

Research Perspectives from Job Control to Flexibility: Historical Outline, Depiction of Risks, and Implications for Future Research

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1 Introduction

Job autonomy, control, decision latitude, and flexibility – many terms for a worker’s possibility to exert influence on their own working life – have found their way into the literature over the years. Despite the diverse terminology, all these terms have, from a humanist perspective, the core idea of workers’ agency. The possibility of shaping one’s own work and consequently one’s own life is not only relevant to handling work demands (e.g., Semmer, 1984; Udris & Frese, 1988) but is also a central component of motivation (Hackman & Oldham, 1976) and a self-determined life (Ryan & Deci, 2000).

The terms autonomy and control are often used interchangeably, but they can be defined in different ways. Webster’s dictionary defines autonomy as the quality or state of being self-governing. The term refers to an individual’s subjective experience of having autonomy over their own life (e.g., Ryan & Deci, 2000). Control, however, refers to the actual decision latitude that is granted to someone (e.g., the individual worker) by someone or something (e.g., a supervisor or an organization; see Hacker & Richter, 1990). Thus, the terms job control and decision latitude describe a worker’s scope of action from an external point of view or an individual’s work-related discretion as a general job characteristic, whereas the term job autonomy expresses a worker’s inner perception or appraisal of their scope of action or granted job control.

The question of the appropriate scope of action for individuals at work has a long history in labor science. Adam Smith (1776) recognized the lack of room for maneuver as a problem of mechanical work, yet ideas of rigid process control, such as

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scientific management, were still influential until the early twentieth century (Taylor, 1911). With more humanistic ideas entering management theories, it became clear that the assembly line approach needed to be viewed critically. Repetitive tasks led to a demotivated workforce, whose productivity decreases under rigid rules. The widely circulated Hoxie Report summarized the US Trade Union's objections to the effects of scientific management regarding working conditions and the welfare of workers and society. It noted, *inter alia*, that scientific management considers the worker as a mere instrument of production and reduces him or her to a semiautomatic attachment to the machine or tool. This is because the specialization of work displaces and represses skilled workers while depriving them of "thought, initiative, sense of achievement and joy in [their] work" (Hoxie, 1915, p. 171).

The final rejection of scientific management and human reductionism led to important considerations of workers' job control in the design of work (Bar-on, 1990). Founded in 1946, the Tavistock Institute of Human Relations has made its goal the interdisciplinary research into group processes and conflicts as antecedents of workers' psychological welfare (Trist et al., 1997). Influenced by the work of Kurt Lewin, initial studies by the institute have drawn attention to the need for group autonomy and a "scope of flexibility in the workplace" in order to achieve interchangeability of roles within a work group and, thus, workers' "mutual understanding and tolerance" (Trist & Bamforth, 1951, p. 38). Further experiments on the quality of working life in Sweden (Agurén et al., 1976) and Norway (Herbst, 1985) demonstrated the benefits of a movement away from rigid control of workers by the management.

As the *homo economicus* gradually lost its importance – at least in labor science – as the dominant view on human nature, it became clear that work processes must be enriched by extended possibilities of action in order to increase workers' autonomous work motivation and, thus, their well-being. In the 1960s and 1970s, influenced by theories such as expectancy theory (Vroom, 1964) and goal-setting theory (Locke, 1968), the scientific paradigm shifted toward workers' autonomous motivation to work and its inherent link to the job control provided by the management. In 1987, the National Institute for Occupational Safety and Health in the USA organized an interdisciplinary workshop to review the state of knowledge on job discretion (or job control). Sauter et al. (1990) summarized the conclusions and emphasized the important role of high job control in work designs.

Workers' perceived job autonomy has been associated with experienced meaningfulness of work and internal work motivation (Fried & Ferris, 1987), higher job satisfaction (Dollard & Winefield, 1998), lower turnover intentions (Kossek et al., 2006), more learning experiences (Wielenga-Meijer et al., 2010), lower risk of cardiovascular diseases (Fishta & Backé, 2015), and better physical health (Ng & Feldman, 2015). Several theories have been developed that center job control as a core job characteristic influencing workers' performance and well-being. Two of the most prevalent theories are the demand–control model (Karasek, 1979) and the job characteristics model (Hackman & Oldham, 1975), both of which will be discussed below.

2 Job Autonomy and Control in Classic Theory

2.1 *Control as the Counterweight of Demands*

One of the most influential theories integrating the concept of workers' job control has been Karasek's (1979) job demand–control model. Karasek presented two important parameters: job demands and job decision latitude (i.e., job control). The theory postulates that workers experience occupational strain when the job demands are high, but they have little room for maneuver due to a small decision latitude on how to meet their job demands. Although Karasek (1979) initially provided empirical confirmation of his model, his samples were limited to male employees from Sweden and the USA.

In later works, Karasek specified the concept of decision latitude by distinguishing between the subdimensions of skill discretion (i.e., workers' flexibility to decide what skills to employ) and decision authority (i.e., workers' possibilities to make decisions about their work; Karasek et al., 1998). This distinction is similar to Hackman and Oldham's job characteristics' skill variety and autonomy (Hackman & Oldham, 1975, see Chapter 1.2). This distinction has also been criticized, since skill discretion and decision latitude should not be combined theoretically (Kain & Jex, 2010). Another important criticism is the lack of organizational factors such as control over scheduling or the use of technology (Jones et al., 1998). Technology, in particular, is an aspect of a lot of modern jobs that cannot be ignored.

Since 1979, there have been multiple advancements and additions to the original job demand–control model. The most influential extension of the model integrated the factor of social support (Johnson & Hall, 1988), and this has been acknowledged by the authors of the original model (Karasek & Theorell, 1990). According to the job demand–control–support model, next to job demands and job control, the extent of social support workers' experience functions as an additional determinant of occupational strain (Johnson, 1989). Consequently, other variables, such as organizational position (Westman & Eden, 1992), proactive personality (Parker & Sprigg, 1999), and self-efficacy (Salanova et al., 2002), have been explored as possible additions to the model.

Over the years, two different views on the theoretical interaction between job demands and control have emerged: an *additive hypothesis*, according to which demand and control have independent effects on strain, and a *buffer hypothesis*, according to which control acts as a moderator between demands and strain. An extensive review by Van der Doef and Maes (1999) showed that there has been slightly more support for the additive hypothesis. A later review by De Lange et al. (2003) found only 1 study out of 19 with support for the buffer hypothesis. The difference between the two perspectives is an important one, since the buffer hypothesis may favor enlargement of job control without consideration for the level of demands, whereas the additive hypothesis predicts that a sole increase in job control is insufficient to prevent strain.

