Autonomous, yet Aligned

Challenges of Self-leadership in Context

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"Ask not what's inside your head,
but what your head is inside of."

- William M. Mace, 1977

Abstract

In this thesis, I add to theories of management of knowledge work at the micro-level, by an examination of self-leadership in knowledge work and organizational attempts to foster it at the individual and team levels, in the empirical settings of innovative software development, consultants, and activity based working; the methods are mainly interviews and thematic analysis (I-III), and survey and statistical analysis (IV). The main research question has been: How can organizations support sustainable and productive self-leadership in their employees?

In paper I, a 'seeing work'-skill emerged in all interviews with managers, implicating situational judgment and attention as core to what is ultimately seen as successful self-direction. In paper II, consultants indicate the expectation to "infer" demands as leading to internalization of demands and seeing oneself as a source of stress. While consultants expressed a belief in internal self-discipline strategies of a more reactive nature to self-lead, in fact, external and proactive strategies (selecting or modifying the working environment) were the most effective in practice, echoing recent research on limited self-regulatory resources.

Paper IV examined quantitatively the hypothesis, based on papers I & II, that having timely access to work relevant information ("information richness") would have a stronger relationship with lower cognitive stress and better performance, than internal, self-focused self-leadership strategies, in the setting of Activity Based Working Environments where employees have high autonomy to decide how, where, when, and with whom to perform work. This hypothesis was confirmed, suggesting that when organizational situations cannot be strongly structured, for example because the best work process is not known, or innovation or different collaboration constellations are needed, they need instead to be *enriched* so that employee orientation and co-ordination does not become too

much of a burden on the individual employee, disrupting cognitive functioning and performance.

Paper III is a case study of agile coaches at Spotify and how they practise enabling leadership, a key balancing force of complexity leadership theory (Uhl-Bien, Marion, & McKelvey, 2007). Coaches practise enabling leadership by increasing the context-sensitivity of others, supporting other leaders, establishing and reinforcing simple principles, observing group dynamics, surfacing conflict and facilitating and encouraging constructive dialogue. The AC as complexity leader values being present, observing and reacting in the moment. Findings suggest flexible structure provided by an attentive coach may prove a fruitful way to navigate and balance autonomy and alignment in organizations.

The re-conceptualization of self-leadership in this thesis points to the importance for the individual of 1) being able to navigate "weak situations" and to "see" or "create" one's own work tasks so as to make a valuable contribution to the organization, and 2) for the ability to offload cognitive demands onto the environment, in a broad sense. Supporting self-leadership, then, would mean supporting these two main mechanisms. And with a resource perspective, organizations can offer support by building or offering resources, of various kinds, that allow for employees to have more resources to spare for where and when they are truly needed.

Sammanfattning

Följande avhandling bidrar till teorier om ledning av kunskapsarbete på mikronivå, genom att undersöka självledarskap i kunskapsarbete och organisatoriska försök att främja det på individ- och teamnivåer. Det empiriska materialet är insamlat i kontexter av innovativ mjukvaruutveckling, konsulter, och aktivitetsbaserat arbetssätt; metoden är företrädesvis djupintervjuer och tematisk analys, och i papper IV enkät och statistisk analys. Den övergripande forskningsfrågan har varit: Hur kan organisationer stödja hållbart och produktivt självledarskap hos sina anställda?

  I papper I framträder en förmåga att "se" vilket arbete som skulle göras. Det antyder att situationellt omdöme och uppmärksamhet är nyckelingredienser i vad som slutligen ses som framgångsrikt självgående eller självledarskap hos anställda. I papper II indikerar kunskapsarbetare själva att en förväntan att kunna "utläsa" chefens/omgivningens krav som något som bidrar till ett internaliserande av krav och att man ser sig själv som källan till stress. Konsulterna i studien uttryckte en tro på interna själv-disciplinära strategier av en mer reaktiv natur som det som skulle göra dem mer självledande. I själva verket så visade deras berättelser istället på att det snarare var mer externa och proaktiva strategier (att välja eller ändra arbetsmiljön) som fungerade bäst i praktiken, vilket rimmar väl med den forskning om begränsade resurser för självreglering som publicerats på senare tid.

  Baserat på papper I & II så undersöker papper IV kvantitativt hypotesen att ha god tillgång till arbetsrelevant information ("information richness") skulle ha ett starkare samband med lägre kognitiv stress, och bättre prestation, är de interna och självfokuserade strategier som förordas i det etablerade konceptet och måttet *self-leadership* (självledarskap). I synnerhet i en kontext av aktivitetsbaserat arbete, där medarbetarna själva har stark möjlighet att bestämma

hur, var, när, och med vem de utför arbete. Hypoteserna bekräftades i stort, vilket tyder på att när organisatoriska situationer inte kan konfigureras *starkt*, till exempel eftersom den bästa arbetsprocessen inte är känd, eller för att innovation eller olika samarbeteskonstellationer krävs, så behöver de *berikas* så att den orientering och om-orientering som anställda behöver göra inte blir för belastande för den enskilda och försämrar kognitiv funktion och prestation.

Papper III är en fallstudie av agila coacher (AC) på Spotify och hur de praktiserar ett underlättande ledarskap ("enabling leadership"), en central, balanserade kraft inom *complexity leadership theory* (Uhl-Bien, Marion, & McKelvey, 2007). Coacher praktiserar underlättande ledarskap genom att öka kontext-känsligheten hos andra, genom stöd till andra ledarroller, genom att etablera och förstärka enkla beslutsprinciper, observera gruppdynamik, synliggöra motsättningar och underlätta och uppmuntra konstruktiv dialog. AC som komplexitetsledare värderar att vara närvarande, observera och reagera i ögonblicket. Fynden antyder att den flexibla struktur som en uppmärksam coach bidrar med kan vara ett fruktsamt sätt att navigera och balansera autonomi och målstyrning, att ha en gemensam riktning.

Omformuleringen av konceptet *självledarskap* i den här avhandlingen pekar på vikten av att, som individ, 1) kunna navigera "svaga" situationer och att *se* eller *skapa* sina egna arbetsuppgifter på ett sådant sätt som gör ett värdefullt bidrag till organisationen, och 2) ha möjligheten att avlasta kognitiva krav på sin miljö i bred mening. Att stödja självledarskap innebär i så fall att stödja dessa två huvudmekanismer. Och med ett resursperspektiv kan vi säga att organisationer kan erbjuda stöd genom att bygga eller erbjuda resurser av olika slag, som i sin tur låter medarbetare ha mer kvar av sina interna, personliga resurser för de tillfällen då de verkligen behövs.

Nyckelord: arbetsdesign, kunskapsarbete, självledarskap, självkontroll, medarbetarskap

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Bäcklander, G. (2019) To see or not to see: Importance of sensemaking in employee self-direction. *Nordic Journal of Working Life*, *9*(2), 25-45. doi: 10.18291/njwls.v9i2.114799

(an earlier version was presented at Helix Conference 2013, Linköping)

Paper II

Bäcklander, G., Rosengren, C., & Kaulio, M. (2018) Managing intensity in knowledge work: Self-leadership practices among Danish management consultants. *Journal of Management & Organization,* 1-19. doi:10.1017/jmo.2018.64

Paper III

Bäcklander G. (2019) Doing complexity leadership theory: How agile coaches at Spotify practise enabling leadership. *Creativty and Innovation Management*, *28*(1), 42-60. doi:10.1111/caim.12303

(an earlier version was presented at the International Studying Leadership Conference, CBS, Copenhagen, dec 2014)

Paper IV

Bäcklander, G., Rosengren, C., Lid-Falkman, L., Stenfors, C., Seddigh, A., Osika, W., & Stenström, E. (2019) Navigating the Activity Based Working Environment – Relationships of self-leadership, autonomy and information richness with cognitive stress and performance. *Scandinavian Journal of Work and Organizational Psychology,* *4*(1), 1-14. doi:10.16993/sjwop.58

1 Introduction

1.1 The rise of knowledge work, which is underdesigned work, and the need for updated theories

What has broadly been described as "knowledge work" (Alvesson, 2004) is becoming a dominant mode of work in the Nordic countries (Vinnova, 2011), and indeed most western economies (Eurostat, 2018). Like industrial work during the 1900's was archetypal work, and the source of much theorizing on work and organization (Barley & Kunda, 2001), knowledge work is entering this place today (Kärreman, Sveningsson, & Alvesson, 2002; Örnulf & Forslin, 2008). Theorizing has been slower to follow. Several scholars have noted that the nature of the thing under study, i.e. work, has changed and thus, theories of work must also change (Barley & Kunda, 2001; Oldham & Hackman, 2010; S. K. Parker, 2014). What they are referring to is that most theories and concepts of work are

still grounded in the industrial setting and concepts of jobs, work design, and how to motivate people to perform in repetitive and boring jobs. In knowledge work, more salient problems are those of information overload and scarce attentional resources (van Knippenberg, Dahlander, Haas, & George, 2015), risks of burnout (S. K. Parker, 2014) and a general boundarylessness between work and the rest of life impacting employees' ability for recovery (Allvin, Aronsson, Hagström, Johansson, & Lundberg, 2006; Aronsson, 2018).

Though previously thought to be the case, knowledge workers' great autonomy does not exempt them from risks of work intensification; in fact, such autonomy may even contribute to it (Ipsen & Jensen, 2010; Michel, 2014; Pérez-Zapata, Pascual, Álvarez-Hernández, & Collado, 2016). The largest contributing factor to work stress is how work is organized in terms of pace, intensity, quality of communications and social relations, employment security, and more (Schnall, Dobson, Rosskam, & Elling, 2018). And while an employer is responsible for the organization of work traditionally and legally, when it comes to knowledge work in practice, it is the workers themselves who are responsible to a high degree (Ipsen & Jensen, 2010). In this thesis, I add to theories of management of knowledge work at the micro-level, by an examination of self-leadership in knowledge work and organizational attempts to foster it at the individual and team levels, in the empirical settings of innovative software development, consulting, and activity based working.

Not only have boundaries around work become more permeable or dissolved, but what we might call boundaries within work are similarly dissolving. Weick (1996) described this as a move from organizationally

strong situations – well defined by structured, salient cues – to weak(er) situations that are relatively ambiguous, with fewer salient cues for action. In strong situations, the behavior of different individuals will tend to be the same as strong situations lead everyone to construe the situation, and thus what is rational to do, in a similar manner. In weak situations there is more room for interpretation, and thus different individuals will construe the situation differently, and assess the prudent response differently (Mischel, 1977). Without firm external boundaries for work, one has to establish, at least to some extent, internal boundaries (Allvin, Mellner, Movitz, & Aronsson, 2013). For example, actively managing attention, judging what quantity and quality of work that is enough, stopping work and switching attention to the private life. The co-worker herself needs to employ some kind of strategy or approach in order to structure work, coordinate effort, and craft her own role.

1.2 Self-leadership as a solution to underdesign

For the individual employee, less external boundaries on work can be construed as increased control of work and thus increased freedom (Busck, Knudsen, & Lind, 2010; Grönlund, 2007; Hvid, Lund, & Pejtersen, 2008) and is indeed generally appraised positively by workers – self-leadership, autonomy, job crafting and proactive work behavior are all positively related to job satisfaction (Hackman & Oldham, 1976; Loher, Noe, Moeller, & Fitzgerald, 1985; Neck & Manz, 1996; Politis, 2006; Thomas, Whitman, & Viswesvaran, 2010; Tims, Bakker, & Derks, 2013; Uhl-Bien & Graen, 1998). However, it has also been suggested by several scholars that this "freedom" has a shadow side. Boundaryless work is

stressful for many people (Albertsen, Rugulies, Garde, & Burr, 2010; Allvin et al., 2006) and expectations of self-leadership/self-management can lead to self-exploitation (Pérez-Zapata et al., 2016), "self-entrapment" (Michel, 2014), overwork and intensity (Ipsen & Jensen, 2010). A very high reliance on employee proactivity may also have negative consequences for the organization as a whole. Socialisation of new employees may suffer (Bolino, Valcea, & Harvey, 2010). Without sound situational judgment, proactivity relates to worse performance, not better (Chan, 2006). The supply and development of homegrown leaders may suffer if leadership (of others) isn't practised (Bolino et al., 2010). Reinventing the wheel and other inefficiencies are also a risk, and inofficial power structures, bullying etc. might also grow in a leadership vacuum (Skogstad, Einarsen, Torsheim, Aasland, & Hetland, 2007).

Self-leadership was launched as a concept in the 1980's as a substitute for leadership (Manz, 1986, 2015; Manz & Sims, 1980). The self-leading employee leads themselves towards performance of both naturally rewarding tasks as well as less motivating ones that need be done (Manz, 1986), and also determine what is to be done, why, and how it is to be done (Manz, 2015). This conception of self-leadership aims to foster intrinsic motivation, by use of a number of strategies: constructive thought patterns, natural reward strategies (make a task more enjoyable), and self-imposed strategies like self-reward and –punishment, self-goal setting, and self-observation (Manz & Sims, 2001). With intrinsic motivation as the focal interest and many "self-applied" strategies, nowhere in the development of this concept is it really acknowledged that there might

be some upper boundary to the extent that one can rely on internal cognitive processes to lead ones own behavior.

In the Swedish context, in a thesis on flexible work demanding self-governing competences, Hanson (2004) conclude that 'self-governing' is very demanding of advanced metacognitive skills, and that it might lead to a cognitive pre-occupation with work that is taxing. Adopting the view that it is attention, not motivation, which is the truly scarce resource in modern knowledge work, it becomes apparent that organizing work in ways making ever higher cognitive demands on individuals is fragile and unsustainable. It is still an open question what the best ways are to achieve self-leading employees in a sustainable and productive way. Can employers select for self-leading employees or do the conditions for it have to be created in the organizing? Are there alternatives to ever higher cognitive demands on individuals?

1.3 Research purpose and research questions

Demands for employee self-leadership seem driven by a rollback and dissolution of external regulations of work leaving a kind of gap or space for self-leadership to fill. For employees to perform, or indeed act at all, some clarity and a springboard for action – previously more clearly pre-defined – is nevertheless needed (Weick, 1995). The overall aim of the thesis has been to gain a greater understanding of self-leadership situated in knowledge work and how organizations can try to support this, or if indeed they should.

Through the studies in this thesis, I first seek to examine closer the nature of this gap that employee self-leadership should fill, as perceived

by employers' representatives (managers). Second, to examine how knowledge workers themselves do self-leadership, how they conceive of it, and what challenges it may bring. Third, to explore how employee self-leadership can be strengthened and supported, especially with the view of employee attentional resources as the scarce factor for knowledge workers, rather than employee intrinsic motivation.

The research questions of the thesis thus have been:

RQ 1: When organizations claim to want self-directed employees, what do they mean?

RQ 2: How is self-leadership performed in knowledge work?

RQ 3: How can organizations support sustainable and productive self-leadership in their employees?

1.4 Structure of the thesis

In the following chapters, I first review literature relating to what I call underdesigned work and various ways of dealing with it, especially self-leadership. In chapter 3, I introduce the theoretical perspectives informing the choice of methods, the research context and informants, and discuss the particular methods. Chapter 4 summarizes the appended papers, and in chapter 5, I attempt to synthesize the results into a more coherent whole addressing the research questions. Chapter 6 discusses the results in the light of the extant literature, followed by a discussion of limitations and future research.

2 Literature review

2.1 When work is "underdesigned"

Organizations have to work faster, be more flexible, manage more complex jobs (Bolden, 2011; Yammarino, Salas, Serban, Shirreffs, & Shuffler, 2012, p. 384), and learn faster and more adaptively (Hannah, Lord, & Pearce, 2011; Hazy & Uhl-Bien, 2015). Organizations continuously strive to catch up as their environment fluctuates (Burke, 2010). Turbulent environments place higher demands on continuous adaptation from organizations and people (Eisenhardt, 1989; Eisenhardt, Furr, & Bingham, 2010). Decades ago, organizational work was generally linked to specific, defined jobs (Oldham & Hackman, 2010), but as the pace of change is accelerating, the value of explicit prescriptions for work is declining. Such prescriptions would too soon become ossified and counterproductive.

