

Chapter 20

Stabilizing Self-Identities in Engineering

Anders Buch

Abstract: Increasingly, engineering work – and other types of knowledge work – is performed in ambiguous contexts. Although key performance indicators are used to set standards for excellence in engineering work, the character of knowledge work is still flexible and open to interpretation. Engineers constantly have to make sense of their work in order to reproduce their social identities. Organizational contexts – as well as engineering work itself – have become still more ambiguous – always in need of justification. Thus engineers are being held accountable for their actions and their roles as professionals. This puts a lot of pressure and strain on their (professional) identities. In reaction to the strain the engineers are constantly engaged in a process of finding viable subject positions that can help stabilize their self-identities. The subject positions are negotiated in an ongoing dialogue in the workplace and in relation to other significant contexts. Discursive resources and story lines are mobilized in order to make sense of the category ‘engineer’ as a defining characteristic of identities. Empirical findings from an ongoing research project on work-related stress among knowledge workers reveal three frameworks of sense-making among engineers: 1) The archaic professional framework, 2) The framework of bureaucracy, and 3) The framework of reification. The chapter discusses these frameworks of sense-making within engineering work and shows that the frameworks themselves in fact are ambiguous. The frameworks do – *prima facie* – stabilize the professional identities, but they are in fact also a potential source of work-related stress when professionals are faced with demands for flexibility and the frameworks collide.

Key words: Identity, work-related stress, engineering profession, institutions

Introduction

Increasingly, it is reported that engineers and other well-educated knowledge workers suffer from serious work-related stress. Surveys conducted by professional societies, e.g. The Danish Society of Engineers, show that work-related stress has become a serious problem for many engineers. The engineers claim that they are affected by heavy workloads and an increasing

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pace in work that result in classical symptoms of stress. On the other hand, engineers often regard their work as privileged and stimulating. Due to the nature of their work, engineers often have a high degree of influence on how their work is performed and structured. ‘Self management’ is a predominant form of management when it comes to intellectual, creative, open-ended and complex work. Generally, the engineers have the expertise, skills and (tacit) knowledge that are crucial for success. In addition they are dedicated to – and often very enthusiastic about – their work. Given this background, it is often left to the engineers themselves to determine their methods of work and to plan their work. Engineers will come out with a high score when it comes to influence and job control and should therefore – according to leading theories of work-related stress (e.g. Karasek & Theorell, 1990) – not be stressed due to working conditions. On the contrary, knowledge work is typically characterized by high decision latitude and classified as an active job. This apparent paradox suggests that we are in need of a new and more reflective perspective on job-related stress in order to understand the phenomenon. The limitations of traditional stress conceptions when it comes to understanding knowledge work have been argued elsewhere (e.g. Grönlund (2007), Sørensen et al. (2007), Buch & Andersen (2007)). In this chapter, however, I will give an outline of a contextual framework of analysis that attempts to understand stress among knowledge workers in terms of a delicate balance between strain and enthusiasm. The discussion will be informed by empirical data derived from case studies of six Danish knowledge intensive firms – two of which are engineering consultancy firms. I will conclude this article by presenting three strategies of sense making that engineers mobilize in order to alleviate stressful conditions in their work.

The Ambiguity of Knowledge Work

You don't always have the feeling that your job is straight to the point. Actually, you can have your doubts: Say, did I get it right this time? If you're working on something that's part of somebody's assignment. You've been given some vague constraints for the solution of the task and you get back with your output. And you don't get any response on your work. You get kind of troubled. That's how I feel and I think: Gee – did I get the perspective on the problem right? For example when I do risk assessments. Such things can be done within 1½ page. [But] it can easily stretch over 7 pages depending on how thoroughly you deal with the assignment. In situations like this I feel I'm in need of feedback – that's what I think. (From an interview with Nina – an experienced engineer working in an engineering consultancy firm.)

Nina's remarks remind us that engineering work and performance is susceptible to interpretations. Although much engineering work is regulated by the laws of nature, rigorously audited quality standards and strict company

procedures, there is still considerable room for personal judgment. This interpretative flexibility and open-endedness have been argued strongly by theoretical and empirical studies in science and technology. Bucciarelli and Kuhn (1997, p.213) make the point in relation to engineering design when they write:

It is not difficult to lay out performance specifications at the beginning of the design process; indeed, it is standard practice. What is difficult – probably impossible – is retaining those specifications without an ongoing process of modification, clarification, negotiation and joint meaning-making. Specifications that seem clear at the outset are stretched and challenged by the design process itself; ambiguities, incompletenesses, and contradictions are uncovered as part of the process of discovery that is design.

