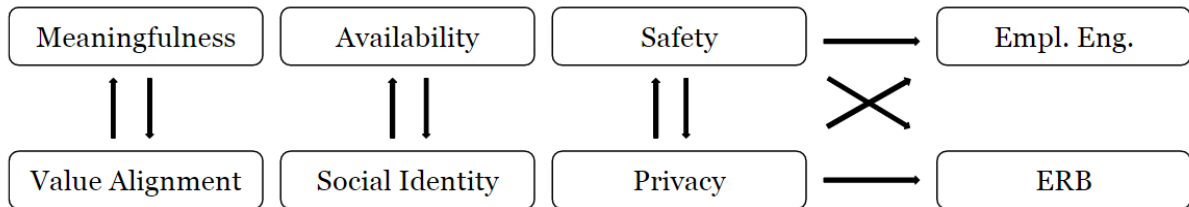
(sources: Kahn 1990; Deckop et al. 1999; Alge et al. 2006; Blader and Tyler 2009)

3   METHODOLOGY

This chapter describes the methods used in order to seek the answer to the research questions of this thesis. The study performed in this thesis constitutes a case study chosen on the basis of purposive sampling (Creswell 2006: 288), and uses a set of research methods; employing a mixed methods approach gathering empirical data (involving both qualitative and quantitative data), in line with suggestions by Bryman and Bell (2011: 41). Given the variations in the characteristics of each of the two sub-questions, each is catered by its own method for data collection, forming what can be best described as a multiphase design (Creswell 2014: 133 and Creswell 2014: 221). The choice of case study as a method is a response to a desire to gain holistic, and meaningful insights into a complex social phenomenon (Yin 2009: 4). Yet, as has been mentioned it is constructed of several phases, each constituting its own form of methodology.

The research is grounded in a relativistic ontology, in that it departs from a set of questions, searches for convergence in terms of how individuals' engagement is affected, through the analysis of a specific case, in an attempt to generate early suggestions for theory generation concerning how the linkage between extrarole activities affect employee engagement (Easterby-Smith, Thorpe and Jackson 2012: 25).

The following parts will take a more precise look at what the above-mentioned research strategy implies as well as to what the given research philosophy will mean for the view that is taken on the data collected and its analysis. First the research philosophy and the case study approach will be discussed; thereafter the case is described and critically discussed.

3.1.   Research philosophy and research design

The research conducted in this paper spans over both qualitative and quantitative methodology, and over the boundaries of research philosophical paradigms hereby acknowledging that "while a paradigm offers a coherent worldview, an anchor of stability and certainty in the real world sea of chaos, operating narrowly within any singular paradigm can be quite limiting" (Patton 2002:71). Epistemologically then, it is the intent to adopt a pragmatic approach hereby superseding one-sided paradigm allegiance (Patton 2002:71), shifting the focus towards intended consequences of the

research for guidance in terms of methodology, rather than letting a paradigm narrow down the concrete and practical methodological options (Creswell 2014:11).

Pragmatism can be seen as a compromise between internal realism and relativism, in that it discredits that there are predetermined theories of frameworks shaping knowledge and truth, but also that people could construct their own truths out of nothing (Easterby-Smith et al. 2012:32; Kromrey 2009:16). Pragmatists propose that a tree should be recognised by its fruits (Kvale and Brinkmann 2009:325), hereby the initial aim of pragmatists was the clarification of "meanings of intellectual concepts by tracing out their 'conceivable practical consequences'" (Cherryholmes 1992). Pragmatic choices about what to research and how to go about it are conditioned by where we want to go (Cherryholmes 1992), allowing the pragmatist to "eschew methodological orthodoxy in favour of methodological appropriateness" (Patton 2002:72). From a pragmatist perspective, research always occurs in social, historical and political, as well as other contexts (Cherryholmes 1992). In other words, pragmatists believe in both an external world independent of the mind as well as that lodged in the mind, proposing a shift away from asking questions about reality and the laws of nature (Creswell 2014:11).

A pragmatic research approach can be used for confirmatory and elucidating research that adds depth, detail, and meaning to quantitative analyses (Patton 2002:193). This, Patton argues, aims at considering what people really mean when they mark a specific answer on a preceding questionnaire. In pursuing a pragmatist philosophy this research encompasses a multiphase, mixed methods study in line with the elucidating type of research that Patton describes. The qualitative interview-based second phase of the study aimed at forming a deeper understanding of the results from the preceding quantitative survey represents a shift away from a more positivistic perspective as it assumes characteristics more typical for qualitative research. This seemingly unorthodox approach follows a pragmatist line of reasoning rather harshly yet poignantly explained by Creswell (2014:11) as; "truth is what works at the time". Aiming at providing a rich picture of life and behaviour in the studied organisation, this qualitative second phase epistemologically overlaps with constructionist perspectives (Yin 2009:55), giving more emphasis to how individuals create meaning in a process of sense-making (Silverman 2006:129). Much in line with typical tendencies of qualitative research, the thesis will follows inductive reasoning (Silverman 2006:56). Yet, given its

strong foundation in previous engagement research, as well as its quantitative element, the reasoning might border on the abductive.

3.2.   Case study as approach

A case study, such as this thesis work, is concerned with the "detailed and intensive analysis of a single case" (Bryman and Bell 2011:59) or a set of several cases (Easterby-Smith et al. 2012:54). It allows for in-depth understanding of the complexity and nature of the specific case that is researched (Creswell 2014:14); in this case a specific program in a specific organisation. Case studies, as is the case with this research, can often employ both quantitative and qualitative methods (Bryman and Bell 2011:60; Gable 1994). Case study research is primarily concerned with the how and why, over questions such as who, what, where and how many/much, and with contemporary rather than past events (Yin 2009:8).

Contrary to common views of case studies as useful merely for the exploratory phases of a study, Yin (2009:6) suggests that case studies are far from only exploratory, but suitable for explanatory studies as well. Such an approach allows for capturing a certain richness of organisational behaviour as is characteristic for qualitative research, yet it is not limited to be limited to strictly qualitative research methods (Gable 1994).

3.3.   Justification and limitations of the single case study

A single case can serve as a powerful example and provide unique insights (Easterby-Smith et al. 2012:55; Siggelkow 2007). Also Yin (2009:47) argues that a single case study approach can provide proof of the existence of a concept and be worthy of studying simply thanks to its uniqueness, revelatory, or critical properties, or typical character. Siggelkow (2007) points out how it is often desirable to choose a particular organisation precisely because it is special and non-representative thereby going against 'conventional' requirements of representativeness, and that this might in fact allow for the case to shed light specifically on conventional cases. Siggelkow however continues by emphasising the need for the case to actually be unique and compelling enough so that it does not state the obvious without even providing the statistical rigor of large sample studies. Finally, Silverman (2011:388) suggests that a single case study is indeed valuable given appropriate sampling methods.

The case at hand, strictly going against conventional for-profit business practice, and being a case that goes against usual top-down business initiatives should serve as a case of unconventional enough character for to fulfil the requirement of being a uniquely interesting case. Moreover, the case expands the views to extrarole activities from earlier discussions that have only extended to theorising around extrarole behaviour as a potential outcome or behavioural manifestation of employee engagement.

3.4. Case description

Futurice is a Finnish limited company registered in 2000, active in the IT-industry with planning and developing software, as well as consulting. The company has experienced rapid growth at a reported 19,4% in 2014. (Kauppalehti 2015a) The annual turnover 2014 amounted to just over 20,1 million euro, resulting in a 1,54-million-euro profit, a 38,7% increase compared 2013 (Kauppalehti 2015b).

3.4.1. *The Spice program*

The Spice program is a Futurice company program with the purpose of advancing OSS ideology in company operations (Turunen 2014a). The program encompasses several components. The elements that the program is comprised of are on the one hand directed towards the employees directly and on the other hand broader elements. Central elements are comprised of on the one hand guidelines and policy for open source activities within the company, as well as contract clauses allowing the company to contribute fixes and enhancements to OSS projects used in their customer projects. On the other hand there are educational and social events for both employees and e.g. university students interested in open source software. (Turunen 2014b)

The most central element of the Spice program in terms of this research however, is OSS sponsorship. Since November 2014 Futurice sponsors open source contributions done outside of working hours financially. Any open source contributions are accepted as long as the licence under which the code is distributed is OSI (Open Source Initiative) approved, and that the company makes no IPR claims on the contributions. (Futurice 2014) The sponsoring amounts to a compensation of 15€ per hour spent on the open source contribution, up to a maximum of 30 hours per month (Turunen 2014c).

Hence, participation is voluntary and the extent to which any employee chooses to participate is practically unlimited, despite a limitation for the amount of contribution hours that are compensated per month. Futurice rationalises the sponsorship stating that with the employees active in the OSS scene, they will improve their skills faster. Moreover, they assume a recruitment edge as such sponsorship is a rare benefit, and that it is the right thing to do as Futurice benefits from OSS. (Futurice 2014)

Spice participation can thus be termed an extrarole behavior or activity, in that it is a voluntary action that goes beyond role expectations, and is organisationally functional (Morrison and Phelps 1999: 403). Hence, Spice program participation will be used as a case for exploring the effects of extrarole activities on employee engagement.

3.5. Research strategy

The empirical data is collected through a mixed methods multiphase study (as portrayed in Figure 2), consisting of two phases. The first phase, which is designed to answer the question "*Does program participation have an impact on engagement?*", utilises a digital survey for data collection, whereas the second, and final phase, designed to answer the question "*How can the above-mentioned impact (or lack thereof) be explained?*", turns to interviews for the gathering of explanatory data. The first phase serves an exploratory role, whereas the final phase has an explanatory focus.

Despite the exploratory nature of a large extent of the conducted research, the research procedure is constructed before the actual data gathering, in order to address one of the most common criticisms against case studies, namely their apparent lack of rigour (Yin 2009: 14). Nevertheless, adhering to the constructionist-like interview approach, interviews were kept as only semi-structured, in order to best capture the different perspectives, and perceptions of the interviewees (Patton 2002: 98).

Figure 2   Overview of the research methodology

Q1
- **Question:** *Does program participation have an impact on engagement?*
- **Method:** Questionnaire based on UWES

Q2
- **Question:** *How can the above-mentioned impact (or lack thereof) be explained?*
- **Method:** Semi-structured explanatory interviews
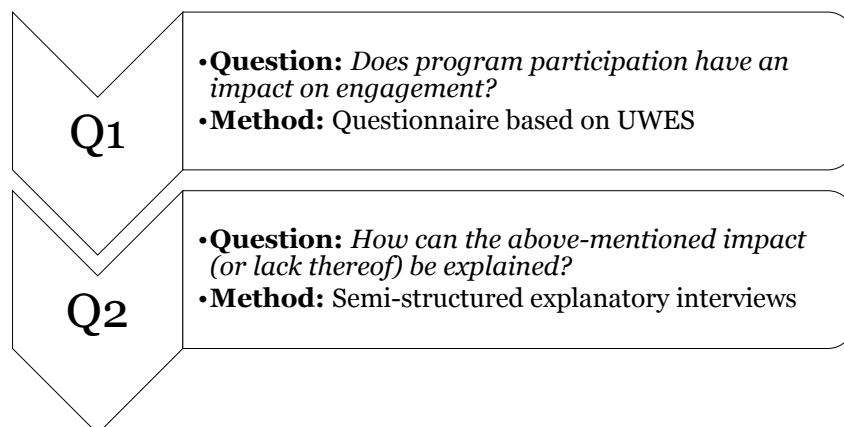
3.6. Description of the sample and data collection

Descriptive data on the case as presented previously in part 3.4 was gathered through a document study. A number of background interviews with key employees involved in the program, chosen with the aid of program executives (see table 3), served the function of introducing the researcher to the case. In gathering this body of data, in contrast to the rest of the data gathered, focus was put on identifying the structure of the program in terms of both numerical data on amount of participants, as well as information on rules of participation. Any investigations into employees' perceptions, feelings and attitudes towards the program were thus probed for only in the later stages of the study. Being explorative in nature, these background interviews were kept semi-structured and open-ended in order to achieve as good an insight into the structure of the program as possible (Yin 2009: 106).

Table 3   Summary of background interviews

Function	Interview date	Location
Active program participant	25.03.2015	Futurice Kamppi Office
Head of Spice Program	25.03.2015	Futurice Kamppi Office
Former Spice worker	26.03.2015	Hanken School of Economics (Helsinki)
Developer, Open Source Activist	27.03.2015	Futurice Kamppi Office
Board Member & "Program Sponsor"	27.03.2015	Futurice Kamppi Office
Head of Marketing	31.03.2015	Futurice Kamppi Office

The following parts will provide a closer look at the two phases of the research, their respective samples and data collection methods. It will be shown that phase two builds on phase one as the research is performed in a sequential manner, and that subsequently the sample will be narrowed down from phase to phase in order to continuously probe deeper.

3.6.1. *Phase 1: TheUWES-9 survey*

"Survey research is defined as the cross-sectional gathering of data predominantly by questionnaire or structured interview..." (Bryman and Bell 2011: 54). In terms of this research and phase, a digital questionnaire was used. Bryman and Bell (2011) state that the issues of reliability and measurement validity are first and foremost concerned with the quality of the measures that are employed to tap in to the concepts that are studied. The survey conducted in this research was based on a widely used and tested questionnaire with a proven track record. Researchers such as Hardy and Ford (2014) express their concern towards using published surveys as it inherently implies the disembodiment of it (the survey) from its context, hence risking comprehension. It should however be pointed out that this is in no way the case, as is shown below, as the survey method used is indeed a universal questionnaire for studying specifically employee engagement irrespective of profession.

Although it can be said that the dominant epistemology of survey research methods is positivism (Easterby-Smith et al. 2012: 42), the purpose of the survey is not attempting to state any definitive, factual information on the state of employee engagement, rather it is seen as an indicative measure based upon the subjective evaluations by the respondents.

Stern, Bilgen and Dillman (2014) state that a survey design needs to be adapted to the specific group of respondents that is in focus. With a group of highly technologically competent, and most likely also with strong preferences towards the digital medium, it seems only natural that the medium of choice is a digital questionnaire, rather than a printed out version or structured interviews. This also allowed for greater flexibility for the respondent to choose when and where to respond to the questionnaire, subsequently allowing for better response rates.

Two main parts constitute the survey, with the purpose to determine correlation between engagement and program participation. It is based on the 9-item UWES-9 (9-item Utrecht Work Engagement Scale) (see Schaufeli and Bakker 2004b) scale proposed by Schaufeli et al. (2006), and on the other hand, demographical questions with the purpose of determining characteristics of the respondent, e.g. how long he or she has been working at Futurice, and whether he or she is a Finnish or foreign national.

As described earlier, the survey was distributed, and managed electronically, with the aid of Futurice, using the company's internal systems, to the company's software developers. Respondents were asked, however not forced to disclose their name as they respond to the survey, in order to make the contacting of key respondents possible in phase 2. Respondents were asked to report free-time activities they had participated in, in order to identify Spice participants among respondents that did not report their name. The responses have however not been enclosed with respondent names to the company; instead they were anonymised in order to allow for the respondents to disclose their actual thoughts and feelings without real or perceived risk in terms of their job situation.

The UWES-survey has a proven track record over the years and has been validated in peer-reviewed articles (see e.g. Schaufeli et al. 2006), and is the most used scale for the determination of engagement to date (Bakker 2011). Moreover, UWES has a proven track record in Finland as well. However, for the purpose of this research, the English language questionnaire will be used, as several program participants are not native Finns and the company language is English. Tested and validated translations (e.g. Finnish, Swedish and German), do however serve as additional aid for the exploratory interviews to improve comprehension (See e.g. Hakanen 2009). The specific choice of the shorter UWES-9 scale (as compared to the original UWES-17) is motivated given its proven track record and the potential for larger response rates given a shorter survey.

The survey was evaluated against Lenzner's (2012) list of seven factors decreasing survey comprehensibility, in order to improve comprehensibility, however without making alterations to the UWES-9 questionnaire. However, all other parts have been adapted in order to follow Lenzner's (2012) suggestions in terms of eliminating complex syntactic structures, low-frequency words and vague noun-phrases. To further strengthen the response quality by structural means, neither engagement nor the Spice program are mentioned in the survey. This follows suggestions by Easterby-Smith et al. (2012: 46) considering the risk that respondents attempt to champion something (in this case the Spice program), and thereby skew responses. Moreover, it is in line with the specific recommendations by Schaufeli and Bakker (2004b) concerning mentioning the term engagement, suggesting that a more neutral term e.g. work and well-being.

