Chapter 7
Designing Work that Works in the Contemporary World: Future Directions for Job Design Research

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Abstract Much research shows that good work design has positive outcomes for individuals and organisations. After a brief review of two popular work design perspectives (designing motivating work; designing safe and healthy work), the primary goal of this chapter is to identify some important future research directions. This chapter highlights key areas that need more attention from researchers and practitioners: putting work design into context to consider the effects of rapid changes currently occurring in the workplace and the workforce; identifying the value of work design from a longer term and more strategic perspectives; paying more attention to employee-initiated forms of work design; giving greater attention to why poor work design continues; and investigating the effects of culture on work design and cross-cultural research on work design. This chapter concludes by advocating the collaboration of researchers and practitioners to take up the challenge of work design to achieve decent jobs for all.

Keywords Work design · Job characteristics · Proactivity · Job crafting · Future work

Introduction

Work design, which refers to 'the content and organization of one's work tasks, activities, relationships and responsibilities' (Parker 2014, p. 662), has been linked not only with positive individual outcomes, but also the effective functioning of organisations and even societies. For individuals, work design can affect their sense of meaning, health and well-being, creativity, development and more. At the same

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time, work design can also affect many significant goals in organisations, such as safety, performance and innovation. At the societal level, work design is also considered critical, as shown by the International Labor Organization's Decent Work Agenda that aims to not just secure work for all, but to ensure that work is of high quality.

In the past decades, researchers and practitioners have applied work design theories to understand workers' experiences and behaviours across an array of organisations. However, many important questions remain unsolved (Humphrey et al. 2007), especially in light of the global shifts in work organisation that give rise to new challenges. Work design theory and practice must develop in accordance with changes in the nature of work (e.g. service-oriented industries and increased popularity of virtual work) as well as changes in the nature of workforce (e.g. ageing, different generation cohorts and dual working parents).

The goal of this article is to identify some important future research directions. To set the scene, we begin by providing a brief overview of the most two popular approaches to work design. We then turn to the core of this chapter, which concerns future research avenues. Of the many different directions that can be identified, we argue for five aspects as especially important.

Existing Work Design Research and Theories

In this section, we provide a brief overview of the dominant approaches to work design research present within the field of industrial/organisational psychology. Our goal is not to thoroughly recount all of the literature since many other reviews (e.g., Torraco 2005; Parker 2014) and meta-analyses (e.g. Humphrey et al. 2007; Nahrgang et al. 2011) already achieve this goal. Rather, our aim is to give a flavour of what have been some of the key directions.

Designing Motivating Work

At the dawn of the Industrial Revolution, influenced by Smith's (1776) concept of the 'division of labor' as well as Taylor's (1911) notion of scientific management, job simplification became the mainstream of work design. Job simplification meant that managers carried out the 'mental' work such as decision-making, whilst operators' jobs composed only the 'manual' work.

However, the negative outcomes of job simplification (e.g. increased turnover and reduced mental health) prompted interest amongst some scholars and practitioners in redesigning work to improve and optimise employees' work experiences and organisational productivity. At the group level, researchers in the UK at the Tavistock Institute proposed sociotechnical systems (STS) theory, or the integrating of technical aspects and human relations aspects into the work system, rather than

the prior sole focus on technical aspects (Trist and Bamforth 1951; Emery and Trist 1969). At the individual level, redesign efforts to increase the motivational quality of work included job rotation (rotating workers from one job to another job), job enlargement (expanding the content of jobs to include additional tasks) and job enrichment (e.g. increasing employees' autonomy over the planning and execution of their own work). These redesign ideas were ultimately consolidated into the Job Characteristics Model (JCM) (Hackman and Oldham 1976), which became a dominant theory of motivational work design.

The JCM proposes that work design should have five core job characteristics (skill variety, autonomy, feedback, task significance and task identity), which generate three critical psychological states (individuals' experiencing meaning, feeling responsible for their outcomes, and understanding the results of their efforts), thus enhancing employee motivation, job satisfaction, and performance and reducing turnover. Several meta-analyses and longitudinal and quasi-experimental studies have established that work characteristics affect attitudinal outcomes in ways largely consistent with the key principles of the JCM (Humphrey et al. 2007; Parker and Wall 1998). When it comes to performance and behavioural outcomes, although meta-analyses show links between work characteristics and subjective job performance, the effects of motivational work design on performance are rather more inconsistent in existing studies.

