Individual work design as a job demand: The double-edged sword of autonomy[1]

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ABSTRACT

This qualitative study developed and examined the role of high autonomy in relation to individual work design as a job demand. We argue that designing one's own job may require additional effort beyond dealing with the job demands associated with the core work tasks. We conducted 41 semi-structured interviews with employees with high levels of autonomy and flexibility at work, revealing different work characteristics that need to be designed, along with individual efforts to cope with the work situation. Some of these efforts were clearly necessary to work efficiently, ensure long-term professional success and preserve internal resources. They represented an increase in expended effort in addition to working on regular tasks, supporting our concept of individual work design as a job demand. This study contributes to the research on job autonomy, challenging its positive reputation as one of the most important job resources.

Keywords

Individual work design – autonomy – job demands

The shift from manufacturing to a more service-oriented economy during recent decades has been accompanied by the growing use of innovative technologies and flexible work methods (Demerouti & Bakker, 2014; Morgeson & Humphrey, 2008), as well as competitive pressure and a higher speed at which work is completed (Grant & Parker, 2009; Ilgen & Hollenbeck, 1991). New managerial practices that have accompanied this development include, for example, project work and management by objectives to promote employees' self-organization and self-control (Höge, 2011). Static jobs progressively make way for more flexible and dynamic tasks, roles and projects to be able to react to the market and customer demands in a more flexible manner (Ilgen & Hollenbeck, 1991). Employees are increasingly given more autonomy in executing their own work (Wood, 2011; Eichmann, 2006; Pongratz & Voß, 2003), accompanied by high responsibility (Hacker, 2003). This trend is especially observed in jobs that require a highly qualified staff (Garhammer, 2002; Pongratz & Voß, 2003).

When autonomy is high, as in self-employment and very flexible autonomous jobs, there is no set framework in which work is executed, and there are no guidelines as to how to accomplish one's work tasks; therefore, *individual work design* becomes indispensable. Individuals must make decisions regarding their tasks and task characteristics, their working hours, their work place and their social relationships at work (Allvin, Aronsson, Hagström, Johansson & Lundberg, 2011). Kubicek, Paškvan and Korunka (2014) argue that an increase in job autonomy has not only given employees the possibility to make decisions independently, but they are also forced to make these decisions. These decision-making demands (Kubicek et al., 2014) may then entail additional effort beyond actually completing one's work tasks. For example, planning as an action process takes additional effort,

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especially combined with the few resources that are available (Frese & Zapf, 1994). We argue that jobs very high in autonomy can lead to a requirement to individually design one's own work, which is accompanied by increased effort beyond the execution of regular work tasks.

Job design theories, such as the job characteristics model (e.g., Hackman & Oldham, 1976), the job demand-control model (e.g., Karasek & Theorell, 1990), action theory (e.g., Frese & Zapf, 1994) or the job demands-resources model (JD-R model; Bakker & Demerouti, 2007), propose that autonomy constitutes one of the most important job resources. Hackman and Oldham (1976) define 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). It affects the degree to which individuals experience responsibility for their work outcomes. Autonomy has been shown to have positive effects on various behavioral, well-being and attitudinal outcomes, such as performance, job satisfaction, organizational commitment, internal work motivation, lower emotional distress, burnout, absenteeism and turnover (de Jonge & Schaufeli, 1998; de Lange, Taris, Kompier, Houtman & Bongers, 2004; Humphrey, Nahrgang & Morgeson, 2007; Spector, 1986; Thompson & Prottas, 2005). The positive effects of autonomy are a product of employees' abilities to choose to engage in tasks that are interesting and personally meaningful (Gagné & Bhave, 2011) and to choose their own strategies to address a situation (Frese & Zapf, 1994).

However, Warr (1987) argued in his Vitamin Model that autonomy is related to mental health in an inverted u-shaped pattern: High levels of autonomy can entail high degrees of uncertainty, responsibility and difficult decision making, leading to overload strain. Likewise, Busck, Knudsen and Lind (2010) raise the question of whether job autonomy constitutes a psychological strain. They argue that an increase in job autonomy, for example through empowerment and self-management, might go hand in hand with higher responsibility and a demand of higher performance. In a similar manner, Claessens, van Eerde, Rutte and Roe (2004) claim that in dealing with job demands, self-management has become a critical issue.