There are signs that the labor market has become more polarized, with an increase in both low- and highly skilled jobs, while the middle is diminishing (Autor, Levy, & Murnane, 2003; Dølvik & Steen, 2018; Goos & Manning, 2003). The common denominator is that jobs that rely on execution of formalized rules have become, to a higher degree, outsourced or automated (for example, payroll and other administrative work), while non-routine work tasks instead tend to become technology supported; in low-end jobs, the work is managed by technology while in high-end jobs, workers are managers of and augmented by technology (Autor et al., 2003). In the lower end, demands for flexibility has come to mean doing micro-gigs (driving an Uber, delivering food, or collecting electric scooters from the streets to mention three examples from Stockholm, early 2019) or being prepared to work at a moments notice but with no guarantees ("sms-jobb"[1]).

While an important area of study, these low-end kinds of jobs are outside the scope of this thesis, which focuses on rather well-to-do knowledge workers with indefinite term contracts ("tillsvidareanställning") in organizations working with consulting, software development and realty development, to be precise. How common this type of work is depends on definitions. Eurostat define Knowledge Intensive Services as including many kinds of professional services including computer and management consulting, marketing and advertising, recruitment, logistics, financial activities, but also air transport, educational services and healthcare. All together, this sector accounts for 47.5 % of the

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[1] http://www.duochjobbet.se/nyhet/unga-far-sms-jobb-i-stallet-for-vikariat/ accessed 2019-04-04

Swedish economy, with notable subdivisions Technology 5.1 %, Market 10.9 % and Finance 1.9 % (Eurostat, 2018). According to SCB, in Sweden in 2018, 18 % of men and 15 % of women work in an organization classified as knowledge intensive services (ICT and financial services, SNI code 58-63, and finance and professional services (e.g. management consultants), SNI code 64-82).

However that is also a blunt instrument; for example, large consumer goods companies such as ICA, H&M and IKEA are not classified as knowledge intensive service providers (as indeed they are not) but have substantial numbers of people working with software development, analytics, advanced administrative roles and other kinds of knowledge intensive work. Government agencies, process industry and others similarly contains this kind of work, though of course each with its special circumstances.

A different but related aspect is examined in the SLOSH study, which is representative of the Swedish labor force; the percentage answering "yes, often" or "yes, sometimes" to whether they experience a high degree of control in their work is 95 % for those with a college degree (and in Sweden on average, a fourth of the population has a college degree; in the larger cities, the share is one third (SCB, 2017), 98 % for "specialized competence" ("fördjupad högskolekompetens") and 99 % for managers; for only answering "yes, often" the numbers are, respectively: 33 %, 47 % and 50 % (SLOSH - The Swedish Longitudinal Occupational Survey of Health, 2016).

But work on the whole has become more complex, and more cognitively taxing (Wegman, Hoffman, Carter, Twenge, & Guenole, 2018). Increased complexity (Hanson, 2004, p. 11), intensity (Allvin et al., 2006, pp. 149-150), and expectations of collaboration (Deming, 2017), not least through ICT (Mazmanian, Orlikowski, & Yates, 2013), place higher demands on workers executive functions, such as memory and direction of attention (Stenfors, Marklund, Magnusson Hanson, Theorell, & Nilsson, 2013; van Knippenberg et al., 2015). If once the problem was that jobs were too "small", repetitive and boring, today more concern is raised with jobs straining our brains too much (Grant & Parker, 2009) by a constant barrage of information and emails, being available at all times, being flexible, bringing work home and your personality and emotions to work, being expected to keep up with technological advances mostly in ones own time, being proactive in improving ones job and organization, and never complaining. This development was recently outlined in a research review report from Swedish Arbetsmiljöverket (Aronsson, 2018).

Characteristics of knowledge intensive work is ambiguity and indeterminacy (Alvesson, 2001), also referred to as underdesign (Hatchuel, 2002) or being "weakly structured" (Papavassiliou & Mentzas, 2003). This underdesign contributes to workers being exposed more directly to fluctuations in the firm's environment (Kira & Forslin, 2008) rather than buffered by organizational plans, structures, or other formal procedures (Nurmi, 1998), something that has also been called boundaryless work (Allvin et al., 2006). From the 90's onward, much work has undergone "projectification" (Ekstedt, Lundin, Söderholm, & Wirdenius, 1999; Sydow, Lindkvist, & DeFillippi, 2004) where instead of being exceptional

and rare, projects are being used to organize any undertaking (Engwall, 2003). It is also common to work in a "multi-project" setting, with several projects competing for resources and attention, and often competing demands in practice have to be prioritized by the individual worker herself (Gustavsson & Jerbrant, 2012). The competing demands of multi-projects paired with expectations of self-leadership make it an issue for the individual herself to prioritize their work and to have the self-knowledge and self-esteem to say no or to flag that they cannot take on any more work, that they are overloaded (Zika-Viktorsson, Sundström, & Engwall, 2006).

Somewhat analogously, public sector professionals such as physicians and teachers experience an increasing "pile on" of additional demands in the form of administration (Läkartidningen, 2012; Skolvärlden, 2016), especially through many different IT systems, and at the nexus of all these demands is the individual professional expected to solve it gracefully rather than a formal design of jobs to make sure demands are compatible and possible to handle within the allotted time and with the resources available. However, the effects of New Public Management is also not the context of this thesis.

To be clear, the idea of "underdesigned" work does not mean work without demands but rather that there is little in the design of the work that is structured (enough) to deal with demands, like in the project overload (Zika-Viktorsson et al., 2006) example: ones role is not specified to a specific project, how time should be divided between projects is not specified, what rule to use to prioritize is not specified, who should share the work if it is too much is not specified: it is up to the individual

squeezed by demands to do something about it. Either they can structure their workday, workweek and so on to absorb the demands and deal with them, or, if they can't do that, signal for help. How this signalling for help will be interpreted by peers and managers is in turn not given (as we shall see particularly in studies I & II of the thesis). Drucker (1999) wrote that knowledge work is unlike manual work in that it "does not program the worker," meaning that it is not viable to externally manage knowledge workers in the same way one might direct other workers. Accordingly, the workers themselves are crucially involved in the leadership of knowledge work (Drucker, 1999) and thus have to continuously bridge the gap between market demands and daily, specific work tasks (Alvesson, 2001; Hatchuel, 2002; Kira & Forslin, 2008).

Scholarly, there has been a focus of work design research on solving the problems of industrialized work, especially the lack of intrinsic motivation and engagement with work. After the maturation of the Job Characteristics Model, work design was pretty much "solved". But, several scholars argue (Barley & Kunda, 2001; Grant & Parker, 2009; Oldham & Hackman, 2010), the nature of work has changed and so ideas of what to design work "for" has to change also. In this thesis, the aspect of changing work of primary interest is underdesign. And with that, a lack of motivation is not the most salient problem but rather the risks of overwhelm, cognitive preoccupation with work and possible burnout (Hanson, 2004; S. K. Parker, 2014; van Knippenberg et al., 2015). In work with few external regulations, very high motivation can even be a risk factor (Ipsen & Jensen, 2010; Joo & Lim, 2009; Palm, 2008). For organizations, the issue

of achieving alignment and co-ordination of efforts also gains more salience as guiding structures recede (Davis, Eisenhardt, & Bingham, 2009; Runsten, 2017; Uhl-Bien et al., 2007).

2.1.1 Flexible, boundaryless work in Sweden

In Sweden, changes in white collar work (especially) has been described as increased *boundarylessness,* or an increase in *flexible working conditions,* both by scholars and other societal actors, for example by Unionen (2010), the largest white collar union in the world. In a book summarizing years of work on "boundaryless work", Allvin et al. (2006) describe work deregulated in several dimensions. One is the employment relation itself, with increases in precarious employment, though for knowledge workers this is much less pronounced. Questions of when and where to work are less explicitly regulated. And dimensions within the work itself are affected too: less hierarchical, clearly expressed roles make the social relations at work fuzzier.

The deregulatation and dissipation of external structuring elements make organizational situations *weaker* (Mischel, 1977), i.e. they "reduce the cues and expectancies within the situation, and subsequently increase the discretion and ambiguity" (Allvin et al., 2013). Work tasks are complex, abstract, unstructured and unpredictable, placing higher demands on workers' intellective abilities to structure, articulate and co-ordinate their work. As a driving force, the researchers describe the need to "open up" the organization to let market forces more directly influence employees, thereby creating flexibility and speedy adaptation (Allvin et al., 2006). The risk is that employees overextend themselves trying to accommodate unclear and conflicting goals with less support.

Focusing on the work-life boundary, workers themselves need to develop boundary control competence, or boundary strategies (Mellner, Aronsson, & Kecklund, 2014). "Segmenters" prefer strong boundaries between work and personal life, while "integrators" prefer being able to work more flexibly in regards to time and place. Integrators work longer hours in total, as they work both during regular work hours *and* more outside regular hours, such as evenings and weekends (Matthews, Swody, & Barnes-Farrell, 2012; Mellner et al., 2014). For both segmentors and integrators however, individual capacity for self-regulation is predictive of a satisfactory sense of boundary control (Mellner et al., 2014). A sense of boundary control in turn is related to psychological detachment from work (Mellner, 2016).

Focusing instead more on underdesign of the work itself, in studies of 'flexible work' in the form of freelancers and teleworking civil servants, Hanson (2004) conclude that demands on workers intellective abilities become very high as conditions of work were not lucid and well defined. The regulation of work is constantly negotiated implicitly between individual and environment, requiring individuals to develop their "self-governing competence." This thesis seeks to add knowledge to her very final, concluding point on the necessity of finding ways for work environments to support the individual in dealing with self-governing demands.
When work is underdesigned – the situation "weak" – there is *demand* and *expectations* on the individual to herself perform the design necessary to act, to perform (Bredehöft, Dettmers, Hoppe, & Janneck, 2015). This "design" relates to the boundaryless dimensions within work, and to dimensions of space and time around work. What to work on? When

to work? Where to work? With whom to work? How to work? When is work finished? How much work is enough? Is the produced work good enough? Is this still the best use of my time? To the extent the work itself lacks such cues and they must be decided or constructed by the individual, work is underdesigned.

2.1.2 Post-bureacracy, knowledge intensive work and "soft controls"

In management research, the decreased reliance on formal prescriptions and control has been described as *post-bureacracy*, i.e. leaving behind the structure, the well defined roles, the hierarchy and organizational boundaries of Weberian bureaucracy (Lee & Edmondson, 2017). Van de Ven, Delbecq, and Koenig Jr (1976) showed that as task uncertainty increases, the use of formal rules and plans as coordinating mechanisms go down, and the use of mutual adjustment mechanisms reliant on increased communication, such as unscheduled and scheduled meetings, go up. Similarly, Davis et al. (2009) have shown that with increased complexity (uncertainty, ambiguity, and change), organizations need to be "less" structured, though not completely without formal structure, *and*, that the range of optimal structure narrows. Contingency theories stipulate that as uncertainty, ambiguity and rates of change go up, organizations must be internally differentiated, flexible, less formal, less hierarchical and communicate more (e.g. Burns & Stalker, 1961; Galbraith, 1974; Lawrence & Lorsch, 1967). In a stable and predictable environment, organizations can become increasingly "reified" while in complex environments they must be relatively more fluid, more tentative, more process than object.

Focusing on organizational structure, this has traditionally been described as the "organic" form (Burns & Stalker, 1961), or as "adhocracy" (Mintzberg, 1980). The idea has been to seek ways of organizing to be more flexible, responsive, and innovative as an organization, to deal with increased complexity, ambiguity, and change. Flatter hierarchies, broader roles with increased discretion, and use of projects or team organizations are markers of a more post-bureaucratic structure (Bolin & Härenstam, 2008). A distinguishing characteristic especially relevant for the context of this thesis, is that the responsibility for setting limits between work and non-work has been displaced from the organization to the individual employee (Maravelias, 2003).

In a recent review, Lee and Edmondson (2017) seek conceptual clarity in bringing together different streams of research on what they term "less-hierarchical organizing" (including post-bureacracy), and distinguishing especially what they call self-managing organizations: organizations that *radically* break with bureaucratic organizing. Critically, the self-managing organization breaks the manager-subordinate hierarchical relationship. Previous research, they argue, has been too vague about whether they are in fact studying self-managing organizations (frequently cited US examples are Gore, Zappos, Morning Star, and Valve) or "just" less-hierarchical organizing, conflating the two. The larger trend, and the context of the organizations in this thesis, has arguably been that of "less-hierarchical organizing" and not doing away with managers; rather a combination of both bureaucratic and post-bureacratic elements seem to be the dominating form even in knowledge-intensive service firms and in ICT (Bolin & Härenstam, 2008; Kärreman et al.,

2002). Going forward, "post-bureacratic" will be used with this softer meaning.

Critical management researchers have argued that post-bureaucratic work may be less hierarchical, but it is not with less control. Rather, corporations use "soft controls" to regulate workers and extract increased effort. Examples of soft controls are various ways of instilling culture and identity, so that norms and values are internalized (Alvesson & Kärreman, 2004), facilitating overwork by for example providing food, dry-cleaning (Michel, 2014) and other things to take care of needs that would otherwise have to be tended to wihin the "personal" rather than "work" sphere. Personal judgment, agency, interests, motivations and relationships have shifted from being something to be kept out of the professional practice to a central economic resource to be exploited (Rose, 1999), or "harvested" (Bramming et al., 2011). Several empirical studies also show how soft controls in combination with "high autonomy" results in workers' self-entrapment (Michel, 2014), self-intensification (Pérez-Zapata et al., 2016) or an "autonomy paradox" (Mazmanian et al., 2013) wherein the choice to work anywhere, any time becomes work everywhere, all the time.

What is sold as autonomy and freedom for the employee is really, or also, the lack of prescriptions delimiting their work; and while these could indeed be seen as rules limiting freedom of action, they also provide a buffer from directly facing market demands (Kira & Forslin, 2008; Maravelias, 2007). Again the expectation is on the employee to self-lead, in accordance with organizational ideals.

2.1.3 Two working life trends and specific contexts: Agile methods and Activity Based Working Environment

Much of the work on boundaryless work was centered around a project reported in the 2006 book "Gränslöst arbete" (Allvin et al., 2006). Since then, two new working life trends, contexts, or management techniques (Staw & Epstein, 2000) have emerged as relevant and spreading: Agile software development, and Activity Based Working Environment. These are specifically adressed in two of the four studies in this thesis, Study III which focuses on agile coaches, and Study IV that focuses on Activity Based Working Environments. Most respondents in Study I also work in contexts of agile software development though this was not a focus of the study.

2.1.3.1 Agile software development

Agile software development (ASD) has grown out of a desire to organize software development to deliver faster, better, and cheaper results in uncertain or turbulent contexts. It can be described as a family of iterative system development methods valuing team collaboration, minimal planning up front, and the flexibility to adapt to changing requirements (Beck et al., 2001). It includes frameworks, for example Scrum, Extreme Programming (XP) and Kanban; a collection of methods or practices, for example pair programming, planning poker, retrospectives and test-driven development; and a set of principles, most prominent the 12 principles of the Agile Manifesto (Highsmith & Cockburn, 2001). The seventeen signatories to the manifesto declared the following values, indicating that while the thing on the right is valued, the thing on the left is valued more:

"Individuals and Interactions over processes and tools. Working Software over comprehensive documentation. Customer Collaboration over contract negotiation. Responding to Change over following a plan."

The movement of ASD has been away from the rationalist ideas underpinning so called waterfall or stage-gate models of development, thinking that a problem can be thoroughly understood and picked apart to find an optimal solution that can be pre-planned and then put into place (Dybå & Dingsøyr, 2008). Instead it relies typically on self-organizing teams working in iterative sprints of a couple of weeks, with re-calibration of for example priorities of functionalities between sprints, as the customer gets a clearer idea of what it is they truly need and want (Schwaber & Sutherland, 2013).

ASD could be considered a system of management more in some organization than others. In a large corporation not digital from the start, agile work practices are more likely confined to the software development department, while a company such as Spotify (the case company in Study III) have agile thinking in their company DNA, and it is probably warranted to see ASD as a management technique or philosophy in use there, generally. This speaks to the broader relevance of examining work under ASD. As more of organizational life is touched by the digital transformation, the potential scope for ASD to spread becomes very large and many organizations will likely consider implementing agile management.