2.2 *Autonomy as a Prerequisite for Work Motivation*

In motivational theories such as the job characteristics model (Hackman & Oldham, 1975), the individual perception of job control is usually referred to as autonomy. The intention of such theories is to design an instrument that measures job characteristics with a focus on enhancing work motivation and job satisfaction. Hackman and Oldham (1975) identified five job characteristics that are key to workers' job satisfaction, growth satisfaction, and internal work motivation: skill variety, task identity, task significance, feedback from the job, and autonomy. The idea was that, if work performance depends on a worker's own initiatives and decisions, the worker simultaneously experiences greater meaning in their job and greater personal responsibility for their own successes and failures at work, which further enhances their work-related experiences in terms of job satisfaction, growth satisfaction, and internal work motivation (Hackman & Oldham, 1975).

Hackman and Oldham (1976) conceptualized job autonomy as "the degree to which the job provides substantial freedom, independence, and discretion to the individual in scheduling the work and in determining the procedures to be used in carrying it out" (p. 258). Based on their definition, autonomy can be present in the choice of the procedures as well as in the chronological planning of work. However, as job autonomy was assessed as one global construct, several researchers suggested that a multidimensional instrument be developed to capture different facets of autonomy (Breugh, 1985; Breugh, 1999; Fried, 1991; Wall et al., 1995). Based on the job characteristics model (Hackman & Oldham, 1975), yet influenced by claims for more specificity of autonomy, the work design questionnaire (WDQ) was developed by Morgeson and Humphrey (2006). To reflect the increasing complexity of work organization, the WDQ distinguishes between decision-making autonomy (i.e., workers' ability to exert personal initiative or judgment while carrying out work), methods autonomy (i.e., workers' discretion about the methods applied to meet work goals), and scheduling autonomy (i.e., workers' scope of action regarding the order in which things are done on the job).

2.3 *The Thin Line Between Resource and Demand*

A differentiated view on job control in work was provided by Hacker (1973) and Volpert (1974) with action regulation theory, which focuses on the regulation and requirements of goal-directed behavior. Developed in East Germany (and published mainly in the German language), the theory has received less attention from the English-speaking scholars. Yet it adds further depth to the concept of job control. Action regulation theory uses the term *decision latitude*, which it describes as a systemic, organizational, dynamic, and contradictory concept. The term itself refers to a multidimensional situation that exists for individuals or groups. It is contradictory in so far as it can be beneficial by granting degrees of freedom at work for the

individual, yet it leads to challenges by creating more responsibilities (Hacker & Richter, 1990; Hacker, 2003). To fulfill responsibilities, it is necessary to plan goals and predict outcomes. Without transparency of the situation and the foreseeing of intermediate and final results, there are no well-founded decisions (Frese, 1988). Without predictability, there is no well-founded drafting and planning of the possible long-term goals. Thus, considerable prerequisites for applicable control in the work environment must be taken into consideration.

Higher levels of job control inherently come with more responsibilities, which means that more work-related choices have to be made. However, it has been proven that having more choice is not always preferable (Schwartz et al., 2002). Exerting job control causes cognitive effort, especially if it involves considering conflicts or several goals that are difficult to reconcile. Increased responsibilities and decision-making demands can turn certain aspects of control into a necessity, and unprotected attempts involving this kind of contradiction and decision management can cause stress (Ulich, 1979). Contemporary research on decision-making and multi-option situations suggests that satisficing (i.e., searching through alternatives until the first acceptable option is found) is a more beneficial strategy than maximizing (i.e., searching through alternatives until the best option is found; see Cheek & Ward, 2019; Kokkoris, 2016).

The insight that job control is not only hard to classify with regard to demands and resources but is also contradictory in itself becomes more important with the emergence of new ways of working. Technological advances have profoundly changed the organization of work in numerous industries (Holtgrewe, 2014). These advances provide flexibility not only regarding what and how to work (e.g., decision latitude, method autonomy) but also regarding when and where to work (see Allvin et al., 2013). These developments raise the question of whether classic theories, such as the job demand–control model (Karasek, 1979) or the job characteristics model (Hackman & Oldham, 1975), are still sufficient for predicting contemporary work experiences and behaviors.

3 ICT-Enabled Flexibility Adds More Layers to the Classic Concept

The digitalization of information, the codification of knowledge, and the access to centered data storage via different types of (mobile) networks fundamentally change workflows, the nature of tasks, and, by extension, jobs themselves (Flecker et al., 2013). These changes may no longer be fully represented in existing models of work design. Especially in ICT-enabled work, new management practices have been implemented that foster flexible forms of work (Allvin et al., 2013; Eurofound, 2015). In particular, ICT-based work enables asynchronous communication, which makes the performance of work, even in teams, independent of time (e.g., Allvin et al., 2011); it also allows remote, distributed work practices and thus a decoupling

of work from a fixed physical location (the “placelessness” of work; Flecker & Schönauer, 2016). As a result, unifying occupational framework concepts, such as a regular workplace and steady office hours, no longer correspond to many modern work arrangements (Allvin et al., 2013). Additionally, the trend of work “projectification” has been observed, shifting routinized line operations to dynamic, goal-oriented, and situation-sensitive project work and introducing concepts such as management by objectives (Schoper et al., 2018).

Temporal and spatial work flexibility add new dimensions to the classic concept of job control, as decision latitude, method, or scheduling autonomy refers only to the work task or activity itself, not to the surrounding conditions in which it is carried out. However, workers’ discretion with regard to their working times and places and its implication for the performance of work have been studied for decades under the terms *flexi-time* or *telework arrangements* (Messenger & Gschwind, 2016; Nijp et al., 2012). However, the difference today is “omnipresent connectivity” (Holtgrewe, 2014). In the virtual office, work is omnipresent, and flexibility has the potential to grant the worker more control; at the same time, however, such omnipresence and flexibility can transfer even more responsibilities and demands from the management to the worker. Thus, like job control, flexibility is a potentially contradictory and multidimensional construct, whose effects on the individual worker’s motivation and well-being can differ greatly.