Thus, contrary to common-sense perceptions, there are no clear and pre-determined standards for what makes engineering work – and other kinds of complex knowledge work – successful. The very successfulness (or unsuccessfulness) of the work is established in a complex work context where various goals, interests and perspectives are mediated, altered, mangled and negotiated. The work context is heterogeneously populated by various actors (the customer, the manager, the colleagues, etc.) and actants (quality systems, technical equipment, etc.) that give ‘voice’ to (conflicting) interpretations of what constitutes successful engineering work. Although local routines, standards and conventions guide the day-to-day work and make ‘going on’ possible, these routines can be interrupted and questioned. The increasing complexity of knowledge work makes it likely that the work routines are in fact frequently interrupted. Restructurings, organizational changes, new managerial philosophies and techniques count among the more spectacular interruptions of everyday work routines, but local work routines can also be questioned by colleagues from other departments in the company, colleagues with other professional backgrounds, etc. All in all, engineering work and other kinds of knowledge work are inherently ambiguous. The work is characterized by a high level of ambiguity in input, process, and output. Although traditional engineering knowledge about ‘how things work’ (the physics and instrumental process) might seem to be fairly stable the work context of engineering is in fact highly unstable, ambiguous and subject to interpretation.

Identity and Stress

These characteristics of engineering work seem to have implications for the way engineers make sense of their work and their own identities. In a general theory of the psychological make-up of individuals, Giddens (1991) describes how identity work has developed as a social, reflexive and subject-

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tive project in late modernity. Giddens uses the term ‘self-identity’ to describe the individual’s ongoing reflective attempts to make sense and coherence of its experiences and to stabilize the self. Normally the self is stabilized through unproblematic routine actions of the practical consciousness. These routine actions are fundamental for our ability to carry out ordinary social interactions and tasks and they provide a basic cognitive and emotional platform for the development of the self – the ontological security of our existence. However:

On the other side of what might appear to be quite trivial aspects of day-to-day actions and discourse, chaos lurks. And this chaos is not just disorganisation, but the loss of a sense of the very reality of things and of other persons. (Giddens, 1991, p.36)

In other words, the individual must continuously engage in a sense-making endeavour in order to secure the ontological security of the identity. The continuous reproduction of the self-identity is needed in order not to lose sense of reality and face existential anxiety. The reflective construction of self-identity is based on social and cultural resources: language, symbols, meanings, values, etc. These elements are the fundamental bricks of identity work and with these elements the individual constructs and stabilizes the identity. The identity work of knowledge workers is interwoven with their professional training and career background. With an academic training and a professional career in engineering the individual typically identifies with the profession’s values and adopts a certain way of seeing and approaching the world. This professional outlook typically will constitute the basis of the individual’s appraisal of the work and lay out a horizon of expectations in relation to fulfilment, self-realization, job satisfaction, etc. In this way the construction of self-identity becomes the yardstick for the individual’s sense-making and, *a fortiori*, for the individual’s sense of strain or enthusiasm in relation to work. Work related stress is developed as strains accumulate over a longer period of time. This might of course be due to heavy work loads and other stressors defined by traditional theories of work-related stress. But in the case of many knowledge workers it can also be caused by work-related conflicts, unfulfilled ambitions, professional intimidations, etc. – strains that put pressure on the professional self-identity and threaten the individual’s ontological security. For knowledge workers work will become stressful when their expectations and professional aspirations are not met. When the self-identity adopts a professional codex or ethos it will be stressful to experience conflicts that intimidate or sidestep the values of the profession. It will be difficult for the professional identity to make sense of these violations. They will be perceived not only as unreasonable actions but also as a personal assault, degrading or senseless.