Pongratz and Voß (2003) describe jobs very high in autonomy in their concept of the 'entreployee'. In these types of jobs, autonomy is accompanied by an increase in self-control, self-commercialization and self-rationalization. Pongratz and Voß (2003) define self-control as the „planning, control and monitoring of work by the person responsible" (p. 8). Self-commercialization means advertising and selling one's capacities and abilities on the labor market as well as within organizations. Employees become more and more responsible for the development and maintenance of their work capacities to demonstrate their value for their current employer as well as for the labor market (Höge, 2011; Wiese, 2008). Self-rationalization refers to the management and organization of individual resources, and in the case of the entreployee, to „the tendency to accept willingly the importance of the company (employer) as an integral part of life" (Pongratz & Voß, 2003, p. 8). Based on these considerations, Höge (2011) developed the concept of flexibility requirements at work. These flexibility requirements may challenge employees to constantly balance and rationalize the resources they allocate to their work and their private lives (Höge, 2011). Höge (2011) identified four dimensions of flexibility requirements: (a) requirements for self-organization, (b) requirements for a self-directed career development, (c) requirements for self-directed learning and (d) requirements for temporal flexibility. All of these dimensions, except for requirements for temporal flexibility, relate positively to job control (Höge, 2011), which can be understood as autonomy in the way the work is executed (see Semmer, Zapf & Dunckel, 1999). These results show that flexibility requirements seem to be accompanied by high autonomy, leading to the possible conclusion that the need to be flexible at work can only be realized when autonomy is high, allowing employees to exert control over the way work is executed. All dimensions of flexibility requirements show significant correlations to strain indicators, showing that flexibility requirements can be considered a demand (Höge, 2011).

In sum, Pongratz and Voß (2003) as well as Höge (2011) described a new form of work, characterized by an increase in autonomy, which encompasses an increase in self-control, self-commercialization and self-rationalization, accompanied by the requirement to be flexible. As a result, the necessity to design one's own job may increase, as in defining task goals or engaging in project management. When autonomy leads to a lack of predictability and a binding framework in which work is being executed (Korunka & Kubicek, 2013), employees may be forced to regulate and design their own job to be able to work efficiently, to reach goals and to ensure sustainable productivity and health.

To examine these new demands that employees face more closely, Kubicek et al. (2014) developed the concept of work intensification, referring to the increase in effort an employee has to invest in order to complete his or her work tasks during the day. Kubicek et al. (2014) postulate an increase in intensified job-related planning and decision-making demands, intensified career-related planning and decision-making demands, intensified knowledge-related learning demands and intensified skill-related learning demands, all of which showed positive relationships with emotional exhaustion after controlling for traditional

job demands, such as time pressure. The authors concluded that „an ever-growing amount of planning and decision-making and learning has detrimental effects on employees' well-being" (Kubicek et al., 2014, p. 14). Looking at the possible impact of work intensification on work design by providing in-depth qualitative data analysis, we argue that jobs very high in autonomy can lead to the requirement to individually design one's work.

Work design theories explain how aspects of jobs, tasks and roles affect individual, group and organizational outcomes (Grant & Parker, 2009). Understanding how individuals experience their job has long been their primary goal (Wrzesniewski & Dutton, 2001). Work design can affect several outcomes, such as organizational performance, well-being, satisfaction and absenteeism (see Morgeson & Humphrey, 2008).

Work design theories traditionally focus on top-down processes, examining the way organizations create jobs for their employees, as well as the conditions under which work is being performed (Hackman & Oldham, 1976; Demerouti & Bakker, 2014). The research on job redesign adds to the research in the field by focusing on the processes that take place when organizations or supervisors change something about the job, the task, the role or the working conditions of an individual or a group (Tims & Bakker, 2010).

New approaches in work design focus on the active role the individual plays in the process of work redesign (Demerouti & Bakker, 2014). Proactive approaches, such as job crafting, hypothesize that employees create a motivating potential themselves by shaping and changing their job characteristics individually (Wrzesniewski & Dutton, 2001). Wrzesniewski and Dutton (2001) define Job Crafting as „the physical and cognitive changes individuals make in the task or relational boundaries of their work" (p. 179).

Physical changes refer to the form or number of activities performed while on the job, and cognitive changes represent an alteration of how one sees the job. The process of changing relational boundaries is characterized as deciding with whom and how one interacts on the job (Wrzesniewski & Dutton, 2001). According to Wrzesniewski and Dutton (2001), job crafting is a creative process through which individuals change their jobs to create a suitable definition of the work they do and who they are at work. Tims and Bakker (2010) expanded the research on job crafting, basing their concept on the JD-R model. They define job crafting as „the changes that employees may make to balance their job demands and job resources with their personal abilities and needs" (Tims, Bakker & Derks, 2012, p.174). As a form of proactive behavior, it may support employees in fitting their jobs better to their individual abilities, skills and knowledge, as well as to their preferences and needs (Tims & Bakker, 2010). According to Petrou, Demerouti, Peeters, Schaufeli and Hetland (2012), another aim of job crafting is to create working conditions that support sustainable health and motivation to work.