3.1 Workers as Objects or Subjects of Control

Who benefits from changing working conditions toward more flexibility – individuals or organizations? In that regard, it is important to consider whether individual workers are the objects or subjects of job control within flexible working conditions, as advances in ICT have led to both decreases and increases in individual job control. Depending on the type of work organization, the worker’s position can be on a continuum that ranges from being the object of control due to being flexibly deployed by the management and to being the subject of control due to being in control of the situation. This duality of flexibility regarding the locus of control has also been expressed by other terminologies, such as numerical versus functional flexibility (Kalleberg, 2001), company-centered versus worker-centered flexibility (Gareis & Korte, 2002), flexibility through substitution versus flexibility through empowerment (Allvin et al., 2011), or employer-oriented versus employee-oriented flexibility (Hornung & Höge, 2019).

On the one hand, where workers are the objects of control, ICT-enabled flexibility provides organizations with more possibilities to flexibly adapt their human resources (Kalleberg, 2001). The standardization of work processes and tasks makes the individual worker increasingly exchangeable (Allvin et al., 2011). Organizations are enabled to reduce costs by using workers who are not their regular, full-time employees, leading to a growth of organizations’ use of flexible staffing arrangements (i.e., nonstandard employment relations such as part-time, temporary, and

contract work) and the outsourcing of certain work tasks (Kalleberg, 2001). The trend of outsourcing certain work tasks has led to the new economic branch of crowd work (Flecker & Meil, 2010). Temporary limited work and outsourcing are a threat to workers' internal motivation and well-being, because these trends foster job insecurity (Burgoon & Dekker, 2010) and deprive workers from playing a meaningful part within the social structure of an organization characterized by shared goals and values. In other words, modern jobs with employer-oriented flexibility lack job control; thus, they lack the important job characteristic that decreases workers' occupational strain (see job demand–control model; Karasek, 1979) and provides the experience of meaningfulness, internal motivation, and well-being (see job characteristics model; Hackman & Oldham, 1976).

On the other hand, there is employee-oriented flexibility, which manifests itself in four dimensions (Allvin et al., 2013): The first dimension of flexibility refers to workers' control over their work performance, which is fostered by projectification processes and thus by the specification of distal work goals, but not by the methods of how to reach them. Second, project work and management by objectives also enable work with a flexible social constellation. This flexibility of collaboration enables employees to work in variable teams and thus with coworkers with whom they autonomously choose to collaborate. The third dimension of flexibility refers to the time during which work is performed. Under employee-oriented flexible working conditions, workers have increased discretion over their own working hours and off-work time. This temporal flexibility goes beyond classic forms of scheduling autonomy (Hackman & Oldham, 1976; Morgeson & Humphrey, 2006), which primarily emphasized workers' control over arranging the sequence of their work tasks. Finally, the use of mobile technological devices enables the potential variability of workers' physical workplaces (e.g., flexible work arrangements such as voluntary telework). Spatial flexibility refers to the workers' discretion in deciding at which location they perform their work.

Employee-oriented flexible forms of work follow a common rationale that can be summarized as a shift from an external locus of control imposed by an organization to workers' increased self-control (Pongratz & Voß, 2003; Voß & Pongratz, 1998). Thus, work flexibilization has been touted as a key to helping workers manage paid work and private responsibilities (Allen et al., 2013). In particular, dual-earner families – who make up the largest proportion of all families in the European Union (Eurofound, 2014) – can benefit from spatial and temporal work flexibility to coordinate how they meet their work and private demands (Ropponen et al., 2016). Workers' discretion in terms of how, when, where, and with whom they perform their work not only provides them with control but also transfers associated planning and decision tasks from the jurisdiction of the organization to the individual worker; furthermore, it has the major organizational benefit of reducing operative costs (Demerouti et al., 2014). A self-regulated workforce enables organizations to enhance their adaptability and efficiency by reducing hierarchy levels and bureaucratic, centrally regulated mechanisms (Teece et al., 2016). As ICT-enabled globalization, decentralization, and flexible production create competition (Flecker et al., 2013), organizations strive to master the challenges of this increased competition

not only by increasing their numerical flexibility but also by the complete utilization of human resources – a social process also known as the subjectivation of work.

3.2 *The Critical Process of Work Subjectivation and Indirect Control*

Decades of working in environments designed to foster autonomous work motivation (see also Hackman & Oldham, 1976; Morgeson & Humphrey, 2006) have increased individuals' willingness to show a high degree of personal engagement at work, thereby turning the subjectivity of employees into a resource for employers (Flecker & Hofbauer, 1998). The sociological term *subjectivation of work* (Moldaschl & Voß, 2002) refers to the purposeful utilization of subjectivity in work processes (e.g., qualities and skills such as self-organization, cooperation, conflict-solving, and empathy; von Streit, 2011), which fundamentally changes the relation between employees and organizations (Voß & Pongratz, 1998).

In addition to their task-specific skills and knowledge, workers are required to display socially and organizationally desirable qualities and skills (Hornung & Höge, 2019). The organization deliberately delegates managerial activities to its workers – often without financial compensation and under the guise of employee-oriented flexible work – in order to seize their subjective production potential, which is a situation referred to by sociologists as indirect organizational control (Krause et al., 2012; Sauer, 2011; Voß, 1998). In other words, increasing workers' control to influence work processes opens the way to their exploitation if the organization takes advantage of its workers' increased work engagement and internalization of organizational goals (Hornung & Höge, 2019).

A similar mechanism in the context of ICT-enabled work was first described by Huws et al. (1996) and defined as the *autonomy paradox* (Mazmanian et al., 2013; Pérez-Zapata et al., 2016; Shevchuk et al., 2019). It describes a situation where a worker restricts his/her own autonomy, such as by working long hours, even though the worker could, in theory at least, choose when to work. Even with a high amount of working time control, the individual is still driven by deadlines and goals set by the employer or the socio-normative work environment; the worker may, therefore, work even more hours than if he/she were in a job characterized by fixed working times. This mechanism happens unconsciously, since the worker often perceives high levels of job autonomy while being indirectly controlled by external forces. It is an example of the importance of the distinction between objective dimensions of job control that come with responsibilities, possibilities, and necessities and the perceived autonomy of the worker.