3.6.1.1. UWES-9

The UWES questionnaire is the most widely and arguably also most reliable tool for measuring engagement that is available to date (Jose and Mampilly 2014). As has been pointed out, this study will deploy the shortened 9-item version of the (originally 24-item and later 17-item) UWES scale, which has been proven to be effective and maintaining high correlation with older versions of the scale (Schaufeli et al. 2006). Based on what can be termed a burnout antithesis perspective on engagement (Shuck 2011), the UWES scale building on the Schaufeli and Bakker (2004a) definition of engagement as characterised by vigour, absorption and dedication, is negatively correlated with measures of burnout e.g. MBI (Maslach Burnout Inventory) (Schaufeli et al. 2006). As such it represents three questions for each of the three characteristics of engagement as stated above. Vigour is assessed by the questions:

1. At my work, I feel bursting with energy

2. At my job, I feel strong and vigorous

3. When I get up in the morning, I feel like going to work

Dedication on the other hand is assessed by:

4. I am enthusiastic about my job

5. My job inspires me

6. I am proud of the work that I do

Finally, absorption is measured by:

7. I feel happy when I am working intensely

8. I am immersed in my work

9. I get carried away when I'm working

In the actual questionnaire, the order of the questions is mixed (see appendix 1). These questions are to be responded to along a scale from zero (I have never experienced this feeing) to six (I experience this feeling every day). Subsequently the mean scale or subscale score can be calculated by adding the scores and dividing it by the number of items in the scale or subscale. (Schaufeli and Bakker 2004b)

3.6.1.2. Demographical questions

The demographical questions were purposefully placed after the UWES-form in order to adhere to suggestions by Bryman and Bell (2011: 213) that questions on behaviour and knowledge are less affected by question order than are such questions that tap into opinions and attitudes. Hence, there would have been a risk that some or all of the demographical questions could have affected the mind-set of the respondent by providing a context from which the questions were subsequently answered. This follows the underlying purpose of the survey being aimed at measuring engagement irrespective of attitudes or opinions towards the company, the program or the respondents themselves.

The demographical questions posed (see appendix 2) are aimed at determining to what extent the measured level of employee engagement for each respondent respectively, could be affected by factors other than the Spice program. Such factors identified are first and foremost whether the respondent has participated in other activities or events arranged by Futurice. Secondly, how long the employee has been working at Futurice, as those who are new have experienced less exposure to company culture, and those who have worked at Futurice for a long time are likely to be affected more by other aspects than Spice. For comparison, also age and nationality was queried, as both these aspects are shown to have some level of effect on engagement levels (Schaufeli and Bakker 2004b). Given the small sample, no exact ages were queried to maintain sufficient anonymity of the respondents; rather ages are collected with five-year precision. Finally, by collecting information on whether the work of each respondent is mainly individual or team-based, as it has been suggested that engagement not only an individual phenomenon but also group related (Schaufeli and Bakker 2004b).

3.6.1.3. Phase 1 sample

The survey sample was reached in part through digital survey tools within Futurice' internal digital communication channels. Access was provided, aided as well as monitored by the Futurice executives in charge of the Spice program. These are the same who have invented, championed, and started the program, and thus also constitute a central role as informants, on the technical aspects of the program, through exploratory interviews, given their superior knowledge, and insight in the program. In terms of the survey-phase, the sample is limited by the organisational boundaries.

3.6.2. *Phase 2: Explanatory interviews*

The second phase engaged in qualitative, interview-based research, hereby attempting to address the lack of such research in the field of employee engagement (Reissner and Pagan 2013), as well as acknowledging the fact that interviews constitute an essential source of case study information (Yin 2009: 106).

The qualitative research interview attempts to understand the world from the perspective of the studied person, unveiling their lived world as it was before the scientific explanations (Kvale and Brinkmann 2009:17). Such an understanding of the qualitative interview resonates with the pragmatist perspective that has received a central role in postmodern research (Kvale and Brinkmann 2009:67) as its objectivity is achieved as the object objects, i.e. when the object disconfirms the researcher's preconceptions (Kvale and Brinkmann 2009:261).

It is important to understand and bear in mind that interviews never are neutral. Answers to interview questions are never purely reactions to a question, but also a reaction on the interviewer and the entire situation (Kromrey 2009:9). Neither can we rightfully assume that an answer is attached to one single meaning (Silverman 2004:35). This has serious implications for the status that is attached to the data, as it needs to be observed as inter-relational and inter-subjective, and within its greater context (Kvale and Brinkmann 2009:70). Knowledge is co-created in an interview setting in an active process where the interviewer and interviewee engage in a social production of knowledge together (Kvale and Brinkmann 2009:34) This process is a foundation for the value of interview data deriving on the one hand from the meanings that are constructed, and on the other hand from how these meanings are constructed (Gubrium and Holstein 2001:16). The types of data produced are twofold. On the one hand, the data that co-created between the interviewer and interviewee, and on the other hand, the interaction between the two (Kvale and Brinkmann 2009:70). For the purpose of this study, focus will be on the former of the two.

The explanatory interviews that constitute the second phase were aimed at answering the core question of the thesis in explaining the effects (or lack of effects) program participation has on engagement by probing the subjects' views and impressions. Respondents were chosen based on informative survey responses (as explained in part 3.6.2.3). In order to avoid infringing on respondents' anonymity without their consent, participation in the interviews was entirely voluntary. The interviews take stance in a

semi-structured interview guide in part based on survey data, utilising open-ended "how" and "why" questions (Yin 2009:9). In order to minimise the risk of bias, and allow for greater depth, interviews are conducted on a one-to-one basis, where the interviewer's role is kept sensitive and listening, but still allowing for some assisting of the interviewee in exploring his or her beliefs and understandings when the interviewer fails to answer (Easterby-Smith et al. 2012:131). Acknowledging the importance of the interview setting, interviewees were allowed to choose the place of the interview in order to provide for safe ground on the part of the interviewees (Easterby-Smith et al. 2012:137). All interviews were recorded for later transcription and analyses of the interview data. The transcriptions were not made as perfect representations of what was said or the interview situation as a whole, but as decontextualised conversations that are abstractions of the interviews (Kvale 1996: 165). All transcriptions were performed by the researcher. Transcriptions were not done in verbatim style, as the interviews served the purpose of providing insight into views and impressions, and ultimately condensing what is said (Kvale 1996:170-171). Rather, and given the restricted time frame of the study, transcriptions covered the entirety of all interviews, however omitting information such as short pauses and stuttering.

3.6.2.1. *Comprehension, rapport, and response quality*

In order to maintain a high quality standard on interviews and interview data, several aspects spanning the entire interview process are considered, starting from interview preparations, communication with the subjects, the actual interview situations, and post-interview activities.

Fundamental to take into consideration are the consequences and perceived consequences of the interview to the subject. Kromrey (2009:340) states that interviews need to be socially without consequence to enable the subject to answer freely. Hence the interviews need to be designed to minimise any risk of adverse consequences for the sake of quality, but also for ethical reasons (further discussion on ethical aspect in the study in part 3.9). As it is hard to categorically determine what will turn out to be adverse, and what positive consequences, all interviews have been anonymised to minimise the risk of any and all consequences from speaking freely or at all participating in an interview for the employees. This is manifested in the consent form stating the rights and responsibilities of both interviewee and interviewer.

However, the need for a relaxed interview situation extends beyond merely limiting the risk of consequences. Obtaining trust is an important element on the road to ensuring that the interviewee provides the important information that is needed to further the research, and not only resorting to telling what he or she believes the interviewer wants to hear (Easterby-Smith et al. 2012:136). Easterby-Smith et al. (2012:137-138) suggest the interviewer should be well cued up about the company, be concerned about social interaction, use appropriate language, and an appropriate location for the interview. These elements are covered by the background research on the company and the Spice program as presented in the case description, using active listening and communicating genuine interest, as well as conducting the interviews on the subject's own ground. Although recording audio during the interview might be unsettling to the interviewee, its problems are assumed to be outweighed by the increased accuracy of the transcript that such recordings provide for. To minimise tensions and focus on the recording, recording is started at as early a stage of the interview situation as possible, allowing for casual discussion to relax the atmosphere before actual interview questions were posed. Such activities are thought to increase rapport, aided by moderate mutual disclosure in cases when the subject responses are reserved (Gubrium and Holstein 2001:57-58).

3.6.2.2. *The interview guide*

In case study interviewing there is a need for satisfying both the needs of the research in terms of its line of inquiry by asking enough "why" questions, as well as putting forth non-threatening questions (Yin 2009:106-107). Kromrey (2009:359) specifies that the interview should preferably start with such questions that awake the employee's interest. To accommodate this, interviews were started with an introduction to the research, i.e. repetition of the basic information that was distributed to potential subjects prior to agreeing upon the interview, and an explanation as to the researcher's interest towards the subject of the study. The consent form was filled out and any questions the interviewee has are answered.

Furthermore, Kromrey (2009:359) suggests that thematically similar questions should be bundled together which are subsequently connected to each other by bridging questions. Adhering to these suggestions, as well as with the intention to assure coverage of the entire object of the interview, the interview guide was based off a matrix where the studied concepts are juxtaposed to each other as presented in figure 3.

Figure 3   Concept matrix serving as a basis for the interview guide
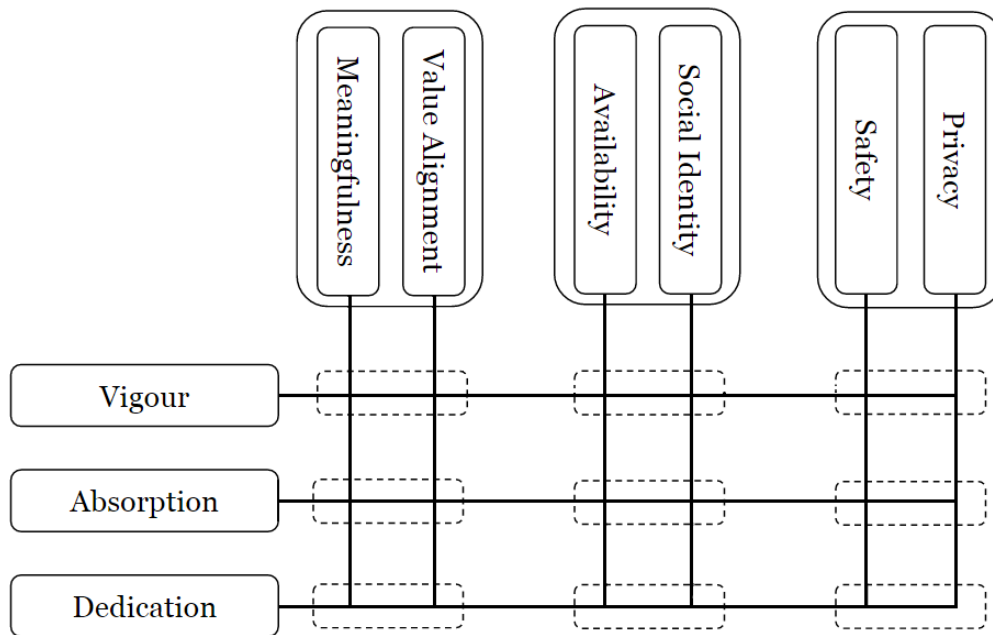
(sources: Kahn 1990; Deckop et al. 1999; Alge et al. 2006; Blader and Tyler 2009)

The three main "question bundles" are represented horizontally and are constituted by the three characteristics of employee engagement as described by Schaufeli and Bakker (2004a), which correspond with the underlying line of inquiry of the preceding UWES-survey of phase 1. On a more general level questions are categorised in personal factual questions, factual questions about others and informant questions, as well as attitudes, beliefs, normative standards and values, and knowledge (Bryman and Bell 2011:253). Finally, Kvale (1996:128) emphasises the need for a debriefing at the end of each interview to make sure that the subject does not feel left empty handed after the interview session.

Hereby the interview guide represented more than a set of questions. It worked as a script for the entire interview session, thereby helping in providing a certain level of standardisation of interview content in order to ascertain equal treatment of interviewees, minimise human error or deficiencies in terms of interview skill, and last but not least, assist the subsequent systematic analysis of the gathered data. As each question can be evaluated from both a thematic perspective, in terms of how relevant it is to the research, as well as a dynamic perspective, considering the interpersonal relationship in the interview (Kvale 1996:129), the interview guide is not considered a

strict sequence of questioning at the expense of interview dynamics. Rather it was used as a guide for semi-structured interviewing allowing for some variation based on the interviewer's in situ judgement. Hence, spontaneous follow-up, probing, specifying or interpreting questions are allowed within the boundaries of the theme of the interview. Interviews were predominantly carried out in Finnish using the Finnish language UWES questionnaire as a reference for terminology (yet attempting to avoid strictly academic terminology), with the exception of one interview performed in English.

3.6.2.3. Phase 2 sample

Respondents for the explanatory interviews (see table 4) were chosen based on nonprobability sampling, guided by meaningful responses in the survey. Nonprobability sampling is called for in labour intensive, in depth studies (Bernard 2006:186, e.g. intensive case studies or critical case studies (Bernard 2006:190), as is common in research that is not concerned with statistical generalizability (Guest, Bunce and Johnson 2006). This choice based on *meaningful* responses falls under purposive sampling methodology, allowing for the choice of subjects that illustrates a feature that is of interest (Silverman 2011:388). Easterby-Smith et al. (2012:228-229) hold that purposive sampling requires critical thought on the parameters that are chosen and that sample members are chosen carefully.

Meaningful responses were in this case defined as responses that show potential in providing valuable insights into how and why any observed pattern or lack thereof is seen in survey results. Respondents that can be considered to hold such potential are such whose survey responses are typical examples of the observed pattern (or lack thereof). Furthermore, in order to gain a truly holistic view, also respondents clearly deviating from the norm were interviewed in an attempt to falsify emerging conclusions. This was done based on the UWES score, by focusing on respondents close to the mean and in contrast, those who deviate significantly from it. To get a more saturated picture, demographical criteria were used to try to spread respondent characteristics over a broader spectrum.

Table 4   **Summary of phase 2 interviewees**

Title	Pseudonym	UWES-Score	Interview date	Location
Software Developer	I1	4.56	9.6	Customer office
Senior Software engineer	I2	2.78	11.6	Futurice Kamppi office
Senior Software engineer	I3	4.56	15.6	Customer office
Software Developer	I4	3.67	15.6	Hangouts
User Interface Engineer	I5	4.00	15.6	Futurice Kamppi office
Software Developer	I6	5.33	26.6	Futurice Kamppi office
Software Developer	I7	5.00	29.6	Futurice Kamppi office

Calculating sample size when using a sample such as the purposive one here, is concerned with theoretical saturation (Fossey, Harvey, McDermott and Davidson 2002; Sandelowski 1995). Theoretical saturation is reached when no new categories or relations among them are found (Bernard 2006:501), in other words when patterns are recurring or no new information emerges (Fossey at al. 2002). This means that sampling will continue until themes are fully developed, rather than when a calculated sample size is met. There are, nevertheless, indications that theoretical saturation tends to occur in sample sizes between six and twelve persons (see Guest et al. 2006), an indication that is used as a rule of thumb to assist sampling, despite the fact that there are cases where researchers never declare saturation (Charmaz 2000).

3.7. Data analysis

The data analysis aims at following the same lines of pragmatist approach as the rest of the research is designed to along. Being a mixed methods research this implies close resemblance with the methods described by Feilzer (2010) suggesting that the data sets be analysed separately at first, and then moving back and forth between them with the knowledge produced in each one of them to finally bring them together. As has been mentioned earlier however, emphasis was put on the second and last phase, which also naturally follows the nature of the first phase being one that serves primarily the role of informing the second phase and providing contextual information for the knowledge produced. Yet, such contextual knowledge does provide added value aiding a multidimensional perspective on the studied processes.

Pursuing such a multidimensional and informed perspective does raise the issue of potentially heterogeneous results. In a pragmatist setting however, this should not allow for assumptions of logical contradictions or duality of data from overly rigid interpretation of positivist paradigms in terms of quantitative data or constructivist views in terms of qualitative data (Feilzer 2010). This would, according to Feilzer (2010: 13) be "neither sensitive nor perceptive of the complexity of the social world", thereby ignoring how pragmatism as a rational for mixed methods goes "beyond testing a particular idea and describing status quo". Thus, the usage of multiple methods need not be seen strictly as a means of and limited to methodological triangulation (Patton 2002: 247). Nevertheless, it is deployed as the primary source of knowledge generation.

3.7.1. *Analysis of quantitative data*

The quantitative body of data collected in the first phase of the study through the deployment of the UWES study was primarily analysed using quantitative methods. Subsequent discussions later treat the quantitative data in conjunction with qualitative findings in order to further enrich the findings of the study.

Hence, the primary treatment of the data was constituted of calculating the means of the UWES scores of Spice participants and non-participants to show how they compare. To shed further light upon the constellation between the two groups means for the sub-constructs of vigour, dedication and absorption were calculated and compared. Given the low amount of Spice participants no statistical tests could provide

meaningful information in terms of correlations between program participation and UEWS-9 scores.