Strain and Enthusiasm in Engineering Work

The ambiguity involved in engineering work – and knowledge work in general – becomes a potential strain on the identity construction of the employees engaged in knowledge work *and* a potential source of enthusiasm and self-fulfilment. Due to the incessant discussion and negotiation of their performances and roles the engineers are constantly faced with doubts and insecurities about the relevance, use and meaning of their work, yet, these negotiations also hold the prospect of receiving acknowledgement of their importance in developing and executing special assignments. The engineers constantly have to reflect on their contribution to and their entitlement in the organisations, in society in general and not least in relation to personal expectations to career development and work life. The nature of their work requires them continuously (and often openly) to define and substantiate themselves. This makes their work a field of intense and ongoing identity construction and development. When the challenges of the job are successfully overcome, feelings of enthusiasm are evoked, but when they are not, the result may lead to anxiety and doubt. Due to the ambiguous character of knowledge work the identity development and construction of the engineers are under pressure.

In a series of qualitative focus group interviews with knowledge workers and their managers in six Danish knowledge intensive firms, efforts have been made to map the “enthusing” and “straining” factors. Some of the findings derived from interviews in two engineering consultancy firms will be mentioned here¹. One theme in the interviews deals with professionalism:

- The interviews point to the importance of professional development as a prerequisite for the feeling of enthusiasm. The engineers stress that they thrive on opportunities to struggle with challenging assignments that give room for contemplation of technical problems. One of the engineers sees technical contemplation as the “fuel” that keeps him going on and another one expresses his wish for room to do “nerdish” work. It is obvious that the term ‘nerd’ has a very positive meaning among the engineers and is closely associated with the engineering ethos.
- It is also very important for the engineers to be recognized as accomplished and competent professionals by their colleagues, superiors, customers and fellow professionals.

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- The engineers do not see their professionalism as something that is given once and for all. On the contrary, professionalism is a thing that needs to be established and proven on a regularly basis. The striving towards personal fulfilment and development is tightly interwoven with a striving towards overcoming and solving technically challenging problems.

Another theme in the interviews addresses the need to produce ‘results’ or manifest products:

- The engineers consider it very important that their work actually adds value to someone or that the work actually results in the fabrication of a concrete (and tangible) product. One engineer tells a story about how proud he was to point to a bridge when driving on the freeway with his son and say: “Dad built that bridge”. Others make the point in other words: “I want my work to make a difference [to my fellow citizens]”
- The ambition to make a difference is closely related to the engineers’ feeling of pride in their job and the product they produce. It is mandatory that the engineers can answer for their products and that the quality of their deliverances is impeccable. If the engineers are forced to deliver a service or a product half-done they feel bad about the situation and feel that their professionalism is being compromised.

This last point about the quality of the products of their work is further developed in discussions about the fragmentation of their workdays.

- Working on several different assignments during a work-day is very stressful for the engineers. They feel that their working hours get fragmented when they have to attend to a lot of different assignments during the day. They feel the lack of continuity very unsatisfying because it deprives the engineers of contemplating the technical problems of their work – which can eventually result in unacceptable quality standards.
- Even though the problems are solved on an acceptable basis according to the company’s quality standards, the engineers often feel that the fragmented workday does not leave room to solve the problems in ways that are acceptable to their own professional standards of quality. In effect, the engineers work longer hours in order to raise the quality level of the products – even though the budgets do not give room for this. Typically, the engineers take the extra time to deliver high quality and omit to invoice the extra time spent.

Finally, the engineers are very concerned with questions about management and feedback.

- The engineers appreciate autonomy in their work. Self-management is the dominant form of management when it comes to giving shape and structure to the assignments and the working days. Allowing the engineers professional judgements and individual preferences to structure work are seen as the most effective and satisfying way to get the job done – both managers and employees agree on this point. However, the engineers often feel that the autonomy comes at a price. They often feel that they are left in a vacuum where they have to make decisions and perform without any clear guidelines. Nina's remarks – quoted earlier – exemplify this point. The engineers cry out for feedback – from colleagues, managers, customers, etc. The ambiguity of the engineers' work calls for feedback to let the engineers know they are on the right track.