Drawing on self-determination theory (Ryan & Deci, 2000), it can be argued that high levels of workers' temporal, spatial, performance-related, or collaboration-related control (see Allvin et al., 2013) foster the satisfaction of individuals' need for autonomy. The satisfaction of the basic human needs for autonomy, competence,

and relatedness further fosters workers' self-determination, internal work motivation, and, as a consequence, subjective well-being (Ryan & Deci, 2000). Thus, as long as workers perceive autonomy, they will most likely perform their work in a highly motivated and happy way, but this situation can change quickly if they come to realize how they are in fact externally determined by their environment. And with their self-determination, they also lose an important resource shielding them from experiencing occupational strain (Karasek, 1979) or burnout symptoms due to high work demands (Fernet et al., 2004). By transparently distinguishing the exercise of (direct) control from the exercise of indirect control, it is possible to shed light on the unseen mechanisms of control that arise with work flexibilization and thus to resolve the autonomy paradox. Related contemporary phenomena have been referred to as tied autonomy (Väänänen & Toivanen, 2018), the connectivity paradox (Leonardi et al., 2010), and the recovery paradox (Sonnetag, 2018).

4 How to Approach Work Flexibility in the Future

Work flexibility can be a new, extended form of job control, yet it is not an unconditional job resource because job control comes with new work demands (such as self-control demands) as well as with reduced organizational regulations that formerly secured workers from self-exploitation. Global economic developments, such as work intensification (Korunka et al., 2015), long-hours culture (Chatzitheochari & Arber, 2009), and a growing number of flexibly working people (Holtgrewe, 2014), are associated with increasing work demands with which workers have to deal. Moreover, there are the first empirical indications that contemporary high levels of decision latitude may no longer be exclusively beneficial for workers. In a study by Kubicek et al. (2014), eldercare workers with low and high levels of job control experienced less work engagement than those with medium levels of job control; and Stiglbauer and Kovacs (2018) reported detrimental effects of high levels of job control on subjective well-being, which were most evident for method and scheduling control.

It has been argued that these “too-much-of-a-good-thing effects” of job control (Stiglbauer & Kovacs, 2018, p. 520) can arise from the fact that modern, flexible work environments simultaneously increase other work demands (see Warr, 1994). Paralleling the claims of action regulation theory (Hacker & Richter, 1990), Warr (1990) proposed in his vitamin model that job characteristics, such as job control, can have nonlinear or even curvilinear relations with work-related well-being, such as burnout or job satisfaction. He explained this relationship by using the metaphor of consuming vitamins: just as certain vitamins will have adverse effects if taken in a high dosage, more job control puts additional responsibilities and work tasks on workers. Being in control of one's job implicitly demands the self-regulation of one's own behaviors in order to choose and plan appropriate work tasks, optimal procedures, places, times, and collaboration partners to achieve the overall work goals. Correspondingly, ICT-enabled forms of job control – such as working time

flexibility – and their high level of self-organization are associated with intensified workloads that workers have to master on top of the regular tasks they are primarily paid to do (Cañibano, 2011; Höge & Hornung, 2013; Kelliher & Anderson, 2010). This is in line with the aforementioned additive hypothesis of the job demand–control model, according to which increasing control may not buffer the strain effect of job demands (Kain & Jex, 2010). There is some empirical support for an existing buffer if the form of control matches the type of demand (Sargent & Terry, 1998). With this in mind, we identify increasing self-control demands as a possible match to extended job control.

4.1 Self-control Demands

Work settings require the ability to override actions, feelings, and emotions that would interfere with the work process (Baumeister et al., 2007; de Ridder et al., 2012; Schmidt & Neubach, 2007; Schmidt and Diestel, 2015). The increasing demand for adaptability, flexibility, and self-regulation in today's work (Cascio, 2003) requires workers to exert self-control, regulate their emotions, monitor goals, and perform unattractive tasks (Vohs & Baumeister, 2011). Diestel and Schmidt (2012) referred to these contemporary job characteristics as self-control demands and showed that they mediate the long-term relationship between workers' experienced workload and emotional exhaustion. Ter Hoeven and van Zoonen (2015) also pointed toward self-control demands indirectly relating to flexible work, finding that flexible-working employees are more often, and thus more negatively, affected by interruptions due to their high dependence on technological devices.

The ability to self-regulate can be described as the exercise of control over oneself (Koval et al., 2015) and is thus closely related to the concept of job control and workers' response to it. While job control refers to workers making plans and proactively exerting agency, self-control in the work setting describes the suppressing of distractions or the overcoming of dislikes that are connected to certain work tasks (Schmidt & Neubach, 2007). Self-regulation thus acts as a personal job resource, and depletion of this resource leads not only to less cognitive and behavioral control (Hagger et al., 2010) but also to more detrimental work behavior such as procrastination (Kühnel et al., 2016).

4.2 Self-exploitation Through Excessive Work Engagement

The deregulation of work combined with high levels of job control (Allvin et al., 2013) boosts workers' internal motivation (see Ryan & Deci, 2000) and thus working hours. The use of wireless Internet devices (Derks & Bakker, 2014; Towers et al., 2006) enables employees to work even outside working hours, such as in the evenings, at weekends, or during vacations (Boswell & Olson-Buchanan, 2007;

Đuranová & Ohly, 2016; Hassler & Rau, 2016), which considerably intensifies the share of their work in relation to their overall life. In the long term, work intensification is negatively associated with job satisfaction and well-being (Korunka et al., 2015).

Flexible organizational practices, with their opportunities for self-organization and personal growth, simultaneously put additional work demands on workers and thus may induce stressful situations. Occupational strain then stimulates self-exploitative behaviors as a form of dysfunctional coping mechanism: *self-endangering work* aims to attain work goals but has detrimental consequences for workers' welfare and ability to work, at least in the long term (Dettmers et al., 2016). Krause et al. (2015) labeled both the prolonging of working hours and the striving to intensify the output of working hours as self-endangering coping behaviors. Workers using self-endangering work strategies to cope with flexible working demands face more health impairment than workers using other passive or active coping strategies, such as denial or the search for support strategies (Deci et al., 2016).

5 Conclusion and Practical Implications

In summary, modern working conditions within organizations can create a moral dilemma. On the one hand, ICT-enabled extended job control provides workers with the necessary flexibility to manage work and private demands (Ropponen et al., 2016), as well as with the motivational profit from feeling self-determined (see Ryan & Deci, 2000). On the other hand, work subjectivation processes potentially transform workers into puppets that have to work harder than specified in their employment contract and are unknowingly steered by invisible strings pulled by indirect control mechanisms (Krause et al., 2012; Sauer, 2011). To examine these phenomena scientifically, a clear distinction between active job control, indirect forms of control, and perceived job autonomy is essential. It is important to keep the contradictory nature of job control in mind, especially in jobs that lack boundaries. In this chapter, we have disentangled the often synonymously used terms of *job autonomy*, *job control*, and *flexibility in work*.

