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How to be in control when work is changing.
An essay about demands and control in current working life

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Abstract: Control, understood as employee’s control over their work, has for decades been considered as a crucial factor for the quality of working life. Karasek’s famous Demand/Control model has been an important expression of the widespread understanding of the importance of employee-control in work. However, Karasek’s model is only one expression of a much broader movement related to the development of working life, where job development, influence, autonomy, direct participation, empowerment and learning could flourish. Work has changed dramatically since the D/C-model was created, and many alternative concepts to interpret the quality of working life have emerged. Many of these concepts seem to be better adjusted to the working life of the ‘knowledge society’.

The main point of this paper is: Don’t throw the baby out with the bathwater. It is important to keep the concept of control as one (among some few) fundamentals when understanding the quality of working life. However, it is necessary to rethink our understanding of employee-control, because opportunities and constraints for getting control in current working life are very different from what they were when the concept of employee-control first were developed.

The paper is based on empirical research form the last six years in which case studies have been conceptually framed by the concept of control. Here the various understandings of employee-control are summarized and boarder theoretical perspectives are suggested.

Introduction
Employee’s involvement, participation and autonomy in their work has been a core issue in Nordic understanding of the quality of working life. In the socio-technique tradition, founded in the 1960s, jobs where the employees have a high degree of influence on how to carry out the work and good learning opportunities were seen as an alternative to jobs designed in accordance with Tayloristic principles. In Norway, Thorsrud and Emery (1976) were major spokesmen for this alternative to Taylorism. As was Gardell in Sweden (1981), Agersnap og Junge-Jensen (1974) in Denmark and many other founders of the Nordic working life tradition. Karasek, who was strongly inspired by the Nordic working life tradition, transformed the Nordic endeavour to improve working conditions to a very simple and quantifiable model, the so called Demand/Control (D/C) model, first published in 1979 (Karasek 1979). The D/C
model emphasised employee control, defined as influence and learning opportunities at work, as being crucial for mental and physical health.

The attempt in the Nordic countries to re-design work to give workers (and now employees) influence and learning opportunities was internationally well-known. Volvo, which created assembly factories without an assembly line, turned out to be an international icon for Nordic working life.

However, the work reform movement was not isolated to the Nordic countries. In the US there was a movement in the 1970s called ‘Quality of Working Life’, in which influence and learning opportunities were important factors. Hackman and Oldham made a questionnaire that could map the quality of working life by measuring skill variety, task identity, task significance, autonomy and feedback (Hackman & Oldham 1974).

In this paper, the Demand/Control model will be the basic point of reference – not because it is the most advanced expression of the early Nordic working life tradition, but because it is the most simple.

**Control: What are we actually talking about?**

The point of the D/C model was that job-strain not only depends on the demands at work. It also depends on the degree to which the individual can control his or work activity. This basic point has been clearly verified through epidemiological studies. The model recognizes that healthy working conditions can not only be created by protecting the workers. The solution might just as well be to develop work so as to create opportunities for development and empowerment of employees. The traditional Tayloristic and bureaucratic controlled work which is controlled in details from outside is, according to D/C model, harmful. But if Taylorism and bureaucratic control were broken, employees would able to control their own work and thus have the opportunity both to develop themselves and improve their production. The world of work would become healthier. However, that is not all. Human potential would also be developed, and the creation of wealth would be more diverse.

Work has changed dramatically since the 1970s. Organizations and work have according to many observers moved away from Taylorism and bureaucracy towards a post-Tayloristic, post-bureaucratic knowledge society (Totterdill et al., 2002). Previously industrial work was a norm for all kinds of work. Now, boundaryless knowledge work seems to be the norm for work in all sectors. Perhaps we have now reached a stage in the development of work where employee’s control over his or her own work is no longer a problem. Perhaps, instead, employees have too much control and influence?

Already in 1979, Karasek noted that in work settings in which there was already a high degree of employee-control could result in psychosocial costs if there were further increases in control. As Sørensen et al (2007) suggest, the problem may no longer be a general lack of control at work, but more specifically, lack of influence over the quantitative demands at work. Better opportunities for learning and development at work may no longer be an option that can
counterbalance the impact of high demands. Perhaps learning, influence and development at work now is an inevitable demand? This makes it difficult to separate demands and control in the D/C model.