In summary, the enthusing factors identified in the interviews in all of the six Danish knowledge intensive firms concern:

- professionalism
- development prospects – professionally and personally
- delivering the results (achieving results)
- identification, pride and meaning
- autonomy
- recognition and feedback
- social support from colleagues
- clear framework and “good management”

The themes regarding elements in the work that produce strain decidedly mirror those listed as leading to enthusiasm. Thus, they address the following issues:

- too much work
- too diversified tasks
- interruptions
- not delivering results
- ambiguous demands, vague framework – “bad management”
- unpredictability/insecurity
- rivalry between colleagues

Besides being interesting per se, to find out what precisely the engineers perceive as respectively enthusing and straining factors, what is really strik-

ing in the findings are the complexities and ambivalences in engineering work. It appears that factors that enthuse the engineers – professionalism, developing products of high quality, autonomy, etc. – are the very same that causes strain in the work of the engineers. This entails that the very elements that feed the employees' sense of enthusiasm in their work and provide them with fuel to go on, are the same that in the end tip them over the edge and become a strain. When the professional ambitions and values are compromised, their enthusiasm translates into strains and frustrations. It is another interesting point that many of the factors that lead to enthusiasm and strain in the engineers' jobs are produced in the clash between the engineers' subjective ambitions and professional aspirations on the one hand, and the objective reality of the organization on the other hand.

Stabilizing Frameworks in Engineering Work

Looking at the empirical results from the interviews in the six Danish knowledge intensive firms it appears that there are various coping strategies that the knowledge workers and engineers can choose to apply in order to address the pressures on their identities brought on by the ambiguous character of knowledge work. Various resources and frameworks of sense-making are available for the engineers in their efforts to cope with conflicting demands, extreme complexity and heterogeneity. These frameworks deliver cultural resources, stories, metaphors, discursive material, etc. that can be applied in order for the individual to establish their subject positions within the dynamic field of the work place and substantiate their self-identity. W. Richard Scott, one of the founders of neo-institutional theory, argues that:

“...the insight that professional authority is based on the ability to create and apply a set of cultural-cognitive, normative and/or regulatory elements that provide frameworks for dealing with various types of uncertainty is at the core of the institutional perspective. [...] In our own time, the professions are the primary societal institutional agents.” (Scott, 2008a, p.227)

In accordance with this institutional perspective, professions can be seen as regimes of competence that give authority and legitimacy to activities, relations and resources. Scott identifies the elements of institutional hegemony in the rules, norms and beliefs of the professionals. Institutions – and professional hegemony – are comprised of three pillars (Scott 2008a; Scott 2008b, chap.3):

- the regulatory pillar, which stresses rule-setting, monitoring and sanctioning activities, both formal and informal;
- the normative pillar, which introduces a prescriptive, evaluative, and obligatory dimension into social life, stressing 'appropriate' behav-

our – given the demands of the situation and the actor’s role within it – vs. ‘instrumental’ behaviour, in which attention is focused on the actor’s preference and pursuit of self-interest; and

- the cultural-cognitive pillar, which emphasizes the centrality of symbolic systems: the use of common schemas, frames and other shared symbolic representations that guide behaviour.

Thus the three institutional pillars enhance and restrict behaviour by enforcing professional standards of compliance. Scotts neo-institutional perspective provides a framework to identify sense-making strategies among engineers.²

The Archaic Professional Framework

One strategy is to identify with the engineering profession or the engineering ethos (and/or one’s academic education). This strategy draws heavily on the cultural-cognitive pillar of the professional institution of engineering. Bucciarelli (1994) and Bucciarelli & Kuhn (1997) have described the cosmology of the engineering profession in terms of work within object worlds. An object world is a domain of thoughts, actions and values that guides the engineers in their work and way of seeing the world – close to Wittgenstein’s concept of a form of life. Work within the framework of object worlds stresses precision, closure, stability, rigidity, unambiguousness, consistency, truth, determinism, rationality, mechanic models, reductionism, duality of abstraction/concreteness, conservation, hierarchy, value freedom, results, individual achievement, etc. – ideals borrowed from science and reproduced in basic engineering education. Bucciarelli and others have effectively shown that although these schemas, ideas and standards are held in high esteem by the engineers themselves, they do not reflect engineering work as performed in real life. Engineering is immersed in social processes that do not live up to ideals of the object world. Ambiguity and social interests are part and parcel of engineering practice. This is why I call the framework archaic: it reflects a vision of engineering inherited from old ideals about the engineering profession that is in fact at odds with present-day engineering practice.