By looking deeper into social mechanisms within organizations and their associated psychological consequences for organizations' members, we have to distinguish humanistic ideals of individuation, solidarity, and emancipation from the neoliberal ideologies of subjectivation, competition, and instrumentality (Hornung & Höge, 2019). Practical implications could point toward a more objective assessment of job characteristics such as job control – as the self-report of job control actually captures job autonomy – and to its careful adjustment in order to avoid indirect control and forms of subjectivation that facilitate workers' exploitation or self-endangering coping behaviors.

References

- Agurén, S., Hansson, R., & Karlsson, K. G. (1976). *The Volvo Kalmar plant: The impact of new design on work organization*. Rationalization Council.
- Allen, T. D., Johnson, R. C., Kiburz, K. M., & Shockley, K. M. (2013). Work-family conflict and flexible work arrangements: Deconstructing flexibility. *Personnel Psychology, 66*, 345–376. <https://doi.org/10.1111/peps.12012>
- Allvin, M., Aronsson, G., Hagström, T., Johansson, G., & Lundberg, U. (2011). *Work without boundaries: Psychological perspectives on the new working life*. Wiley.
- Allvin, M., Mellner, C., Movitz, F., & Aronsson, G. (2013). The diffusion of flexibility: Estimating the incidence of low-regulated working conditions. *Nordic Journal of Working Life Studies, 3*, 99–116.
- Bar-On, D. (1990). Work and the struggle for a humane society. In F. Frei & I. Udris (Eds.), *Das Bild der Arbeit* (pp. 41–55). Verlag Hans Huber.
- Baumeister, R. F., Vohs, K. D., & Tice, D. M. (2007). The strength model of self-control. *Current Directions in Psychological Science, 16*, 351–355.
- Boswell, W. R., & Olson-Buchanan, J. B. (2007). The use of communication technologies after hours: The role of work attitudes and work-life conflict. *Journal of Management, 33*, 592–610. <https://doi.org/10.1177/0149206307302552>
- Breaugh, J. A. (1985). The measurement of work autonomy. *Human Relations, 38*, 551–570.
- Breaugh, J. A. (1999). Further investigation of the work autonomy scales: Two studies. *Journal of Business and Psychology, 13*(3), 357–373. <https://doi.org/10.1023/A:1022926416628>
- Burgoon, B., & Dekker, F. (2010). Flexible employment, economic insecurity and social policy preferences in Europe. *Journal of European Social Policy, 20*, 126–141. <https://doi.org/10.1177/0958928709358789>
- Cañibano, A. (2011). Exploring the negative outcomes of flexible work arrangements. The case of a consultancy firm in Spain. *Journal of Management, 31*(4), 622–640.
- Cascio, W. F. (2003). Changes in workers, work, and organizations. In W. C. Borman, D. R. Ilgen, & R. J. Klimoski (Eds.), *Industrial and organizational psychology* (Vol. 12, pp. 401–422). Wiley.
- Chatzitheochari, S., & Arber, S. (2009). Lack of sleep, work and the long hours culture: Evidence from the UK time use survey. *Work, Employment & Society, 23*(1), 30–48. <https://doi.org/10.1177/0950017008099776>
- Cheek, N. N., & Ward, A. (2019). When choice is a double-edged sword: Understanding maximizers' paradoxical experiences with choice. *Personality and Individual Differences, 143*, 55–61. <https://doi.org/10.1016/j.paid.2019.02.004>
- de Lange, A. H., Taris, T. W., Kompier, M. A., Houtman, I. L. D., & Bongers, P. M. (2003). “The very best of the millennium”: Longitudinal research and the demands-control(support) model. *Journal of Occupational Health Psychology, 8*(4), 282–305.
- de Ridder, D. T. D., Lensvelt-Mulders, G., Finkenauer, C., Stok, F. M., & Baumeister, R. F. (2012). Taking stock of self-control: A meta-analysis of how trait self-control relates to a wide range of behaviors. *Personality and Social Psychology Review, 16*(1), 76–99. <https://doi.org/10.1177/1088868311418749>
- Deci, N., Dettmers, J., Krause, A., & Berset, M. (2016). Coping in flexible working conditions—Engagement, disengagement and self-endangering strategies. *Journal Psychologie Des Alltagshandelns, 9*, 49–65.
- Demerouti, E., Derks, D., ten Brummelhuis, L. L., & Bakker, A. B. (2014). New ways of working: Impact on working conditions, work–family balance, and well-being. In C. Korunka & P. Hoonakker (Eds.), *The impact of ICT on quality of working life* (pp. 123–141). Springer. https://doi.org/10.1007/978-94-017-8854-0_8
- Derks, D., & Bakker, A. B. (2014). Smartphone use, work-home interference, and burnout: A diary study on the role of recovery. *Applied Psychology, 63*, 411–440. <https://doi.org/10.1111/j.1464-0597.2012.00530.x>