For the purposes of *this* thesis, ASD is seen in part as a way for organizations to cope with complexity and ambiguity that can be thought to rival the self-leadership paradigm. ASD emphasizes self-organizing teams,

and team work, over individual self-leadership. The extent to which teams generally actually realize the proposed autonomy has however been questioned in some studies (Annosi, Magnusson, Martini, & Appio, 2016; Conboy, 2009; Hodgson & Briand, 2013). Further, even though teams should be "self-organzing," they are not leaderless (Hoda, Noble, & Marshall, 2013). Apart from Product Manager roles, teams often have access to alternative leadership, such as agile coaches. The role of the agile coach in enabling self-organizing dynamics of teams, and building collective leadership resources such as direction, is the focus of Study III.

2.1.3.2 Activity Based Working Environments (ABWE)

The name Activity Based Workplace originates from the Dutch consultancy Veldhoen Company, in the mid-1990's (L. D. Parker, 2016), and while it is also sold as a "way of working", at heart it is about arranging the physical workspace in an "activity based" way. An ABW office is characterized by free seating (i.e. no fixed workstation), clean desk policy and different zones created for different activities. There can be a quiet zone meant for work that demands focus and concentration, and more social zones where one can work together and overhear others conversations. Further, there are meeting rooms of different sizes and with differing equipment, as well as "phone booths."

The practice of implementing ABWE is driven first of all by the opportunity of cutting costs for offices. However, like any management fashion, the spread can probably also be explained by institutional theory as attributed to seeking legitimization through mimicry. The philosophy of the activity based workplace is to make work 'effective, efficient and enjoyable' from both an organization and employee perspective (van

Koetsveld & Kamperman, 2011). This vision is to be achieved by focusing on the employee and giving them … "the freedom (within boundaries) to decide how to work, where to work, when to work, the tools to use and with whom to collaborate to get their work done…." (ibid, p 305). The management practices should be based on trust, autonomy, and self-organization for employees (ibid). Thus, freedom and loose boundaries are part and parcel of the vision and concept of ABWE. Many critical voices by disgruntled employees have been lifted by media, but looking at the research (Manca, Grijalvo, Palacios, & Kaulio, 2018; Seddigh, Berntson, Bodin Danielson, & Westerlund, 2014; Wohlers, Hartner-Tiefenthaler, & Hertel, 2017), most people seem to reach at least their previous levels of job satisfaction after an initial adjustment period.

In the context of this thesis, ABWE is hypothesized to be a case of a *weakening work situation*, or at least one placing additional demands on employee self-leadership or self-regulation by introducing a slew of new choices to be made several times a day. Since you are not allowed to occupy the same space continually over time, the environment can not "hold" and guide the process of work for example by leaving work-in-progress on your desk or on the walls to act as a placeholder. You will not be sitting with for example your manager or the same peers each day, and so there will be few reliable cues as to *what* one should be working with from the proximal environment, even though the environment itself may suggest a certain kind of activity (i.e. focus, a formal meeting, or serendipitous meetings). The initiative to start something or to seek something out is on the individual, or through collective social practices orchestrated by a manager or group virtually.

ABWE is hypothesized to be a case of work with high self-leadership demands, and thus theoretically interesting to illuminate mechanisms of self-leadership and relationships to stress and performance (Study IV).

2.2 Dealing with underdesigned work

To deal with underdesign, several hypothetical scenarios are possible. One is a strong reliance on leadership rather than structure and design of work. Heroic images of leadership dominate much of the literature, where the leader inspires and motivates, "transforms", empowers, communicates a strong vision, gives much feedback, gives cognitive stimulation and generally is seen as the major source of agency in organizations (Crevani, Lindgren, & Packendorff, 2010; Manz & Sims, 1991). In the organizations in this thesis, this has tended not to be the case. Study I, which focuses on managers, reveals that most simply do not want to be very hands-on-leaders, which they see as micromanagement.

Another strategy is a self-leadership paradigm, where employees lead themselves as much as possible, including making plans, co-ordinating with peers, defining their work tasks, managing their time, and so on.

As I will explain further in this theoretical section, incorporating a cognitive resource perspective on work reveals a number of weaknesses or problems with the self-leadership paradigm as is. It is not so much that the idea of self-leadership is "wrong" as there is, I mean, a perspective missing that is informative of how efforts best should be invested.

A third possible strategy for dealing with underdesigned work is to focus on structure as support and informative, rather than as inflexible and controlling.

2.2.1 Self-leadership, self-control and related employee discretionary behaviors

Self-leadership as a management paradigm is based on the idea that skilled employees will know better than their manager how to do their jobs, and are better equipped to make the right decisions about what to do and how to do it (Uhl-Bien & Graen, 1998). In this sense, it is a "substitute for leadership" (Manz & Sims, 1980), and as a requirement on employees, complementary to the use of empowering styles of leadership and "post-bureacratic" ways of organizing work. Self-managing employees are expected to figure out which standards and cues are relevant in a new work situation (Bramming et al., 2011) and to unleash their creativity to proactively anticipate the needs of the organization (Costea, Crump, & Amiridis, 2008).

Several similar concepts exist: employee initiative, discretionary behavior, proactive behavior (including job crafting), self-management, self-leadership, and self-governing competencies. See Table 1 for a short overview of these concepts, some similarities, and differences. A unifying idea for all these concepts, that is especially relevant here, is that it is about employees themselves making *decisions about what to do*, rather than relying on either a manager or a clear set of rules regulating their

Table 1. Brief overview and comparison of self-leadership and similar concepts related to employee discretionary behaviors

Concept	Definition	Goal	Optimize for	Means
Self-leadership	"a self-influence process through which people achieve the self-direction and self-motivation necessary to perform" (Manz, 1986; Neck & Houghton, 2006)	Improved intrinsic motivation, improved performance. "To positively influence personal effectiveness"	Intrinsic motivation	"Natural reward" strategies, thought strategies, and behavioral strategies
Self-governing competence	"the guiding, supervising function needed for the individual to be able to define, structure, and discipline her own performance and, ultimately, her ability to manage and govern herself in a wider, functional sense." (Hanson, 2004)	---	---	Advanced metacognitive competencies
Self-management	Harnessing of agency and subjectivity in service of management. (Kärreman in Bramming et al., 2011)	---	Extracted value	---
Proactive behavior	"the extent to which [employees] take action to influence their environment" (Bateman & Crant, 1993). Future-oriented, change-oriented and self-starting (S. K. Parker & Bindl, 2016).	Descriptive, no goal *per se*. Proactive pursuit of goals.	---	For example: Voice, issue selling, feedback seeking, taking charge, role expansion
Proactive followership	"working to advance the mission of their department or organization" and to challenge their leaders if necessary. (Carsten, Uhl-Bien, West, Patera, & McGregor, 2010)	Description of proactive exercise of followership	---	---
Employeeship	Employee has great discretion and practises self-management, takes responsibility, manages their work-life balance, and manages relations to manager, colleagues, and others. (Backström, 2003)	Increased engagement and adaptive performance	---	---
Self-entrapment	"using autonomy granted by participative work practices to design activity structures that unintentionally entrapped the workers." (Michel, 2014)	Enabling constant work, exploitig worker insecurity about what is "good enough" to trigger self-discipline to always work.	Compelling habitual, indiscriminate overwork	Socialization
Job crafting	Using employee discretion to modify/craft ones own work tasks (cognitive, task, and relational boundaries) (Wrzesniewski & Dutton, 2001)	Higher sense of meaning in work	Improved intrinsic motivation, improved utilization of skills	Change cognitive, task, and/or relational boundaries
Self-regulation	"the ongoing exercise of self-influence", "self-directed change" (Bandura, 1991)	Regulation of behavior or emotions	---	Self-monitoring, self-diagnostic and self-motivating functions
Self-leadership (this thesis)	*Exerting influence over ones organizational activities. (Bäcklander)*	*The successful implementation of desired behaviors that support one's chosen goals*	*Available cognitive resources*	*1. Situation selection; 2. Situation modification; 3. Self-control; 4. Reappraisal*

actions. Discretionary employee behaviors are more valuable in complex or ambiguous work (Cordery, Morrison, Wright, & Wall, 2010), suggesting that there are configurational reasons linking employee initiative to success in "weak situtations" and *not* simply motivational ones, or there would be similar benefit in simpler, "one right way", jobs as well*.* Complex, ambiguous or simply new work situations are thus underdesigned in regards to providing guides for action (Weick, Sutcliffe, & Obstfeld, 2005), and there is a kind of "gap" in these kinds of situations that needs to be bridged for performance being possible, moderating the effect between discretionary behavior and performance.

One stream of research from the management literature has since the 1980's focused on individuals using their knowledge and skills to bridge this under-design of work framed as self-leadership (Manz, 1986). This is a process of self-influence and a set of individual strategies presented as a substitute for the leadership behaviors otherwise offered by a boss (Kerr & Jermier, 1978; Manz & Sims, 1980). Self-leadership is seen as critical as the expectation grows for employees to take more and more responsibility for their own jobs and work behaviors (Neck & Houghton, 2006).

As a more general and normative model of management, self-leadership is seen as ideal employee behavior to complement leadership styles where the leader is motivating, coaching and inspiring perhaps but not very instructional, and will overall contribute to efficiency, innovation, and competitiveness (DiLiello & Houghton, 2006; Houghton & Yoho, 2005; Pearce & Manz, 2005; Prussia, Anderson, & Manz, 1998). As it has been conceptualized by Manz (1986) and later by Houghton, Dawley, and

DiLiello (2012), self-leadership is also prescriptive for individuals, containing a set of *strategies* of self-influence, see Table 2. These have been operationalized into a quantitative measurement of self-leadership in some variants, for example Houghton et al. (2012); Houghton and Neck (2002).

The self-leadership scale has been shown to be sufficiently distinct from classical motivation constructs such as self-efficacy, need for achievement, and self-regulation, and predicts individual job performance (and also other leader behavior styles) above and beyond these (Furtner, Rauthmann, & Sachse, 2015). It is telling that it is compared primarily to motivational constructs, and not behavioral constructs such as job crafting. Self-leadership has also been shown in empirical studies to lower stress (Unsworth & Mason, 2012) and improve performance (Hauschildt & Konradt, 2012; Prussia et al., 1998).

Table 2. Three categories of self-leadership strategies based on Manz and Sims (2001) (Bäcklander, Rosengren, & Kaulio, 2018)

Behavior-focused strategies	Natural reward strategies	Constructive thought pattern strategies
Originally called Self-Imposed strategies (Manz, 1986), these strategies include self-observation, self-goal-setting, self-reward, self-correcting feedback (or self-punishment) and practice.	Strategies that seek to incorporate more enjoyable features into a given task to make it more intrinsically motivating. The concept of work context strategies (Williams, 1997), which focus on environmental factors such as where and with whom work is done, are included in this category.	Strategies that challenge irrational beliefs and thus create rational thought patterns, including self-talk and mental imagery to improve future performance.

On a high level, self-leadership is "the influence organization members exert over themselves" (Manz, 1986). I use this definition going forward, with one modification: self-leadership is the influence organization members exert over *their activities*, to somewhat de-centralise the self and allow a more extended view of how activities are performed. Further, I will not keep the "contents" of the concept, i.e. the particular strategies proposed. Part of the contributions of this thesis is a suggested revised framework of self-leadership, with economical use of attentional resources as the "base" mechanism, rather than instrinsic motivation.

If we view, as I do in this thesis, self-leadership as that thing employees must do to "fill in whats missing" or "bridging the gap" of underdesigned work, the concept of "job crafting" emerges as a more relevant comparison than for example self-efficacy, for the purposes of this thesis. Job crafting is proactive behavior by employees to modify parts of their job to achieve a better fit with their own skills or preferences (Wrzesniewski & Dutton, 2001). However, this too can become a job demand as the design of work becomes necessary and reactive rather than discretionary and proactive (Bredehöft et al., 2015; Kubicek, Paškvan, & Korunka, 2015) – when work is underdesigned and employees have high responsibility, it becomes *necessary* for the individual to design work to bridge the gap between demands and actual, daily work task. Thus, the demand for self-leadership or individual work design may increase work intensity, even though it has also, and more often, been examined as resources that will lower intensity.

I argue that neither the self-leadership literature, job crafting literature, nor boundaryless work literature really explore the perspective put

forth in this thesis, where I focus on executive functions as a group of resources of special interest. In 1991, Manz distinguished self-leadership from self-management by stating that self-management is generally about aligning with externally set standards, using extrinsic motivation and focusing on behavior, while self-leadership, in his view, includes self-set standards/goals, using intrinsic motivation and an increased focus on cognitive processes (Manz, 1991, p. 17, as cited in Stewart, Courtright, & Manz, 2011). Nowhere in the development of the self-leadership concept is it fully acknowledged that there might be some upper boundary to the extent that one can in fact rely on internal cognitive processes to lead oneself. Two decades of research on self-control shows it to be a very costly process and not an unlimited resource (Baumeister, Tice, & Vohs, 2018; Sjåstad & Baumeister, 2018).

Finally in a recent review of the development of the self-leadership concept by its originators, Stewart, Courtright, and Manz (2019), do acknowledge as a "paradox of self-leadership" that the exercise of self-leadership in the short term depletes self-regulatory resources, and suggest researchers examine for example how self-leadership can be externally supported without diminishing feelings of autonomy. In this thesis, this is addressed as RQ 3. Research on executive functions and self-control cast serious doubt over the viability of relying extensively on internal cognitive control as the main resource for leading yourself, and in the next sections (2.2.2, 2.2.3), I shall lay out in more detail why.

The main contributions of this thesis are: 1) A re-examining of the concept and phenomenon of self-leadership, and a revised framework of self-leadership, where the scarce resource is attention and executive

function, not motivation. 2) Suggestions for how organizations may support employee self-leadership, given the revised framework.

Though an organizational expectation of proactivity or self-directed behaviors in employees is typically seen as a way to save on overhead costs, gain flexibility and innovation – it may incur costs to the organization. Withdrawal of active leadership, to the point of so-called laissez-faire leadership (Bass & Avolio, 1990) – "the absence of leadership, the avoidance of intervention, or both" – may cause role conflict, role ambiguity and co-worker conflict (Skogstad et al., 2007). Organizations may also become overly dependent on specific individuals and undermine the socialization of new employees, the organization's capacity for learning, and the development of new leaders, for example by decreased opportunities for employees to find mentors, decreased incentive to disseminate knowledge, and fewer opportunities to practise and develop leadership (Bolino et al., 2010). For the individual, pro-active behaviors may also cause stress or at least tax resources as they consume time, energy and attention – all personal resources of the employee (Bolino, Turnley, & Anderson, 2017, p. 520). Further evidence of that demands that employees be proactive can be strainful has emerged lately (Fay & Hüttges, 2017; Strauss, Parker, & O'Shea, 2017; Zacher, Schmitt, Jimmieson, & Rudolph, 2018).

2.2.2 Stress and intensity at work

Knowledge intensive work is typically characterized as "active" jobs in the demands-control model (Karasek, 1979), i.e. high demands but high control leading to engaging and healthy work. In the light of increased boundarylessness and expectations of self-leadership, some scholars

have wondered what to really make of the "control" dimension in the model (Busck et al., 2010; Hvid et al., 2008). Can "too much" autonomy be a bad thing? There are studies showing that active jobs – high demands paired with high control – can also be associated with ill health (Härenstam, 2008).

A study examining if "too much" control leads to stress found that, in Europe in general, more control meant more overtime and more work-family conflict, but nevertheless still correlated with higher satisfaction (Grönlund, 2007). However, in Sweden, more control had none of the deleterious effects found in Europe more generally. Grönlund concluded that the increased intensity and sick-leave numbers due to stress could not be due to "too much freedom" in work. However, she suggests, one might examine the changing demands rather than changing control variable, for example, having freedom over when and where you work does not mean you control the total workload, or control demands to deliver results.