In sum, the way in which employees engage in designing their own work has already been well described in the concept of job crafting. However, in contrast to job crafting, which is conceptualized as proactive and voluntary, we assume that individual work design is reactive and necessary – reactive because we consider it a reaction to a certain job environment, in which high autonomy leads to a lack of guidelines as to how, when and where to accomplish work tasks, resulting in the need to individually design one's own work – and necessary because without individual work design, employees would not be able to work efficiently, reach work goals and ensure long-term employability by making room for recovery.

In this study, we sought to investigate whether employees high in autonomy perceive designing their own job as necessary and whether individual work design is accompanied by increased effort. In this sense, it is hypothesized that individual work design constitutes a job demand. Within the JD-R model, job demands are defined as „physical, psychological, social, or organizational aspects of the job that require sustained physical and/or psychological (cognitive and emotional) effort or skills and are therefore associated with certain physiological and/or psychological costs" (Bakker & Demerouti, 2007, p. 312). Examples include cognitive demands, task complexity, time pressure, work overload and work-home conflict (Schaufeli & Taris, 2014). According to Hockey's (1993) model of compensatory control, performance in spite of high demands can be protected by sympathetic activation, increased effort or both. Other strategies to address high work demands are a decrease in task performance and fatigue after-effects (Hockey, 1993; Hockey, 1997). For example, planning and decision-making demands, as well as learning demands that arise in the face of high autonomy, require increased effort (Kubicek et al., 2014).

Likewise, the effort-recovery model postulates that dealing with task demands is strenuous at all times and therefore always requires a certain amount of effort (Meijman & Mulder, 1998). When work demands exceed the individual work potential, as is the case in work overload, physiological, behavioral and subjective load reactions are a consequence, eventually resulting in decreased well-being and health. This reaction can be buffered by decision latitude, or autonomy (Meijman & Mulder, 1998). However, when autonomy is accompanied by the requirement to design one's own job, which imposes yet another job demand, the positive effect of autonomy may be impaired. Korunka and Kubicek (2013) concluded that the possibi-

lities that increased autonomy offers are ambivalent. On the one hand, it offers the opportunity to work in a self-determined and therefore humane manner. On the other hand, it can bear a risk when individual work design becomes necessary and leads to overload strain (Voß, 1998).

In line with the JD-R model and the effort recovery model, when individual work design involves an increase in effort and in the amount of energy dedicated to plan, organize and coordinate the regular work tasks, it can be considered a job demand, potentially leading to decreased health and well-being. Our aim in this study was to investigate individual work design not only as employees' unsolicited behavior, as in the case of job crafting (Wrzesniewski & Dutton, 2001), but as an inherent requirement to achieve work goals and to ensure long-term productivity, health and employability. Therefore, our main research question was: In what way does high autonomy produce a need for individual work design to cope with the work situation? We subdivided our main research question into two more distinct questions.

1. How do employees engage in individual work design?
2. Can individual work design be considered a job demand?

Method

Procedure & Sample

The research questions aimed to examine participants' efforts of individual work design. They were exploratory in nature; therefore, we used a qualitative approach to data collection and analysis.

We used a semi-structured interview format and developed an interview schedule, assessing participants' work characteristics, their influence upon them and their need to individually design their own job. Interviewees were asked to describe their workplace including typical tasks they perform. Then, we asked questions about participants' degree of autonomy at work and potential influence they had on work tasks and working time. We were able to extract the work characteristics that participants had an influence upon and explored whether they experienced a necessity to design these aspects and whether work design was accompanied by additional effort.

The study reported in this paper is part of a larger research project on individualized work design. Participants were recruited mainly through a large German health insurance company and through three companies, all taking part in the above named research project. We recruited participants who work in very flexible, self-determined and highly autonomous work settings, deciding how, when and where to work. We conducted 41 interviews. Our sample consisted of self-employed individuals without employees and employees with high degrees of autonomy, working rather separately from their organization, for example in project management, abroad, with clients on site, and on the road as sales representatives. Approximately 68 % were male, and the mean age was 43 years. Participants worked 48 hours per week on average. Each study participant was interviewed individually. The interviews lasted 60 minutes on average. Participants agreed to take part in the study and signed a consent form. They were assured that we would only present the data in an aggregated and anonymized way. Interviews took place in the spring of 2014, either face-to-face or via phone, and were recorded and transcribed afterwards. They were conducted by 10 trained interviewers. The interview training consisted of information about the interview setting, the attitude of the interviewer towards the interviewee and the handling of difficult and/or sensitive interview situations.