Further analysis comprised regressions for assessing potential correlations between demographical factors (Age, length of employment, nationality, type of work) on the UWES-9 scores. Given the large percentage of Finnish nationals in the sample, foreign nationals were bundled together, forming a dummy variable that tested for effects from being a non-Finnish national on engagement scores. Also in the case of type of work, i.e. whether the employee was engaged mainly in teamwork or individual work, a dummy variable was used to test correlations between performing mainly teamwork as opposed to individual work on test scores. Length of employment was tested for both using the reported age group for testing linear relationships, but also using length of employment[2] in order to capture exponential relationships.

3.7.2. *Analysis of qualitative data*

Analysis of the qualitative data generated in phase 2 was driven by a search for understanding of the linkage between extrarole activities and employee engagement within the case of the Spice program aided and guided by the results achieved in the previous phase of study.

This was done by careful study of the transcribed phase 2 interviews, searching for related topics, words and expressions across them. The groundwork in terms of categorisation into broad topics was naturally laid out by the interview guide. However, also practical examples that the interviewees brought up to express themselves were used to structure and compare the data gathered from different interviews to find linkages, and seek to identify patterns. This process started with the condensation of the raw transcription by reduction of larger chunks of data into shorter, more concise formulations (Kvale 1996:192). The condensation was followed by further categorisation with respect to the research topic to categories of distinct effects from, or links between the studied concepts, and ultimately visualised in the form of tables (Kvale 1996:196), in an iterative process moving back and forth between the different data sets as depicted in figure 4. This reworked data provided groundwork for analysis, as well as comparison with the quantitative data.

Figure 4   The process of data analysis
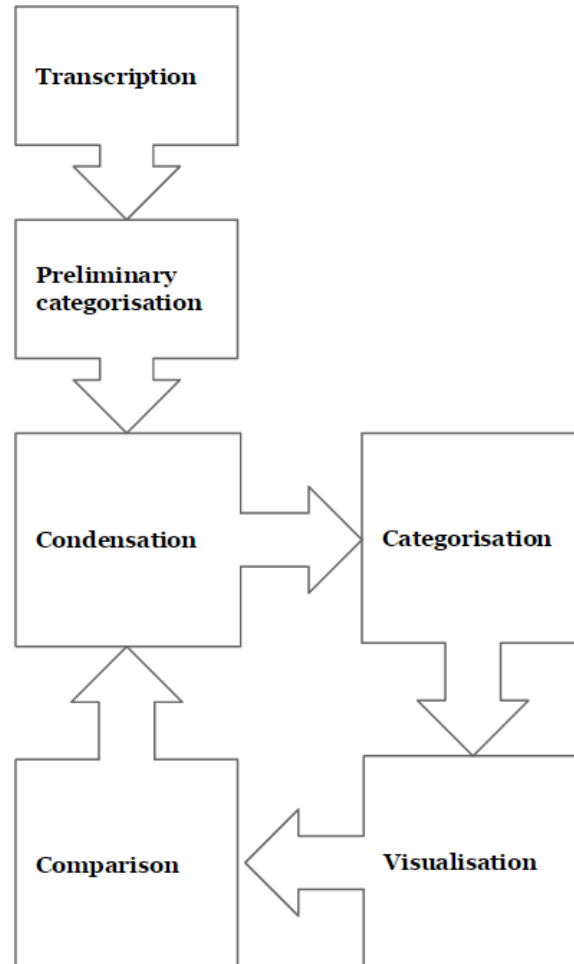
(sources: Kvale 1996)

3.8.   Research quality

In response to common criticisms as to the perceived lack of rigour of case studies, special efforts were made in order to clearly present findings to avoid equivocal or biased views to influence the research and its findings (Yin 2009: 14). In terms of criticisms as to the possibilities to generalize beyond the specific case, it is clear that it can be considered questionable to make generalisations based on a single-case study. Yet, it is generalizable to theoretical proposition, and thus in line with the purpose of expanding and generalising engagement theory (i.e. analytic generalisation), rather than enumerate frequencies (statistical generalisation) (Yin 2009: 15).

Sampling- and sampling-related errors are, due to the case study format and simply technical separation between software developers and others, as well as participants, and non-participants, kept at a minimum.

In terms of reliability, the usage of predetermined conceptual definitions, and framework should allow for the consistent usage of said concepts. Moreover, using a fixed and documented survey, as well as semi-structured interviews allows for replication over time, as long as access to the case organisation can be obtained. (Bryman and Bell 2011:41).

Objectivity in a study such as this implies not jumping to easy conclusions based on insufficient scientific backing (Silverman 2006: 280). This follows the suggestions by Kirk and Miller (1986: 11) that although we perceive and understand the world differently, there are still some understandings of it that are more tolerated than others. This implies that the study at hand can achieve credibility by attempting to falsify initial assumptions of the data (Silverman 2006: 280), that is attempting to falsify assumptions deriving from results from the quantitative phase 1.

Laddering and probing was used to move towards more specific increasingly specific information (Easterby-Smith et al. 2012: 129-131), and the use of different data sources and types allowed for triangulation strengthening validity (Patton 2002:247). Finally, and as pointed out earlier, the case at hand, thanks to its unconventional character, is argued to fit the description of a case that is uniquely interesting (Easterby-Smith et al. 2012: 55), and is thereby arguably worthy of study simply thanks to this.

3.9. Ethical aspects of the research

There are ethical issues embedded throughout the entirety of any research project, with important aspects reaching beyond the actual gathering of data (Kvale and Brinkmann, 2009:77). Hence Kvale and Brinkmann (2009:78) argue that ethical issues should be considered from the very beginning of any study conducted. The underlying aim is, as should be in any form of research, to do no harm (Booth, Colomb and Williams 2008:83). This study adopts a primarily deontological position in that it is designed to live up to certain ethical codes of conduct in terms of research ethics, rather than taking a "the-ends-justify-the-means" teleological approach (Kvale 1996:121-122).

Kvale (1996:111) as well as Kvale and Brinkmann (2009:78-79) suggest that a researcher should not only consider the scientific value of the findings that are strived for, but also if and how the study may improve the human situation studied. In these terms, studying the extrarole activities and employee engagement may seem rather distanced from any concrete improvements. Nevertheless, any steps taken towards greater understanding of this phenomenon should take us closer to ultimately improving employee engagement. This then would in fact imply actual improvements in terms of the human situation thanks to the positive effects of engagement and the inherent decrease in risks for burnout that engagement implies (Schaufeli and Bakker 2004a).

Interviews were structured so that the interviewee is given as much control as possible of how much exposure they tolerate (Sinding and Aronson 2003). A form of consent outlining confidentiality, data access- and distribution, as well as access and distribution of the analysis (Kvale and Brinkmann 2009:87) (see appendix 3) was used to enhance informed consent among interviewees, and encompasses the possibility for the interviewees to review and comment on said data.

Although survey data was not collected entirely anonymously it was treated as such throughout the study and no personal information is disclosed in the paper or otherwise to any third party, including anyone in the company outside of the program itself. Hereby the research practice was aimed at avoiding any adverse consequences for respondents, in terms of their role as employees as well as in terms of anxiety or stress related to exposing their thoughts, emotions or beliefs (see Kvale 1996: 19, Kvale and Brinkmann 2009: 79 and Sinding and Aronson 2003).

4   FINDINGS

This chapter will describe the results of the two phases commencing with quantitative UWES-9 from phase 1 and then concluding with the qualitative findings of the second phase consisting of interviews. The subsequent discussions-chapter then continues with integrating the findings of both phases and contrasting them with previous research.

4.1.   UWES-9 survey findings

The responses as presented in the following tables have been corrected for unusable responses. Responses deemed as unusable are such where the respondent has submitted only partial responses to the survey or responses by employees that have worked in the company for a time shorter than one month, who could therefore not be deemed justifiable references. The number of responses deemed usable amounted to 75 which, i.e. 30% out of Futurice' entire workforce.

The demography of the respondents is presented in tables 5-8 below with age divided into brackets of 5 years in order to maintain sufficient anonymity given the small sample. It is noteworthy that the age of the respondents is not normally distributed (as determined by using a Jarque-Bera test) and in terms of age skewed towards the younger age groups, with 44,0% in the 26-30 age bracket.

Table 5   Age distribution of survey respondents

Age	Frequency	Percent	Cumulative Percent
20-25	8	10.7	10.7
26-30	33	44.0	54.7
31-35	21	28.0	82.7
36-40	11	14.7	97.3
41-45	2	2.7	100.0
Total:	75	100.0	

Concerning the type of work that is done there is a clear majority (69,3%) that report themselves as being engaged mainly in team work rather than individual work (30,7%).

Table 6   Distribution of team vs. individual work among survey respondents

	Frequency	Percent
Mostly individual work	25	30.7
Mostly team work	52	69.3
Total:	75	100.0

In terms of nationality the vast majority of respondents are Finnish (82,7) with the rest of the nationalities being represented by merely one respondent respectively, except for the case of Germany represented by two respondents (i.e. 2,7%). Therefore, and considering that 13 out of 22 nationalities represented, nationalities will only be treated as either Finnish or foreign.

Table 7   Distribution of nationality among survey respondents

	Frequency	Percent
Finland	62	82.7
Foreign	13	17.3
Total:	75	100.0

The distribution of the length of the respondents' employments is presented below, showing a rather even distribution between employments of less than a year, one year, and two years respectively constituting over 15% of the responses. This seems to correspond rather well with the large proportion of younger employees.

Table 8   Distribution of length of employment

Years:	<1	1	2	3	4	5	>5	Total:
n:	14	13	14	7	11	6	10	75
Percent:	18.7	17.3	18.7	9.3	14.7	8.0	13.3	100

As can be seen in table 9 displaying the measured UWES-9 scores the number of Spice participants amount to only 9 (12%) out of the 75 usable responses, which renders comparison by statistical means between program participants and non-participants problematic as it is rather too small an amount to draw any decisive conclusions from. Nevertheless, there are some interesting characteristics in terms of how the groups differ, as well as in terms of how the results compare to the scores of the UWES-9 database. Survey data thus does provide valuable insights and a basis for further analysis and discussion.

Spice participants displayed 4.33 in terms of total UWES-9 score, thus 0.23 or 5% less than the score of 4.53 of the rest of the employees, who consistently scored higher in all of the characteristics. In relation to the rather small amount of Spice participants among the respondents, the differences are fairly marginal after all given as the notable risk that the 9 participants are not representative of all Spice participants, as the differences are limited to 4% in terms of vigour and dedication, and 6% in terms of absorption. Comparing Spice participants to the global means in the UWES-9 database we can see that program participants still score 0.48 higher than the global mean in terms of total UWES-9 score, with only vigour being lower than that of the global mean. Subsequently, the UWES-9 scores of Futurice as a whole (i.e. Spice participants + others) supersede the global UWES-9 scores even more with a total score 0.48 higher. Especially the average scores for absorption are worth noting. Not only is it the category in which Spice participants showed the relatively lowest scoring compared to others scoring 0,27 higher, it is also the category in which Futurice as a whole scores the highest over the database average by a remarkable 1,00 corresponding to 27%. Dedication in turn is higher than the database average by 0,43 or 10% whereas the difference in terms of vigour is insignificantly small.

Table 9   UWES-9 scores

	Spice (n = 9)		Others (n = 66)		Futurice (n = 75)		UWES-9 DB (n = 12,631)	
	M:	**SD:**	**M:**	**SD:**	**M:**	**SD:**	**M:**	**SD:**
Vigour:	4,04	0,68	4,23	0,80	4,20	0,80	4,18	1,24
Dedication:	4,52	0,87	4,73	0,72	4,71	0,72	4,28	1,36
Absorption:	4,44	0,87	4,71	0,67	4,68	0,67	3,68	1,43
Total score:	4,33	0,76	4,56	0,60	4,53	0,60	4,05	1,19

Some demographic characteristics could be shown to have certain impact on the UWES-9 scores. Results from regressions with the total scores and each of the sub-scores for vigour, dedication and absorption respectively are presented in the tables below. It is noteworthy that only vigour showed correlations with a majority of the studied demographical characteristics, whereas other models were limited to fewer significant correlations.

Regression with total score as dependent variable proved significant intercept at 4.6017 with a 5% confidence interval as presented in table 10. The dummy testing the impact of doing mainly teamwork in contrast to mainly doing individual gave a positive coefficient of 0.4208, as did length of employment[2], albeit with a coefficient as low as 0.0143, both at a 5% confidence interval.

Table 10   Regression showing impact of demographical factors on total UWES-9 score

	Coefficients	Standard error	P-value
Intercept	4,6017	0,2204	$1,5549\mathrm{E}^{-31}$
Age	-0,1183	0,0725	0,1073
Team vs. individual work dummy	0,4208	0,1412	0,0040
Length of employment	-0,1087	0,0650	0,0990
Length of employment^2	0,0143	0,0058	0,0170
Nationality	0,1890	01736	0,2801

A primary regression against all demographical variables provided results as displayed below in table 11. With four out of six demographical factors tested for showing significant results within a 5% confidence interval, as well a fifth factor (nationality) being significant at a 10% confidence interval leaving only age with a p-value of 0,3697, a new test was rendered excluding age from the model as presented in table 12.

Table 11   Regression showing impact of demographical factors on UWES-9 scores for vigour (all demographical variables)

	Coefficients	Standard error	P-value
Intercept	4,1949	0,2776	$1,3997\mathrm{E}^{-23}$
Age	-0,0824	0,0913	0,3697
Team vs. individual work dummy	0,5160	0,1778	0,0050
Length of employment	-0,1838	0,0818	0,0279
Length of employment^2	0,0211	0,0074	0,0055
Nationality	0,4120	0,2187	0,0638

The second model (Table 12) exhibited somewhat more precise results with higher p-values for all remaining demographical factors, except for nationality, which with a p-value of 0,0747 still did remain within a 10% confidence interval. Especially noteworthy is the positive effect of doing teamwork rather than individual work on vigour value with a coefficient of 0,5132. Longer employment, as indicated by the length of employment variable has an initial negative effect with a coefficient of -0,2012. However, the length of employment[2] indicates an exponential relationship where the negative effect alleviated over time as length of employment increases enough, albeit at a low coefficient of 0,0217, implying that the coefficient would turn positive only after 9 years of employment. A stronger positive effect is indicated from not being a Finnish national, however only at 10% significance level.

Table 12   **Regression showing impact of demographical factors on UWES-9 scores for vigour (corrected for significant results)**

	Coefficients	**Standard error**	**P-value**
Intercept	4,0307	0,2094	$1,1476E^{-29}$
Team vs. individual work dummy	0,5132	0,1775	0,0051
Length of employment	-0,2012	0,0794	0,0135
Length of employment^2	0,0217	0,0073	0,0041
Nationality	0,3933	0,2174	0,0747

Table 13 displays the results for correlations between demographical factors and dedication scores on the UWES-9 scale. Only the intercept and the dummy variable for type of work (team vs. individual) proved significant at a 5% confidence interval, to the favour of teamwork by a coefficient of 0,5046. Moreover, coefficients for all demographical factors except the significant team vs. individual work dummy were all relatively low.

Table 13 **Regression showing impact of demographical factors on UWES-9 scores for dedication**

	Coefficients	Standard error	P-value
Intercept	4,8279	0,2745	$3,3556E^{-27}$
Age	-0,1226	0,0903	0,1786
Team vs. individual work dummy	0,5046	0,1758	0,0054
Length of employment	-0,1187	0,0809	0,1471
Length of employment^2	0,0125	0,0073	0,0906
Nationality	-0,0360	0,2162	0,8681

In terms of the regression for the impact of demographical factors on absorption scores, presented in table 14, the intercept proved significant with a 5% confidence interval. None of the demographical factors proved to have significant impact at a 5% confidence interval, suggesting that absorption is dependent on alternative factors, although it is worth noting that a slight negative correlation (-0,1497) could be found in terms of age at a 10% confidence interval.

Table 14 **Regression showing impact of demographical factors on UWES-9 scores for absorption**

	Coefficients	Standard error	P-value
Intercept	4,7821	0,2628	$4.8226\ E^{-28}$
Age	-0,1497	0,0864	0,0876
Team vs. individual work dummy	0,2417	0,1683	0,1555
Length of employment	-0,0235	0,0775	0,7626
Length of employment^2	0,0093	0,0070	0,1865
Nationality	0,1911	0,2070	0,3591

4.1.1. *Summary of UWES-9 findings*

The UWES-9 survey returned results that on average exceeded the accumulated average total score in the UWES-9 database by 12%, mostly propelled by remarkably high scores for absorption exceeding database values by 27%. Differences between Spice participants' average UWES-9 score as compared to others turned out small in comparison to the differences of the total score for Futurice compared to database averages, at 5% lower scores among Spice participants.

All intercept coefficients proved to be close to the mean of the corresponding UWES-9 score, characterising the high level of significance the intercepts bear. Hence, coefficients for demographical factors, as has been portrayed are rather small. Interestingly enough, absorption which exceeded UWES database scores the most, was practically unaffected by the demographical factors tested for. Hence indicating possibilities that external factors play a more central role in shaping absorption levels amongst Futurice' employees.