In regards to updating the JD-C model, either "control" can be bad sometimes (though empirically this does not quite seem to be the case), something is missing from the model, or *autonomy*, which has increased, does not actually entail *control*. In work on sustainable work systems, Moldaschl (2002) suggest distinguishing different kinds of autonomy. *Formal autonomy* is when a situation is characterized by 'degrees of freedom' or 'multifunctionality', while *substantial autonomy* in such situations may still be low, if the employee has to expend too much of their personal resources to cope with demands (Moldaschl, 2002, p. 53). Similarly, an expectation of self-leadership (in various forms) is probably

most relevantly construed and examined as a work *demand*, as has been suggested by for example Grönlund (2007, p. 23) and Bredehöft et al. (2015). Whether practicing self-leadership builds or depletes resources may depend on employees' capacity for control *over* work, rather than just control *in* work (Aronsson, 1989). Control over work means employees can use self-leadership to build or accumulate resources for themselves outside of themselves, i.e. as (relatively) more stable components of their work environments. Without this *control over*, self-leadership will likely only amount to a demand for self-control and effortful cognition to constantly improvise, adapt, and "hustle" to solve underdesigned work that stays underdesigned.

Alternative models of stress in work, that I rely on more going forward in the thesis, are Conservation of Resources (COR) (Hobfoll, 1989) and Job Demands-Resources (JD-R) (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001). The JD-R model gives an overarching framework where the various factors having bearing on a particular situation at work can be categorized as either *demands* or *resources*, while leaving flexibility in determining which particular demands, and which particular resources, are especially salient and relevant in particular kinds of work (Demerouti et al., 2001). The related COR theory (Hobfoll, 1989) delves more into the mechanisms of how resources are mobilized and invested to cope with demands. COR theory posits that people strive to obtain, protect, and keep their resources (Hobfoll, 1989, 2001), which include time, energy, knowledge and social support, but really can be anything "perceived by the individual to help attain his or her goals" (Halbesleben,

Neveu, Paustian-Underdahl, & Westman, 2014, p. 1338). Further, resource loss is perceived as a larger threat than resource gain is a promise. People experiencing rapid resource loss will therefore be motivated to change situations, for example (Halbesleben et al., 2014).

Kira and Forslin (2008) have described sustainable work systems and regenerative work, i.e. work that does not *consume* individuals' resources but provides opportunity for accumulation and development of personal resources. Essentially, it should not be done by the individual in isolation but should be a collective and interconnected process of job crafting to make individuals' jobs more comprehensible (Kira, van Eijnatten, & Balkin, 2010).

This resource perspective on coping with stress is not directly comparable or substitutable with the Demands-Control model proposed by Karasek and Theorell as they have somewhat different focus and different explanatory power. Karasek's theory focuses characteristics of the job situation while COR and JD-R theory are more easily applicable to cases where the individual and her range of possible actions are more in focus, as is the case when focusing on how self-leadership is practised. Having discretion over for example when, on what, and how to work creates possibilities for more adaptive action as employees, who likely are in the best position to judge different courses of action locally in their situation, make choices about which out of a variety of resources to use and how to make use of them (though it need not be so conscious and deliberate as it may sound). For this reason, in this context, I judge the

JD-R and COR theories as a better fit to analyze and to talk about the different components coming into play as one tries to describe the challenges in practicing self-leadership.

2.2.3 Effortful self-control, ego depletion, and self-leadership

Joining the stress, resources and self-leadership perspectives I want to delve even deeper into a particular set of resources at the heart of self-leadership, namely what in cognitive psychology is called executive functions. Most of our cognitions are automatic responses that we don't have to think about, our brains produce them without volitional control (Bargh, 2014). These automatic cognitions don't cost very much for the brain to produce. They are fast, easily accessible, "cheap," and often sufficient to deal with arising situations. Stanovich and West (2000) introduced the term "system 1" for this fast, evolutionarily older, cognitive system. We also have "system 2," relatively slower, more deliberate ways of cognizing, governed by executive functions.

The executive functions are used to control attention, shift attention, keeping something in working memory while doing something else, inhibiting first impulses (stop control) or initiating something not automatic (start control). Attention is one of the main "battlefields" of self-regulation, where stimulus-driven influences and goal-directed processing "compete for limited attentional resources" (Hofmann, Schmeichel, & Baddeley, 2012). Our working memory capacity (WMC) is very limited, and multiple types of information compete to control the WM circuitry at any time; the information held in WM in turn serves as the basis for decisions and planning of complex behaviors (Knudsen, 2007). WM can rely on both internal processes (such as goals from long

term memory) and external resources (cues in the environment, things currently perceived), but in essence we only have at our disposal to conduct complex behaviors what is brought into WM. Choosing when to work, what to work on, how to construe the problem, overriding incipient responses, active deliberation, sustained attention, persistence - all of these things may be considered self-regulatory and central executive acts (Schmeichel, Vohs, & Baumeister, 2003). Knowledge work, thus, involves to a high degree the most active and most expensive processes in the brain.

In what has been known as the "strength model," or "limited resources model," of self-control (Baumeister, Bratslavsky, Muraven, & Tice, 1998; Baumeister et al., 2018; Garrison, Finley, & Schmeichel, 2019; Hagger, Wood, Stiff, & Chatzisarantis, 2010), many studies indicate that exerting self-control to resist impulses on one task, will "deplete" self-control on a following, unrelated task, suggesting many different kinds of self-control rely on a common pool of resources, or seem to. While "resisting an impulse" may be what we typically consider an exertion of self-control, other behaviors typical at work are too, such as making choices of various kinds (Vohs et al., 2008), or planning (Sjåstad & Baumeister, 2018) – this also depletes later self-control. Being depleted causes worse performance on complex cognitive tasks, but not simple ones (Schmeichel et al., 2003), and again, on for example, planning (Sjåstad & Baumeister, 2018), i.e. there is reciprocal causality. The more a behavior taxes the executive functions, the more likely to cause depletion, which

makes it more difficult to use executive functions. *Practicing a self-leadership relying mainly on effortful self-control will strain these resources highly.*

Parallels between the limited resources model of self-control and COR theory (Hobfoll, 1989) have been noted previously (Hagger, 2015). Each outlines individuals' sources of and responses to stress, has *resources* as a central concept, and both see the investment of resources as a key mechanism in determining behavioral outcomes (Hagger, 2015). COR theory is more general while the strength model of self-control is more narrow in its focus. The stressor of interest in the latter theory is a mismatch between situational demands and the individual's available self-control resources, which are also dwindling as self-control is exerted. It is possible therefore to see the strength model of self-control as a special case of conservation of resources, and self-control strength as a specific resource. Nesting the theories highlights the possibility of substitutions of resources in dealing with the demands of self-leadership.

To date, during work with this thesis, I have found exactly one empirical study explicitly linking the self-control and self-leadership literatures. Müller and Niessen (2018) examined whether practicing self-leadership (as measured with Revised Self-Leadership Questionnaire (Houghton & Neck, 2002)) in the morning would cause self-control depletion (measured with a handgrip task) before lunch. They found that for workers that had experienced a qualitative overload (complex and difficult intellectual tasks, likely to be somewhat unpleasant and effortful) in the morning, having exerted self-leadership correlated with more depletion.

Though this might be about to change, that practicing self-leadership might expend a limited resource, or tax limited bandwidth of executive functions, has mostly gone un-acknowledged in the self-leadership literature. But the information-processing burdens of the 21st century workforce are unprecedented (Hodgkinson & Healey, 2008). Attention is a scarce resource (Hofmann et al., 2012; Knudsen, 2007; Simon, 1971; van Knippenberg et al., 2015). We also know that jobs are indeed more cognitively complex now than they were (Wegman et al., 2018). And on top of all that, employees are expected to self-lead to a higher degree, relying on cognitive processes in doing so? It seems the game is rigged to cause overwhelm, resulting in co-ordinative lapses and decision errors, and individual stress, anxiety and pre-occupation with work thoughts.

I see as a central question in understanding self-leadership in the modern workplace: what resource is expended relying so heavily on complex cognitions to self-govern, or self-lead? Is there another way that preserves autonomy but does not deplete resources?

I have declared that I believe a cognitive resource perspective illuminates problems with self-leadership relying too heavily on individual, controlled cognition. I believe this perspective also illuminates alternative routes that incorporate cognitive offloading and preserving cognitive resources.

"To understand how cognitive work gets done, then, it is not enough to look at what goes on within individual organisms; we need to consider also the complex transactions between embodied minds and the embedding world. One type of such a transaction is the use of strategies for off-loading cognitive work onto the environment, a useful way to boost efficiency and extend one's epistemic reach." (Robbins & Aydede, 2009, p. 6)

The concept of distributed cognition (Hutchins, 1995) is used to denote knowledge and action being *stretched across* (rather than simply distributed *between*) actors and artifacts (D'Adderio, 2011). Using our fingers to help do calculations, for example, doesn't move anything from our brains to our hands (redistributing it) but *stretches* the cognition *across* mind and hand. Both the cognitions and the behavior we consider "ours" are really arising in an entanglement of minds, artifacts and organization. Though the goal might be "self-leadership," with this perspective, focus shifts to factors outside the self enabling the emergence of these outcomes.

2.2.4 Formalization and support

The post-bureacratic approach to management and organization, including the self-leadership paradigm, is usually motivated by a need or desire for organizations to be faster, more flexible, more adaptive, and better at integrating expertise and creating innovation. This is contrasted with bureaucracy that, in comparison, is considered cumbersome, slow, de-motivating and stifling creativity (Juillerat, 2010). In a paper drawing parallels between organizational bureaucracy and technology, Adler and Borys (1996) present an alternative, positive view of what bureaucracy

can be. In the positive view, bureaucracy is seen as an enabler that provides guidance, clarity and through that lowers role stress and makes individuals more effective.

Adler and Borys suggest that bureaucracy - operationalized as having a high degree of formalization (of rules, procedures) - will only be felt as coercive and intrusive when the rules proposed by it go *against* the judgments and values of the individuals subordinate to it. We will not feel coerced by rules that are in line with what we consider right and useful, in fact, we may not even recognize them as rules at all but rather take them for granted.

The argument made by Adler and Borys (1996) is that bureaucracy can be designed with a "user as a source of intelligence"-perspective, which they call "enabling bureaucracy" and contrasts it to "coercive bureaucracy" (and low formalization organizations are typified as "organic" and "autocratic"). Four characteristics factor into making a bureaucracy enabling - repair, internal transparency, global transparency, and flexibility. Rules and procedures are intended to help the organizational "user," and are transparent so that the user can determine if they are working well, what the rationale is behind them, keep users informed of context and consequences of their actions, suggest but not force courses of actions and make visible opportunities for possible improvements. In making the rationale behind a procedure invisible, leaving only a number of tasks/steps to be carried out, the organization cannot extend its own cognitive functioning by taking advantage of the fact that a human being, not a machine, is at the "end" of this procedure. Understanding *why* might

mean that a person makes sure to really follow an at first glance mean-ingless procedure because they understand its importance, or that the person improves the procedure because they understand what is meant to be accomplished and with their local knowledge know of a better way to accomplish it.

Empirical work on structure and formalization in work gives that the effects are not unequivocal. Organizations that are overstructured be-come stale, slow and inflexible, and yet, if they are understructured, they may rip apart (Davis et al., 2009). Highly formalized work is often de-motivating (Juillerat, 2010), but more than that, it may cause organiza-tional ignorance and failure to learn (e.g. Gersick & Hackman, 1990). While several drawbacks and problems exist with very formalized, or "overdesigned" work, it has also been suggested that formalization may benefit workers in complex, high discretion work to the extent that it of-floads them and helps with coordination, decision-making and perfor-mance (Juillerat, 2010).

Several empirical studies have examined the benefits of formalization and structural support for workers. For example, routinization initiated by the individual increases their decision-making performance (Laureiro-Martinez, 2014), having role clarity at work is related to lower cognitive stress (Hvid et al., 2008), and structural supports relates to higher perceived core job performance (S. K. Parker, Johnson, Collins, & Nguyen, 2013).

Scholars of organizational routines (Feldman & Pentland, 2003) note that routines are not executed mindlessly, but selected and executed with skill to adapt to the current situation. Using a technology metaphor,

developing formalized routines is a way to improve co-ordination and performance akin to developing a standardized interface between technologies rather than requiring a massive, integrated system. Juillerat (2010) points out that changing a formalized *way of interacting* between departments would not require changing organizational structure nor formal job descriptions, and so is a comparably light-weight and flexible way of gaining benefits from formalization.

In the context of self-leadership expectations on employees, it seems likely that increased formalization may be perceived as helpful, to the degree that it helps with cognitive offloading and decision-making and is seen to benefit the worker herself rather than only the employer (or another employee).

3 Research approach and methodology

Here I first present a short introduction of the theoretical perspectives informing the design of the studies and the choice of methodology. Then I further discuss the particular methods of the studies in the thesis: the interview style, focus groups, survey, thematic analysis and regression analysis. See Table 3 for an overview of how methods relate to specific studies. A more detailed description of each study's method is given in each paper.

3.1 Theoretical position informing choice of methods

Common for all papers is an interactionist view of organizational behavior as emerging out of interactions between individuals and their environments, common in social psychology, and also recognizing that individuals are always *situated* at work in social, technical and organizational

Table 3. Studies and methods

	I	**II**	**III**	**IV**
Collected data	Bäcklander	Co-author	Bäcklander	Co-authors
Semi-structured interviews	X	X	X	
Case study			X	
Focus group interviews		X		
Survey				X
Type of analysis	Thematic	Thematic/ Content	Thematic	Statistical
Analysis by	Bäcklander	Bäcklander & co-authors	Bäcklander	Bäcklander

webs (Elsbach, Barr, & Hargadon, 2005). The same individual may act differently in different situations, and what is seen as "objectively the same" situation by one person may be strongly perceived as a different situation by someone else (Rauthmann & Sherman, 2018). A variety of individual predispositions, knowledge, understanding; what has been termed *schemas*; interact with, *and* bias what will be perceived as, *salient cues* in the environment (Elsbach et al., 2005; Nayak, Chia, & Canales, in press; Rauthmann, Sherman, & Funder, 2015). Never the less, it is possible for humans to come to share a view of a situation for example by communication, or to increase understanding of another's view by taking their perspective, we can teach each other and learn from each other, and we can act on the situation to change it.

In the strategic literature, this reflects a microfoundations view, as "micro, ordinary activities carried out by individuals…at all levels in the organizational hierarchy are central to determining the idiosyncratic content of capabilities and their dynamic adaptation over time" (Salvato, 2009, p. 397). Higher level group and organizational outcomes emerge

from interactions at the micro-level (Bradbury & Lichtenstein, 2000; Runsten, 2017; Uhl-Bien et al., 2007). Different *modes of interacting* are what links individual characteristics and knowledge to higher level organizational capabilities (Ployhart, 2015).

Interactions to communicate about actions and views happen both in organizations, as talking and interacting is a large part of what goes on at work, but also in the relation between researcher and research subjects. "Situations cannot rate themselves, and thus raters are needed to judge situations" (Rauthmann et al., 2015) – the rater could be the researcher as an observer, or it could be a combination of research subjects and researcher as is the case, I believe, with interviews and also with questionnaires, to some extent. In relying on interviews, the individual in the organization is seen as a 'knowledgeable agent' (Gioia, Corley, & Hamilton, 2013) that can give (some) insight into their own behavior and motivations, reasons for acting and so on. All data, both qualitative and quantitative, in this thesis has this subjective quality as it is gathered "through" though not always "about" individuals.

Overall, studies I-III can be classified as *experiential qualitative research* – language is assumed to be capable of communicating people's experiences, perspectives, and practices. The research questions focus on factors and social processes underpinning particular phenomena, and on practices in organizations; reflecting an approach that Clarke, Braun, and Hayfield (2015) call critical realist/contextualist (in contrast with realist/essentialist on the one hand and relativist/constructionist on the other). Critical realism is a philosophical position most comprehensively laid out by Bhaskar (1975) insisting on the existence of an independent

material reality, while denying a direct correspondence between that reality and knowledge claims about reality. Clarke et al. (2015, p. 21) describe the thematic analysis with a critical realism/contextualist stance as follows:

"Reality is 'out there' but access to it is always mediated by socio-cultural meanings, and, in the case of qualitative analysis, the participant's and the researcher's interpretative resources (so direct access to reality is never possible). People's words provide access to their particular version of reality; research produces interpretations of this reality."