Analysis

Data analysis followed Neuendorf's (2002) approach to content analysis. Because we built on the JD-R model but aimed to broaden the concept of job demands with respect to individual work design, we derived categories inductively and deductively, i.e., applying the concept of job demands to our data, as well as developing new explanations grounded in the data. We established a thematic framework of the work characteristics being designed and the efforts of individual design necessary to cope with the work situation, which we revised and expanded as the coding process continued. We analyzed our data in more detail as we divided our categories into subcategories. Additionally, we counted statements in which study participants mentioned such words as 'effort', 'strain', 'energy', 'time-consuming', 'taxing' and 'costly' in relation to individual work design in order to answer our research question as to whether individual work design can be considered a job demand.

The number of entries in each category was counted for descriptive statistics. Four of the 41 interviews were picked at random and coded by two coders (10 % of the total sample). We calculated intercoder agreement according to the Hayes and Krippendorff criteria (2007). Intercoder agreement was substantial at .76 (Krippendorff's α).

Table 1: Designing work content and working time.

	% (N=41)	Example
Work content		
Working procedures/processes	63	„What I actually do during the day or during one week is eventually up to me“ (Jane, consultant, 31).
Choice of projects/customers	46	„I am relatively free in choosing the projects I work on, how many new projects I take on, and how much money I charge“ (Mary, consultant, 34).
Project planning	39	„You have a certain influence in projects. I have a say in how the project is going to be run“ (Bob, self-employed web-designer, 30).
Promoting one's own career	29	„When I notice my knowledge gaps in some areas or when I notice something coming 'in style', then I have the opportunity to train myself or to attend a training“ (Richard, consultant, 61).
Working time		
Timekeeping	10	„I have a timekeeping tool on my computer. So I always know how many hours I worked for each client. (…) I can keep track of how much money I made working for a client and also how many hours I've worked during the day“ (David, self-employed film maker, 37).
Scheduling	29	„I have deadlines that I have to keep, but how I do that is up to me. As I said, it's management. I have to manage it, so it all works and fits“ (Sharon, sales representative, 52).
Taking individual breaks from work	63	„I usually take breaks, but there are days where I just keep going, but I can completely influence that. I could take a break, but then I'd have to stay at work an hour longer in the evening“ (Adam, self-employed consultant, 45).
Extending working time	68	„There are times when it's just extreme, where I don't have any influence. (…) It's just so much that I work from dusk till dawn, even on the weekends“ (John, self-employed consultant, 40).

Note: Pseudonyms are used in quotes. Quotes are translated from German.

Findings

In total, we developed a code system of 22 codes. All 41 interviewees reported designing aspects of their own job on a regular basis. Thirty-nine of 41 reported having to design their job in order to work efficiently and to stay healthy. Eighteen of 41 reported that their individual work design was accompanied by increased effort. To answer our first research question, we explored whether and how participants engaged in individual work design as part of their job. The interviews clearly showed that employees designed several dimensions of job characteristics on a regular basis. We divided results into individual efforts regarding work content and efforts regarding working time. Table 1 gives an overview of designing work content and working time, including examples.

Designing work content

1. More than half of the participants of our study mentioned having an influence on their *working procedures and processes*, referring to the way they execute their work tasks. Examples include deciding how, when, with whom and where to work, setting up project-specific to-do lists, switching between different projects and eventually creating one's own special way of working and getting tasks done.
2. *Choosing customers and projects* to work on was mentioned by almost half of our sample. Efforts include actively acquiring new customers and prioritizing inquiries as to which customers are considered 'important' in terms of reputation and possible future jobs, thus strategically planning which projects to take and which to decline. Additionally, participants mentioned taking on and declining projects as being an act of balance be-

tween avoiding work overload while also avoiding turning down important clients and feeling financially secure. This behavior was particularly pronounced in self-employed individuals.

3. The *planning of projects* was another behavior mentioned by 39 % of the participants. To some extent, participants were able to influence the magnitude of projects, i.e., either expanding or narrowing down projects. They could change the order in which tasks were completed and influence work scheduling. They were able to manage and address time delays, eventually engaging in time management.
4. *Promoting one's own career* is a behavior almost one-third of our sample mentioned. It refers to participants' control over their own professional development. They must expand their expertise and knowledge actively in relevant fields through research and self-training. They always must be up to date in terms of trends and new procedures. One interviewee stated: „There are these trends, developments and all of a sudden it's irrelevant, the programming language (…). People have to relearn completely. And that's something you need to be aware of, that you have to be up to date constantly" (Bob, self-employed web designer, 30 years).