Dedication also remained practically unaffected by demographical characteristics, with merely the team vs. individual work dummy producing significant results worth mentioning. However, the results show that vigour was influenced relatively much compared to dedication and absorption. Almost all of the demographical factors tested for proved correlations at significant levels, and in particular whether or not the employee is engaged in mainly team or individual work.

Finally, the model based on the total UWES-9 score resulted in significant correlations with two demographical factors, however only the dummy for team vs. individual work resulted in a coefficient of a level worth mentioning. Out of the demographical factors team vs. individual work showed the strongest effects on engagement levels, especially with regard to vigour and dedication.

4.2. Interview findings

This section presents the findings from the second research phase constituted by interviews with program participants. The findings are presented in several steps starting with the interviewees' perceptions of values and meaning, social identity and availability, as well as safety and privacy. These three sections serve to provide a picture of the terms in which these are discussed. Hereafter come the three characteristics of engagement; vigour, dedication and absorption, and a look at the interviewees'

experiences of the Spice programs effects on these. Each of these three characteristics of engagement and how they are affected by the Spice program were studied departing from thoughts on value alignment and meaning, social identity and availability, as well as safety and privacy, then letting each of the discussions continue to pursue relevant tracks as interviewees report their perceptions of the given issue. For the sake of clarity, findings regarding each of the characteristics are first preceded by a general description and subsequently followed by separate listings of positive and negative effects respectively (see appendix 6 for table of citations).

Answers, comments and examples presented or quoted in each section below do not necessarily derive from questions asked about that specific area. This is a result from the fact that at many occasions the interviewees' answers to given questions could provide valuable insights in terms of other questions as well. Thus, gathering, arranging and making sense of transcribed interview data has not been a strictly linear process, but one where the entire body of data from each interview has been used to distil insights for each of the sub-categories.

4.2.1. *Values and Meaning*

Six out of seven interviewees stated they could identify with or shared the same values as they perceived were the values behind the Spice program hence constituting the meaning or purpose of the program, with the last interviewee not considering the values relevant to his participation in the program. Perceptions of what the values behind Spice are were fairly consistent with openness and open source mentioned by all the interviewees. Interviewee I1 condenses it to *"Making open source, and making free software"*, and continues stating that *"All the values that belong to free software belong to the Spice program. All the ethical values are also Spice's values"*.

Furthermore, giving back to the open source community is pointed out by I6, *"...since we use a lot of open source in our work we kind of give back to the community"*. This is also mentioned by I7, *"After all, I've used open things all my life and benefitted from the community and now I've started giving back to it"*. Several other interviewees confirm similar ideas in terms of giving and helping others and the society in broader terms. I2 states that a value behind spice is *"Doing meaningful things for the society."*, *"You do stuff and give it for others to use."*, and *"Encouraging to openness and taking part in a global society"*. Also I7 embraces such a broader perspective and points out

"Helping others and a kind of openness.", and states that *"…after all it's taking open source even further to the idea of helping people"* as central to the program's values.

Adding to the idea of helping others I2 indicates that it is of importance that *"…the employer has made this program quite altruistically in the sense that what you do within the program is still your property and the only prerequisite is that it's shared with everyone for the common good"*. I3 makes a similar suggestion stating that an important value is *"…some sort of common good where you don't just work to make the company EBIT good, but also some embrace the world in a sense."*. Also I1 expresses that it feels good that the monetary compensation *"…very concretely shows on the salary slip that the company is acting and not only talking"*, adding to arguments about the company doing what is considered ethically right at its own expense. I4 describes it as *"…like one more cherry on top, something where we do the right thing, not only for the company but also for others"*.

I4 further mentions that *"One of the central values is that when you do this on your own time it is very useful for your own development"*, referring to how Futurice through the program supports its employees' spare time activities. Also I2 notes that the Spice program is supportive of open source as a hobby as it provides *"…better possibilities to do what I did before and like to do"*. It is noteworthy that I5 who otherwise parts from other interviewees in terms of value alignment and meaning for participating, stating claiming a neutral attitude towards the values involved, explicitly states that *"…the point why I wanted being involved with this is just the creation part, so I'd say I'm not passionate about open source itself but I'm passionate about creating stuff and the thing I happen to create is open source."*, suggesting that supporting his hobby coding activities is most important.

4.2.2. *Social identity and availability*

Not all interviewees felt that they could readily attach their identities to Spice or that they had a clear perspective on the program in terms of identity. Several interviewees made ties back to the values. For instance, I1 stated he could not say that he could attach his identity directly to Spice; *"With the values yes, but I don't understand the name comes from, why Spice?"*, and *"…there's a lot of silliness on the open source channel, meme jokes… somehow it stops me from fully identifying with Spice, though I*

definitely share the values". I6 comments in similar fashion that *"The first thing that comes to mind is that it's the ideology that hits the bull's-eye so I like to attach myself to that"*, but pointing out that the logo *"…is funny enough but I've always hated that pony joke somehow, so that's a thing that I don't like to attach myself to"*. Also I4 is on the same track suggesting *"It's like one more cherry on top, something where we do the right things not only for the company but also for others"*, however stating he could attach to the identity of Spice, hence equating the values with the identity. I7 in contrast, states that he feels he can attach his identity to that of the Spice program as *"…in a way it feels like what I am as a person"*. Also I5 says he can associate *"…with the non-serious part of it, yes… I mentioned in the beginning that I didn't associate my identity with the Spice program as a serious thing, but I do sort of identify myself with the funny part"*, explaining his view that *"If we have like a serious image then it would probably feel like work and yea… so I think the non-serious image of the Spice program kind of contributes to make it sort of fun"*.

The discussion of identity and attachment of the own identity to the Spice program thus indicates a certain level of conflict, on the one hand between the serious nature of the values and the identity, visual appearance and relaxed atmosphere of the Spice program, and on the other hand participants calling for such a *"non-serious part"* of the program as I5 puts it and those like I1 seeing it as silliness. This is also reflected in interviewees' perceptions of how the Spice program affects how they attach themselves and their identities to Futurice as a company. I5 who explicitly expresses his attachment to the relaxed atmosphere in the program explains that *"I kind of identify myself with Futurice better because it's not just my work thing but also my free time and the things that I do on my free time are sort of me because that's what I do in my free time. And if Futurice is involved in that then Futurice is kind of helping me be me"*. I6 on the other hand puts emphasis on the values and how that is what he likes to attach to rather than the program per se, and how the embodiment of these values through the program affects how he attaches to Futurice in that from his *"…point of view we've always had our values in the right place and this program just reinforces the values that we already had from before"*. Other interviewees were located in the middle of the spectrum with I2 arguing that *"It is still conceptually quite abstract as a program. So in sense yes but it's still a bit shady"* on the question whether he could readily attach his identity to the program. I3 rather emphasises the group of participants stating that *"It's kind of a good posse. Maybe attaching is too strong an*

expression but something in that direction, it's kind of this thing that it's cool to be part of".

4.2.3. Safety and privacy

In terms of safety, three central implications of program participation emerged. I7 emphasised effects in terms of increased level of professional skills stating that *"…I feel more valuable as an employee, and I'm not afraid that I wouldn't have a value in myself to the company".* I3 proposes that *"on some level the development of own know-how is supportive in a way",* further explaining that Spice nurtures *"…a certain knowledge capital so that on some level you have more competitive know-how and are able to participate more".*

Participation and membership as I3 points out is identified as having a positive effect on the feeling of safety in the workplace as I6 explains that *"I like to do open source anyway. I've done it already before Spice came along… so maybe along with the program it feels like more of a homelike place to be",* further elaborating that *"It always brings a kind of small feeling of safety that you have these different teams which you are part of and this is one more and that's always positive".* Also I4 tentatively indicates such tendencies *"I might feel more like part of a community but I haven't participated that much so I don't really have that feeling of a community".* I2 however adds another angle on added sense of safety as a member of the Spice program as an employee who is outsourced or doing significant amounts of telework. *"I think the largest challenge is that if you are outsourced or even work somewhere else the contact to the company is rather small, and we do speak rather openly about company issues but when you are in some completely other place then you might see things from another angle, which might make it seem like you're a bit of an outsider after all. So in situations like that I might say that it is one of the strongest ties to Futurice."*

Three interviewees also brought up feedback and feedback culture within Spice as a central factor affecting the feeling of safety. I1 states that *"…there is a bit of a culture where failures get commented upon. Not from above but specifically from peers",* asserting that *"Spice has been conflict free territory so far. Sometimes contributions are discussed but then it's that oh someone's doing something like this, so it's always in a positive sense".* Also I5 follows the same reasoning arguing that Spice has improved his sense of safety, arguing that *"normally there's no such kind of negative*

comments about things you're doing on your free time and it's only like interesting and people like that and comment that". Elaborating on this I6 reports that *"It's not like if you bring open source up for discussion around the coffee table someone's going to be like what are you talking about, that makes me feel good"*, arguing that Spice has had a legitimising effect on open source within Futurice.

Finally, the trust in the employees displayed by the company is brought up. As I6 states *"The program kind of provides the possibility to take part in any programming activity that is open source and has the right licence, so there's a trust that people do stuff that makes sense"*. I7 comments in very similar wording that *"...there is a trust in people that they can do good stuff"*, suggesting that *"...there is a trust in people and care for them"*, alleviating pressure that might affect the feeling of safety, with also I3 stating that *"Futurice has a fairly open kind of a low threshold climate"*.

4.2.4. Vigour

Interview data suggests that there are mainly positive effects from the Spice program on vigour as assessed by energy levels, eagerness to get to work, and feeling strong at work, as interviewees mainly positive effects. However, it is hard to determine the scale of the impact of each of the ways in which the Spice program impacts vigour, something that many interviewees explicitly pointed out, stating that they found it hard to quantify, rank or explain the extent of said effects.

Especially I1 reported a fairly neutral relationship between program participation and vigour in the workplace, stating that that Spice' values *"Currently mainly affects free time"*, and that *"Identity issues feel rather distant from daily work"*. Also I3 stated that the actually *"making contributions doesn't really affect the feeling of safety as much as it boosts my energy from the rewarding feeling of having gotten something done"*.

A feeling of safety as a product of the Spice program was reported to have some positive effect on vigour, however all interviewees mainly considered it a neutral relationship, where not feeling safe would have negative effects, with I1 suggesting that *"negative discussions emerge it could have a negative impact"*, however following up with the statement that *"the discussion climate has been positive but not affected my energy levels at work"*.

4.2.4.1. Positive effects of the Spice program on vigour

Interviewees reported several positive consequences from program participation. On the one hand interviewees pointed out consequences that follow participation on a more practical or concrete level, on the other hand consequences that followed the ideological aspects of program participation and feelings towards it.

In terms of effects following the more practical aspects of program participation on vigour I2 explained that *"The ability to shift focus is invigorating. It's nicer to return to regular work after doing different things"*. I1 on the other hand focuses on the customer contracts and the customer contract clause on publication of improvements and alterations to open source software used in solutions provided to the customer stating that the effect derives from the values as a *"slow positive effect only after practical actions have taken place as a product of the program, such as that customer contracts are updated"* and that there is an *"enormous effect if entire customer projects were to be released as open source"*.

The values and feeling of being part of a group through the Spice program was reported to have a positive effect on vigour and energy levels as I2 states *"It affects energy at work enormously as it helps me feel like I'm part of a group of likeminded people with equal values"*. I4 did as well state that the program *"...does have quite a strong effect the more I feel like I'm part of a group"*, as did I2 commenting that effects on vigour are *"positive in the sense that it gives the sense of being part of a group"* or *"team spirit"* as I5 calls it.

The Spice program's values were explained by several of the interviewees to have positive effects on vigour at work. I6 states in a general fashion that it is *"one out of many things that make it feel nice to go to work and work a nice place to be"*, with I7 on the same track telling that *"work that is in line with my values gives me incredible amounts of energy"*. Also I3 pinpoints Spice' values as central in that it's *"something that generally makes the world a better place"*.

Another effect reported by I2 derived from feedback received on Spice program contributions. I2 states that *"The feedback that I might get has the potential of increasing my energy levels"*, explaining it as an *"intermediary effect as it is easier to share stuff without risk"*.

4.2.4.2. Negative or neutral effects of the Spice program on vigour

In terms of negative effects from the Spice program on vigour, interviewees mainly pointed out the straining effects that additional coding or work in general can have, as program activity takes place on top of regular work. I2 stated that *"...if you have work you practically do as overtime in addition to regular work, one has to acknowledge that when you start doing some own project it does constitute a burden of course"*, further explaining that *"...in a sense you do some more of the same work you'd do at work on your free time, and you have to be cautious that you don't burn yourself out on voluntary work"*. Also pointed out strain as a consequence of program participation *"...if someone does it in the evening then you're all the more tired in the day"*.

Moreover, associating or ultimately attaching identity to the program was considered challenging or even in the case of I1 even resulting in a somewhat negative effect in that he felt that the identity of the program was making it difficult to attach to Spice although he could fully associate himself with the values. Stating that he could attach his identity to Futurice he further explained that if Spice was closer to that and *"...more like the visual appearance of Futurice and all then it could better merge with my own identity"*, and that *"If over the years all the ideas of Spice would move so they'd become the ideas of Futurice then it would increase my attachment to Futurice"*.

4.2.5. Dedication

The dedication, as measured by feelings of enthusiasm, inspiration and pride was indicated by the interviewees to have been affected mainly positively in their experience. However, also in this case the internal hierarchy of the factors is unclear, and it is rather the amount of positive factors reported by the interviewees, as well as the lack of negative effects reported, that is indicative of participation in Spice having a positive effect on dedication.

4.2.5.1. Positive effects of the Spice program on dedication

Also in terms of dedication interviewees pointed out or referred to the values behind the Spice program as central to the effects they reported the program had. I1 explained that values and in terms of Spice, value alignment is central as *"coding open source is very inspiring. In one project where the contract with the customer didn't contain the clause enabling publication I recoded a modification to a software library on my own*

time in order to publish it”, using the example to point out that *“It's inspiring but when you do nine to five work it has to be in the form of practice”*, referring to his earlier comments emphasising the need for the values to have practical consequences, not only good intentions, and that it hence has an effect only over time as practical consequences emerge. I7 on the other hand has a lighter approach explaining that *“I can identify with the values and get inspired by them”*. I6 refers to the values and how *“probably one of the strongest effects from the program has been pride”*, and that *“I enjoy tweeting and telling my friends about it”*, explaining that *“it is inspiring in terms of the sense of being forerunners and increasing pride as we are the best in this area”*. I2 represents equal experiences *“Spice has increased my pride of Futurice and I have told about the company to my friends because of it”*.

I5 emphasises the culture, and joking atmosphere, stating that *“it’s cool if we can create our own subculture, it’s a good connection between not serious identity and free time activities”*. In a similar way, I7 lists *“fun events, funny logos and a good attitude increases inspiration, kind of like partying with your colleagues”*, confirms likeminded thoughts on how his dedication has benefitted from program participation.

A sense of freedom to create is pointed out by I2 suggesting that *“I believe it has an effect as it is kind of detached from work and there are no consequences if you fail”*, continuing explaining that *“through trial and error I can find inspiration for my actual work”*. I6 follows similar sentiments stating that *“it's inspiring that I can create tools I need and not like I don't have the time and feel stressed about it”*. I3 makes careful statements suggesting *“I think it has a slight positive effect but it doesn't feel like a system with clear inputs and outputs but it helps in showing what one does and developing oneself”*, and that *“It helps in extending my own toolbox for when the day comes when I can use it in my actual work”*, concerning how practical consequences of the program have affected his dedication at work.

I1 adds thoughts on how the actual pleasure of writing code in conjunction with the values behind open source affects vigour explaining that *“Coding open source is very inspiring. In one project where the contract with the customer didn't contain the clause enabling publication I recoded a modification to a software library on my own time in order to publish it”*. Also I7 suggests that the values and learning practical professional skills within the program has a positive effect *“Spice has helped me think in terms of products, what people need and what could be improved, which is inspiring”*.

4.2.5.2. Negative or neutral effects of the Spice program on dedication

None of the interviewees reported any negative effects from Spice program participation on their dedication. Albeit not negative, I4 however stated that the program had not had any effect on dedication. Neither did five out of seven interviewees experience any effect explicitly from Spice in terms of feeling of safety on dedication although three out of these five did experience that safety per se has a significant effect on dedication.

4.2.6. Absorption

Absorption, as indicated by getting carried away, immersing oneself in one's work, and feeling happy when working intensely, turned out to be the least connected with Spice program participation as reported by the interviewees. The interviews rather indicated that the relationship between Spice and absorption is quite neutral with few exceptions, although the interviewees did state that they do get absorbed by their work from time to time. It would seem that although there is an increased possibility of immersion in program related work, however no or little effect from this on other work performed in the workplace.