Willig (2016) reason about qualitative research in psychology and conclude that people's interpretations and social practices themselves constitute a "reality" that is independent of the researcher, and that these constructions are real as far as they have consequences for the people positioned in them. The goal of qualitative social psychological research is "understanding how participants' ideas, assumptions and readings of one another's actions (i.e. their interpretations) interact with one another and with wider social conditions to give rise to social phenomena."

One could argue that typical work psychology surveys, like in Study IV, are actually much like the qualitative research described above, albeit more structured, standardized and formalized. Virtually all psychological research rests on two assumptions completely in line with critical realism: 1) Behind "what we see" are (latent, often mental) driving mechanisms that have a causal effect on the world, and 2) the latent is real, it is not contingent on observation or awareness. Psychological scales such as stress, self-leadership and job autonomy attempt to measure latent constructs that are seen as both constructed *and* real (which is not to say

that any specific scale can be taken at face value to represent what it claims to measure).

3.2 Research context and informants

Data for the studies has been gathered from people doing 'knowledge work' in a general sense, but more specifically, the emphasis is on "ICT workers" and their managers. Participants work in software development, IT consulting, IT-management consulting, and in the last study, on Activity Based Working Environment, some other white-collar workers are part of the mix. All work in cities, all in Scandinavia, most in Stockholm. In a recent report from ECEPR, "The geography of Europe's brain business jobs", Sweden is number 2 closely after Switzerland for having the most "brain business jobs" per capita in Europe; in Stockholm, 16.6 % of the workforce is classified to work in "brain business jobs." Stockholm is also the world's second most prolific, per capita, tech hub after Silicon Valley (Sanandaji, 2018).

Through triangulation of methods and, especially, informants, each study in the thesis is providing a slightly different perspective on underdesigned work and self-leadership (Farquhar & Michels, 2016; Kaulio & Karlsson, 1998). In P1, participants are representatives of the employer *speaking about employees*, with concrete examples of both "good" and "bad" self-leadership, how they *themselves as managers* recognize it, and how they try to increase it. In P2, the informants are employees (and one manager) *reporting about themselves*, mainly: how they "do" self-leadership and when it is needed, but also about how leaders and colleagues

act; later discussed as outside and inside view. In P4, the data is quantitative survey data and employees report mainly *on their working situation,* though the outcome variables, cognitive stress and performance, are on the individual level as well as the amount of self-leadership behaviors. In P3, the informants – the agile coaches – are a kind of leaders, and so are likely leaning towards more of an "employer" perspective, reporting *on their own* practices and most of all, what it is they are trying to achieve with teams (accomplishing self-leading teams).

For a further discussion on the validity and transferability of results, see Chapter 7 Limitations.

3.3 Discussion of methods

3.3.1 Contextualist interview style (Study I and III)

Two studies, Study I and Study III, are using semi-structured interviews with individuals in organizations, one by one, which have been analyzed using thematic analysis (Braun & Clarke, 2006).

In the contextualist view, a participant can give access not directly to reality but to their particular version of it. The researcher in turn provides an interpretation of this more indirectly accessed reality (Clarke, Braun, & Hayfield, 2015). Typical questions in contextualist thematic analysis are about factors and social processes that underpin phenomena, or about practices – things people do in the world. Studies I-III are about these types of questions, and in Study I and III, where I have collected the data myself, I have used the following style of interview.

In these studies, I seek first to understand more fully the world of the interviewees, and am letting them describe what it is they do concretely and their reasons for doing so, what they hope to accomplish and why

they thought it would work. Through careful probing I try to uncover ideas about causality held by and attributions done by the informants.

Though I have taken care not to sound or be judgmental about what is said, neither showing great approval nor disapproval, interviewing in this way is always at least partly a creative act. The informants may not have put their reasons into words in such a concrete way before, or thought about their behavior and reasons in quite the same way before being asked. Coming up with a rationale for one's behavior does not mean that is the "true cause" of why one acted as one did in the moment. The goal of the studies however has not been to determine true causes of behaviors but on exploring actions, intention, and their connection. Each interview has really been about establishing what participants are trying to accomplish and what they are doing, concretely, to accomplish that; much in line with a view of practice as *blocks of both means (actions) and ends*, of sayings and doings with oughtness and direction (Nicolini, 2012; Schatzki, 2002).

In the interviews of Study I and III, respondents were encouraged to use detailed, concrete examples in their answers and when applicable to think of specific people and specific situations to illustrate what they mean. This was done in order to ground the data material in episodic memory – to start with what respondents remember happening and doing, rather than what they think they 'know' (Shondrick & Lord, 2010). Also, this was to avoid, to the extent possible, the use of "management speak" in the data itself (Alvesson & Sveningsson, 2003). Using episodic memory is likely to bring forth events that have actually happened

(Shondrick et al., 2010). However, participants were also asked to explain what they were trying to achieve doing certain things, exploring motivations, attributions and causal inferences made by respondents – assuming respondents as 'knowledgeable agents' (Gioia, Corley, & Hamilton, 2013). I rely on the premise espoused by Alvesson and Kärreman (2000) that language does have some capacity to point to things beyond itself, to communicate insight, experience, and facts. Further I have believed that respondents' descriptions and explanations of their actions and intentions are better – more accurate and more useful – than those I would have made myself had I simply observed and interpreted their actions on my own. What I have "observed" instead are their constructions and interpretations of events – in interviews. Respondents tell me of actions and explanations they deem *meaningful* in relation to my questions.

However, while described actions are taken more or less at face value – I have no way of knowing if respondents are lying to me or, more likely, just misremembering – their attributions or explanations of effects of their actions are somewhat less so. After trying to understand the perspective of each informant I try to rise above the particulars of each interview and view them together. The larger part of this of course happens in the coding and analysis of the material, but it also happens during data collection. Some topics or themes from one interview may inform the next, really whether one wants it to or not; though the interview questions remain more or less the same, one might notice new things as cues to follow-up questions due to how one's own understanding has changed by interviews already conducted. In coding and analysis, the in-

terviews are taken together as one material (for each study), one collection of data about views on, actions about, and causal inferences made about self-direction/self-leadership.

3.3.2 Focus group interview (Study II)

Study II examined a group of Danish management consultants working in a small organization with 16 employees. Management consultants were selected because their work can be seen as archetypal knowledge work (Fincham & Clark, 2002; Muhr, Pedersen, & Alvesson, 2012). The interviewer, Calle Rosengren, had worked for the firm as an external consultant on several occasions prior to the interviews. This allowed him to observe and be a participant in events and activities that gave valuable insight into the firm. It is also important to note that he was invited to the firm because the management perceived that there were problems with high levels of intensity and also cases of burnout, which were thought to be caused, at least in part, by lack of self-leadership skills among the employees. In all, eight members of the organization (seven men, one woman) participated in semi-structured focus group interviews, which took place on two occasions, with the same participants.

The transcribed interviews were coded and analyzed using a combination of thematic and more content analysis-style that evolved during the work, see further 3.3.4 on thematic analysis.

3.3.3 Case study (Study III)

Using a case study may be appropriate to answer questions of "how" and "why" some contemporary social phenomenon works, especially if one is seeking in-depth description of the phenomenon in context (Yin, 2003).

The social phenomenon I examine in Study III is management of emergent processes in teams with intent to foster autonomous teams. The study questions are: *How* do agile coaches practise *enabling leadership*, a key component of complexity leadership to balance structure and flexibility, and *why* are they doing the things they do (what effect do they expect or observe it to have)?

Based on contact with Spotify in Study I, I learned of the agile coach role and how important it seemed to be for the development of teams at Spotify. Spotify was a "unicorn" company – a startup valued at over $ 1 billion – and was at the time of study going through tremendous growth. At first contact with Spotify in early 2013 they had grown from 50-350 employees since 2011. The study was conducted during 2014, and in 2018 Spotify had over 4000 employees globally. Those I had been in contact with seemed to think the agile coaches were an important factor in getting teams up to speed quickly and aligned with the company mission – getting to be autonomous, high performing teams – while learning how to practise agile development and being innovative. The role was also described as focusing, more than any other role surrounding teams, on the internal dynamics of the team. Similar to my Study I but on a different scale, I was intrigued by the idea that self-organization or self-leadership was not best achieved by "laissez faire" or doing nothing but tremendously helped by having an assigned resource to facilitate the development of that.

The unit of analysis in Study III, what could be said to be the actual case, are the agile coaches in the organization, or rather, what they do. It is a single case study.

The paper is based on thorough thematic analysis of interview transcripts. However, I was also on site for observations on several occasions as well as taking part of videos, written materials from blogs and the intranet, and a public talk. See details in the paper.

3.3.4 Thematic analysis (Studies I-III)

Thematic analysis (TA) is a common and theoretically flexible method for analysis of qualitative data (Clarke et al., 2015). Being a theoretically agnostic *method* rather than a package *methodology* means it can be adopted within different theoretical settings. In this thesis I adopt what could be called a contextualist stance (see 3.3.1 on contextualism).

Through studies I-III I have used the six-step method of TA described by Braun and Clarke (2006), which includes:

- Familiarization: gaining an in-depth knowledge of and familiarization with the data.

- Coding: the systematic identifying and labelling of relevant (in relation to research question) features of the data.

- "Searching" for themes: Clustering together codes to create a plausible mapping of key patterns in the data.

- Reviewing themes: Pausing theme generation to check whether proposed themes "fit" the entire data set, and each has a clear distinct organizing concept.

- Defining and naming themes: Writing theme definitions – summaries of each theme. Selecting a name to ensure conceptual clarity.

- Writing the report: Weave together the analytic narrative and compelling data extracts. Themes provide an organizing framework, but analytic conclusions are drawn across themes.

For study I I have used a more inductive leaning TA, meaning the analysis is grounded primarily in the data rather than in existing theories and concepts. In this particular case, that means a large point of the study was to unpack and interpret how managers actually conceptualize "employee self-direction". I did not start with an already operationalized concept though many such related concepts exist: proactive behavior, self-leadership, and others collected in Table 1. However, it would be putting the cart in front of the horse to bring these operationalizations to the managers when what I wanted to understand was what *they* mean when they use such concepts for example in job ads. The analysis was not concept free however, as the research questions and interview design meant to explore how managers conceptualize and act to increase a particular thing – that thing they call self-direction.

Study III is using a comparatively more deductive TA, viewing the data through the lens of Complexity Leadership Theory (Uhl-Bien, Marion, & McKelvey, 2007). Doing a deductive TA means bringing in theoretical concepts to inform coding and theme development, and the analysis moves beyond obvious meaning in the data to connect to the more abstract level of theory (Clarke et al., 2015). However, while theoretical higher-level codes were applied first, most of the material was coded inductively but still with a complexity lens.

The analysis in Paper II is a bit of a blend. Initially, coding started from the already-operationalized concept of self-leadership (Manz, 1986) to

categorize the events told by participants as belonging to different strategies of self-leadership as they were already provided. However, after coding and writing the first version of the paper, it became apparent that this was actually a rather poor fit for the data. Most of the strategies ended up under one category, another category had no relevant data, and so on. This may be *accurate*, perhaps, but it did not then appear as a *useful* way to categorize the data. This led me to decide to rework the analysis, and base it instead on a categorization of self-leading strategies as either internally focused (more cognitive, more focused on the self and disciplining the self) or more externally focused (selecting or modifying environment/conditions to facilitate desired behaviors) and as more proactive or more reactive. We then rated each strategy as whether it was described in hypothetical wordings or as something the respondent had in fact done, and whether the strategy had seemed to "work" (for dealing with intensity at work) or not. So this was originally a deductive TA turning into an inductive TA turning into content analysis, looking at frequencies.

3.3.5 Survey data and statistical analysis (Study IV)

In study IV, I wanted to test the hypothesis that self-leadership *as operationalized by Manz* would not decrease stress and that "orienting" factors, in this study "Information richness", would be more important under conditions of higher ambiguity, as suggested by studies I and II (and tangentially by study III). Getting access to survey data from my co-authors, from the project *ABW, Activity Based Workplaces – The Office of the*

Future[2], provided an opportunity to do such a test. The survey items rely mostly on existing scales, except for the scale I have termed "information richness." This scale of, in the end, five items were based on initially 13 items from one of my co-authors who called it, initially, "communication." After exploratory factor analysis outlined in P4, I kept the five items most closely correlated and which seemed to most clearly represent the aspect of information richness, having timely access to work relevant information.

Though often criticized, self-reports are often quite good as indicators of attitudes, perceptions and feelings (Spector, 1992). In this particular study, the use of self-reports is probably weakest for the outcome variable "performance" which has to be taken plainly as subjects' feelings about their own performance. For several of the other measures: cognitive stress, information richness, and self-leadership; it is instead obviously the most appropriate measure as these are subjective in nature and not readily observed from the outside, for example. Autonomy could perhaps have been measured both as self-report and more objectively by a manager. The office conditions could perhaps also have been more objectively gathered at the organization level; on the other hand, it does not seem very likely that individuals would misremember or creatively interpret what kind of room they sit it.

The analysis centers on regression analysis which is useful to show the relative weights of different variables to explain variance in the out-

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[2] VINNOVA reference no 2014-00907, https://www.vinnova.se/en/p/abw-activity-based-workplaces---the-office-of-the-future/

come variable. The 510 responses are quite sufficient for the main analysis of the regression. For *comparing* different office types however, the cell office (n =30) and landscape office (n = 64) groups were a bit small to conclusively decide that null findings are "real".

Doing this kind of study means adopting a more positivistic stance as broad phenomena get reduced and defined in precise operationalizations. While a single survey study with hypotheses tests does not prove the found relationships, the findings are consistent with the suggestions from the qualitative studies, i.e. that "orientation" (which can be supported with various resources) matters more for successful self-directed performance, and lower stress, than doing self-focused, internal "self-leadership" thoughts.

4 Summary of appended papers

4.1 Paper I - To see or not to see: Importance of sense-making in employee self-direction

Purpose - The study examines managers' conceptualization of and approaches to increasing employee self-direction (SD) in knowledge workers in Information and Communications Technology (ICT) related work.

Methodology - Individual in-depth interviews were conducted using Thematic Analysis with thirteen managers and HR staff across five organizations in Stockholm, Sweden.

Findings - Two main approaches to increasing employee SD were found, with differing underlying assumptions: an evaluation strategy, where SD is conceptualized as an inherent property of the individual; and a cultivation strategy suggesting an interactionist perspective on SD as emergent behavior based on interactions of individual and situational

characteristics. An emergent topic of a skill for "seeing work" implicates situational judgment, or sensemaking, as core to what is ultimately seen as successful SD. Of the approaches to increasing self-direction found in this study, only the cultivation approach included tactics focused on supporting sensemaking.

Implications – Managers' views of specific employees' performance influences them to view proactive behaviors, e.g. seeking more information, differently (e.g. as a sign of incompetence, or as a sign of "drive") – which in practice may de-motivate employee SD behaviors. Since SD is shown to include both proactiveness and situational judgment, this means one likely way to improve self-direction is by helping employees improve situational judgments, for example using training, explicit areas of responsibility, and allowing employees to make decisions and learn from mistakes.

Originality/value –The study shows that the ways managers conceptualize SD are not reducible to proactive behavior but a more complex composite. Further it shows how differing underlying assumptions relate to how managers attempt to enable self-direction.

Contributions to thesis – The study answers RQ1 by unpacking self-leadership/self-direction to a number of behaviors, not least of which are "seeing work" and RQ3 by showing that, if sensemaking is essential for successful self-leadership, strategies to support sensemaking will likely benefit the development of self-leadership in the organization.

4.2 Paper II - Managing intensity in knowledge work: Self-leadership practices among Danish management consultants

Purpose – Examine sources of intensity in knowledge work and how participants' use self-leadership in coping with intensity.