Designing working time

Approximately 56 % of our sample reported making use of time autonomy. For example, time autonomy might be used for personal reasons, such as taking care of children or adjusting the working hours to one's personal circadian rhythm. Interestingly, some interviewees reported having a great deal of working time autonomy but not really making use of it. Data analysis revealed different efforts related to working time.

1. *Time keeping* was only exercised by a small amount of participants (10 %). One interviewee used a time-keeping tool, helping him to gain knowledge on how many hours he worked for each client.
2. Almost one-third of our participants mentioned designing their own *scheduling*. This included coordinating working hours with private time demands and coordinating appointments so that travelling and waiting time is reduced to a minimum, deciding when to attend to which tasks, keeping deadlines in mind and prioritizing tasks.
3. Approximately 63 % of our interviewees reported *taking individual breaks from work*. Due to the great autonomy experienced by our participants, breaks can be planned and taken individually. Behaviors include taking regular lunch breaks, using breaks to recover from work, to have time for personal matters, to spend time alone and, interestingly, to work on routinized tasks. Additionally, breaks are omitted in times of high workload. When working with clients on site, taking breaks seems to be particularly hard. One consultant asked: „The question is, what exactly is a break? Am I only taking a break when I completely detach from work or am I also taking a break when I talk to a colleague?" (Eric, consultant, 47 years).
4. *Extending working time* was the most frequently mentioned behavior, named by more than two-thirds of our sample. Extending working time refers to working overtime, working on the weekends, working during vacation and being available for work matters after hours through electronic devices. It was primarily used to cope with job demands such as time pressure and a high workload.

Individual work design as a job demand

After looking at the dimensions of job characteristics that employees designed on a regular basis, our second research question was: Can individual work design be considered a job demand? To answer the question of whether individual work design was necessary and therefore constituted a job demand accompanied by increased effort, we included all statements in which interviewees clearly mentioned *being forced* to engage in individual work design and *having no other choice* but to design, indicated by such words as 'must', 'have to' and 'otherwise xy would happen'. We extracted three major reasons to engage in individual work design: (a) *to ensure work effectivity*, (b) *to ensure long-term professional success* and (c) *to preserve internal resources*. Table 2 gives an overview of our main results.

Design efforts to ensure work effectivity

Our sample reported having to use different strategies to work efficiently and to reach work goals throughout the working day.

1. Efforts to design *working procedures and processes* include planning projects and delegating tasks. Two specific ways in which work procedures must be designed are *prioritizing* tasks and scheduling time. Participants mentioned having to use programs such as Google Calendar®, cloud computing and Dropbox® to manage their time, to set appointments and to work simultaneously on dif-

ferent projects. This task planning and keeping track of meetings and deadlines is experienced as a burden or „lost time“ (Harry, self-employed journalist, 31) because it is usually not paid. However, without making decisions on how to design work procedures efficiently, the quality of one's work would suffer due to losing track of tasks to be done and deadlines to be met.

2. *Influencing work quality* refers to such efforts as lowering the quality of one's work and keeping perfectionism to a minimum in order to work in an economically efficient way. This becomes particularly important when faced with time pressure, when deadlines are close and time is limited.
3. *Creating self-motivation* is a behavior aimed at increasing self-discipline, staying involved and

Table 2: Design efforts of individual work design.

	% (N=41)	Example
Design efforts to ensure work effectivity		
Working procedures/processes	66	„The things you don't talk about (with clients) in the beginning (of a project) can potentially cause problems later on“ (Ben, consultant, 35).
Prioritizing tasks	32	„Some medical practices are more promising when it comes to buying than others. And when I'm in a medical practice which is rather reluctant to buy and they keep me waiting for two hours, then I'll try to postpone the appointment“ (Michael, sales representative, 35).
Scheduling	59	„The freedom (of being self-employed) is accompanied by the need to organize yourself. I have to be very disciplined with myself, because I don't have a set framework of office hours or the presence of co-workers or meetings I have to attend“ (Harry, self-employed journalist, 31).
Influencing work quality	10	„Sometimes I'll say 'I know it's not great, but let's just leave it at that'. My client will never know because he's never seen the better version and he'd probably not spend more money on the better version anyway, so at some point it's all about thinking economically“ (Tom, self-employed marketing consultant, 32).
Creating self-motivation	7	„You really have to get involved, without anyone supporting you and telling you what to do. You have to be able to motivate yourself. It's hard“ (Bob, self-employed web designer, 30).
Extending working time	34	„Two years ago, on Easter, I had to write an offer for a client. I completely blew off Easter, my family went visiting relatives and I sat here working. That was very annoying. And I try to avoid that“ (Adam, self-employed consultant, 45).
Design efforts to ensure long-term professional success		
Acquisition of projects/customers	32	„It is an effort to submit an offer, which you have to prepare and you work on that for one or two days and you don't get paid for that“ (Jane, consultant, 31).
Promoting one's own career	29	„It's all about being updated, because there's much competition. (…) You can easily become dispensable“ (Jenny, self-employed journalist, 57).
Financial management, formalities	20	„You have to keep track of your financial situation. Managing that is extremely important. And it might be the biggest problem. As soon as an existential fear hits you, (being self-employed) is probably the worst in the world because you'll feel like a beggar“ (David, self-employed film maker, 37).
Shaping relationships		
With co-workers	34	„I have a few co-workers who also work as consultants, and we talk almost every day, give ourselves feedback, acquire new clients together“ (Adam, self-employed consultant, 45).
With clients/customers	34	„Of course you have to respond to the other person. That's the most important thing when doing business. To know what kind of person he or she is, concerning the kind of language you use, right?“ (David, self-employed film maker, 37).