The archaic professional framework can give comfort and stability in the turbulent world of ambiguities. Belonging to a profession provides an op-

² I realize that the term ‘strategy’ can give rise to some individualistic and voluntaristic connotations. These connotations are, however, not intended. I see the three identified frameworks of sense-making as resources for the professional. It is not the case that the professional arbitrarily chooses from them. On the contrary, the individual will mobilize the resources in accordance with his or her position within the social setting. (Harré & Slocum, 2003)

portunity to enter a frame of reference where it is possible to understand oneself and one's work in terms of a number of conceptual schemas, codes and concepts of values. Life within the object world guards against ambivalence and anxiety. In this way the profession – understood broadly as a particular set of 'mindset', internalized for instance through long university educations – can act as a critical reference point to the engineers, making it possible to keep informed and find one's bearings in the complexity of their work; especially when the identity is under pressure.

At the same time, however, it is clear that especially this strategy, emphasizing the cultural and cognitive standards of the engineering profession, may fall short when it encounters the aims and frameworks of the work which exist in the organization. The archaic 'mindset' of the engineering culture can turn out to be an absolute impediment. Far from dealing with the ambiguities involved in engineering work, clinging to the archaic professional framework is close to a state of denial: the troublesome complexity of the work is shunned away and seen, instead, in terms of the object world. This state of denial is of course counterproductive in the long term.

The Framework of Bureaucracy

This strategy did not prevail in our interviews with the knowledge workers, but it has been reported elsewhere (Kärremann et al., 2002). We did, however, learn that the engineers express a need for clearer frameworks, more structure and more guidelines in their work. Hence, an alternative or supplementary strategy for the professional could be to seek stability and continuity in work by adopting routines, established procedures, standards and other bureaucratic regulations (Scott's regulatory intuitional pillar). Due to the technical development which makes standardization of more and more areas of work possible by integrating them in various IT-based systems, engineering work and other types of knowledge work in the recent years have become increasingly more bureaucratic (Broadbent et al., 1997; Andersen & Nielsen, 2008). The bureaucratization of engineering work can be interpreted both as a strain (conflict with the engineer's demand for autonomy and professional integrity) and as a potential relief when it comes to the pressures on identity construction. Kärremann et al. (op.cit.) report that bureaucratic standards can in fact provide symbolic value and shared meanings in professional settings that help to establish codes that allow organizational members (from diverse professions and backgrounds) to communicate with each other about their respective tasks. They argue that bureaucracy provides a sense of closure, control, and predictability in organizations and work relations, and thus makes them more manageable. 'Selective' bureaucratization of engineering work (i.e. bureaucratization that only indirectly and marginally affects core work, while administrative and planning matters are tightened up to a stronger degree) may contribute significantly to minimize the ambigu-

ous nature of the work; for instance by introducing quality systems, that provide guidelines for how the work should be carried out and, not least, what the quality demands for the ‘products’ are at a given time and place: in other words context needs to be considered.

However, if the quality standards are set arbitrarily or in accordance with criteria that do not accommodate the professionals’ own standards of quality, the engineers feel that their work gets stressful. In a recent stress-survey among Danish engineers (Andersen & Nielsen, 2008) it is reported that large portions of engineering work are regulated by bureaucratic procedures and management concepts (e.g. lean-production, TQM, BPR). The engineers feel unsatisfied with their work situation if the bureaucratic procedures are ‘imposed’ without local adjustments that take the specifics of their work into account. On the other hand they are not opposed to quality systems or regular monitoring of their work as long as the criteria of evaluation are designed ‘intelligently’ (i.e. the criteria do not conflict with their professional criteria of quality).

The Framework of Reification.

The third coping strategy found in the study relates to broader contexts of justification. Scott mentions that institutions also rests on a normative pillar that draws on a broader normative basis of social obligation, appropriateness and morality that, in the end, rests on affective feelings of shame or honor. It concerns the feelings of pride and satisfaction when the work of the professionals leads to the production of a specific product and/or result. Several employees emphasise the importance they attach to the fact that what they do results in something concrete and tangible; something appreciated by the end-users (e.g. the bridge that eases the traffic congestions on the roads). Thus, the framework of reification refers to very specific and everyday criteria for success, to a large extent taken from a wider societal and/or material context. All the same, the framework of reification may also refer to criteria for success and “good results” laid down by the company and/or the profession. What characterises the framework is that the engineers, so to speak, materialise themselves in unambiguous categories. The abstract and intangible nature of knowledge work (e.g. calculations, risk assessments), combined with the lack of clarity (e.g. negotiations with the contractors, environmental groups, public authorities), seems to be – at least temporarily – reduced via referring to an independent authority: the concrete artefact (i.e. the bridge) or a positive verdict by the end user.