4.2.6.1. Positive effects of the Spice program on absorption

I2 explains that *"There are a few cases where you really get into what you are doing because you are so interested in it and it's the right time. But since we do a lot of consultancy work I think it mainly depends on the customer"*, suggesting that although he might get immersed and absorbed by his work, there are other factors that have a stronger impact. Also I3 states that *"Sometimes it can get me into a flow"*, but quite like in the case of I2, he could not report any specific situation in which the Spice program or participation in it would have had an effect on absorption. I1 states that there may be a positive effect *"in the long run yes when it has become a part of everyday activities, currently not really any effect. The values are important, in that I do something universally beneficial rather than just make money for the customer."* yet again emphasising the values and them being a concrete part of everyday work. I2 explains that *"I might immerse myself more in the projects that I do within the Spice program, however I don't think it really affects the rest of my work"*.

I6 and I7 however provide a couple of different points of view. Firstly I7 suggests that *"In a sense I see this as a part of me and it doesn't feel bad to take this with me in my thoughts during my free time so that I am continuously somewhat focused and immersed in these projects"*, referring to how he remains thinking of work related open source projects even after work. I7 continues explaining that Spice *"...has helped in the sense that if you doubt your skills it's hard to immerse yourself in your work"*, building on earlier statements that he has increased his know-how in the field and that his Spice *"work has marketing value for me"*. I6 adds that *"Spice has helped in that it makes me feel more like a member of a group and thereby given me a sense of safety that makes it easier to focus"*, thus providing similar suggestions that the increased feeling of safety that Spice had provided laid a ground for absorption.

4.2.6.2. *Negative or neutral effects of the Spice program on absorption*

In terms of negative effects of Spice participation on absorption, I3 explains that *"At the start or end of the day hobby projects can be distracting"*, referring to open source hobby projects done within the program. I4 thinks that the program *"Probably helps, but I haven't experienced it"*, continuing that *"It can actually help a lot if you work with a team. If you are on your own your thoughts might wander"*. As little work other than hobby projects evolve to become main work tasks performed during business hours, the likelihood of such an effect is still small at best and best considered as neutral.

4.2.7. **Summary of interview findings**

Values and meaning, social identity and availability, as well as safety and privacy were all reported to have an impact on the characteristics of engagement. Especially the values behind the Spice program were pointed out to have positive effects. These could in broad terms be divided into two main functions being primarily the employee doing good by participating, and on the second hand the employer doing good by providing the program as depicted in table 15. In terms of social identity and availability the interviewees reported the Spice program both introduced drivers of attachment of the own identity as well as challenges (marked by *). Safety and privacy was associated with what could be divided into three categories of positive effects on safety, firstly signals of approval from the employer, secondly a sense of membership, and finally learning and increasing the own confidence through increased professional skills.

Table 15 Summary of interviewees' perceptions of values and meaning, social identity and availability, and safety and privacy

Values and meaning

Doing good	- Giving back - Helping society - Transparency and openness - Helping others
Employer doing good	- Altruistic behaviour from the company - Support of the employee's interests and projects

Social identity and availability

*Challenges to attachment of identity**	- Name and logo strange* - Silliness and strange jokes* - Rather abstract*
Drivers of attachment of own identity	- Identification with the funny part - Good group

Safety and privacy

Signals of approval from employer	- Employer displaying trust in employees - Employers approval
Sense of membership	- Healthy feedback culture - Participation and membership
Learning and increasing confidence	- Increasing own employee value by increasing professional capabilities - Learning new skills - Learning new skills

Interviewees reported the highest amount of effects to be effects on vigour. These constitute three general groups of positive effects on vigour, namely variation, membership and support, as well as concrete consequences in line with values, as presented in table 16. Moreover, interviewees indicated that program participation on the other hand could induce strain as a negative effect (indicated by *) on vigour. Some interviewees also considered the identity, consisting of the visual language, and program jargon, an estranging factor influencing negatively on their vigour. Dedication was considered to be primarily positively affected by the program to the extent that it was affected. The effects could be divided into increased dedication through the purpose and meaning of shared values with the program, as well as the autonomy the employees were given through their program participation. Finally, absorption, was mainly considered to be affected through program participation by more junior interviewees. The reported effects took the form of an increased sense of safety, and thereby peace of mind allowing them to be absorbed by their work.

Table 16   Summary of Spice' effects on vigour, dedication and absorption as reported by interviewees

Vigour	
Variation	• Variation is invigorating • The program feels new • Getting to work with something of my own
Membership and support	• Membership in a group with same values • Being able to share in the group without risk • Team spirit • Feedback increasing energy
Concrete consequences in line with values	• Contract clause • Giving back to the community

Strain*	• Tiring to continue writing code in the evenings* • Getting carried away and spending too much energy*
Identity of the program estranging*	• Strange jokes* • Strange visual language* • Not in line with Futurice identity*

Dedication	
Values as purpose and meaning	• Open source coding inspiring • Values behind open source • Pride of program values
Autonomy	• Own subculture • Freedom to create • Learning new skills • Judgement-free environment for experimenting

Absorption	
Peace of mind	• Safety and calm to immerse oneself in work • Confidence in own skills • A possibility to focus on work related skills outside of work

4.2.7.1. *Unified framework of interview findings*

The themes that emerge in the vigour, dedication and absorption, and values and meaning, social identity and availability, as well as safety and privacy resonate well with each other with sharing several central themes. Figure 5 represents a recategorisation unifying the two sets of themes into a combined set of seven central, broader effects on engagement from Spice program participation, as perceived by the interviewees. The

reasons for moving back towards lesser detail are twofold. The first reason is practical and, a stripped down model is easier to grasp in order to comprehend the main effects more easily. The second reason is a methodological precaution. Given the characteristics of the thesis, being a single case study of encompassing a limited body of data, making highly detailed and specific claims is questionable. The purpose of these broader categories is hence to allow for better applicability of the tentative theoretical generalisations outside of the specific case, and thereby provide better support for potential future studies.

The themes that emerge are firstly a sense of membership, encompassing the membership and support that interviewees reported affected vigour, together with the sense of membership that was reported to improve safety. The combined category thus involves the idea of being a member, a sense of belonging to a group, paired with more concrete notions of membership in the form of feedback and recognition. This contrasts with practical teamwork within the frame of actual work tasks where work is actually shared as program contributions thus far have been individual projects. Alignment with program values comprises doing good as well as the employer doing good, reportedly being central functions of the program in terms of value and meaning, combined with concrete consequences in line with values affecting vigour, and values as purpose and meaning improving dedication. All of these reported effects share the common denominator of a shared value base between participants and program ideals. The reported effects are essentially practical actions that all build on acting in accordance with said value base, thus naturally forming a common category. Attachment to program identity in turn combines the positive drivers of attachment, as well as the negative forces of an estranging identity, thus being a category that has two sides and encompasses the issues of how the program identity and culture are communicated. Learning and increasing confidence increases the feeling of safety and is united with peace of mind that both reportedly supports absorption. These two categories were found to be in consonance to the extent that they both concern the employee's sense of confidence and acceptance from his or her peers, as well as the employer in terms of professional capabilities. Signals of approval from the employer however, is not included as it is concerned with the approval of the values and ideals of the employees, rather than their professional skills, as is the essence of the category of learning and increasing confidence. Also autonomy as well as the negative effects of strain remain as autonomous categories, as these could not be found to be combined with other categories without significant generalisations at the loss of insight.

Figure 5   Unified framework of phase 2 findings

A Sense of Membership

| Membership & support | Sense of membership |

Alignment with Program Values

| Values as purpose and meaning | Doing good |
| Concrete consequences | Employer doing good |

Attachment to Program Identity

| Program identity estranging | Challenges to attachment |
| Drivers of attachment | |

Learning and Increasing Confidence

| Learning & confidence | Peace of mind |

Autonomy to Pursue Interests and Needs

| Autonomy | Variation |

Signals of Approval from Employer

Unintended Strain from Excessive Program Engagement

4.3.   Limitations

Given the methods used, the specific case studied, and the nature of this research being a master's thesis, there are some limitations that need to be considered. The perhaps most fundamental of these is the nature of a master's thesis, as it is what has set the timeframe of the entire research, hence also affected the extent of the research and the methods used. In practical terms this implies a timeframe of one year, hence limiting

the time available for reviewing previous research, and most importantly, data collection.

The given timeframe has, in terms of quantitative data collection, implied that no longitudinal research was possible, although this would have been the optimal method to use. Yet given the controlled sample it is possible to perform additional UWES-surveys and thus build a longitudinal study beyond the scope of the thesis. However, in the case of this thesis it needs to be noted that the UWES-survey failed to fulfil its intended role as no significant results could be achieved given the low amount of program participants that responded, hereby leaving research question one unanswered. The timeframe, as well as the method for identifying participants, in terms of the qualitative interview study, implied that interviews were limited to program participants by the narrow definition of individuals that had made software contributions. Thus the findings are limited to the narrow definition of participants as OSS-contributors, omitting potential effects of the program on employees taking part in other parts of the program, or potential effects of the mere existence of such a program on any and all employees.

It is furthermore noteworthy that both phases of the research, relying on self-reporting, is potentially subjected to some inherent shortcomings of the nature of the method as e.g. social desirability bias may occur. Firstly, there is no way to guarantee the honesty of any of the responses as respondents or interviewees might be biased or inclined to attempt to actively portray their employer in a more positive or negative light than is true. Hence, the accuracy of the results is dependent on an assumption of truthful answering. Secondly, and despite the researcher's best efforts, there is a certain risk of differing understanding or interpretation of survey and interview questions. Moreover, due to the somewhat abstract nature of especially the interview questions, responses are subject to the introspective abilities of the respondents. Consequently, the relative importance of reported effects cannot be determined with precision.

5   DISCUSSION AND CONCLUSIONS

This chapter comprises a discussion of the findings, tying them together with theories presented in the literature review. The chapter will start with a discussion on how interview insights relate to UWES-9 findings, and how the latter could be explained by the former and vice versa. Some tentative theories on the relationships between phase 1 and phase 2 data are laid out. The following part brings together findings and theory as presented in the literature review, assessing on the one hand whether, and how the findings in this study agree with theory, and on the other hand what the research has to offer in terms of added insight. The chapter is then concluded with some suggestions for future research, as well as practical implications of the findings.

5.1.   Interview insights and UWES-9 findings

This section combines quantitative data from phase 1 and interview data from phase 2 of the study in order to generate increased understanding by cross-referencing the findings, to address research question 2, i.e. how the results from the UWES-9 survey can be explained and used to understand the interrelationships between extrarole activities exemplified by the Spice program and employee engagement. The data gathered through the UWES-9 survey offers contextual data that helps in understanding interview responses. Moreover, the interview data from interviews with the Spice participants helps in interpreting their UWES scores, and what the relationship between the scores and Spice program participation could be. It is however necessary to be mindful of the limitations of a dataset as small as the one studied. Any claims or assumptions based on the data are not to be considered suitable for any more than theoretical generalisation.

The lack of longitudinal data is a vital aspect of the research results that needs to be taken into consideration, as it has important implications for how the findings can be analysed. In practical terms it implies that neither the Spice participants' nor the non-participants' initial UWES scores have been which means no trends can interpreted from the data. This in turn means that effects from participation in the Spice program cannot be read solely from the survey results of the quantitative study in phase 1, as it is possible both that the participants' engagement levels were higher before, implying a decrease after participation, as well as that they were lower before. Therefore, UWES-

results and demographical data, as has been pointed out earlier, is used as contextual data to provide augmented understanding of qualitative interview data from phase 2.

Out of the effects from program participation on vigour, membership stands out as an effect that seems to align well with quantitative data. The statement aligns well with results from the regressions with demographical data indicating that working mainly in a team as opposed to doing primarily individual work has a positive impact on vigour. As $\frac{1}{4}$ or 44% of the Spice participants who responded to the survey were engaged mainly in individual work, they represented a far larger proportion than among the group of non-participants where the corresponding percentage was 29%, it could be an explanation for the lower vigour score of the Spice participants. Interestingly enough it was notably the interviewees who also had spent a shorter time within the company who emphasised the value of membership and shared values most, which probably follows the fact that they are newer in their roles and more senior employees in terms of employment length are more settled in the organisation and experience a smaller impact. Also some interviewees' expressing concerns with the identity of the program being estranging offers further clues as to the importance of attachment with a group from the perspective of identity. Such an estranging effect is however not likely to affect the Spice participants' vigour score negatively relative to the others' per se. Rather, it would be an effect that halters or diminishes the positive effects of the sense of membership from Spice participation. Taking all these aspects of the two data sets into consideration it would indeed seem that not only a sense of membership and belonging but also membership on a very concrete, practical level does affect engagement levels. The distinction between a sense of membership and practical teamwork is both interesting and important. It should be safe to assume that doing work in a team does not automatically imply a profound sense of membership, although it most probably increases the possibilities for it. Spice-program participation on the other hand offers a possibility for a sense of membership around a common cause that is characterised by the participants' own choice, which assumedly increases the likelihood of a sense of membership or belonging. Hence it would seem that a program such as Spice could serve a role that HR cannot approximate merely by structural measures.

The added strain from spending personal spare time on coding open source on the other hand is a negative effect that would be limited to only participants, and hence could have a role in explaining why the Spice participants' average vigour score was somewhat lower than that of non-participants. This would in turn probably be offset by

the positive effect of variation through the possibility of varying regular work tasks with Spice projects, yet it is hard to assess the effect of variation through the numerical data, especially as the level of strain would probably vary over time and be affected by several other factors at both work and in the private life as interviewees pointed out. Moreover, the amount of strain imposed on the participants would be subject to their personal capabilities to self-regulate and optimise the amount of program participation so that strain is avoided. Hence, to properly assess the effects of strain longitudinal data on an individual level would be necessary. Although the strain induced on participators would technically be mainly dependent on the individual it is still provoked by a program run by the company and thus arguably also the employer's responsibility to a certain extent. This in turn implies a conflict between providing autonomy for the employees and limiting their freedom to participate in order to avoid added strain countering the the positive effects engagement has in minimising burnout. Despite the fact that the level of added strain remains unknown it does call for monitoring by HR or program managers.

Although interviewees indicated that doing open source and supporting the values behind open source and Spice increased dedication, they had not rated pride particularly high in the UWES survey (see appendix 5). Assuming that the statements do hold true nevertheless, and they do consider the values as a basis for purpose and meaning, it could indicate that they simply are more critical in terms of ethics and care more about such values than the non-participants are. Statements such as that the values need to lead to concrete consequences in order to affect their dedication or vigour in greater extent would support this. As has been pointed out however, drawing general conclusions about Spice participants from the available data is at the least problematic.

The Spice-participants' inspiration at an average score of 4,44 is equally low as pride. Judging from interview data it seems likely that inspiration was interpreted in very concrete terms as practical ideas that can be implemented in the work role rather than in the sense of a feeling of inspiration. Hence, this could explain how the closely related feeling of enthusiasm still was rated one of the two highest scores together with immersion at 4,67. Enthusiasm scoring higher however seems logical, as it seems likely that both autonomy and values play a role in increasing the employee's enthusiasm, judging from the interviewees' statements suggesting that the freedom to create what they want in line with their own value base increases energy and enthusiasm.

As in the case of vigour, mainly working in a team was shown to correlate with higher scores for dedication. This could in turn imply that a sense of membership could have a positive effect on dedication as well, although it did not protrude as a central theme in the interviews. It could be argued that even though regular work teams do not constitute groups that have formed around shared values, as it was suggested is the case with Spice, working in a group could to some extent provide at least an own subculture, and a social platform for learning new skills. Both of which were suggested by interviewees to be positive effects from program participation on dedication. This adds further to a model differing between practical membership and a sense of membership as discussed above.

Absorption turns out to be the perhaps most complex and interesting of the three characteristics of engagement. Firstly, it is the characteristic that differs the most from the UWES-9 database. Secondly, at a score 6% lower for Spice participants than others it represents the largest difference between Spice participants and others. Moreover, it also has the largest internal variation between the three factors queried for (i.e. feeling happy when working intensely, being immersed in one's work, and getting carried away when working. Finally, absorption did not seem to be affected significantly by any of the demographical factors queried for.

The interview data gave little insights as to absorption. Interviewees reported that the increased know-how, new skills and the safety of a group did have some positive impact on absorption. This could be argued to be in line with the relatively high score for immersion that in the case of Spice participants exceeds the score of others. The lower score for happiness when working intensely, on the other hand could align with an assumption that values play a more central role in a work setting in the case of the Spice participants, not only being happy with intense work per se but making a difference between what work is done, which would fit the central role that values reportedly have. The bottom line however is that it is probable that external factors such as the state of the personal life and relationships play a central role in terms of absorption, apart from job characteristics and interpersonal relationships in the workplace mentioned above. A potential further answer to what the external factors could also be found in attributes specific to the IT-industry and the characteristics of the work of developers, with its heavy focus on writing code. As UWES-9 data gathered in this research cannot offer any clear indications in this matter given the internal

inconsistency of scores for absorption it seems most likely that it is indeed factors such as these that need to be examined to gain an understanding of the absorption scores.