- Dettmers, J., Deci, N., Baeriswyl, S., Berset, M., & Krause, A. (2016). Self-endangering work behavior. In M. Wiencke, M. Cacace, & S. Fischer (Eds.), *Healthy at work* (pp. 37–51). Springer International Publishing. https://doi.org/10.1007/978-3-319-32331-2_4
- Diestel, S., & Schmidt, K.-H. (2012). Lagged mediator effects of self-control demands on psychological strain and absenteeism. *Journal of Occupational and Organizational Psychology*, 85(4), 556–578. <https://doi.org/10.1111/j.2044-8325.2012.02058.x>
- Dollard, M. F., & Winefield, A. H. (1998). A test of the demand–control/support model of work stress in correctional officers. *Journal of Occupational Health Psychology*, 3(3), 243–264. <https://doi.org/10.1037/1076-8998.3.3.243>
- Đuranová, L., & Ohly, S. (2016). *Persistent work-related technology use, recovery and well-being processes*. Springer International Publishing. <http://link.springer.com/10.1007/978-3-319-24759-5>
- Eurofound. (2014). *Third European quality of life survey – Quality of life in Europe: Families in the economic crisis*. Publications Office of the European Union.
- Eurofound. (2015). *New forms of employment*. Publications Office of the European Union. <http://dx.publications.europa.eu/10.2806/012203>
- Fernet, C., Guay, F., & Senécal, C. (2004). Adjusting to job demands: The role of work self-determination and job control in predicting burnout. *Journal of Vocational Behavior*, 65, 39–56.
- Fishta, A., & Backé, E. M. (2015). Psychosocial stress at work and cardiovascular diseases: An overview of systematic reviews. *International Archives of Occupational and Environmental Health*, 88(8), 997–1014. <https://doi.org/10.1007/s00420-015-1019-0>
- Flecker, J., & Hofbauer, J. (1998). Capitalising on subjectivity: The “new model worker” and the importance of being useful. In P. Thompson & C. Warhurst (Eds.), *Workplaces of the future* (pp. 104–123). Macmillan Press.
- Flecker, J., & Meil, P. (2010). Organisational restructuring and emerging service value chains: Implications for work and employment. *Work, Employment and Society*, 24, 680–698. <https://doi.org/10.1177/0950017010380635>
- Flecker, J., & Schönauer, A. (2016). The production of “placelessness”—Digital service activities in global value chains. In J. Flecker (Ed.), *Space, place and global digital work* (pp. 11–30). Palgrave Macmillan.
- Flecker, J., Haidinger, B., & Schönauer, A. (2013). Divide and serve: The labour process in service value chains and networks. *Competition & Change*, 17, 6–23. <https://doi.org/10.1179/1024529412Z.00000000022>
- Frese, M. (1988). A theory of control and complexity: Implications for software design and integration of computer systems into the work place. In M. Frese & E. Ulich (Eds.), *Psychological issues of human-computer interaction in the work place* (pp. 313–337). North-Holland Publishing Co..
- Fried, Y. (1991). Meta-analytic comparison of the job diagnostic survey and job characteristics inventory as correlates of work satisfaction and performance. *Journal of Applied Psychology*, 76, 690–697.
- Fried, Y., & Ferris, G. R. (1987). The validity of the job characteristics model: A review and meta-analysis. *Personnel Psychology*, 40, 287–322.
- Gareis, K., & Korte, W. B. (2002). ICTs and the adaptability of work arrangements in the EU. *ECIS 2002 Proceedings, Paper*, 54, 1101–1112.
- Hacker, W. (1973). *Allgemeine Arbeits- und Ingenieurpsychologie: Psychische Struktur und Regulation von Arbeitstätigkeiten*. VEB Deutscher Verlag der Wissenschaften.
- Hacker, W. (2003). Action regulation theory: A practical tool for the design of modern work processes? *European Journal of Work and Organizational Psychology*, 12(2), 105–130.
- Hacker, W., & Richter, P. (1990). Psychische Regulation von Arbeitstätigkeiten – Ein Konzept in Entwicklung. In F. Frei & I. Udris (Eds.), *Das Bild der Arbeit* (pp. 125–142). Huber.
- Hackman, J. R., & Oldham, G. R. (1975). Development of the job diagnostic survey. *Journal of Applied Psychology*, 60(2), 159–170. <https://doi.org/10.1037/h0076546>
- Hackman, J. R., & Oldham, G. R. (1976). Motivation through the design of work: Test of a theory. *Organizational Behavior and Human Performance*, 16, 250–279.

- Hagger, M. S., Wood, C., Stiff, C., & Chatzisarantis, N. L. (2010). Ego depletion and the strength model of self-control: A meta-analysis. *Psychological Bulletin*, *136*, 495–525.
- Hassler, M., & Rau, R. (2016). Ständige Erreichbarkeit: Flexibilisierungsanforderung oder Flexibilisierungsmöglichkeit [Permanent availability: Flexibility requirement or flexibility option]. *Wirtschaftspsychologie*, *2*, 25–34.
- Herbst, D. P. (1985). *Contextual design: Towards the development of socio-technical learning networks*. Work Research Institutes.
- Höge, T., & Hornung, S. (2013). Perceived flexibility requirements: Exploring mediating mechanisms in positive and negative effects on worker well-being. *Economic and Industrial Democracy*, *36*(3), 407–430.
- Holtgrewe, U. (2014). New new technologies: The future and the present of work in information and communication technology: The future and present of work in ICT. *New Technology, Work and Employment*, *29*, 9–24. <https://doi.org/10.1111/ntwe.12025>
- Hornung, S., & Höge, T. (2019). Humanization, rationalization or subjectification of work? Employee-oriented flexibility between i-deals and ideology in the neoliberal era. *Business & Management Studies: An International Journal*, *7*, 3090–3119. <https://doi.org/10.15295/bmij.v7i5.1384>
- Hoxie, R. F. (1915). *Scientific management and labor*. D. Appleton and Company.
- Huws, U., Podro, S., Gunnarsson, E., Weijers, T., Arvanitaki, K., & Trova, V. (1996). *Teleworking and Gender*. Institute of Employment Studies.
- Johnson, J. V. (1989). Collective control: Strategies for survival in the workplace. *International Journal of Health Services*, *19*, 469–480.
- Johnson, J. V., & Hall, E. M. (1988). Job strain, work place social support, and cardiovascular disease: A cross-sectional study of a random sample of the Swedish working population. *American Journal of Public Health*, *78*(10), 1336–1342.
- Jones, F., Bright, J. E. H., Searle, B., & Cooper, L. (1998). Modeling occupational stress and health: The impact of the demand-control model on academic research and on workplace practice. *Stress Medicine*, *14*, 231–236.
- Kain, K., & Jex, S. (2010). Karasek's (1979) job demands-control model: A summary of current issues and recommendations for future research. In P. L. Perrewe & D. C. Ganster (Eds.), *New developments in theoretical and conceptual approaches to job stress* (pp. 237–268). Emerald Group Publishing Limited.
- Kalleberg, A. L. (2001). Organizing flexibility: The flexible firm in a new century. *British Journal of Industrial Relations*, *39*, 479–504. <https://doi.org/10.1111/1467-8543.00211>
- Karasek, R. A. (1979). Job demands, job decision latitude, and mental strain: Implications for job redesign. *Administrative Science Quarterly*, *24*, 285–308. <https://doi.org/10.2307/2392498>
- Karasek, R. A., & Theorell, T. (1990). *Healthy work: Stress, productivity, and the reconstruction of the working life*. Basic Books.
- Karasek, R., Brisson, C., Kawakami, N., Houtman, I., Bongers, P., & Amick, B. (1998). The Job Content Questionnaire (JCQ): An instrument for internationally comparative assessments of psychosocial job characteristics. *Journal of Occupational Health Psychology*, *3*(4), 322–355.
- Kelliher, C., & Anderson, D. (2010). Doing more with less? Flexible working practices and the intensification of work. *Human Relations*, *63*, 83–106. <https://doi.org/10.1177/0018726709349199>
- Kokkoris, M. D. (2016). Revisiting the relationship between maximizing and well-being: An investigation of eudaimonic well-being. *Personality and Individual Differences*, *99*, 174–178. <https://doi.org/10.1016/j.paid.2016.04.099>
- Korunka, C., Kubicek, B., Paškvan, M., & Ulferts, H. (2015). Changes in work intensification and intensified learning: Challenge or hindrance demands? *Journal of Managerial Psychology*, *30*(7), 786–800. <https://doi.org/10.1108/JMP-02-2013-0065>
- Kossek, E. E., Lautsch, B. A., & Eaton, S. C. (2006). Telecommuting, control, and boundary management: Correlates of policy use and practice, job control, and work–family effectiveness. *Journal of Vocational Behavior*, *68*(2), 347–367. <https://doi.org/10.1016/j.jvb.2005.07.002>