Methodology – Natural group, focus groups interviews at two separate times with 8 employees in a small management consulting company. Semi-structured interviews on the freer end of the spectrum. Analyzed using thematic analysis, and then again with a kind of content analysis.

Findings – Leaving demands unspoken and "inferred" led consultants to internalize demands and see themselves as the source of them. Results indicate that seeing oneself as the source of stressful demands, as knowledge workers often do, leads to beliefs that self-leadership through effortful self-control will be a solution. From the consultants' stories of their practices however, other strategies emerged as more successful for managing intensity. Notably, these often depended on manipulating physical space such as choosing where to work, not bringing a device when you were supposed to be off work, turning off distractions, and preparing assets that could be re-used in work (digital or physical). Proactive, externally focused strategies were indicated as leading both to better work outcomes and improved ability to be entirely off work.

Implications – Consultants' practices show that they could indeed self-lead to manage intensity, but that the effective self-leadership was focused on manipulating the conditions and environment surrounding a work or non-work situation and not so much the internally focused use

of effortful self-control that was how consultants conceived of "self-leadership."

Originality/Value - The paper contributes an extension of self-leadership theory to better account for current research on self-control. The paper supports previous findings that "implicit" demands can contribute to a mechanism of self-exploitation and trigger overwork in knowledge workers.

Contributions to thesis – Answering RQ2 and 3: Suggesting that self-leadership in knowledge work, to be effective, should reduce reliance on self-applied, thought-focused strategies in favor of externally-focused, proactive strategies to regulate behavior, more akin to "continuous job crafting."

4.3 Paper III - Doing complexity leadership theory: How agile coaches at Spotify practise enabling leadership

Purpose - To examine *how* Agile Coaches, a non-managerial role, in an innovative software company practice *enabling leadership*, a key balancing force in complexity leadership theory.

Methodology – The overall design is a descriptive case study. Semi-structured interviews were conducted with 16 agile coaches in Spotify during a time span of about one year, mostly during 2014. A small number of observations were also made, as well as reading on the intranet, public blogs, and "hanging out" in the office. A thematic analysis was performed on the transcribed interview data, which forms the basis of the presented results.

Findings - Coaches practise enabling leadership by increasing the context-sensitivity of others, supporting other leaders, establishing and reinforcing simple principles, observing group dynamics, surfacing conflict and facilitating and encouraging constructive dialogue. The AC as complexity leader values being present, observing and reacting in the moment, with a great focus on the *quality of interactions* between people.

Implications - Findings suggest flexible structure provided by an attentive coach may prove a fruitful way to navigate and balance autonomy and alignment in organizations.

Originality/Value – Results from this study present an alternative focus for complexity leadership than has previously been theorized – rather than focusing one's practice on the management of enabling conditions, it is possible to practise enabling leadership from the "inside out" by adopting a more micro-level focus on the *quality of interactions* amongst employees. The study also contributes to the team leadership literature by its examination of leadership by non-managers, and adds to research on agile coaches/scrum masters which is very scarce.

Contributions to thesis – The case presented can be seen as a study of collective job resource building facilitated by agile coaches, the kind of enrichment of weaker situations suggested in paper IV. Through their structuring of dynamics, the information richness likely improves, though this is not measured explicitly. Using visualizations, physical boards, by mirroring and surfacing tensions, by helping people through discussions when needed, and more, I see coaches (*and* the practices in themselves, many stemming from agile software development philosophies) as lowering the cognitive load on individual team members; this

would help teams as a whole, the organization as a whole, and enable teams to handle more complex problems without overwhelm.

4.4 Paper IV - Navigating the Activity Based Working Environment – Relationships of self-leadership, autonomy and information richness with cognitive stress and performance

Purpose – Compare the relationships of self-leadership-as-conceptualized-by-Manz and the resource of information richness with cognitive stress and performance, in conditions of ABWE or non-ABWE.

Methodology - Swedish ABWE workers (N = 416) are compared with workers in cell offices (N = 30) and landscape offices (N = 64), and relationships of self-leadership, information richness, and autonomy with cognitive stress and performance were examined using regression analysis.

Findings - Results show no effect of office type. For cognitive stress, information richness had the largest negative relationship, followed by self-leadership goal setting and autonomy. For performance, self-leadership goal setting had the largest positive relationship, followed by information richness.

Implications – When organizational situations cannot be strongly structured, for example because the best work process is not known, or innovation or different collaboration constellations are needed, they need instead to be *enriched* so that employee orientation and co-ordination does not become too much of a burden on the individual employee, disrupting cognitive functioning and performance.

Originality/Value – The paper contributes to the study of employee outcomes in ABWE by highlighting the importance of job resources for outcomes, rather than different office settings *per se*.

Contributions to thesis – Answers RQ3, demonstrating that information richness as a resource has a stronger relationship with lower cognitive stress than does Self-Leadership as conceptualized by Manz. When employees have access to relevant, clear, timely and comprehensible information, the goals they set for themselves, the decisions they make and the discretionary actions they take will all be better informed. Informed, *discretionary* action also carries information back into the organizational system, as signals to other employees about priorities, what is valued and so on.

Table 4. Overview of papers, their connection to the thesis, and author contributions

	Paper I	Paper II	Paper III	Paper IV
Method	Semi-structured individual interviews; thematic analysis.	Focus group interviews with same group at two times; thematic + content analysis.	Semi-structured individual interviews; observations. Case study. Thematic analysis.	Questionnaire; statistical analyses (regression and analysis of variance).
RQ's	1; 2; 3	2; 3	3	3
Main concepts	Observable behaviors that make up self-leadership as judged by managers.	Self-leadership strategies; Boundaryless work (under-designed); ego depletion & self-regulation perspective informing self-leadership	Complexity leadership framework; practices; quality of interactions as key to "good emergence"	ABWE – weak situation; Work design; cognitive stress; "information rich situation"
Data sources	13 individual managers and HR staff in 5 organizations (Stockholm)	8 management consultants from 1 organization (Denmark) at 2 focus groups interview sessions.	16 agile coaches from Spotify (Stockholm). Internal wiki. Presentations materials, blogs etc from agile coaches. Some observations at Spotify HQ.	510 white collar employees (Sweden). 416 in ABWE and 94 not in ABWE.
My contribution on the paper	Everything. I.e. design, participants, interview guide, gathering data, analysis, and writing and re-writing	Data (transcribed interviews) received from second author. Paper idea conceived together with co-authors. I did analysis of the data, and most of the writing, including the re-writing with a new theoretical framework, and most revisions in peer-review. Co-authors involved in one part of the analysis (classification of strategies), critical comments on the manuscript, providing some references, and some writing in earlier versions.	Everything. I.e. design, participants, interview guide, field visits, gathering data, analysis, writing and re-writing.	Data (questionnaire answers) received from collaborators who designed the data gathering, the survey & some of the measures used. I conceived of the particular research questions addressed in the paper and the accompanying analyses. I have done close to all of the writing. Constructive comments on analyses, framing and text by collaborators.

5 Synthesis of results

In the light of the thesis papers and what I mean has been a "missing perspective" of limited self-regulation resources, a main contribution of the thesis is the suggestion to "view self-leadership differently," specifically, with an eye towards optimizing for available cognitive resources rather than focussing on internal motivation. Further, as work today is both presenting "weaker situations", is more complex, and more interdependent, organizations also need to support employees to co-ordinate and align their (discretionary) actions with organizational goals. With a view of self-leadership informed by the perspective of limited cognitive resources, some ways of supporting this emerge as more likely to succeed than others.

Table 5. How each paper contributes to answering the research questions of the thesis.

Research question	I	II	III	IV
RQ 1: When organizations claim to want self-directed employees, what do they mean?	X			
RQ 2: How is self-leadership performed in knowledge work?	X	X		
RQ 3: How can organizations support sustainable and productive self-leadership in their employees?	X	X	X	X

There are two important findings from the first study that especially provided ideas that informed both the later studies and what theoretical ideas became important for the thesis as a whole. These are 1) that situational judgment, through a process of sensemaking, is an essential part of what is deemed "successful" self-leadership (i.e. self-leadership that is aligned with organizational goals) and 2) organizations, and individual managers, may tend either towards a more laissez-faire type leadership where self-leading employees get to fend for themselves, or a more supportive leadership (and a kind of work design).

In the following chapter, I present in more detail how I re-conceptualize self-leadership in the light of the studies, and how the studies *suggest* organizations can support employee self-leadership in ways that allows alignment with organizational goals while preserving employee personal resources and thus their health and wellbeing. Table 5 presents

an overview of the specific research questions and how each paper contributes to answering the RQ's of the thesis. Figure 1 shows how ideas have flowed between papers and influenced concepts.
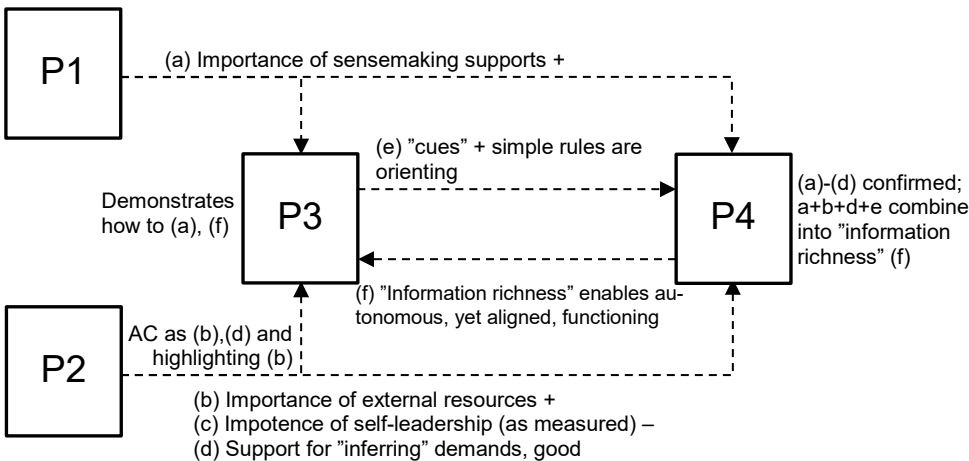
Figure 1. Flow of ideas through papers

5.1 A reconceptualization of self-leadership

The thesis provides both an "outside" and an "inside" view of self-leadership through papers I and II, respectively. Together, results suggest that performed self-leadership is essentially composed of self-direction and self-regulation (Figure 2). Results from paper I provide the outside view (managers observing employee behaviors), and focusses on the self-direction component. Results from paper II provide the (relative) inside view (employees observing themselves and each other), and focuses more on self-regulation.
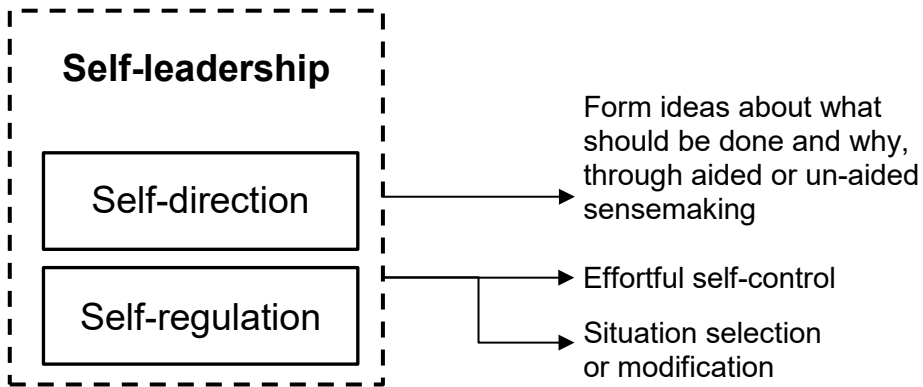
Figure 2. A model of self-leadership based on the findings of this thesis and incorporating research on self-regulation

Papers III and IV have examined closer how self-leadership – thus conceptualized – can be supported by organizations. Paper III links self-leadership to self-organization through agile coach practices focused on providing many opportunities for developing direction, continually, while the self-regulation component is de-emphasized because working is relatively more collective. Paper IV demonstrates that external resources (specifically, information richness) matter more for lower stress and higher performance than the self-focused, internal strategies of self-leadership as operationalized by Manz, likely by preserving attentional resources. See further in section 5.2 Supporting self-leadership.

5.1.1 Achieving self-direction

From the outside, self-leadership is not easily distinguished from simply "performance" or adaptive behavior: employees work to solve problems for the organization's benefit without needing much help or attention from a manager. How the regulation of performance is done specifically is more of a "black box" from the manager's point of view – they don't

know, and can't know, exactly what is going on inside employees' heads. The point is that they don't have to get involved (very much).

A main finding of paper I, in answering RQ 1 and 2, was that a kind of "seeing" was considered essential in employee self-leadership. Being able to, from attending a meeting for example, infer what work tasks one should do to contribute was described as "seeing" by several respondents from different companies. Being able to infer, or make, ones own tasks, without help from a manager, was, from the managers' point of view, the core of self-leadership. Similarly, in paper II, participants described the need to "infer" what the demands on them as workers really were, as managers were reluctant to articulate explicit demands. In paper IV, I hypothesized that a lower *need to infer* demands and work tasks (i.e. that relevant work information is readily available) would relate to lower cognitive stress, and to better performance. Both hypotheses were supported. In paper III, coaches describe many practices aimed at improving clarity of goals, priorities and next actions together with employees, demonstrating ways of supporting individuals in achieving aligned direction without "telling" or imposing controls. And importantly, it is not about subtly manipulating teams to accept a given direction either, but providing tools and opportunity for collectively working out directions, priorities and next actions.

Taken together, self-direction is one key mechanism in aligned self-leadership. Employees form ideas about what should be done (by them), and why, through aided or un-aided sensemaking. The weaker the situation – the more devoid of relevant cues – the more difficult self-direction becomes, either requiring more effort (and expended resources) from

the individual, or resulting in less alignment and co-ordination for the organization.

5.1.2 Achieving self-regulation

The second component of self-leadership is the regulation of behavior. If self-direction is about what one is trying to achieve, self-regulation is about how one goes about it. Paper II is most explicit about exploring this dimension (RQ 2). Participants described using, or hypothesized using, different self-leading strategies to cope with intensity in their work. In the paper, we categorize these strategies as either more reactive or pro-active, and aimed more at the self (internal) or at the environment/situation (external), see Table 6. Participants hypothesized that internal strategies such as "being more disciplined" would be effective, but when they described strategies actually working, these were usually externally focused, such as selecting where to be, physically, or what tools to bring. Linking these results to theories of limited self-regulatory resources, we see that there are different paths to achieving successful self-regulation (Figure 3): self-regulation through effortful self-control (see theory section 2.2.3 for a description), and self-regulation through situation selection or modification.

Table 6. Focus of self-leading strategies, examples. From Bäcklander et al. (2018)

Focus	Sample practice
Self / Proactive	Make plans
	Make "deals" with self
	Prepare
Self / Reactive	Resist or succumb to distraction
	Work more
	Work while sick
	Check email constantly
External/ Reactive	Ask co-worker for help
	Venting to manager
External/ Proactive	Avoid/seek co-workers
	Creating knowledge artefacts
	Seek alternative workplace

Modifying or selecting a situation to avoid or minimize the need for effortful self-control may cost more effort up front, but then places the individual in an "effortless loop" where sustaining the right behavior is easy or automatic (for some time). As a simple example, closing down your email program when you need to focus precludes the need to decide whether to resist checking emails. Doing nothing, i.e. keeping the program up, costs no effort initially but may cost quite a lot after that depending on the inflow of emails – placing the individual in an "effortful loop" where the individual either succeeds in exerting self-control, or fails and thus fails to regulate their behavior as they really wanted.
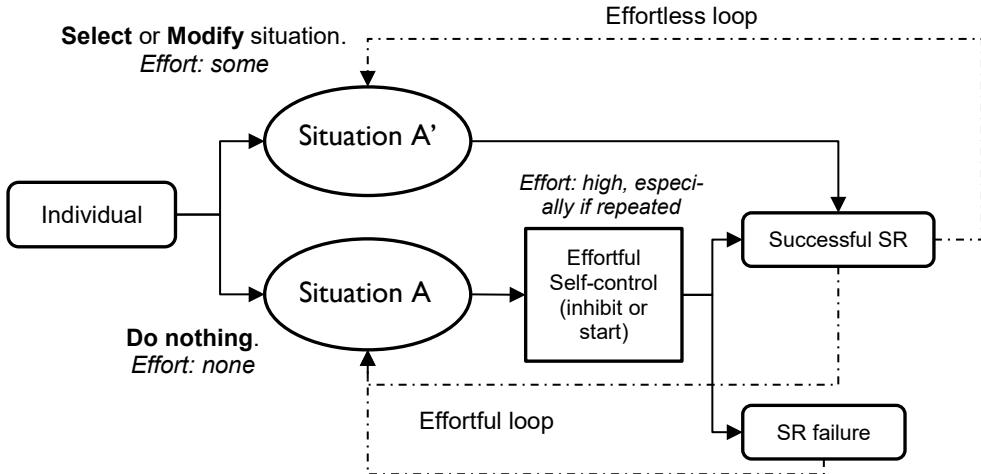
Figure 3. Paths to achieving self-regulation.