5.2. Conclusions of the findings and implications for theory

A Sense of Membership

A sense of membership and the subsequent peer support from membership correlates with several of the antecedents to employee engagement as presented in the literature review. Firstly, a rather direct correlation is that with team and co-worker relationship as reported by Anitha (2014). It is suggested that good relationships with co-workers leads to increased employee engagement (Anitha 2014). This rings true to the statements of the interviewees suggesting that a sense of membership in a group united by the same values increases both peer support, feedback and safety. Furthermore, Bakker (2011) explicitly suggests that social support from colleagues, as well as performance feedback are job resources that antecede employee engagement. This correlates well with the interviewees' suggestions that Spice has brought about increased amounts of positive feedback and encouragement from peers. Results indicate that Spice-participation first and foremost supports a sense of membership, a sense of belonging to a group rather than providing practical teamwork. Moreover, interviewees stressed that they considered feedback from their colleagues as especially valuable, and a source for energy at work. In broader terms, these factors are much aligned with what Shuck, Reio and Rocco (2011) suggest in terms of a positive psychological climate as an antecedent to employee engagement. The interview results from phase 2 thus seem to agree well with what previous studies predict in terms of statements about membership and support as factors that the interviewees perceived as positive consequences from program participation influencing their engagement or specific characteristics thereof.

Attachment to Program Identity

Identity, or more specifically, identification with the program bears some similarities with membership as portrayed by the interviewees as membership was much concerned with identification with the values. Out of the effects from Spice participation, identification was one out of two that was also connected with negative consequences for employee engagement as some employees reported they could not fully identify themselves with some of the visual language and the jargon among

program participants. Identification in this sense approximates what Shuck, Reio and Rocco (2011) term affective commitment, one out of three antecedents of employee engagement the authors outline in their paper *Employee Engagement: An Examination of Antecedents and Outcome Variables*. The affective commitment, i.e. an emotional bond with the workplace can, however, not be fully explained merely in terms of identification. Rather, it overlaps with a sense of membership, just as the identification, as it is termed here, overlaps with membership. In many senses, the lines are blurry, and so antecedents, mediators, and outcomes do not form clear systems of unique inputs with unique outputs. This could also be observed in the interviews where interviewees voiced their concern that it was hard to make clear distinctions between emotions that were not always clear to themselves. Another overlap courtesy of this blurriness is one with value alignment, with several interviewees underlining values as a source for identification, attachment of the own identity and commitment.

Alignment with Program Values

Value alignment, in the case of the Spice program, seems to be a uniting factor in terms of membership and identification. It is however, as the interviews showed, also in itself a factor that has positive consequences on the interviewees' employee engagement. Also value alignment has been suggested by earlier research to be an antecedent to employee engagement. Shuck, Reio and Rocco (2011) state that job fit, which they define as congruence between the employee's and the company's interests and values, antecedes employee engagement. Moreover, the authors suggest that congruent interests and values of the two parties predict affective commitment. Such overlaps and interconnection between these antecedents may hence seem rather confusing and imprecise. However, such interconnectedness is what gives engagement its characteristic effect of a self-reinforcing positive spiral, much like a positive counterpart to the negative spiraling effects of burnout, as the burnout antithesis of Schaufeli and Bakker (2004a) dictates. Anitha (2014) suggests that also fair organizational policies play an important role as antecedents of employee engagement. Although the author emphasises e.g. fair recruitment policies and selection as examples of such policies, it can be argued that these policies are much in line with questions of value alignment as the values brought up by interviewees were much concerned with issues of doing the right thing, and that doing the right thing is to give back to the open source community the company has benefitted from. Hence, although values have been noted by previous research, they have been a discussed mainly in terms of a part of

larger factors such as job fit. The case at hand however indicates that values could play a very central role in a framework where extrarole activities with a strong value base could serve to improve engagement, or at least aid in shaping the right environment for employee engagement to form.

Signals of Approval from Employer

The third of the seven central themes that emerged from the phase 2 interviews was that of signs of approval from the employer. Similar findings can be found in earlier research suggesting that such a factor has a positive effect on employee engagement. Saks (2006) firstly suggests that perceived organisational support increases engagement. The interviews uncovered perceptions of the Spice program in terms of a type of stamp of approval, indicating the employers support for the employees' interest, values and cause. Such signals were in turn said to be further reinforced by the monetary compensation provided for contributions. This follows predictions by earlier research with notably Anitha (2014) stating that compensations affect engagement positively. Also Saks (2006) does points out similar effects reporting positive effects on engagement from rewards as well as recognition, both being present in the Spice program. In addition to the positive signals that the employer sends through the program and compensation, there is, as mentioned earlier, an important component of recognition from peers arguably adding furthermore to this type of positive effect.

Learning and Increasing Confidence

Learning and enjoying increased confidence through program participation emerged as a positive effect in the interviews, both of which have been suggested to have positive impact on employee engagement by previous research. Anitha (2014) mentions training and career development, and Bakker (2011) learning opportunities. As the skills applied, developed and learned within Spice are highly compatible with or even the same as those used in the participants' daily work, the effect on employee engagement should be immediate without any dampening effect from the fact that Spice contributions are separate from regular work tasks. In these terms Schaufeli, Bakker and Salanova (2006) indeed list professional efficacy among the antecedents of employee engagement, as does Bakker (2011). Furthermore, Bakker (2011) adds self-esteem to the list of antecedents of engagement, resonating well with the interviewees reports of self-esteem, or confidence, being one of the effects following learning and increased professional efficacy, and affecting their engagement.

Autonomy to Pursue Interests and Needs

Autonomy in the workplace through program participation, which in the interviews arose as one of the positive consequences from Spice participation affecting employee engagement, has been also been suggested by earlier research to be an antecedent of employee engagement. This autonomy was reportedly manifested in two main functions. On the one hand the freedom to pursue own interests by coding what the participants want, and on the other hand the freedom to code what they need without cumbersome permission processes. This is in accord with Bakker (2011) who lists autonomy among job resources that have a positive effect as a part of a motivational process ultimately increasing employee engagement. It is certainly important to bear in mind that the autonomy that is introduced through Spice program participation cannot be automatically assumed to have the same effect as suggested by Bakker (2011), as Spice participation does not affect the levels of autonomy in terms of regular work tasks. Although Spice is constituted by a set of projects that are hobby projects, they cannot be completely separated from the company and the work community, thus assumedly still playing an at least mildly positive role in increasing the employee's engagement.

Unintended Strain from Excessive Program Engagement

The final of the central themes identified in phase 2 interviews of the research is increased strain induced by increased amounts of coding done by the Spice participants. This would occur in situations when the program participant fails to self-regulate the amount of program participation in relation with work and other tasks which results in excessive strain. Naturally this could occur with any hobby employees are engaged in, however the fact that Spice is directed by the employer means it could be argued that some level of responsibility lies with them, not only the participants. With job characteristics playing a central role in formation of engagement (Saks 2006), and strain having an increasing effect on burnout, the antipode of engagement (Schaufeli, Bakker and Salanova 2006), its' negative effects in the setting at hand is in line with previous research. This also resonates with expressed concerns of employees becoming too engaged, to the extent that e.g. families suffer (Halbesleben et al. 2009).

5.3. Final conclusions

The literature review presented converging views from previous research on antecedents of employee engagement, with requirements on both job characteristics and resources as well as on the individual employee. As the literature review indicated, the concepts of employee engagement and that of extrarole behaviour or activities are connected to each other (Saks 2006). The research at hand has in the Spice program investigated an examined an example of extrarole activity in an attempt to shed more light on the specific relationships between these two concepts. Whereas previous research has treated extrarole behaviour as an outcome of engaged employees (Saks 2006), this research has explored the potentials for a reversed causality where extrarole activity such as exemplified by Spice would serve as an incubator creating the appropriate antecedents for employee engagement to form or increase. This was done by first studying engagement levels at Futurice in a first phase using the UWES-9 survey in order to answer whether program participation had an impact on engagement.

The survey did not prove a significant correlation between Spice participation and increased engagement score as a consequence of the moderate amount of Spice participants, that rendered the use of statistical means problematic. The survey did however provide results that provided indications in terms of the impact of demographic factors, as well as individual UWES-9 scores for program participants. This served an important role in choosing purposeful interviewees for the second phase, as well as in providing contextual information for the understanding of the interviewees interview answers.

The subsequent second phase of the study then explored Spice participants' perceptions of how participation had affected them and their engagement. This was done with the purpose of answering the question of how the survey results could be explained in order to provide a picture full enough in order to answer the ultimate research question of how work-related, extrarole activities, such as exemplified by Spice could affect employee engagement. Seven central themes emerged from the interviews consisting of five effects that had a clear positive effect, one that could have both positive and negative consequences depending on the individual (attachment to program identity), and one negative effect. These results offered some tentative theories as to why participants' scores were lower than those of other employees, however a longitudinal

study of a larger sample would be required to gain comprehensive proof of any linkages.

As to the question of how work-related, extrarole activities, such as Spice, could affect engagement, the study has provided indications that such activities could indeed provide appropriate circumstances and antecedents central to the formation of employee engagement, as suggested by earlier research presented in the literature review of this thesis. The results hence suggest that the relationship between employee engagement and extrarole behaviour is not limited to a one-directional relationship where extrarole behaviour follow engagement, but where ERB/A could indeed serve to shape appropriate circumstances for engagement, suggesting a more complex interrelationship that cannot necessarily be considered a causal flow in any direction. Rather it would seem, that engagement grows and thrives where ERB/A thrives. Yet, the case in question has provided a highly interesting example of how the embodiment of ERB/A in a program could serve to shape the circumstances under which employee engagement should form given earlier findings in terms of antecedents and mediators of engagement. Such an interrelationship, theoretically interesting as it is, could however also have valuable practical implications in helping organisations engaging their employees and members.

5.4. Suggestions for future research

Although the results from the study offered indications of a two directional relationship it needs to be noted that it was limited to a harsh definition of Spice participation allowing only contributors into the sample. This naturally offers only a simplified image of the impact of Spice participation. It is possible, given the central role of the value base of the program, that the mere existence of the program may have a positive effect on employees regardless if they participate or not, a secondary effect that would merit further research. Moreover, a longitudinal study using the UWES-9 survey would provide interesting insights as to long-term effects and potential trends from program participation. Such a research should also provide more significant results over time as more and more employees participate in the program.

On the other hand, further qualitative research delving into the effect of and relation between the effects of Spice program participation in contrast to participation in other voluntary events arranged by the employer, that survey respondents reported that they participated in. Furthermore, implications of the most central themes reported in the

interviews, namely membership and values, should be given special focus, and be studied in relation to effects from doing mainly teamwork versus doing mainly individual work.

Finally, absorption, the factor that remains the most puzzling, even after this research, would deserve further research. Especially a study exploring the role of work and personal factors that affect absorption in the IT-industry, in order to gain an understanding whether there are factors unique to coding and IT-consulting that result in exceptionally high absorption scores, should a longitudinal UWES-9 study repeat these results achieved in this study. This could provide valuable insights for the field of HR-studies into a industry that can only grow further in size and importance over coming years.

5.5. Practical implications

The study showed preliminary indications that a program such as Spice could serve to enhance the formation and further growth of employee engagement. With engagement being a positive antipode of burnout (Schaufeli, Bakker and Salanova 2006), and a source of increased competitive advantage (Shuck and Rose 2013), such a program could prove highly valuable, and should thus be seriously considered by HR-professionals.

There are two very important basic premises for a program such as Spice to succeed however, and at least one, however preferably both should be fulfilled for it to succeed. The research at hand has shown that the activities that the program is comprised of needs to fulfil a certain set of requirements. Firstly, they need to be such that they participants enjoy engaging in them, and furthermore, they should preferably be aligned with relevant skills for the participants' regular job tasks. Secondly, a shared value base plays a central role in providing a purpose beyond practical self-fulfilment, a trait rendering a program such as Spice remarkably similar to CSR (Corporate Social Responsibility).

If these premises are fulfilled, could a program such as this help HR-professionals in retaining and developing a skilled workforce. Although there are several potentially beneficial outcomes from implementing a program such as Spice, company decision makers need to exercise care in order to not induce unnecessary strain upon the personnel, which implies that HR or program managers should continuously follow up

whether participation induces significant strain and regulate the amount of autonomy granted participants should they not be able to self-regulate. Furthermore, autonomy needs to be kept in mind in order to shape and maintain ownership among participants, bearing in mind that the specific case of the Spice program is a product of a bottom up initiative rather than a program that has been conceived by management.

SVENSK SAMMANFATTNING

Inledning

Att skapa och upprätthålla engagerad personal har länge varit ett centralt fokusområde för såväl praktiker som forskare. Nya koncept har vuxit fram allteftersom förståelsen för motivation som koncept har utvecklats. Ett av de senare koncepten som fått särskilt mycket uppmärksamhet är *engagemang*, ett positivt, självförverkligande, arbetsrelaterat sinnestillstånd karaktäriserat av vigör, hängivenhet och absorption (Schaufeli och Bakker 2004a). Detta koncept delar flera egenskaper med *motivation* men avviker trots allt i ett centralt avseende: emedan motivation grundar sig på att någon är hågad att utföra en specifik uppgift (Ryan och Deci 2000) är engagemang inte uppgiftsspecifikt utan hänför sig snarare till kognition (absorption) såväl som tillgivenhet (vigör) varvid engagemang är överlägset bättre för att uppnå bättre arbetsprestation (Bakker 2011).

Engagemang är av stort intresse för akademisk forskning enligt såväl Bakker (2004a) som Schaufeli, Bakker och Salanova (2006), men är även av stor betydelse för praktiker. Tidigare forskning indikerar att arbetsengagemang korrelerar negativt med utbrändhet, vilket i sig redan är orsak nog för att det ska vara relevant. Konceptet i fråga utgör trots allt mer än en positiv antipod till utbrändhet (Schaufeli, Bakker och Salanova 2006). Ökat arbetsengagemang leder nämligen till ökad konkurrensförmåga (Shuck och Rose 2013), såväl som till minskad vilja hos anställda att byta arbetsplats. Dessutom poängterar Bakker (2011) att engagerade arbetstagare sannolikt arbetar hårdare än oengagerade.

Problemområde

Trots dess stora ekonomiska betydelse är IT-branschen fortfarande ett outforskat område inom engagemangsforskningen. Forskning inom arbetsengagemang har hittills koncentrerats särskilt till utbildnings- och hälsosektorerna. Givet detta gap i forskningen och IT-industrins betydelse torde det därmed finnas ett behov av att inte bara komplettera engagemangsforskningen med outforskade branscher utan att explicit komplettera med fokuserad forskning inom IT-branschen.

Shuck och Wollard (2010) bidrar med en insiktsfull definition som omfattar beteendemässiga, kognitiva och emotionella aspekter på arbetstagarengagemang som en individuell arbetstagares kognitiva, emotionella och beteendemässiga tillstånd riktat

mot önskade organisatoriska resultat. Som redan påpekats är engagemanget inte riktat mot en specifik uppgift utan organisatoriska resultat på ett generellt plan. Därmed torde lämpliga åtgärder, handlingar och omständigheter främja ökat engagemang, vare sig dessa är direkt kopplade till arbetstagarens specifika arbetsuppgifter eller inte. Tidigare forskning har trots allt inte explicit behandlat frågan huruvida andra arbetsrelaterade aspekter än arbetstagarens egentliga arbetsuppgifter kunde tjäna till att öka arbetstagarengagemang och medföra dess inneboende fördelar. Denna avhandling syftar därmed till att belysa förhållandet mellan frivilliga arbetsrelaterade aktiviteter (eng. extrarole behaviour) och nivån av arbetsengagemang inom IT-branschen.

Syfte och avgränsningar

Avhandlingens syfte är att identifiera och förstå ömsesidiga förhållanden mellan frivilliga arbetsrelaterade aktiviteter och arbetsengagemang. Genom en fallstudie av IT-företaget Futurice arbetstagarprogram "Spice" skapas bättre förståelse för ifall och hur sådana aktiviteter som programmet omfattar kan användas för att öka arbetstagarengagemang. I mera exakta termer syftar avhandlingen till att svara på frågan:

> *Hur kunde arbetsrelaterade, frivilliga aktiviteter, såsom Spice, påverka arbetstagarengagemang?*

För att skapa en uppfattning om denna fråga och slutligen kunna besvara den syftar avhandlingen till att skapa en uppfattning om:

> *Har deltagande i programmet Spice en inverkan på arbetsengagemang?*

> *Hur kan den ovannämnda inverkan (eller avsaknaden av inverkan) förklaras?*

Eftersom detta är en fallstudie sträcker sig studien inte längre än det specifika samplet av branschproffs inom ett finländskt IT-företag. Därutöver begränsar sig avhandlingen till en jämförelse mellan programdeltagare i kontrast till icke-deltagare vid en given tidpunkt och ger inga insikter i fråga om långsiktiga effekter som utvecklas över tid. Därmed begränsar sig avhandlingen till att erbjuda preliminära indikationer i fråga om de studerade fenomenen för att öppna för fortsatt diskussion och forskning genom analytisk generalisering snarare än statistisk generalisering.