	% (N=41)	Example
Design efforts to preserve internal resources		
Deliberately setting limits to working time	46	„If you work too much, your head is overloaded. Then, you have to take time off and spend it with your family and friends“ (Richard, consultant, 61).
Taking individual breaks from work	12	„You have to make sure that you eat something during the day while you're away on business. You have to plan that, and really it's additional effort planning that, but it's necessary“ (Michael, sales representative, 35).
Keeping life-domain balance	56	„I have to take care of my wife, I have to make sure I'm not stressed and still have enough time for the rest of the family. And we can't live off my wife's sick-pay so I have to bring home some money. So, I really have to find my balance“ (Richard, consultant, 61).

Note: Pseudonyms are used in quotes. Quotes are translated from German.

motivating oneself in spite of obstacles. Interviewees mentioned having to motivate themselves, especially when working on boring routine tasks, working on projects they find unexciting and working with clients they do not like.

4. *Extending working* time is used as a resource to stay productive and cope with job demands in times of time pressure and a high workload due to deadlines. In this case, working time must be expanded into the evening and night hours, as well as into the weekend and even vacation time, in order to finish work tasks and eventually meet deadlines, fulfill clients' needs and therefore ensure employability through potential future orders.

Design efforts to ensure long-term professional success

Next to using strategies to work efficiently, interviewees expended efforts to ensure long-term professional success. They acquired new projects and customers, they promoted their own career and they engaged in financial management.

1. *Deliberately choosing projects and/or customers* is an important work design behavior in which interviewees engaged. To ensure long-term employability and a financially secure future, participants must actively acquire new clients or decide which projects to take on and which to decline. They based their decisions on how much money was involved, whether they considered future orders likely and whether declining an offer would entail losing an important client. This behavior was particularly pronounced in self-employed individuals.
2. The acquisition of customers goes along with the requirement to *promote one's career*. Choosing or declining projects also has an impact on one's career development. Participants mentioned having to choose the projects they work on according to how trendy or in-style they were, whether they fit one's portfolio and could potentially be used as a reference for future clients. Additionally, promoting one's career included planning one's professional development, engaging in further training and managing one's knowledge to stay updated on new developments in the field. Allvin et al. (2011) referred to these demands as cognitive knowledge demands. They postulated that the individual himself is responsible for ensuring lifelong learning to fit one's own knowledge to the demands of the labor market.
3. As a strategy, *financial management* refers to such behaviors as monitoring one's financial situation, book keeping, considering how much money one must earn to make a living and whether one must work ahead to save money for economically worse times. Dealing with these formal aspects of the work situation was accompanied by extra effort and therefore was very unpopular in our sample. This behavior was particularly pronounced in self-employed individuals.
4. Next to content-related aspects of the job, interviewees mentioned having to *shape their relationships to co-workers and clients*. Co-workers were seen as a resource to get feedback, to talk about working procedures and to acquire new clients together. Shaping one's relationship to clients was considered important in order to create a pleasant work atmosphere, to be able to respond to customers' needs and to sell one's product. Goals, roles and forms of communication must be discussed in advance to ensure a smooth working

process. One interviewee said: „Working in consulting means working in relations. These can be challenging, socially demanding, and intellectually complex“ (Tim, consultant, 44).

Overall, engaging in these strategies was necessary for interviewees to work efficiently and to ensure long-term professional success. Without expanding these efforts, they would potentially risk their own employability and financial basis due to a lack of productivity. Work procedures might be ineffective without prioritizing tasks and scheduling time, not adjusting one's working time to the current work load could result in missing deadlines and aggravating clients, and avoiding finances and formalities could potentially lead to undesired additional payments.