Results from Study II suggest that when work is already complex and cognitively taxing, relying on internal regulation strategies to control behavior is unreliable. Offloading some of the regulatory burden by preparing artefacts, using physical space strategically, and concretely removing distractions, were more successful strategies. Results from Study IV further support the notion that using internal strategies, such as the "thought strategies" operationalized in the Revised Self-Leadership Scale (Houghton & Neck, 2002), does nothing to lower cognitive stress, while structuring activities – specifically, goal setting and having reliable information by which to navigate, does.

5.1.3 The inside perspective

What is the subjective experience of the self-leader? What orienting elements do I attend to, are available to me? To an extent, the employee is always "self-leading" as they are always making some choices about what to do, though an observer might not term what is happening as self-

leading. For example, formal directives are not *controlling* your behavior like software code. Rules, even laws, are also, really, just signals about what is appropriate behavior, and still need to be translated/interpreted into actual behavior in a specific situation. However, the signal might be very strong, it may be reinforced by sanctions, and the behavioral response might be so well entrained as to be automatic. It is not *determined* however, as we see all the time in the errors, slips, abuse and crime that people also do.

The point is not to recast everything as self-leadership but just to acknowledge that personal agency never really goes away, and the subjective experience likely is not thinking "am I self-leading?" but rather something like "what should I do next?", and that the answer to this latter question may be more or less dependent on outer or inner cues, and more or less under ones own control.

In paper I (table 2 (i)), an employee asking for more instruction and help from his manager was deemed "insufficiently self-leading" by that manager. But asking for help is a proactive way of informing oneself about what to do next, and for *junior* employees, asking questions, even about what to do, was considered a sign of self-leadership. Paper IV further highlights the importance of being able to easily *inform oneself,* as this related to lower cognitive stress (and better performance), likely because it is making next actions easier to formulate. Timely access to reliable work information also means one can trust that one will be reached by signals relevant to one's work, lessening the need for (cognitively taxing) vigilance.

To sum up, from the employer perspective, successful self-leadership means employees proactively bringing their best efforts and judgments in alignment with organizational interests without needing time from managers.

For the individual employee, successful self-leadership means achieving something approximating the above without expending too much of their personal resources but being able to protect and replenish them.

Either way, performing self-leadership requires both self-direction and successful self-regulation, through either effortful self-control or selection/modification of work situations.

5.2 Supporting self-leadership – What can organizations do?

An overall aim of the thesis has also been to create some actionable knowledge for organizations that wish to have more self-leadership, and for employees to cope with self-leadership demands. Paper I found, in line with previous research, that the reasons for wanting self-leading employees is mainly about speed, flexibility, and the right use of expertise, but also about manager preference.

In answering RQ 3: "How can organizations support employee self-leadership?" each paper contributes some indications as to how. To increase self-leadership, participants in Study I mainly practised one of two strategies: evaluation/selection or cultivation. With the evaluation/selection approach, managers' didn't really "do" anything to support self-leadership, because they view this as mostly a personal characteristic or "drive" that people either have or they don't. To increase self-leadership in the organization, then, you need only select the right people. If they

are unable to self-lead successfully, that indicates they were not the right people. They may even be encouraged to seek better fitting work elsewhere. To be clear, the study did not indicate that managers with this view do nothing at all as managers, but that in regards to employee self-leadership, they did not see it as their job to support or cultivate it, but to "hire and fire" for it.

A similar hands-off approach, though not the main object of that study, was also employed in the case company in Study II. Demands were typically not explicit but had to be inferred, leading to different subjective appraisals of, for example, what constituted "real work". The organization had ideas for structural supports for consultants they had not been able to fully realize. Instead, individual consultants built their own structural supports (such as preparing educational materials) that they did not then particularly want to share with others.

Papers I, III, and IV each describe some aspect of *organizational support for self-leadership*. The re-conceptualization of self-leadership in this thesis points to the importance for the individual of 1) being able to navigate "weak situations" and to "see" or "create" one's own work tasks so as to make a valuable contribution to the organization, and 2) for the ability to offload cognitive demands onto the environment, in a broad sense. Supporting self-leadership, then, would mean supporting these two main mechanisms. And with a resource perspective, organizations can offer support by building or offering resources, of various kinds, that allow for employees to have more resources to spare for where and when they are truly needed.

First, in paper I, I call this mode of support the "cultivation" approach. Managers' with this approach displayed a more interactionist view of behavior, meaning they viewed displayed behaviors as not necessarily proof of inherent characteristics of an employee but rather as something depending on both situation and person. With an interactionist view, there is more organizations can do to influence employee behavior than simply select the "right people". The cultivation approach was characterized by emphasizing structured introduction, transparent information, being clear about expectations and responsibilities, and encouraging an "open climate" for questions and discussion.

Second, a different view on the cultivation approach is displayed in Paper III, as practised by the agile coaches (AC). The AC's worked actively with the *quality of interactions* in the organization, with the focus to enable dynamics of constructive dialogue, respectful interactions, and contributions from everyone. For affecting team dynamics, they have two main levers: context-sensitivity of agents and signal salience (paper III, 5.2). The combination of sensitivity and richness of the environment interact to create actionable sense also in novel situations. Frequent small meetings and conversations makes the flow of work more explicit and manageable, so the need to "infer" demands (as in paper II, p 8) is lessened, and what one has inferred is more frequently "tested" against others' ways of making sense of "where we're going and what we're doing." Coaches' practices, in combination with standard agile engineering practices, work to "enrich" situations for employees, i.e. make relevant cues more salient. For example by making visible hidden assumptions, and work them through; visualize the work load, and who is working on

what; discuss what the aims of this working week are and what the next action should be; don't accept a fluffy answer, insist on commitment to concrete actions; encourage and even guide consideration of the consequences down the line of one's actions; to consider value first when prioritizing different options; encourage teams to contact other teams if there is blocking of progress, and work things out directly with them; and escalate to a manager, but only if needed.

Third, in paper IV, we examined the impact of "information richness," which I conceptualized as *timely access to work relevant information*, i.e. it is a subjective appraisal of the richness of ones working situation, generally. Being in a rich, as opposed to poor, information environment related to lower cognitive stress and better performance, regardless of kind of office type. What paper IV does not address however is if there is a "gap" nevertheless in what would be sufficient information richness from the employee point of view, and what is considered sufficient from the manager's point of view. As paper I shows, these need not match.

6 Discussion

6.1 Cognitive resources at the heart of self-leadership in knowledge work

Answering RQ 1 and 2, about how managers conceptualize and recognize self-directed employees and how employees perform self-leadership in knowledge work, and relying on the existing literature on cognitive resources, executive functions and effortful self-control, I have proposed a revised conceptualization of self-leadership for working situations where attention and executive function are critical and scarce resources rather than intrinsic motivation. Knowledge work is characterized by high autonomy, cognitively and socially complex tasks, and workers are typically highly motivated to perform and improve (Ipsen & Jensen, 2010; Joo & Lim, 2009). At the same time, knowledge workers may be highly susceptible to a "honey trap" or "autonomy paradox" wherein the

boundarylessness of the work results in overwork, sick presenteeism, constant thoughts of work, or even burnout (Mazmanian et al., 2013; Michel, 2014; Pérez-Zapata et al., 2016). This does not primarily happen because workers lack intrinsic motivation. Nor should we simply conclude that they have "too much" motivation, as if this was really a problem. Rather it may be the case when the work has become too ambiguous, the demands too implicit or even obscured, and the standards for "good enough" too unspecified to provide sufficient input even for a very motivated worker to prioritize, draw proper boundaries and in other ways *manage* their work. The weaker the working situation – the less designed the work is when it "reaches" the individual – the more she relies on effortful cognition and regulation to conceptualize the work, parse demands into tasks, initiate efforts, evaluate results and so on.

In her thesis on self-governing competence to deal with flexible work, what I here call underdesigned work, Hanson (2004) finds it is very demanding of meta-cognitive competencies, and to that I add that the scarcity of cognitive resources preclude a reliance on individual effortful cognition. In the introduction I wanted to highlight how a defining feature of knowledge work is that there is a kind of continual work design that knowledge workers *have to do* to perform their work (Alvesson, 2001; Davenport, 2005; Drucker, 1999; Hatchuel, 2002; Hodgkinson & Healey, 2008). In addition to the core tasks being ill defined for knowledge workers, a more general working life movement towards boundarylessness in the working situation as a whole further creates demands for workers to perform boundary work, make more peripheral decisions about work

(such as where to work), being proactive about co-ordinating and so on (Allvin et al., 2013).

Some have suggested that there may be such a thing as "too much freedom" at work (Busck et al., 2010; Grönlund, 2007; Hvid et al., 2008; Warr, 1987), though when empirically tested with existing measures, this does not seem to be the case. Focusing instead on how underdesigned work that one is nevertheless expected to do creates additional demands, and specifically, work design demands – makes more sense and allows us to preserve some work psychology theories. That is, we do not suddenly have a situation where too much freedom should be met with reducing worker control, but simply high demand situations where strategies need to be used that preserve and build resources rather than deplete them.

And so we circle back to centering on attention and controlled cognition as a scarce resource in this process. Performing individual work design has been shown to be both a necessary and effortful process (Bredehöft et al., 2015), resulting from increased decision-making demands, planning demands, and learning demands in work (Kubicek et al., 2015). Studies I and II show that what is seen as self-directed performance in employees, or is conceptualized as self-leadership by employees, encompasses these demands. For employees, relying on effortful self-control rather than more actively modifying situations tended to result in working more and experiencing more stress, and were not effective in resisting or avoiding distractions. Selecting or modifying situations were more effective in protecting against distractions and to stop working when this was the goal. A problem with self-leadership as it has

been conceptualized by Manz with a high focus on internal, cognitive strategies and with the aim to optimize intrinsic motivation is that it is relying on cognitive processes that are not exactly free and available for use in knowledge workers, and using them to increase something – intrinsic motivation – which there is already enough of. Study IV strengthened this conclusion as self-leadership as operationalized by Manz and collaborators did not relate to lower cognitive stress or higher performance, while the orienting resources of information richness and goal setting did.

In a 2014 review of work design research, Parker highlights the need for theories to go "beyond motivation", because (intrinsic) motivation is a necessary but insufficient condition to achieve new relevant outcomes of employee health, development, and ambidextrous performance to allow organizations to innovate and adapt to rapidly changing conditions. And while demands at work have moved beyond the need for motivation, the importance of self-leadership as a key component in how employees conduct themselves at work with increasing challenge and complexity is even greater (S. K. Parker, 2014); and so the need to examine how self-leadership is affected by limits of attention and executive function in boundaryless working situations such as knowledge work has never been greater. It is to this effort the thesis makes a contribution by the suggested reconceptualization of self-leadership seeking to optimize for available cognitive resources (5.1).

6.2 Self-leadership as self-exploitation

Taken together, the papers of the thesis paint a view of self-leadership that can be "idealized" into two main types, which we could call (A) Self-leadership as self-exploitation (detailed below) and (B) Self-leadership as self-organization (detailed in 6.3).

In answering RQ2 and RQ3, how self-leadership is performed in knowledge work and how organizations support it (or not), a pathway emerges in which expectations of self-leadership become self-exploitative. By exploitation I mean that one is spending more of ones resources than one is certain to recover. In a COR theory perspective, when we work, we draw on various resources available to us in the moment (Hobfoll, 1989). These can be more external: social, material, technical, or more internal: abilities, attitudes, energy. When employees (have to) rely too heavily on their personal resources, work becomes consuming rather than generative (Kira & Forslin, 2008; Palm, 2008).

Studies I & II suggest that not being explicit about demands and standards of quality and not articulating tasks, for example, may trigger an internalization of demands and tendencies to overwork (study II), i.e. send someone down the self-exploitative pathway. Or, when an employee instead asked for more explicit instruction (study I), this was seen as troublesome, and not self-leading. Managers expressing more of a sink-or-swim approach to self-leadership in study I of course didn't *want* employees to be stressed and burn out, but they still expected employees to use primarily their personal, internal resources ("drive") to give their work sufficient structure and get work done. If they could not or would not do so, they were seen as a bad fit with the company.

A darker side of the supposed autonomy and freedom in knowledge work has been previously shown in several studies (see 1.2 and 2.2.1). Dan Kärreman has suggested that self-management has little to do with freedom and is rather to be seen as a "harvesting of agency" by employers (Bramming et al., 2011), i.e. an exploitation technique. Results from papers I and II basically supports this view. Employees providing their time, their creativity, their ideas, their best judgments and their agency, proactively worrying and taking care of business, ever vigilant, always responsive and never requiring instruction, discipline, or care from management – of course that idealized type is something organizations want, and likely part of the reason why knowledge workers are often paid more.

As suggested in both a more positive and negative sense in papers I and II, leaders not being explicit about demands and articulating tasks encourages an internalization of demands through an interpretive act. This internalization process also, in paper II, seems to result in a view that demands are *self-imposed or chosen, i.e. recasting demands as autonomy*. This echoes the concept of "dictated autonomy" (Maravelias, 2007): an autonomy "so wide that it is no longer defined by its opposite /.../ but is instead completely absorbed by it. It is a dictated autonomy in that it conceals its heteronymous determination." That is, the successfully self-leading employee is supposed to anticipate the intentions of the people in charge, and the best way of reliably doing that is to internalize their values, norms and intentions (ibid). It becomes much a matter for the individual herself to draw boundaries to protect their cognitive function,

their personal relationships and their mental and physical health, also called "boundary work" (Mellner, 2016).

Even if we disregard, as we really should not, the realities of human insecurities, power differentials, differences in self-knowledge, and personality differences affecting the degree to which people will in actuality feel comfortable or entitled to truly declaring and enforcing healthy boundaries, boundary work may *in itself* be taxing work. When faced with (excessive) demands, workers have to either just do the work anyway, or do the boundary work – but both are work. Results from study II suggest that to the extent workers can re-ify, externalize, and automatize boundaries between work and non-work, the more successful they are in enforcing boundaries. Self-regulation research (reviewed in 2.2.3) also suggests this should preserve resources as there is less need for constant decisions about boundaries and so less taxing of executive powers.

6.3 Cultivating self-leadership as self-organization

The rate of change in organizational environments has renewed interest in organizations as complex adaptive systems (Schneider & Somers, 2006), capable of self-organization. While stable environments afford large and highly structured machine bureaucracies focused on efficiency, fluctuating and unpredictable environments require organizations to be more "organic" (Burns & Stalker, 1961). But organizations must strike a balance between sufficient degrees of freedom within the organization to generate variety and novelty, to move on opportunities fast and so on, and sufficient structure to co-ordinate action, share information, and give a sense of direction (Eisenhardt et al., 2010; Regine & Lewin, 2000).

The more turbulent the environment, the more narrow this "edge of chaos" is, i.e. there are fewer configurations that hits this balance avoiding either chaos or being overburdened (Davis et al., 2009).