- Koval, C. Z., van Dellen, M. R., Fitzsimons, G. M., & Ranby, K. W. (2015). The burden of responsibility: Interpersonal costs of high self-control. *Journal of Personality and Social Psychology, 108*(5), 750–766. <https://doi.org/10.1037/pspi0000015>
- Krause, A., Dorsemagen, C., Stadlinger, J., & Baeriswyl, S. (2012). Indirekte Steuerung und interessierte Selbstgefährdung: Ergebnisse aus Befragungen und Fallstudien. Konsequenzen für das Betriebliche Gesundheitsmanagement. In B. Badura, A. Ducki, H. Schröder, J. Klose, & M. Meyer (Eds.), *Fehlzeiten-report 2012* (pp. 191–202). Springer. https://doi.org/10.1007/978-3-642-29201-9_20
- Krause, A., Baeriswyl, S., Berset, M., Deci, N., Dettmers, J., Dorsemagen, C., Meier, W., Schraner, S., Stetter, B., & Straub, L. (2015). Selbstgefährdung als Indikator für Mängel bei der Gestaltung mobil-flexibler Arbeit: Zur Entwicklung eines Erhebungsinstruments. *Wirtschaftspsychologie, 17*, 49–59.
- Kubicek, B., Korunka, C., & Tement, S. (2014). Too much job control? Two studies on curvilinear relations between job control and eldercare workers' well-being. *International Journal of Nursing Studies, 51*, 1644–1653. <https://doi.org/10.1016/j.ijnurstu.2014.05.005>
- Kühnel, J., Bledow, R., & Feuerhahn, N. (2016). When do you procrastinate? Sleep quality and social sleep lag jointly predict self-regulatory failure at work. *Journal of Organizational Behavior, 37*, 983–1002.
- Leonardi, P. M., Treem, J. W., & Jackson, M. H. (2010). The connectivity paradox: Using technology to both decrease and increase perceptions of distance in distributed work arrangements. *Journal of Applied Communication Research, 38*(1), 85–105. <https://doi.org/10.1080/00909880903483599>
- Locke, E. A. (1968). Toward a theory of task motivation and incentives. *Organizational Behavior and Human Performance, 3*(2), 157–189. [https://doi.org/10.1016/0030-5073\(68\)90004-4](https://doi.org/10.1016/0030-5073(68)90004-4)
- Mazmanian, M., Orlikowski, W. J., & Yates, J. (2013). The autonomy paradox: The implications of mobile email devices for knowledge professionals. *Organization Science, 24*(5), 1337–1357.
- Messenger, J. C., & Gschwind, L. (2016). Three generations of Telework: New ICTs and the (R) evolution from Home Office to Virtual Office. *New Technology, Work and Employment, 31*(3), 195–208.
- Moldaschl, M., & Voß, G. G. (Eds.). (2002). *Subjektivierung von Arbeit* (Vol. 2). Rainer Hampp Verlag.
- Morgeson, F. P., & Humphrey, S. E. (2006). The work design questionnaire (WDQ): Developing and validating a comprehensive measure for assessing job design and the nature of work. *Journal of Applied Psychology, 91*, 1321–1339. <https://doi.org/10.1037/0021-9010.91.6.1321>
- Ng, T. W. H., & Feldman, D. C. (2015). The moderating effects of age in the relationships of job autonomy to work outcomes. *Work, Aging and Retirement, 1*, 64–78.
- Nijp, H., Beckers, D., Geurts, S., Tucker, P., & Kompier, M. (2012). Systematic review on the association between employee worktime control and work-non-work balance, health and well-being, and job-related outcomes. *Scandinavian Journal of Work, Environment & Health, 38*(4), 299–313.
- Parker, S. K., & Sprigg, C. A. (1999). Minimizing strain and maximizing learning: The role of job demands, job control, and proactive personality. *Journal of Applied Psychology, 84*(6), 925–939.
- Pérez-Zapata, O., Pascual, A. S., Álvarez-Hernández, G., & Castaño Collado, C. (2016). Knowledge work intensification and self-management: The autonomy paradox. *Work Organisation, Labour & Globalisation, 10*(2), 27–49. <https://doi.org/10.13169/workorgalaboglob.10.2.0027>
- Pongratz, H. J., & Voß, G. G. (2003). From employee to 'entreployee': Towards a 'self-entrepreneurial' work force? *Concepts and Transformation, 8*(3), 239–254. <https://doi.org/10.1075/cat.8.3.04pon>
- Ropponen, A., Känsälä, M., Rantanen, J., & Toppinen-Tanner, S. (2016). Organizational initiatives for promoting employee work-life reconciliation over the life course. A systematic review of intervention studies. *Nordic Journal of Working Life Studies, 6*, 79–100.

- Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, *55*(1), 68.
- Salanova, M., Peiro, J. M., & Schaufeli, W. B. (2002). Self-efficacy specificity and burnout among information technology workers: An extension of the job demand-control model. *European Journal of Work and Organizational Psychology*, *11*(1), 1–25.
- Sargent, L., & Terry, D. (1998). The effects of work control and job demands on employee adjustment and work. *Journal of Occupational and Organizational Psychology*, *71*, 219–236.
- Sauer, D. (2011). Indirekte Steuerung—Zum Formwandel betrieblicher Herrschaft. In W. Bonß & C. Lau (Eds.), *Macht und Herrschaft in der reflexiven Moderne* (pp. 358–378). Velbrück Wissenschaft.
- Sauter, S. L., Murphy, L. R., & Hurrell, J. J. (1990). Prevention of work-related psychological disorders: A national strategy proposed by the National Institute for Occupational Safety and Health (NIOSH). *American Psychologist*, *45*(10), 1146–1158. <https://doi.org/10.1037/0003-066X.45.10.1146>
- Schmidt, K.-H., & Diestel, S. (2015). Self-control demands: From basic research to job-related applications. *Journal of Personnel Psychology*, *14*(1), 49–60. <https://doi.org/10.1027/1866-5888/a000123>
- Schmidt, K.-H., & Neubach, B. (2007). Self-control demands: A source of stress at work. *International Journal of Stress Management*, *14*, 398–416. <https://doi.org/10.1037/1072-5245.14.4.398>
- Schooper, Y. G., Wald, A., Ingason, H. T., & Fridgeirsson, T. V. (2018). Projectification in Western economies: A comparative study of Germany, Norway and Iceland. *International Journal of Project Management*, *36*, 71–82.
- Schwartz, B., Ward, A., Monterosso, J., Lyubomirsky, S., White, K., & Lehman, D. R. (2002). Maximizing versus satisficing: Happiness is a matter of choice. *Journal of Personality and Social Psychology*, *83*(5), 1178–1197. <https://doi.org/10.1037/0022-3514.83.5.1178>
- Semmer, N. (1984). *Streßbezogene Tätigkeitsanalyse. Psychologische Untersuchungen zur Analyse von Streß am Arbeitsplatz*. Hogrefe.
- Shevchuk, A., Strebkov, D., & Davis, S. N. (2019). The autonomy paradox: How night work undermines subjective well-being of internet-based freelancers. *ILR Review*, *72*(1), 75–100. <https://doi.org/10.1177/0019793918767114>
- Smith, A. (1776). *The wealth of nations*. Bibliomania.com Ltd. Retrieved from the Library of Congress <https://lccn.loc.gov/2002564559>.
- Sonnentag, S. (2018). The recovery paradox: Portraying the complex interplay between job stressors, lack of recovery, and poor well-being. *Research in Organizational Behavior*, *38*. <https://doi.org/10.1016/j.riob.2018.11.002>
- Stiglbauer, B., & Kovacs, C. (2018). The more, the better? Curvilinear effects of job autonomy on well-being from vitamin model and PE-fit theory perspectives. *Journal of Occupational Health Psychology*, *23*, 520–536. <https://doi.org/10.1037/ocp0000107>
- Taylor, F. W. (1911). *The principles of scientific management*. Harper & Brothers.
- Teece, D., Peteraf, M., & Leih, S. (2016). Dynamic capabilities and organizational agility: Risk, uncertainty, and strategy in the innovation economy. *California Management Review*, *58*, 13–35. <https://doi.org/10.1525/cmr.2016.58.4.13>
- ter Hoeven, C. L., & van Zoonen, W. (2015). Flexible work designs and employee well-being: Examining the effects of resources and demands: Flexible work designs and employee well-being. *New Technology, Work and Employment*, *30*(3), 237–255. <https://doi.org/10.1111/ntwe.12052>
- Towers, I., Duxbury, L., Higgins, C., & Thomas, J. (2006). Time thieves and space invaders: Technology, work and the organization. *Journal of Organizational Change Management*, *19*(5), 593–618. <https://doi.org/10.1108/09534810610686076>
- Trist, E. L., & Bamforth, K. W. (1951). Some social and psychological consequences of the Longwall Method of Coal-Getting: An examination of the psychological situation and defences of a work group in relation to the social structure and technological content of the work system. *Human Relations*, *4*(1), 3–38. <https://doi.org/10.1177/001872675100400101>

- Trist, E. L., Emory, F., Murray, H., & Trist, B. (Eds.). (1997). *The social engagement of social science: A Tavistock anthology: The socio-ecological perspective*. University of Pennsylvania Press.
- Udris, I., & Frese, M. (1988). Belastung, Streß, Beanspruchung und ihre Folgen. In D. Frey, C. Hoyos, & D. Stahlberg (Eds.), *Angewandte Psychologie. Ein Lehrbuch* (pp. S.428–S.447). Psychologie Verlags Union.
- Ulich, E. (1979). *Motivation, Zufriedenheit – Gestaltung der Arbeitstätigkeit und Führung von Mitarbeitern*. Lebensversicherungs.-Ges.
- Väänänen, A., & Toivanen, M. (2018). The challenge of tied autonomy for traditional work stress models. *Work & Stress*, 32(1), 1–5. <https://doi.org/10.1080/02678373.2017.1415999>
- Van Der Doef, M., & Maes, S. (1999). The job demand-control (-Support) model and psychological well-being: A review of 20 years of empirical research. *Work & Stress*, 13, 87–114. <https://doi.org/10.1080/026783799296084>
- Vohs, K. D., & Baumeister, R. F. (Eds.). (2011). *Handbook of self-regulation: Research, theory, and applications* (2nd ed.). Guilford Press.
- Volpert, W. (1974). *Handlungsstrukturanalyse als Beitrag zur Qualifikationsforschung*. Pahl-Rugenstein.
- von Streit, A. (2011). Entgrenzter Alltag—Arbeiten ohne Grenzen? Das Internet und die raumzeitlichen Organisationsstrategien von Wissensarbeitern. .
- Voß, G. G. (1998). Die Entgrenzung von Arbeit und Arbeitskraft. *Mitteilungen Aus Der Arbeitsmarkt-Und Berufsforschung*, 31, 473–487.
- Voß, G. G., & Pongratz, H. J. (1998). Der Arbeitskraftunternehmer [The worker entrepreneur]. *Kölner Zeitschrift für Soziologie und Sozialpsychologie*, 50, 131–158.
- Vroom, V. H. (1964). *Work and motivation*. Wiley.
- Wall, T. D., Jackson, P. R., & Mullarkey, S. (1995). Further evidence on some new measures of job control, cognitive demand and production responsibility. *Journal of Organizational Behavior*, 16, 431–455.
- Warr, P. B. (1990). Decision latitude, job demands, and employee well-being. *Work and Stress*, 4(4), 285–294.
- Warr, P. B. (1994). A conceptual framework for the study of work and mental health. *Work and Stress*, 8, 84–97.
- Westman, M., & Eden, D. (1992). Excessive role demand and subsequent performance. *Journal of Organizational Behavior*, 13, 519–529.
- Wielenga-Meijer, E. G. A., Taris, T. W., Kompier, M. A. J., & Wigboldus, D. H. J. (2010). From task characteristics to learning: A systematic review. *Scandinavian Journal of Psychology*, 51, 363–375.