According to Karasek (Karasek, Theorell 1990), teamwork and self-management give the employees more control over their work and therefore it will be psychosocially beneficial. Is this still the case? In some cases the delegation of responsibility and self-management does not lead to more employee control, but to more chaos (Hvid et al., 2008). Moreover, decentralization and empowerment can be understood as 'self-technologies' which do not reduce management’s control of the employees, but rather reinforce external control because the employees internalize the external control, and because of that it is impossible for the individual employee to escape the demands.

Generalizations about current working life are however always problematic. We have just argued that work is moving away from Taylorism and bureaucracy. The reverse argument actually seems to be valid too. One can argue that Taylorism and bureaucracy are still alive and even quite well, but they have modernized their appearance (Thompson 2003). New forms of Taylorism and bureaucracy are re-established in knowledge work when organizations are transformed in accordance with the concept of Lean. Workflow systems in administrative work are perhaps a re-appearance of the assembly line. Taylorism seems to diffuse outside its original home base, manufacturing, to white-collar jobs. This might indicate that the D/C model is more valid than ever.

Karaseks D/C model has primarily been used in an epidemiologically based research tradition. Through epidemiological methods it has been demonstrated that externally controlled work is in conflict with the human nature and thus endangers health. It is thus, in principle, possible 'objectively' to determine whether a job is good or bad. The question of good and bad can not be reduced to a matter of socialization or socially constructed values and norms.

An essential message of this research tradition is that man is capable of taking care of her own life and the common social life, and it is a violation of basic needs to prevent him or her doing so - a violation that manifests itself in illness and death. It can be argued that the research tradition is in line with the basic humanistic understanding of man in the modernist tradition as it for instance expresses itself in the German critical theory.

A fascinating feature of the research tradition to which Karasek belongs is that it is both strongly rooted in 'hard science' and on the other hand, it has a strong critical humanistic and political commitment. The critical humanistic angle of this research has given it a momentum that has made the research well known inside and outside the world of research.

**The content of the D/C-model**
The control dimension is expressed on a ‘decision latitude’ scale. This scale consists of two sub-scales:
I. 'skill discretion': This scale consists of five items: (1) the opportunities to learn new things, (2) opportunities to develop skills, (3) skill requirements of the job, (4) task variety, (5) uniformity and (6) job-related creativity.

II. 'Task Authority': This scale consists of three items: (1) freedom to make work-related decisions, (2) opportunities to make decisions about how to carry out the work, and (3) influence over how the work is organized.

Allow me to simplify the D/C model using four interrogatives: 'Task Authority' is about whether the employee has influence on where, when and how work is conducted. 'Skill discretion' is about whether the employee has influence on how to do the job, and a more fundamental question: what to do. I will later provide a brief characterization of current working life with these interrogatives.

The demand dimension consists of five items: (1) the ability to complete the work (excessive work), (2) conflicting requirements, (3) inadequate time to carry out the work (4) the pace of work, and (5) physical strain.

The two dimensions of the D/C model form four quadrants: The passive with low demands and low control, the active with high demands and high control, high strain jobs with low control and high demands, low strain jobs with high control and low demands. The D/C model is greatly bolstered by the health arguments: It is documented that there are major differences in health and death in the four quadrants. High strain jobs are the unhealthiest. The passive jobs are the healthiest. The active jobs are less healthy, but it is implicit in the model that active work is preferable anyway because it includes a dimension of development. Active work brings both the individual and humanity forward.

The D/C model has however to some extent been negatively affected by its association with health research. Other researchers studying work related health have found other correlations also affect health. It is for instance documented, that personality, individual coping strategies and the quality of management also affect health. Perhaps it would be easier to select staff with the right personality, train employees in individual coping and train the managers in appreciative behavior than change work organization to supply the employees with more influence and better learning opportunities?

With reference to the critical modernist conception of the human mentioned earlier, the dimension of control refers to issues that are much more wide-ranging than health. So, even if it turns out that there are easier ways to promote health than to improve people's control over their own lives, there still are good reasons for improving control from beneath.

**The dimension of control in modern working life**

Work has changed dramatically since the 1970s. The service sector and knowledge work have increased dramatically, and industrial work has for a major part changed. The principles for organizing working life suggested by the early socio technique are now widespread. According to a survey carried out by the European Foundation for the Improvement of Living and Working Conditions
(2007) around 60 percent of employees in Europe are working in teams. Employees have increasing opportunities to influence their working hours. Direct contact between employees and consumers or users is widespread.