As the studies in this thesis have shown, self-leadership in its most positive and ideal sense contributes to the organizational ability to self-organize: employees with high autonomy over what, where, when, and with whom to work do choose every day something, some place, some time to work and to co-ordinate and collaborate with colleagues, for the benefit of the organization. They respond adequately to signals within and from outside the organization. They "extract", or forge, work tasks for themselves from incoming information, to make sure they contribute wisely. They engage in constructive dialogue with colleagues leading to better decisions, better products, and better relations between people. They draw boundaries to make sure they can arrive at work again the next day, rested and ready to go. By drawing boundaries, they signal "back" to the organization (i.e. other self-leading people) that no more work can flow this way right now. Further, choosing to align themselves with with others decisions feeds informational value back into the system when the actor is exercising their own judgment. A more heavy handed approach, enforcing compliance, strips the informational value from performed alignment.

The best judgment of well informed but ultimately autonomous agents, sensitized to relevant cues in their environments on which they also act – this is what ties together the self-leadership of employees and the self-organizing capabilities of the organization, the microlevel interactions aggregating to higher level capabilities.

Recasting self-leadership in knowledge work as a matter of reading situations, achieving direction, and protecting cognitive resources rather than a problem of intrinsic motivation has consequences for approaching how to increase successful self-leadership in an organization.

6.3.1 Cultivation of self-leadership through management: enabling and enriching

If individual employees take ever more responsibility for how, what, when, with whom, and so on, to work: what is left for managers? Quite a lot as it turns out. If the traditional bureaucratic response to complexity has been to *reduce complexity*, in post-bureaucratic organizing, one might instead focus on ways to *cope with,* or absorb, complexity (Ashmos, Duchon, & McDaniel, 2000; Havermans, Den Hartog, Keegan, & Uhl-Bien, 2015). The task for management is not to design and confine jobs to be small enough to fit a single person; instead management needs to be about making sure employees *are resourced and equipped* to do the large, complex, interconnected and varying tasks before them.

This thesis has examined both qualitatively and quantitatively the centrality of judgment, sensemaking and access to relevant information to achieving self-directed performance. In paper I, I argue that an important avenue for organizations to increase employee self-leadership, then, is by supporting sensemaking processes: a cultivation approach to achieving employee self-direction. Through providing clarity and opportunities for creating clarity, the organization can take on and share the burden of this work, while also improving alignment of discretionary actions with collective goals. In its more static form, it is the "enabling bureaucracy" (Adler & Borys, 1996). If you indeed want to avoid or lessen employee self-exploitation, perhaps it doesn't have to be unspoken and

unclear whether working on Sundays is expected, or even ok. A top-down decision and communication on this is, as Adler & Borys showed, unlikely to be felt as coercive if it is in line with workers values.

In a more dynamic form, though, clarity may not be "given" but must be made and re-made. Building in opportunities for this is something management can do, for example by not allowing people in a flex office environment to work independently for weeks on end but require regular synchronizations for mutual benefit. In a complex and ambiguous working environment, solving novel problems in changing constellations of people and having adequate task knowledge to perform ones work is not going to be a stable property of an individual, but rather depend on a flow of work relevant information, i.e. an information-rich environment. Weick, Sutcliffe & Obstfeld (2005) write of sensemaking that it involves "turning circumstances into a situation that is comprehended explicitly" which then turns into a "springboard for action." Coaches in Study III work a lot with this, orchestrating moments of interactive and collective making sense of work and turning it into explicitly comprehended, actionable direction. What do these practices contribute to self-leadership? This concept is not very present in Study III, and indeed Spotify probably had the most collective ways of working of the participating organizations. The coaches' focus was mainly on achieving self-leadership in teams, rather than individuals. Yet managers at Spotify in Study I promoted a cultivation approach to achieving self-direction. Establishing enabling structures and routines, and teaching and re-iterating simple rules as in Study III, contributes to making an information-

rich, supporting context to help employees become successful self-leaders, which includes being good collaborators and team mates.

Agile software development (ASD) as a management philosophy is largely in line with a complexity view of organization from the start: that making large a priori plans to be followed relies on a kind of total knowledge of the problem ahead that is just not possible (anymore, if it ever was). Small, local, and iterative processes are a key idea in ASD. However, the coaches in study III often brought up how they thought they differed from doing "agile by the book" (meaning a heavy focus on "tools" and specific techniques), which was in focusing very much on interpersonal dynamics and being present, enabling them to observe, to know their team, and to judicially "interfere" when thought prudent, to improve dynamics.

How organizations deal with employees' proactive information seeking, for example though questions, was indicated to be an important factor in management to support self-leadership in studies I-III. Team research suggests a fruitful path to approach this is to actively attempt to develop psychological safety – the perception that the consequences of taking interpersonal risks at work are not negative - which is related to team learning behaviors (Edmondson & Lei, 2014). The "selection" approach evident in Paper I is clearly hostile to asking "too many" questions as learning behaviors tend to be interpreted as signals of incompetence. In Paper II, many signals of overwork were deflected both by colleagues and managers. In Paper III, coaches talked quite a lot about how people interact, how they respond to each other, for example when others have

questions, in doing code review or interacting with other teams, really matters and is worth dedicating time and effort to improving.

Previous research has concluded that expectations of self-leadership are demanding of cognitive capabilities (Hanson, 2004) and resources (Bredehöft et al., 2015; Kira et al., 2010). This thesis has sought, first, to integrate perspectives from self-regulation research suggesting why it becomes problematic, especially for knowledge workers, to rely on implicit, internal regulation processes; and second, to explore directions for how organizations can support employees and help offload the cognitive burden, without going "back" to many formal directives and limitations, by developing routines for building collective resources, especially improving clarity in work.
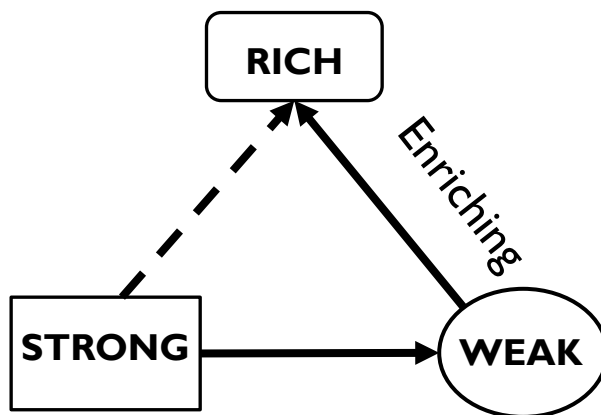

Figure 4. A tripartite model of work situations

I see this as an *enriching* of the work situation that may otherwise be too "weak" (Mischel, 1977). As work has moved from strong to weaker situations (Allvin et al., 2013), what is needed is not, perhaps, a strengthening but an enriching of the situation (Figure 4), creating meaning and interpretable cues that help direct work on a day to day basis.

6.3.2 Practicing individual self-leadership while building resources

While I have wanted to re-focus on the social, structural and cognitive environment surrounding the individual expected to be self-leading, I believe the research in this thesis also makes some suggestions about how self-leadership is practised by individuals and possible improvements.

The first contribution is the conceptualization of a self-leadership economizing on executive function rather than motivation. This is not because motivation is irrelevant. In line with Parker's (2014) argument, (intrinsic) motivation is necessary, but insufficient to deal with challenges of modern knowledge work with its demands for constant learning and renewal, and threats of "information overload". Studies suggest that intrinsic motivation may protect against the resource loss proactive work behaviors otherwise result in (Strauss et al., 2017), and exerting personal initiative at work increases negative mood if perceived organizational support is low, but not when it is high (Zacher et al., 2018).

I have argued that *anything* that requires knowledge workers to use more attention/controlled cognition is problematic from the outset, as attention is a scarce resource in ways motivation is not. Focussing on (intrinsic) motivation suggests that is the most essential factor, or missing link, to adaptive work behavior, that the problem is just to be motivated to behave correctly. I argue that for knowledge workers, the problem is

typically different. Because of the nature of their work, the demands of autonomy and interdependence, and the current demands on attention, it is by no means certain that one can achieve whatever one wants, if only one is sufficiently motivated. Human executive functions, such as working memory, are very limited and cannot be significantly increased by ways of thinking, or training. They can however be preserved in the moment by offloading (Risko & Gilbert, 2016). Studies show that knowledge workers typically *are* motivated and engaged with their work (Ipsen & Jensen, 2010; Joo & Lim, 2009). In fact, very high motivation may be exacerbating problems for knowledge workers, to the extent it contributes to 1) internalization of demands and solutions (as in study II), and 2) a high willingness to expend personal resources for work instead of demanding better job resources collectively (this will negatively impact recovery, and learning).

Secondly, results of the thesis support previous findings that boundary work is central in dealing with underdesigned work. But boundary work is still work, i.e. demanding of resources. Informed by the limited mental resources perspectives, and results from study II, the ability to "externalize" boundaries seems helpful, or to routinize them so they become habitual and thus less cognitively taxing. Previous research supports both these conclusions. People high on trait self-control actually do not have "more" self-control resources than others necessarily, but tend to arrange conditions so that they do not have to exercise self-control in the first place, for example by avoiding a tempting situation altogether (Duckworth, Gendler, & Gross, 2016; Ent, Baumeister, & Tice, 2015; Fujita, 2011). And, people with higher cognitive control capabilities do

not engage in more effortful mindful decision making, as you think they would be equipped to do, but the opposite: they routinize decision making to a higher degree than people with lower cognitive control capabilities (Laureiro-Martinez, 2014). Studies I and IV both also support the notion that resources that help individuals orient themselves about what is important support the accomplishment of self-directed performance. Together, studies I, II and IV, all suggest that to the extent individuals can select or structure their environments and relations to support them in their work, this is preferrable to effortful cognitive strategies.

Essentially what the individual is doing through a process of externalizing and routinization is *organizing*; it is a bottom-up arranging of the conditions of work that may become re-ified, stabilized (or countered) by others similar organizing, and eventually becoming stable patterns of higher level organizing (Uhl-Bien & Arena, 2018), essentially building organizational capabilities (Nayak et al., in press). To the degree that work is interdependent it is likely better for the organization that employees do these processes collaboratively. The facilitation done by coaches in study III is to a high degree focused on enabling these kinds of collaborative, emergent organizing *moments* that are really the engine of organizational creative capacity (Nayak et al., in press, p. 33).

7 Limitations

The work in this thesis is not without limitations. Here I address some limitations I want to acknowledge that pertains to the thesis as a whole, while each paper has its own limitations-section. Section 3.3 also discusses the choices of each method.

The generalizability, or external validity, of the findings may be limited especially as some kind of indicator of how common these working conditions are. However, this was never the purpose of the studies. Instead they may be seen as mainly an examination of extreme cases. Scandinavia in general and Sweden in particular is especially low-bureacracy, low-power-distance, egalitarian, team-working and self-managing (Amble, 2013; Boxall & Winterton, 2015; Enehaug, 2017; Lindeberg, Månson, & Larsen, 2013), and for the most part, I/we have sought out participating organizations that explicitly value or "want" a high degree

of some kind of self-directedness from their knowledge workers, i.e. the particular research contexts have been sought out because they were deemed likely to contain the phenomena under scrutiny, namely under-designed work and/or (expectations of) employee self-leadership; what has been called information-oriented selection (Flyvbjerg, 2006) or purposive sampling (Ritchie, Lewis, Nicholls, & Ormston, 2013), as opposed to random sampling. However, as knowledge work and digitalization spreads, insights from this context may come to have wider applications than presented here.

Having worked to a large extent with an applied, phenomenon-driven approach (Schwarz & Stensaker, 2014), some limitations become built in to the work. You start with some phenomenon, some empirical thing you start to explore and eventually try to name and describe, which opens up the possibility of a wide variety of theoretical frames to apply to the phenomenon; various lenses, if you will. Research papers, the cover essay of this thesis included, are usually written as if the theory frames, which are eventually used to shine a light on the phenomenon, were chosen already from the beginning, which in PDR they are not. This makes the reader arrive at the problem by a different route than was taken by the researcher, and which might lead them to other kinds of questions, informed by the selected theories and related empirical studies. This is not to say there was a blank slate from the beginning; no problem (phenomenon) exists *objectively* but is selected, framed, perceived by the researcher (Van de Ven, 2016). The work in this thesis then has started in an empirical phenomenon and expanded out, rather than starting in a theoretical frame and narrowed in, with the possible exception of study

IV which tests a number of hypotheses (though by no means *all* hypotheses that could be generated or that are reasonably implied from papers I-III).

A weakness of the work might be aiming too broadly and, in effect, superficially. On the other hand, I believe in the end the variety of perspectives, through different informants, is also a strength and does indeed tell us something about an aspect of modern knowledge work, namely its underdesign, and about the idea that self-leadership could and should be used to bridge this underdesign and create flexible, fast and innovative organizations. I like to see the thesis as a prism breaking the light in various ways while still being about one thing.

Another thing that one could have done is to examine the demands side of participants' work and the logic that informs their choices more closely. This is touched upon in some of the papers but one could have gone much further. For example, in P1, consulting follows a somewhat different organizing logic than do less immediately customer facing knowledge work. Some participants would often hire junior people while one participant would only hire experienced people, or even external consultants, to her team. Expectations of self-leadership, time to develop and so on would differ in relation to this. In P3, at Spotify, there seemed to be a difference in degrees of freedom to create one's own modes of working for different teams depending on whether they were "feature teams" (working on software that consumers will use, constraining choices) or some kind of backend team, where their "customer" were only other Spotify employees (granting more freedom). In P2 the participants were more homogenous, but in P4 it was not examined at all what

kinds of demands the work might bring due to the special nature of the work, instead the type of office and some conditions of the working environment were in focus.

8 Future research

As detailed above, the thesis work has started in an empirical phenomenon and expanded from there, pulling in a number of diverse research streams to inform the problem. This makes a fertile soil for generating further hypotheses and ideas to examine, too many to detail here in full. But I want to expand on two themes I find especially interesting and pertinent to follow up on.

8.1 An environment that supports continual making sense

The major theme of the thesis' results I believe is the centrality of "seeing work" – interpreting demands, making sense, and exercising good judgment – and its dependence on the informational, social, and organizational environment for support. The empirical studies illustrate both good and bad examples of managers' and leaders' influence on people's

ability to navigate work more constantly in flux. I believe more research is needed to explore how to create a kind of dynamic clarity, like the internal transparency proposed by Adler and Borys (1996), that supports aligned self-leadership. What helps employees understand their roles better, and that of their co-workers? What makes a piece of information meaningful, and a clear call to action, to someone and not the other? What enables a culture of acceptance and respect for the boundaries employees need to and should enforce, if they are to be stewards of their own work load – is that even possible within a capitalist logic? On that note, what role do unions have to play in this kind of work – something completely unexplored in this thesis.

8.2 Self-leadership in relation to interdependencies and constant connectivity

A question for the future is to closer examine the effects of the combination of simultaneously more interdependent and more autonomous work. In an individual adaptation/coping scenario, where others are autonomous, my own workload could suddenly increase very much due to others coming to me with questions they need my help with, or things they want me to do, without any formal agreement, increase in pay, or official de-prioritization of other work tasks. Constant connectivity as is common today further fuels the problem (Mazmanian et al., 2013). Cross, Rebele, and Grant (2016) demonstrated that what they termed "collaboration overload" leads to employee stress, and makes it more likely that people with in demand-knowledge and skills leave, which seems like a lose-lose proposition. Since nothing formal is happening, the in-demand individual typically gets no extra resources at their disposal to solve the

problems. The more interdependent work is, the less an individual worker can idiosyncratically job craft without causing externalities to others. Further research on self-leadership should include this dimension from both perspectives: How to protect worker focus and time when they are constantly available to everyone? and, How to prevent negative externalities of people optimizing their job a little too much for their personal objectives? Paper III begins to look at this question as the interdependent nature of the work was highly recognized, and something agile coaches worked to balance. What I believe other organizations could learn from this study is the value of paying attention to the quality of interactions. It needs to become a natural thing to discuss among peers and try to manage, at a collective level, our interdependencies. If we have some "scripts" for doing this, and/or organizational resources in the form of coaches or other designated people to guide us in the process, it does not have to feel like the start of a conflict but simply an ordinary part of work. Examining how that might work in practice, perhaps testing an intervention to increase it, would be interesting venues for research and development.

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