Design efforts to preserve internal resources

Next to the above-mentioned work-related efforts, interviewees employed methods to preserve internal resources and were required to stay healthy and productive in the long run. They set limits to their working time, they took breaks from work and they worked on their life-domain balance.

1. *Deliberately setting limits to working time* was important in order to preserve internal resources, to promote well-being and to make room for recovery experiences. Examples include planning social activities in the evening in order to limit working time and keeping working time in a set time frame – not working more than ten hours a day, for example – to prevent work overload and extreme exhaustion.
2. In a similar manner, interviewees were required to *take individual breaks from work* in order to stay productive and healthy during the workday. Efforts included making room for and planning lunch breaks intentionally and making sure to eat enough during the work day, especially when on the road.
3. *Keeping a healthy life-domain balance* is another important behavior that participants engaged in to find time for family and friends and to find compensation for the time spent at work. One interviewee stated: „Keeping a balance between my work life and my private life, I really see that as my job“ (Patrick, self-employed consultant, 35). One way to increase life-domain balance was to set clear boundaries between the work and the private life domain using boundary management strategies, for example. Boundary management refers to setting limits to one's working time, thereby demarcating the line between working and private time (e.g., Kossek, Noe & DeMarr, 1999; Kreiner, Hollensbe & Sheep, 2009). Strategies include establishing rituals to draw a line between work and private time, deliberately rejecting work-related calls or e-mails after hours, having fixed office hours or blocking time frames for private matters only. One interviewee said: „(…) to distinguish between work and leisure time – especially when you work at home – is to simply buy a pair of shoes that you only wear at home. You put it on in the morning, take it off at night, saying 'now is my time off'. It really helped“ (Bob, self-employed web designer, 30).

For interviewees, deliberately setting limits to working time, taking individual breaks from work and keeping a life-domain balance were indispensable ways to make room for recovery, relaxation, and leisure activities. Without these efforts to set limits to working time, take breaks from work, and actively working on their life-domain balance, they would potentially experience symptoms of work overload, exhaustion, fatigue and role conflicts in balancing their work and their private life.

In sum, the above-mentioned efforts of individual work design seem to be important to stay healthy and to work efficiently. We were able to demonstrate that individual work design was accompanied by increased effort and experienced as an additional necessity one must deal with in order to complete regular work tasks. We looked at statements in which study participants mentioned such words as 'effort', 'strain', 'energy', 'time-consuming', 'taxing' and 'costly' in relation to individual work design. According to this analysis, 18 out of 41 participants experienced an increase in energy they had to dedicate to individual work design. Employees experienced the time spent on individual work design as „lost time“ (Harry, self-employed journalist, 31). They mentioned an increase in effort and energy in order to plan, coordinate and prioritize tasks. In this sense, individual work design can be considered a job demand because it requires additional effort to plan and coordinate.

Discussion

Judging from the results presented in this study, high autonomy can lead to the requirement to individually design one's job. Due to unpredictable working conditions and no reliable framework in which work is being executed, individual work design becomes indispensable. These flexible working conditions force employees to design their job in order to work efficiently, to achieve objectives and to maintain sustainable productivity and health. Thus, our study showed

that autonomy can have a demanding side when it goes along with the requirement to design one's work, creating additional effort next to regular work tasks and potentially leading to stress. We looked at very autonomous and flexible working environments and discovered which task and time characteristics individuals designed on a regular basis. We found that individual work design in these jobs with very high autonomy was necessary and therefore constituted a job demand. In line with Warr's (1987) Vitamin Model, when high autonomy goes along with a need for decision-making, high degrees of uncertainty and high responsibility, individuals might eventually experience overload strain. Taking Hockey's (1993) model of compensatory control and the effort-recovery model (Meijman & Mulder, 1998) into account, when individual work design becomes indispensable next to working on the regular work tasks, the demands imposed upon the individual rise and require an increase in effort to meet short-term and long-term work-related goals. Following these results, we define individual work design as the demand to design one's job characteristics in a way that enables long-term healthy and productive working, ensuring sustainable employability.

When dealing with individualized and autonomous forms of work, it is necessary to distinguish our concept of individual work design from other forms of self-initiated behavior, such as (a) job crafting (Wrzesniewski & Dutton, 2001), (b) self-regulation (e.g., Vancouver, 2005) and (c) self-leadership (e.g., Manz, 1986).

First, as opposed to the opportunity to craft one's job, individual work design in itself might be a requirement, inherent in the job, leaving employees no other choice but to craft their jobs because there are no distinct tasks or procedures given (see above).