Organizational principles which were supposed to increase control over work are spreading, however, it is doubtful whether these changes actually have increased control. We have in recent years conducted several case studies in the IT-based service sector and in knowledge work, and the general picture is that control is not increasing, perhaps it is even decreasing. These findings are in line with Danish population studies concluding that influence of development opportunities has neither improved nor declined during from 1990 to 2005 (Burr, 2006, Pejtersen and Kristensen, 2009). We find similar conclusions in studies from the European Foundation for the Improvement of Living and Working Conditions (Birindelli et. Al., 2007). What we have here is a real paradox: Organizational principles that are supposed to increase employee’s control over work are spreading, however employee control is not increasing.

Four reasons for this paradox is here suggested:

a. Principles of work organizations that are supposed to increase employee control are followed by standardisation and surveillance that reduce control

Autonomy in work includes: autonomy in when and where work tasks are performed, how work is conducted, and also to some extent what is actually done. When the D/C model was developed in the 1970s, the jobs with low employee control had no autonomy concerning when, where, how and what. On the other hand, many of the jobs with a high degree of employee control such as the traditional crafts and as professional and semi-professional, had a high degree of autonomy in terms of when, where, how and what. That has however changed: Some of the industrial jobs which previously had a low autonomy in all parameters have got a little higher autonomy when it comes to when and where, but still have a very low autonomy when it comes to how and what. Many of the professional and semi-professional jobs still have a high degree of autonomy when it comes to when and where, but when it comes to how and what, the autonomy has been reduced. In our case studies we have seen that among IT-professionals, employees in finance, social workers and teachers. What we have seen is that the autonomy in planning the work is still high: they do not have a supervisor ordering them to do this and that. All employees are, as it was said in a bank, directors of their own desk. However, autonomy related to how to do things is decreasing. Self-management of when and where is followed by standardization of how and what. Work flow systems, lean, quality control systems are now guiding work procedures and products.

b. Boundarylessness as a trend – more control and higher demands?

The D/C model can and has often been interpreted as an advocate for a win-win approach in working life: If the employer gives the employees more control in their work they are able to cope with higher demands. From the early stage of the model it
has been discussed whether control can be a buffer for high demands, and in the last
decade a number of review articles summarizing the findings related to that question
in epidemiologic studies (Van der Doef & Maes 1999, Egan et al. 2007, Lange et al.
2003) and Grönlund (2007) discuss the same question in a broader sociological
framework. These studies question the win-win approach to the development of work
for which the D/C model has been used as justifier.

The main result of the many studies is that increasing demands reduce health and
wellbeing, and increased control improves health and wellbeing. But increasing
control will not reduce the negative effects of high demands. Van der Doef and
Maesen (1999) indicate that the relation between demands and control depends on
which demands and which control. If the employee has the opportunity to control the
demands, there is a positive relation between control and demands.

Consequently the lesson from the epidemiological study based on the D/C model is:
employee-control is in itself a positive factor in working life. To improve employee-
control established boundaries must be torn down, the boundaries between jobs,
skills, departments, producer and user must be torn down, and the employees must
control their own work. However, when these boundaries are torn down, and
employees get more autonomy in their jobs, at least in some cases, employees lose
control over demands, and consequently the demands increase (Hvid, Holt, Lund 2011).
There will be no natural brakes on the work, a little more work can always be done
and work could always be of a higher quality.

It seems as if the positive aspect of control depends on what the employees control
and what they do not control. It seems to be important whether the employees have
some degree of control over the demands. If a higher degree of job autonomy includes
control over the demands, working conditions seems to improve. If on the other hand
job autonomy and better learning opportunities are followed by increasing demands –
the employees do not control the demands – the positive aspect of increased control
are doubtful. Employees control work activities, but the employers perhaps have an
increasing control over the demands?

c. The dimension of control is relational
In the questionnaire originally developed for the D/C model, the questions about
control are asked individually: ‘Do you have autonomy?’ and ‘Do you have
development opportunities?’ This represents an abstraction from the reality that
work always takes place in the context of cooperation with others. ‘To be in
control’ is about being an active part of this larger fellowship or cooperation. ‘To
be in control’ means that the individual makes his or her contribution to
gradually reshaping the material and social environment in which humans are
living, in accordance with his or her knowledge, experience and desires. ‘To be in
control’ also implies that the individual is influenced by and adapts to the
knowledge, experience and desires of others, thereby becoming
an active part of the cooperation.