Conclusion

The findings from the interviews with engineers working in knowledge intensive firms reveal the complexities and ambivalences in engineering work.

The interviews identify that the engineers perceive the same factors as respectively being enthusing and straining. Professionalism, developing products of high quality, autonomy, etc. become factors in engineering work that can either enrich work life – or result in serious work-related stress. The factors can contribute either to stabilize or to de-stabilize the self-identity of the engineers. In order to cope with the ambiguities of knowledge work the engineers find stability in one or more of the three identified institutional frameworks: self-identity is substantiated and stabilized by drawing resources from ideals about professionalism, bureaucratic standards and/or other reifications (‘products’ or ‘results’). The stabilizing frameworks draw their discursive resources from different domains. The archaic professional framework sustains the engineers’ self-identity by borrowing discursive resources and ideals reproduced in science and engineering education. The bureaucratic framework legitimizes closure and seeks to eliminate ambiguity through company regulations and conventions. Whereas the framework of reification brings stability by referring to a wider societal context, here stability comes through social, unanimously held ideas about beneficial ‘results’ and a shared reality of objects. The frameworks do – prima facie – stabilize the professional identities, but they are in fact also a potential source of work-related stress when professionals are faced with demands for flexibility. There are no guarantees that the ideals, rules, codes of conduct and values reproduced within either the profession, the company or in the broader societal domain can be brought into harmony. As a result, the engineers must engage in an ongoing sense-making endeavor where professional standards, corporate procedures and social obligations are negotiated and mediated. When mediation is not achieved work becomes strained and can in the worst case result in work related stress.

References

- Andersen, V. & Nielsen, F., 2008. *Ingeniørernes arbejdsmiljø for fremtiden – ledelsesteknologier og fagidentitet*. The Society of Danish Engineers.
- Broadbent, J., Dietrich, M. & Roberts, J. (eds.), 1997. *The End of the Professions? The restructuring of professional work*. Routledge.
- Bucciarelli, L., 1994. *Designing Engineers*. MIT Press.
- Bucciarelli, L. & Kuhn, S., 1997. Engineering Education and Engineering Practice: Improving the fit. In: Barley, S. & Orr, J., *Between Craft and Science. Technical Work in U.S. Settings*. Cornell University Press.
- Buch, A. & Andersen, V., 2007. Knowledge work and stress – beyond the job-strain model. In: *Proceedings of the 9th International Symposium on Human Factors in Organizational Design and Management*. Sao Paulo, Brazil.
- Giddens, A., 1991. *Modernity and Self-Identity. Self and Society in the Late Modern Age*, Stanford University Press.
- Grönlund, A., 2007. Employee control in the era of flexibility: A stress buffer or a stress amplifier? *European Societies*, 9:3, 409 – 428.

- Harré, R. & Slocum, N., 2003. Disputes as Complex Social Events. On the Uses of Positioning Theory. In: Harré, R. & Magaddam, F., 2003. *The Self and Others: Positioning Individuals and Groups in Personal, Political and Cultural Contexts*. Greenwood Publishing Group.
- Karasek, R. & Theorell, T., 1990. *Healthy Work – Stress, Productivity, and the Reconstruction of Working Life*. New York, NY: Basic Books.
- Kärreman, D., Svenningson, S. & Alvesson, M., 2002. The Return of the Machine Bureaucracy? Management Control in the Work Settings of Professionals. *International Studies of Management and Organizations*, vol. 32, no. 2, Summer 2002, pp. 70-92.
- Scott, R., 2008a. Lords of the Dance: Professionals as Institutional Agents. *Organization Studies*, 29(02): 219-238. SAGE Publications.
- Scott, R., 2008b. *Institutions and Organizations. Ideas and Interests*, 3rd Edition, SAGE Publications.
- Sørensen, O., Buch, A., Christensen, P. & Andersen, V., 2007. Indflydelse i videnarbejdet – kan man få for meget af det gode? *Tidsskrift for arbejdsliv*, vol. 9, 2, pp.72 – 87, Syddansk Universitetsforlag.