Second, self-regulation is defined as „the processes involved in attaining and maintaining (i.e., keeping *regular*) goals, where goals are internally represented (i.e., within the *self*) desired states" (Vancouver & Day, 2005, p. 158). In particular, these processes involve goal establishment, goal planning, goal striving and goal revision (Austin & Vancouver, 1996). Self-regulation describes the process by which individuals relate their goals to their expenditure of effort and to their current state of goal attainment. It is a feedback process providing individuals with information about the discrepancy between reality and desired future, eventually enabling individuals to modify their strategies of goal attainment, if necessary (Vancouver & Day, 2005). Thus, self-regulating processes must occur in order to ensure effective individual work design. When planning and coordinating aspects of the job, self-regulation is an essential component to successfully achieving work-related goals. We consider it a necessity for successful individual work design.

Third, self-leadership is a specific form of self-regulation and includes bringing oneself to perform both naturally motivating tasks as well as tasks that are not naturally motivating (Manz, 1986; Markham & Markham, 1995). It consists of behavioral-focused strategies, natural reward strategies and constructive thought pattern strategies (Prussia, Anderson & Manz, 1998).

Of the above-mentioned constructs, self-leadership is the most strongly related to individual work design. However, individual work design is conceptualized as a job demand, representing a necessity, whereas self-leadership, just like job crafting, has been described as self-initiated behavior in the literature (e.g., Pearce & Manz, 2005).

When looking at the working conditions our sample reported, the question arises whether we can still speak of autonomy when jobs formally high in autonomy become more and more restricted by external factors, such as clients' demands, deadlines and time pressure, resulting in the requirement to be flexible (Höge, 2011; Korunka & Kubicek, 2013). In our study, we discovered that our sample of highly qualified and very autonomous and flexible workers only experienced individual autonomy to a certain degree. Much of the formally given autonomy could not be used for individual purposes but had to be used to fulfill work tasks, to please clients, to meet deadlines, to cope with time pressure and to eventually secure one's long-term productivity and employability. An increase in autonomy can particularly lead to overload strain when flexibility increases and organizational guidelines, frameworks and control decrease, combined with a higher pressure to perform well at work. The newly gained decision latitude could lead to symptoms of overload or burnout when setting organizational goal setting becomes unrealistic (Korunka & Kubicek, 2013). Therefore, it is necessary to take a closer look at the highly praised concept of autonomy: We need to consider whether autonomy is merely formally present or actually available and useful for employees. When examining autonomy, scholars should be aware of the fact that in certain work environments, workers may not be able to make use of their autonomy for individual purposes, but are forced to use it to react to external demands. Therefore, future studies should also assess the degree to which autonomy can be used for individual purposes, asking whether autonomy offers the possibility for the satisfaction of needs.

High autonomy can present a downside in that it gives rise to the demand for individual work design; we may then ask ourselves whether work design interventions that focus on increasing autonomy continuously in different kinds of jobs is really a promising solution. The advantages of strict guidelines, rules and hierarchies at work should not be underestimated be-

cause they have the ability to decrease complexity and relieve employees from overtaxing responsibility and uncertainty (Baecker, 1999).

When autonomy is high, however, according to the buffering hypothesis of the JD-R model (e.g., Bakker & Demerouti, 2007), resources might help in coping with the demand for individual work design. These resources could comprise competencies in individual work design, such as being able to plan and organize tasks, to schedule working time according to task characteristics, and acknowledging and making room for recovery and leisure activities.

Whenever employees feel like they cannot oversee the dimensions of a new project or clients' demands are changing constantly, it is necessary to keep these influences to a minimum. This can be achieved by preventive actions, such as strategic project management, explicit communication rules, and realistic deadlines. Additionally, emotional and instrumental support by colleagues and supervisors is an essential resource at work and may help employees cope with a required increase in speed and work intensity (Korunka & Kubicek, 2013). An individualized health intervention program could enable and encourage individuals to design their own job in a healthy and productive way by means of communicating, practicing and strengthening expertise in strategies of healthy work design.

A quantitative approach with a larger representative sample is necessary to confirm our findings. Furthermore, more men participated in our study than women, which might be because women are still underrepresented in the flexible and autonomous jobs we examined (Fischer, Dahms, Bechmann, Frei, & Leber, 2009). The results might therefore only be applicable to women in a limited way. Finally, we did not code events in which employees did *not* have the possibility to design their own work or instances in which they *did not have to* design it due to infrequency. Incorporating these statements might help understand jobs high in individual work design better by distinguishing them from jobs low in individual work design.

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