Litteraturöversikt

Centrala koncept som behandlas i avhandlingen i fråga är för det första arbetsengagemang och för det andra arbetsrelaterade, frivilliga aktiviteter, det vill säga "extrarole activity". Dessa koncept och etablerad forskning som fokuserat på dessa redogörs för i denna litteraturöversikt, som dessutom anger definitioner av nyckelkoncepten i fråga som kommer att brukas i denna avhandling. Därutöver omfattar litteraturöversikten en kort diskussion kring hur koncepten är relaterade till varandra utgående från vad tidigare forskning explicit uttryckt och vilka relationer som kan antas på basis av vad tidigare rön indikerar.

Arbetsengagemang

Arbetsengagemang har varit ett omtalat och populärt koncept bland praktiker sedan sent nittiotal, men har erhållit uppmärksamhet i stor skala av akademiker först under senare år (Anitha 2014). Praktiker och akademiker har trots allt tagit olika infallsvinklar på konceptet (Shuck 2011). Emedan praktiker främst fokuserar på användbarheten av konceptet har akademiker främst fokuserat på att definiera och validera konceptet (Wefald och Downey 2009). Denna avhandling antar det akademiska perspektivet, även om praktiska implikationer av resultaten diskuteras kortfattat.

Akademisk forskning inom arbetsengagemang utgår i huvudsak från konceptualiseringar av engagemang i arbetsrollen av Kahn (1990) (Anitha 2014; Shuck 2011; Shuck och Rose 2013; Shuck och Wollard 2010). Konceptualiseringen i fråga bygger på etnografiska studier och fokuserar på olika roller som arbetstagare antar i arbetet och hur väl dessa roller överensstämmer med deras föredragna jag, det vill säga hur väl de kan anknyta sitt jag till arbetsrollen (Kahn 1990). May, Gilson och Harter (2004) lyckades senare empiriskt bevisa positiv korrelation mellan arbetsengagemang och de tre psykologiska villkoren, nämligen meningsfullhet, säkerhet och tillgänglighet, vilka Kahn (1990) identifierar som centrala förutsättningar för engagemang. Senare studier och däribland särskilt Saks (2006) identifierar arbetsengagemang som ett distinkt fristående koncept och inleder diskussion kring möjligheten till att det finns olika underkategorier av arbetsengagemang, en tråd som följts upp av bland annat Macey och Schneider (2008).

Avhandlingen begränsar sig till en studie av arbetsengagemang som ett koncept utan att gå in på mera detaljerade nyanseringar som tills vidare inte fått märkbar uppbackning av tidigare forskning. En för denna studie viktig och inom engagemangsforskning central gren är däremot utbrändhetsantitesstudier (eng. burnout antithesis). Studier såsom Maslach, Schaufeli och Leiter (2001) positionerar alltså arbetsengagemang som en positiv antipod till utbrändhet, ett förhållande som gett upphov till arbetsengagemangsskalan Utrecht Work Engagement Scale (UWES), vilken behandlar arbetsengagemang som ett koncept fristående från utbrändhet men negativt korrelerat med det (Schaufeli och Bakker 2004a; Schaufeli, Salanova, González-Romá och Bakker 2002).

 Utgående från detta är definitionen av begreppet arbetsengagemang som används i avhandlingen sådan att arbetsengagemang är ett "positivt, självförverkligande, arbetsrelaterat sinnestillstånd karaktäriserat av vigör, hängivenhet och absorption" (Schaufeli och Bakker 2004a: 295). Detta sinnestillstånd kan specificeras som "en enskild arbetstagares kognitiva, känslomässiga och beteendemässiga tillstånd riktat mot organisatoriska mål" (Shuck och Wollard 2010:103), vilket därmed skiljer det från så kallat flow i och med att engagemang omfattar längre tidsperioder emedan flow är begränsat till en timmes perioder eller kortare (Bakker 2011).

För att skapa en holistisk bild av konceptet arbetsengagemang är det likväl viktigt att förstå vilka faktorer eller omständigheter som föregår arbetsengagemang. Faktorerna som tidigare forskning identifierat är många och varierar i fråga om konkretion. Bakker (2011) tar ett resursperspektiv och uppger dels personliga resurser såsom självförtroende, förmåga att reglera känslor och personlig effektivitet, och därutöver arbetsrelaterade resurser såsom socialt stöd från kolleger, autonomi i arbetet och respons, som viktiga faktorer för att arbetsengagemang ska kunna skapas. Schuck, Reio och Rocco (2011) lyfter upp psykologiskt klimat vilket är i linje med studier av Anitha (2014) och Saks (2006). Dessa lyfter vidare upp faktorer såsom kompensation, rättvisa och ledarskap som centrala för att arbetstagare ska kunna bygga upp arbetsengagemang.

Frivilliga, arbetsrelaterade aktiviteter

Frivilliga arbetsrelaterade aktiviteter och beteende, på engelska benämnt "extrarole bahaviour" (ERB), omfattar graden till vilken arbetstagare är beredda att gå och till vilken grad de går bortom uttalade minimikrav för vad som förväntas av dem i

utförandet av sitt arbete (Blader och Tyler 2009). Detta kan ställas i kontrast till så kallat "in-role behaviour", rollbeteende som krävs eller förväntas av arbetstagaren som en del av det att han eller hon utför sitt arbete (Van Dyne, Cummings och Parks 1995). Ett centralt karaktärsdrag för frivilliga arbetsrelaterade aktiviteter är att det utöver det ovan nämnda är ändamålsenligt för arbetsuppgiften och gynnar företaget (Morrison och Phelps 1999).

 Även om frivilliga arbetsrelaterade aktiviteter visats påverka chefens bild av arbetstagare positivt (Werner 1994), krävs någon form av drivande faktorer för frivilliga arbetsrelaterade aktiviteter att äga rum i och med att det inte formellt krävs. Blader och Tyler (2009) lyfter fram social identitet som en central drivkraft som främjar frivilliga arbetsrelaterade aktiviteter. Studien indikerar dessutom att rätt social identitet tillsammans med monetära incitament är av stor vikt för att individer ska engagera sig i grupper och organisationer i fråga om frivilliga arbetsrelaterade aktiviteter. Författarna visar likväl att uppfattningen om hur rättvisa organisationens interna processer upplevs vara har en central betydelse för dylikt beteende.

Vidare står informationsintegritet (eng. information privacy), det vill säga den grad av kontroll som organisationen ger arbetstagaren över insamling, förvaring, bearbetning och användning av sina data, i en central roll som en drivkraft bakom frivilliga arbetsrelaterade aktiviteter (Alge, Ballinger, Tangriala och Oakley 2006). Författarna påvisar att detta, och hur legitima företagets informationsintegritetsprinciper är, inverkar på hur säkra arbetstagarna känner sig i att agera på eget bevåg bortom vad som normalt förväntas av dem i arbetsrollen.

Slutligen bör det även noteras att frivilliga arbetsrelaterade aktiviteter är nära knutna till organisatoriskt medborgarbeteende (eng. organisational citizenship behaviour: OCB) (Morrison och Phelps 1999). Organisatoriskt medborgarbeteende omfattar beteende som är fördelaktigt för antingen enskilda individer i organisationen eller alternativt organisationen i sin helhet (Werner 1994). Tidigare forskning pekar på att olika typer av sådant beteende utgår från uppfattningar om vad som är värdemässigt rätt att göra (se till exempel Podsakoff, MacKenzie, Paine och Bachrach 2000 och Saks 2006).

Arbetsengagemang och frivilliga arbetsrelaterade aktiviteter

Med de ovan nämnda drivande faktorerna bakom arbetsengagemang och frivilliga arbetsrelaterade aktiviteter i åtanke kan vissa likheter, eller rent av överlappningar noteras. Kahn (1990) framhäver som redan poängterats meningsfullhet, tillgänglighet och säkerhet som centrala drivande faktorer bakom arbetsengagemang. Mening i arbetet kunde påstås ligga nära en delad värdegrund som identifierats som en av drivkrafterna bakom frivilliga arbetsrelaterade aktiviteter. Vidare sammanfaller tillgänglighet, det vill säga individens beredskap att anknyta sin identitet till arbetsrollen, med social identitet som redan lyfts fram som en av faktorerna som främjar frivilliga arbetsrelaterade aktiviteter. Slutligen bär integritet, i och med den roll den spelar för individens känsla av säkerhet att idka frivilliga arbetsrelaterade aktiviteter, kännetecken av samma säkerhet som Kahn (1990) lyfter fram som bakomliggande faktorer till arbetsengagemang. Dessa likheter utgör en grund för antaganden om att arbetsengagemang och frivilliga arbetsrelaterade aktiviteter är förknippade med varandra i större utsträckning än vad tidigare forskning antyder. Därmed utgör dessa tre skärningspunkter ett viktigt verktyg för fokuserat arbete i föreliggande fallstudie.

Metodologi

Som redan konstaterats utgör avhandlingen en fallstudie. Fallstudien baserar sig på ett subjektivt sampel som utgörs av ett enda observerat fall, det vill säga Spice-programmet (Creswell 2006:288). Forskningen grundar sig på relativistisk ontologi och utgår från en uppsättning frågor och söker konvergens i fråga om hur individers arbetsengagemang påverkas (Easterby-Smith, Thorpe och Jackson 2012:25). Epistemologiskt sett antar studien ett pragmatiskt tillvägagångssätt (Patton 2002:71) och syftar därmed främst till att använda sig av metoder och tolkningssätt som frambringar bästa möjliga resultat i form av insikter (Kvale och Brinkmann 2009:325; Cherryholmes 1992), även på bekostnad av metodologisk renlärighet (Patton 2002:72).

Forskningsstrategi och design

I och med att studien i fråga är en fallstudie förutsätts att fallet i fråga utsätts för djupgående och noggrann analys (Bryman och Bell 2011:59). Dess värde ligger i det studerade fallets förmåga att utgöra ett kraftfullt exempel och ge unika insikter (Easterby-Smith et al. 2012:55; Siggelkow 2007). Vidare kan ett enda fall vara värt att

studeras i detalj om det i sig är tillräckligt unikt för att vara av särskilt intresse (Yin 2009:47). Det specifika fallet som studeras i avhandlingen torde kunna anses uppfylla dessa kriterier tack vare det faktum att det utgör ett sällsynt exempel på frivilliga arbetsrelaterade aktiviteter och avviker från konventionell rent vinstinriktad företagsverksamhet.

Fallet i fråga omfattar ett program som bedrivs av det finländska mjukvaruföretaget Futurice. Programmet i fråga stöder öppen källkod och ersätter monetärt de anställdas fritidsaktiviteter som omfattar skrivande och publicering av mjukvara eller annan intellektuell egendom under öppen källkodslicens, utan att arbetsgivaren gör anspråk på projekten (Turunen 2014a; Turunen 2014b). Även om programmet utöver mjukvarukontributionerna omfattar bland annat sociala evenemang fokuserar denna studie enbart på programdeltagare som publicerat sina hobbyprojekt under öppen källkod och fått ersättning av arbetsgivaren för de timmar av sin fritid som de har lagt ner på projekten i fråga.

Datainsamling och analys

Datainsamlingen följer den struktur som utgörs av forskningsfrågorna. Fråga ett huruvida programdeltagande inverkar på deltagarnas arbetsengagemang mäts med kvantitativa metoder med hjälp av ett UWES-9-frågeformulär. Fråga två som behandlar hur uppmätta UWES-9-resultat kan förklaras använder sig av kvalitativ metodik i form av semistrukturerade intervjuer. Utöver denna datainsamling utförde jag sex stycken bakgrundsintervjuer med nyckelpersoner inom Futurice och Spice-programmet för att öka min förståelse för det studerade fallet.

UWES-9-frågeformuläret som används är standardiserat, det är det mest använda och anses även som det mest pålitliga verktyget för att mäta arbetsengagemang (Jose och Mampilly 2014) och är validerat i flertalet granskade akademiska tidskrifter (Schaufeli et al. 2006; Bakker 2011). Då det är ett så välanvänt verktyg erbjuder det värdefulla möjligheter att skapa utökade insikter genom den referensram som utgörs av en internationell databas av tidigare mätvärden. För att öka begripligheten utvärderades frågeformuläret med Lenzners (2012) 7-faktorlista för begriplighet efter att ha utökats med bakgrundsfrågor såsom nationalitet, arbetsuppgifter och respondentens anställningsförhållandes längd. Formuläret distribuerades elektroniskt till företagets alla anställda och respondenterna gavs möjligheten att ange sitt namn för att jag skulle kunna identifiera Spice-programdeltagare.

Studiens kvalitativa andra fas utgörs av sju semistrukturerade intervjuer med anställda som gjort mjukvarukontributioner publicerade under öppen källkod inom Spice-programmet och som tidigare svarat på UWES-9-formuläret. Den andra fasen syftar som redan noterats till att ta en förklarande roll för mera djupgående förståelse för hur programdeltagande relaterar till anställdas arbetsengagemang, men tjänar även en viktig roll i det att den fyller ett gap som utgörs av en brist på kvalitativ engagemangsforskning (Reissner och Pagan 2013). Intervjuguiden baserar sig på de tidigare presenterade tre skärningspunkterna mellan frivilliga arbetsrelaterade aktiviteter och arbetsengagemang. Dessa ämnen diskuteras med avseende på de tre karakteristiska dragen för arbetsengagemang (vigör, hängivenhet och absorption) som Schaufeli och Bakker (2004a) identifierat och baserat UWES-9 formuläret på.

Analys av insamlade data sker först i separata omgångar där kvantitativa och kvalitativa data analyseras var för sig för att därefter tas vidare till en kombinerad analys (Feilzer 2010). Kvantitativa data tjänar trots allt främst en roll som kontextuell information som stöder kvalitativa intervjudata och ska därmed inte ses som data som i sig tjänar till att besvara forskningsfrågan.

Forskningskvalitet och -etik

För att bemöta kritik som ofta riktas mot fallstudier, så som brist på precision (Yin 2009:14), utförs studien med särskilt noggrann och på förhand fastslagen metodik. Tack vare studiens fallstudieformat minimeras samplingsrelaterad missvisning. Genom att använda på förhand definierade koncept, på förhand fastslaget och väldokumenterat frågeformulär och semi-strukturerade intervjuer torde reliabiliteten och replikabiliteten hålla god nivå (Bryman och Bell 2011:41). För att maximera objektiviteten har forskaren genom analysen strävat efter att falsifiera utgångsmässiga antaganden (Silverman 2006:280). För att bibehålla en god etisk standard har alla respondenter hållits anonyma och alla intervjuade har delgetts informationsformulär som redogör för hur studien utförs och hur data behandlas. Allt deltagande i forskningen var frivilligt och alla som intervjuats har getts chansen att granska studien innan den publicerats och forskaren har beaktat de intervjuades ändringsönskemål.

Resultat

Den kvantitativa första fasen av studien utfördes med hjälp av UWES-9-formuläret och resulterade i 75 användbara svar varav Spice-programdeltagarna endast gav 9 svar (12

%). Detta innebar att inga signifikanta resultat kunde uppnås i en jämförelse av deltagare och icke-deltagare för att kunna svara på forskningsfråga 1. Däremot kunde de insamlade data som helhet användas för att skapa en uppfattning om vilka demografiska faktorer som korrelerade med ökat arbetsengagemang. Därutöver kunde vissa intressanta avvikelser iakttas då engagemangsvärdena jämfördes med internationella medeltal ur UWES-databasen. Totalt sett översteg arbetsengagemangsnivån bland Futurice-personal det internationella snittet med 12 %, vilket främst kunde tillskrivas markant högre värden för absorption vilka översteg det internationella snittet med 27 %. Vid regression av demografiska värden mot respondenternas arbetsengagemangsvärden samt de underliggande delvärdena för vigör, absorption och hängivenhet visade det sig att arbetets karaktär, det vill säga ifall det utgjordes av främst teamarbete eller individuellt arbete, inverkade på arbetsengagemangsvärdena. Resultaten indikerade att arbetstagare som främst idkade teamarbete hade större arbetsengagemang. Det bör dock nämnas att koefficienterna för alla intercept förblev nära medeltalet för deras respektive UWES-9-värden vilket innebär att den praktiska inverkan som skulle uppstå från teamarbete trots allt är marginell. Anmärkningsvärt är slutligen det att absorption, det av de underliggande värdena som översteg det internationella snittet mest, korrelerade minst av alla med demografiska faktorer och därmed borde förklaras med andra medel än de demografiska faktorer som nu testats.