Karasek has attempted to rectify this weakness in two ways: by developing the
concept of the ‘conducive economy’ (Karasek, 2004) and the concept of ‘stress-
disequilibrium’ (Karasek, 2008). Both these concepts shift the focus from the
individual to the associational – to the productive interplay between diversity;
from individual skill and qualification requirements, to the interplay between different experiences and skills. The concept of the 'conducive economy' expands the perspective from the work of the individual, to interaction with the work of others, and hence to the wealth production the work entails (Karasek, 2004). The concept of 'stress-disequilibrium' involves an inward-looking perspective. It examines how various physical and mental functions in the body work together in relation to work, again with the aim of interaction (Karasek, 2008). According to Karasek, both concepts should provide a foundation for a new D/C model which focuses on free interaction.

Karasek calls this an 'associationist D/C model', or, as he also writes, the D/C/A model (Karasek, 2008). The model focuses on the free associations between various subsystems, each having their own skills and expertise. We do not have suggestions about the specific development of a D/C/A model that can quantify the degree of associational control. However, our studies, both quantitative and qualitative, in the financial sector demonstrate the need to pay attention to associational control. Our case studies also show that the degree of associational control is not determined by structures. In a study of work organization in four Danish banks, we did find that he degree of associational control differs quite a lot in similar work settings, apparently without creating significant variations in competitive power (Hvid, Lund, Grosen, Holt 2010).

d. The individual desire is governed by external power (through self-technologies)

Based on a post-structural understanding of society, a critique of working conditions in 'knowledge society' has been put forward. This critique can be interpreted as a criticism of the positive aspects of D/C model and its recommendation of learning and influence in work. If we follow this critique of modern working life, learning, autonomy and self-development cannot be separated from demands. The two dimensions of the D/C model are collapsing in current work. Learning, autonomy and self-development are core demands of modern work. Those who resist learning new things, resist individual responsibility and refuse to participate actively in the development of their personality do not live up to the demands of current working life. They will be the first to be fired when staff is reduced.

According to Boltanski and Chiapello (2005), we live in a project society where relationships matter more than structures, in which social relations are temporary, where everyone is moving towards something new. This requires constant self-development in order to create a position for oneself in the future. This leads, according to Boltanski and Chiapello to disenchantment of learning and development and to in-authenticity in personality development. This also leads to a sophisticated oppression based on individualization. At the societal level, it leads to inequality and poverty. On a personal level the development of capitalism leads to opportunism and egoism.

However, Boltanski and Chiapello do not study work as it is. They study how work should be according to management literature. They analyze management
textbooks. Real work is far more complex than management textbooks and in most work there are strong efforts to re-create stable social relations, continuous personal development, integrity, and professionalism. Presumably 'the new capitalism', as Boltanski and Chiapello call it, simply cannot survive without such endeavors in opposition to main trends in management literature, because the new management principles would undermine the human resources which capitalism depends on if there were no resistance against the principles of management.

Empirical studies of current working life question Boltanski og Chiapello’s basic assumptions. One example is Rasmussen and Håpnes (2012) recent study, which challenges the assumption about the creation of a new flexible personality. They examine the temporary character of modern knowledge work. They have interviewed knowledge workers in the financial services, public relations, web-designers, employees in an international research institution and laboratory workers at an international company. They did find that the explanation for the temporary character of knowledge workers is not that the workers are ‘disloyal portfolio workers’, who have one aspiration: to improve their value on the labor market. The main reason for leaving the company was not related to personal gains. Those who left the company did so even though they strongly identified themselves with the work they were doing. Often the reason for leaving the company was that the employees felt that they no longer could carry out their work in a proper manner.

Following Rasmussen and Håpnes’ analysis, it can be argued that employees leave a company not because they have adjusted themselves to the temporary working condition, but on the contrary, because they want to achieve stability: stability in their work, profession and learning, and refuse to compromise on these matters.

The dimension of control, as it is developed in the working life tradition, is related to the logic of work, and not to the logic of management or the logic of the labour market. Control in working life concerns personal development and personal contribution to innovation products and productive activity. The key issue is not, as it is in the management literature, to adjust oneself to the fluctuating needs of the company. The key issue is neither to improve one’s individual employability in the labor market. Self-development and autonomy base in work can restore the development of the authentic personality, as Boltanski and Chiapello find is threatened in the 'New Capitalism'.

Alternatives to control
As already mentioned, many alternatives to employee-control have been launched to improve health and working conditions, especially in the last 10-15 years. Sometimes it is argued that these new approaches are more relevant than employee-control because of the changes going on in working life. Employees already have a lot of control in modern work.

The main point of this paper is that employee-control still is a very important issue when it comes to improvements of working life, but we have to re-interpret
the concept of control as the nature of work is changing. That does not mean that the many alternative approaches to understand quality of working life are irrelevant. Not at all, however, employee-control can be integrated in these alternative understandings as a perspective. Here I can give some short examples:

a. **Quality of management** has in the latest years been regarded as crucial for quality of working life. That seems obvious: an unqualified supervisor can devastate the quality of life for his or her employees. However, the reverse is not always the case: a qualified supervisor will not always create a good working life for the employees. One important factor here is whether the employees have possibilities and the will to engage in management by taken the control over their work.

b. **Individual coping** can also be understood in a control perspective. The individual employee’s ability to cope with stress can be understood as a result of work experience and life experiences in which the organization, the job and/or relevant institution as schools, trade unions and many more has made it possible that the individual to achieve a certain degree of control over his situation, and thus can use what Lazarus (1987) calls a problem-oriented coping approach.

c. **Reward** also is related to control. Siegrist created the Efford/Reward, inspired by the D/C model, but control was replaced by reward. There are however many aspects of control in the concept of reward, as also Siegrist & Theorell later has mentioned (2006). The model operates for example with dependency, which can lead to an imbalance between the effort and reward. Dependency may be due to a lack of alternative employment opportunities, which contribute to lack of control. A working environment where an important part of the reward is a possible future career also suffers of lack of employee-control. ‘Overcommitment’ is also included in the model. If ‘overcommitment’ is understood as something created by the new ‘self-technologies’, ‘overcommitment’ can be attributed to lack of control.

d. **Social capital,** which as concept has had an influential impact on discourses about the quality of working life. Social capital has three main elements: Trust, Justice and Collaboration (Hasle, Kristensen, Møller and Olsen 2007). Collaboration here is a kind of associational control, which was mentioned earlier. Trust and justice are not directly related to employee control, however, they are related to reciprocity and as such indirectly related to control.

The point here is not that the above concepts and other concepts related to quality of working life just could be replaced with the concept of control. They are all relevant for improvement of quality of working life. The point is that these concepts include aspects of employee-control. A further point is that the concept of employee-control probably could be developed in a dialogue with these partly alternative concepts.

**Conclusion**
‘To be in control’ remains a crucial factor for quality of working life. Deficit in the employee-control is probably still the most negative factor in working life. This despite the fact that the work has evolved, authority has been delegated, employees work in teams, and self-management is widespread. In this paper three main reasons for the deficit of employee-control are highlighted:

a. Self-management, which is supposed to increase employee-control, is followed by standardisation and surveillance, which decrease employee-control. There are often quite good reasons for standards. However, to maintain employee-control, standards and surveillance must be developed from below with supporting local experiences and learning, and supporting trades and professions. This would probably also eliminate some of the negative consequences of standardisation on productivity.

b. Work is increasingly relational, and as a consequence, employee-control also is increasingly relational. An employee with a high degree of autonomy in performing his or her job does not have much control if the relations to colleagues, customers and managers are totally out of control. Therefore employee-control must include the collaboration and the single employee’s control is created together with and through the others.

c. Constant self-development and constant flexibility are profound demands in current working life, which are internalized in the individuals through advanced self-technologies. To counter this development it is crucial that the employees insist on the meaning and the logic of their work, their trade and their profession, which actually also many employees do. That can re-create authentic personalities and authentic engagement in work.

Employee-control is not the only parameter in the creation of good working life. Quality of management, ability to cope with demands, appreciation and rewards, and social capital also affect the quality of working life – together with other parameters. However, employee-control can be connected to these other parameters: development of managers could include empowerment of the employees, coping could be problem orientated and by that improving employee-control, imbalances in effort and reward could be related to lack of carrier control and lack of collective control related to the demands.

References


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1 In the last five years employee-control in current work has been studied within different approaches in three major research projects at Centre for Working Environment and Working Life: (1) Kontrolformer køn og arbejdsmiljø i IT-baseret administrativt arbejde. (2) Tidsmiljøet i grænseløst arbejde. (3) Psykisk arbejdsmiljø mellem standardisering og selvledelse. All projects have been funded by the Danish Arbejdsmiljøforskningsfond. The conceptualisation of employee-control has been don in collaboration with some of my colluages: Helle Holt, Henrik Lund, Sidsel Grosen and Annette Kamp.