Den kvalitativa andra fasen av studien resulterade i resultat som lämpade sig bättre för att slutligen svara på forskningsfrågan till skillnad från de kvantitativa resultaten. Intervjuobjekten uppgav att värderingar och social identitet, såväl som tillgänglighet, säkerhet och integritet inverkar på deras vigör, hängivenhet och absorption. Särskilt värderingarna bakom själva Spice-programmet uppfattades av intervjuobjekten ha en positiv inverkan på deras arbetsengagemang. Dessa värderelaterade effekter fördelade sig på två huvudsakliga kategorier, det vill säga å ena sidan det att den anställde gör gott och å andra sidan det att arbetsgivaren gör gott. I fråga om social identitet och tillgänglighet uppgavs Spice-deltagande ha såväl negativa som positiva effekter. Dessa effekter utgjordes av det att programmets identitet av vissa intervjuobjekt uppfattades vara lätt att associera sig själv med, emedan den av andra uppfattades som främmande eller konstig. Säkerhet och integritet påverkades av tre huvudsakliga positiva effekter av programdeltagande. För det första poängterades de positiva signaler som arbetsgivaren upplevdes sända genom finansieringen av själva programmet vilket uppfattades som att de som anställda uppskattades av arbetsgivaren. Därutöver

uppgavs programdeltagande ge en känsla av medlemskap och upphov till ny kunskap vilken ökade deltagarnas självsäkerhet. Dessa effekter uppgavs även ha positiv inverkan på vigör och hängivenhet, med enbart indirekta positiva effekter på absorption genom det lugn som möjliggörs av större självsäkerhet.

Diskussion och slutsatser

Litteraturöversikten indikerade likheter mellan drivande faktorer bakom frivilliga arbetsrelaterade aktiviteter och arbetsengagemang och att koncepten är knutna till varandra med observerad frivillig arbetsrelaterad aktivitet som ett tecken på högt arbetsengagemang hos arbetstagare. Fallstudien av Futurice Spice-program tyder på att en syn på frivilliga arbetsrelaterade aktiviteter enbart som en produkt av engagerade arbetstagare är för snäv och begränsad. Studiens resultat indikerar att kausalitetssambandet inte är enkelriktat utan ger preliminära indikationer på att det snarare är så att bägge fenomen sannolikt uppstår under samma eller liknande förhållanden. Därutöver, och av desto större betydelse, tyder resultaten på att frivilliga arbetsrelaterade aktiviteter som de i Spice-programmet kunde användas för en skapa tidigare nämnda förhållanden genom de effekter programdeltagande uppgavs ha. Detta följer det faktum att de rapporterade effekterna, det vill säga medlemskapskänsla, delad värdegrund, identifiering, inlärning, autonomi och signaler av uppskattning från arbetsgivaren alla sammanfaller med faktorer som tidigare forskning uppger som faktorer som främjar ökat arbetsengagemang.

Dessa preliminära teser kunde innebära betydelsefulla praktiska implikationer. Detta följer antagandet att ifall en arbetsgivare kunde skapa program eller aktiviteter som omfattar motsvarande funktioner som Spice-programmet som studerats i denna avhandling kunde de eventuellt skapa förutsättningar för ökat arbetsengagemang i strävan efter de positiva effekter som en hög arbetsengagemangsnivå medför i form av välmående i arbetet och konkreta konkurrensfördelar för företaget. Avhandlingen i fråga ger alltså upphov till nya teoretiska antaganden som torde studeras närmare i framtida forskning. Särskilt en longitudinell förlängning av denna fallstudie kunde ge upphov till bättre mätvärden för UWES-mätningen. Vidare skulle en fortsatt kvalitativ intervjustudie av Spice-programmets effekt på en bredare grupp än enbart deltagare som publicerat hobbyarbeten ge djupare insikter i hur långt effekterna av programmet sträcker sig. Slutligen borde en mera allmän studie av IT-branschen och absorption utföras för att utreda ifall de markant höga absorptionsvärdena som uppmätts kunde förklaras med branschspecifika karaktärsdrag för arbetet.

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APPENDIX 1   UWES-9 QUESTIONNAIRE

Work & Well-being Survey (UWES) ©

The following 9 statements are about how you feel at work. Please read each statement carefully and decide if you ever feel this way about your job. If you have never had this feeling, cross the "0" (zero) in the space after the statement. If you have had this feeling, indicate how often you feel it by crossing the number (from 1 to 6) that best describes how frequently you feel that way.

	Almost never	Rarely	Sometimes	Often	Very often	Always
0	1	2	3	4	5	6
Never	A few times a year or less	Once a month or less	A few times a month	Once a week	A few times a week	Every day

1. _____ At my work, I feel bursting with energy
2. _____ At my job, I feel strong and vigorous
3. _____ I am enthusiastic about my job
4. _____ My job inspires me
5. _____ When I get up in the morning, I feel like going to work
6. _____ I feel happy when I am working intensely
7. _____ I am proud of the work that I do
8. _____ I am immersed in my work
9. _____ I get carried away when I'm working

APPENDIX 2   DEMOGRAPHICAL SURVEY QUESTIONS

1. Surname

2. Family name

3. Age:
   a. <20
   b. 20-25
   c. 26-30
   d. 31-35
   e. 36-40
   f. 41-45
   g. 56-50
   h. 51-55
   i. >55

4. Nationality

5. Have you participated in activities/events arragned by Futurice?
   a. Yes/No
   b. If yes, what?

6. How long have you worked at Futurice?

7. I am:
   a. A full-time employee
   b. Part-time employee

8. Is your work:
   a. Mostly individual work
   b. Mostly team work

APPENDIX 3   INTERVIEW CONSENT FORM AND INFORMATION SHEET

Consent Form

Title of project: Master's Thesis

Researcher: Erik Stenberg (094170)

Contact: erik.stenberg@student.hanken.fi, 0400 682713

Please check all boxes:

1. I confirm that I have read and understood the attached information sheet dated **8.6.2015** for the study in question, had the opportunity to consider the information, ask questions, and have had any questions answered satisfactorily.

2. I understand that my participation is voluntary, and that I can withdraw at any point I choose.

3. I consent to the interview being audio recorded, to the possible use of verbatim quotation, and understand that I have the right to review recorded and transcribed information that I have provided as well as analyses thereof.

4. I consent to the usage of the information I provide in future academic research by Erik Stenberg.

5. I agree to take part in the study.

_____   _____   _____
Name of Participant   Date   Signature

I confirm that the participant was given the opportunity to ask questions about the study, that these have been answered correctly, and that consent was given voluntarily.

_____   _____   _____
Name of Person taking   Date   Signature
Consent

Information Sheet

Title of project: Master's Thesis

Researcher: Erik Stenberg (094170)

Contact: erik.stenberg@student.hanken.fi, 0400 682713

1.1 Background

The study at hand is performed within the frame of Erik Stenberg's Master's Thesis at the department of Management and Organisation at Hanken School of Economics.

1.2 Purpose

The purpose of the study is to investigate the case of the Spice program as an example of extrarole activities, and their interrelation with employee engagement.

1.3 Procedures

The study involves three major phases of data collection:

This interview is concerned with phase:

1. Background data collection with the purpose of outlining the characteristics and structure of the Spice program, and thus shape a frame of reference for the analysis of further data gathered.
2. Measurement of employee engagement among Futurice employees, together with demographical data.
3. In-depth interviews to shape an understanding of interrelations of program participation and level of employee engagement.

1.4 Confidentiality

The study as such will be considered public information. Any information gathered in phases 2 & 3 will be kept anonymous from any third party, including Futurice. The information may be used in anonymised form in future research by Erik Stenberg.

APPENDIX 4   INTERVIEW FRAME

1. Do you experience that you can identify yourself with the values behind Spice?

2. What would you say these values are?

3. Does/Would identifying yourself with the values behind Spice affect how valued you feel yourself?
   a. How?
   b. Why?

4. Does/Would identifying yourself with the values behind Spice affect your energy in your work?
   a. Eagerness to get to work
   b. Feeling strong at work

5. Does/Would identifying yourself with Spice' values affect your inspiration at work?
   a. Pride
   b. Eagerness

6. Does/Would identifying yourself with the values behind Spice affect how you feel immersed in your work?
   a. Getting carried away
   b. Feeling happy when working intensely

7. Do you feel that you can connect your social identity to Spice?

8. Has this affected how you can connect your identity with Futurice?

9. Does/Would connecting your identity with Spice affect your energy at work?
   a. Eagerness to get to work
   b. Feeling strong at work

10. Does/Would connecting your identity with Spice affect your inspiration at work?
    a. Pride
    b. Eagerness

11. Does/Would connecting your identity with Spice affect how you feel immersed in your work?
    a. Getting carried away
    b. Feeling happy when working intensely

12. Has Spice affected your feeling of safety at work?

13. Does/Would a feeling of safety affect your energy at work?
    a. Eagerness to get to work
    b. Feeling strong at work

14. Does/Would a feeling of safety affect how you feel inspired in your work?
    a. Pride
    b. Eagerness

15. Does/Would a feeling of safety affect how you feel immersed in your work?
    a. Getting carried away
    b. Feeling happy when working intensely

APPENDIX 5   DETAILED UWES-9 RESULTS

	Spice (n=9)		Others (n=66)		Futurice (n=75)	
	M	**SD**	**M**	**SD**	**M**	**SD**
Vigour:						
At my work I feel bursting with energy	3,78	0,83	4,09	1,00	4,05	0,98
At my job, I feel strong and vigorous	4,11	1,05	4,06	1,04	4,07	1,03
When I get up in the morning, I feel like going to work	4,22	0,83	4,53	1,03	4,49	1,01
Dedication:						
My job inspires me	4,44	1,24	4,70	0,86	4,67	0,91
I am enthusiastic about my job	4,67	0,87	4,79	0,81	4,77	0,81
I am proud of the work that I do	4,44	0,88	4,71	0,91	4,68	0,90
Absorption:						
I feel happy when I am working intensely	4,44	1,13	5,02	0,79	4,95	0,85
I am immersed in my work	4,67	0,87	4,59	0,82	4,60	0,82
I get carried away when I'm working	4,22	0,97	4,52	0,96	4,48	0,96
Total score:	4,33	0,76	4,56	0,60	4,53	0,60

APPENDIX 6   TABLE OF CITATIONS

A Sense of Membership	• *"I like to do open source anyway. I've done it already before Spice came along… so maybe along with the program it feels like more of a homelike place to be"*
	• *"It always brings a kind of small feeling of safety that you have these different teams which you are part of and this is one more and that's always positive"*
	• *"I might feel more like part of a community but I haven't participated that much so I don't really have that feeling of a community"*
	• *"I think the largest challenge is that if you are outsourced or even work somewhere else the contact to the company is rather small, and we do speak rather openly about company issues but when you are in some completely other place then you might see things from another angle, which might make it seem like you're a bit of an outsider after all. So in situations like that I might say that it is one of the strongest ties to Futurice"*
	• *"It affects energy at work enormously as it helps me feel like I'm part of a group of likeminded people with equal values"*
	• *"positive in the sense that it gives the sense of being part of a group"* or *"team spirit"*
	• *"Spice has helped in that it makes me feel more like a member of a group and thereby given me a sense of safety that makes it easier to focus"*
	• *"…does have quite a strong effect the more I feel like I'm part of a group"*
	• *"it's cool if we can create our own subculture, it's a good connection between not serious identity and free time activities"*
	• *"It's not like if you bring open source up for discussion around the coffee table someone's going to be like what are you talking about, that makes me feel good"*
	• *"fun events, funny logos and a good attitude increases inspiration, kind of like partying with your colleagues"*

Alignment with Program Values	• *"...since we use a lot of open source in our work we kind of give back to the community"*
	• *"After all, I've used open things all my life and benefitted from the community and now I've started giving back to it"*
	• *"something that generally makes the world a better place"*
	• *"work that is in line with my values gives me incredible amounts of energy"*
	• *"Doing meaningful things for the society"*
	• *"You do stuff and give it for others to use"*
	• *"Encouraging to openness and taking part in a global society"*
	• *Helping others and a kind of openness"*
	• *"...after all it's taking open source even further to the idea of helping people"*
	• *"...the employer has made this program quite altruistically in the sense that what you do within the program is still your property and the only prerequisite is that it's shared with everyone for the common good"*
	• *"...some sort of common good where you don't just work to make the company EBIT good, but also some embrace the world in a sense"*
	• *"...very concretely shows on the salary slip that the company is acting and not only talking"*
	• *"...like one more cherry on top, something where we do the right thing, not only for the company but also for others"*
	• *"The first thing that comes to mind is that it's the ideology that hits the bull's-eye so I like to attach myself to that"*
	• *"...we've always had our values in the right place and this program just reinforces the values that we already had from before"*
	• *"I can identify with the values and get inspired by them"*
	• *"probably one of the strongest effects from the program has been pride"*

	• *The values are important, in that I do something universally beneficial rather than just make money for the customer"*
	• *"Spice has increased my pride of Futurice and I have told about the company to my friends because of it"*
Attachment to Program Identity	• *"...there's a lot of silliness on the open source channel, meme jokes... somehow it stops me from fully identifying with Spice, though I definitely share the values"*
	• *"[The logo] is funny enough but I've always hated that pony joke somehow, so that's a thing that I don't like to attach myself to"*
	• *"I mentioned in the beginning that I didn't associate my identity with the Spice program as a serious thing, but I do sort of identify myself with the funny part"*
	• *"If we have like a serious image then it would probably feel like work and yea... so I think the non-serious image of the Spice program kind of contributes to make it sort of fun"*
	• *"I kind of identify myself with Futurice better because it's not just my work thing but also my free time and the things that I do on my free time are sort of me because that's what I do in my free time. And if Futurice is involved in that then Futurice is kind of helping me be me"*
	• *"It is still conceptually quite abstract as a program. So in sense yes but it's still a bit shady"*
	• *"It's kind of this thing that it's cool to be part of"*
	• *"In a sense I see this as a part of me and it doesn't feel bad to take this with me in my thoughts during my free time so that I am continuously somewhat focused and immersed in these projects"*
	• *"[I'd prefer Spice to be] more like the visual appearance of Futurice and all then it could better merge with my own identity"*
	• *"If over the years all the ideas of Spice would move so they'd become the ideas of Futurice then it would increase my attachment to Futurice"*

Learning and Increasing Confidence	
	• *"It is very useful for your own development"*
	• *"...I feel more valuable as an employee, and I'm not afraid that I wouldn't have a value in myself to the company"*
	• *"[Spice] has helped in the sense that if you doubt your skills it's hard to immerse yourself in your work"*
	• *"on some level the development of own know-how is supportive in a way"*
	• *"[Spice nurtures] a certain knowledge capital so that on some level you have more competitive know-how and are able to participate more"*
	• *"intermediary effect as it is easier to share stuff without risk"*
	• *"The feedback that I might get has the potential of increasing my energy levels"*
	• *"I believe it has an effect as it is kind of detached from work and there are no consequences if you fail"*
	• *"I think it has a slight positive effect but it doesn't feel like a system with clear inputs and outputs but it helps in showing what one does and developing oneself"*, and that *"It helps in extending my own toolbox for when the day comes when I can use it in my actual work"*
	• *"Spice has helped me think in terms of products, what people need and what could be improved, which is inspiring"*
	• *"through trial and error I can find inspiration for my actual work"*

Autonomy to Pursue Interests and Needs	• *"...there is a trust in people that they can do good stuff"* • *"...there is a trust in people and care for them"* • *"Futurice has a fairly open kind of a low threshold climate"* • *"The program kind of provides the possibility to take part in any programming activity that is open source and has the right licence, so there's a trust that people do stuff that makes sense"* • *"it's inspiring that I can create tools I need and not like I don't have the time and feel stressed about it"*
Signals of Approval from employer	• *"Yes, it is like a stamp of approval by the company"* • *"Yes I feel more valued"* • *"Second value is to support employees in doing what feels nice and is good for your professional abilities' sake"* • *"I think it can have a positive effect on how valued I feel"* • *"Yes, I could say I'm of the opinion that it in a sense shows appreciation of me or developers"* • *"I think it is motivating that they are supported with an official program such as this"* • *"There are positive signals, like that the decision makers say that this is a great thing and carry on with it. It's clearly expressed in words and of course monetarily"*

Unintended Strain from Excessive Program Engagement	• *"...if you have work you practically do as overtime in addition to regular work, one has to acknowledge that when you start doing some own project it does constitute a burden of course"*
	• *"...in a sense you do some more of the same work you'd do at work on your free time, and you have to be cautious that you don't burn yourself out on voluntary work"*
	• *"At the start or end of the day hobby projects can be distracting"*
	• *"...if someone does it in the evening then you're all the more tired in the day"*