Although the JCM has been a dominant model of work design, it has been critiqued and its core elements have been extended. For example, Morgeson and Humphrey (2006) expanded the five core work characteristics into 21 job characteristics. These characteristics include: motivation characteristics (similar to those in the JCM), knowledge motivation characteristics (e.g. cognitive demands), social characteristics (e.g. task interdependence) and contextual characteristics (e.g. physical work conditions). Parker et al. (2001) proposed the Elaborated Job Characteristics Model, identifying a broader set of job characteristics (e.g. social work characteristics, such as interdependence, and different forms of autonomy, such as autonomy over working hours) as well as an expanded set of outcomes (e.g. customer satisfaction, work–home conflict, innovation) and additional moderators and mediators.

In recent times, two extensions to the traditional motivational approach include the proactive and relational perspectives on work design (Grant and Parker 2009). Proactive perspectives emerged because increasing uncertainty raises the value of using one's initiative and innovative behaviours amongst the workforce. Research thus considers how work design can promote more proactive attitudes and behaviours. For example, Parker et al. (2010) argued that work design (e.g., job autonomy) can promote three important motivational states ('can do', 'reason to', and 'energised to' motivation) that, in turn, lead to proactive behaviours. Tornau and Frese (2013) identified the importance of job control and social support in promoting proactive work behaviours.

In addition, whereas traditional work design theories assumed that managers took responsibility for structuring jobs for employees, with employees then passively accepting the tasks assigned to them, proactive perspectives recognise a more

agentic role for employees in shaping their own work designs. Thus, proactive work design perspectives include the idea that proactive individuals can shape their own work designs, and the notion that work designs can shape individuals' motivation and opportunity to behave proactively at work (Grant and Parker 2009).

A further new perspective that has extended the traditional motivational view is the relational approach to work design. Changes in the social context of work, such as increases in the use of teams to complete work in most organisations, warrant this relationally oriented perspective. In particular, Grant (2007) argued that work can be designed so that employees interact, or connect in some way, with the beneficiaries of their work, which in turn affects their motivation, attitudes and job performance. In jobs where employees can connect with beneficiaries, employees are likely to empathise with these beneficiaries, and hence develop stronger affective commitment towards them, which will encourage employees' higher levels of effort, persistence and helping behaviours. Evidence is shown in several field experiments (Grant 2007, 2008). In contrast with the JCM work design theory that emphasises intrinsic motivation, the relational perspective is concerned with how work design can stimulate prosocial motivation, the desire to help others. This is a key contribution because when enriched types of work redesign are untenable for some reason, the relational work design might be considered to increase the meaning of work.

It is likely that different contexts will need different forms of relational work design. For example, for doctors who already had frequent contact with patients (that is, connections with beneficiaries were already high), providing social support to doctors was a powerful form of relational work design that resulted in improved work outcomes (Parker et al. 2013).

Designing Work that is Healthy and Safe

The link between work design and employee health has been of interest for many decades. Nevertheless, continued attention is needed for the design of healthy work today due to the increased complexity, demands and pressure in many jobs and heightened concerns about health issues in society.

The most dominant work design model relevant to designing healthy work is the job demands-control model of strain (Karasek 1979), which was extended to include social support (the demand-control-support model, Karasek and Theorell 1990). The model proposes that high job demands (e.g. high work load), low social support and low decision latitude (i.e. low job control and skill discretion), will lead to strain on employees, and stress-related physical symptoms such as heart disease. A particular twist of the model is that it also proposes that, if the high demands occur accompanied by high decision latitude, a so-called 'active job', then strain will not occur and there will be other benefits such as strengthened feelings of mastery and confidence, which help workers to deal with further job demands, and promote learning (Karasek and Theorell 1990).

A vast number of studies have tested the job demands-control model. There is clear evidence to show that excess job demands cause strain (De Lange et al. 2003). Other studies show that high job demands and low control affect cardiovascular disease, especially for men (Belkic et al. 2004). Excessive job demands can also reduce safety (Nahrgang et al. 2011). In terms of the effects of control on health, many cross-sectional studies show that a lack of perceived job control is associated with negative outcomes such as anxiety, depression, burnout, excess alcohol consumption, although the results are not quite as consistent in longitudinal studies, perhaps because of individual differences or contextual variables (Warr 2011). Finally, evidence for the buffering effects of job control on job demands is also rather mixed: the buffering effect is by and large supported in laboratory studies (e.g. Karasek 1979) but inconsistently supported in many field studies (e.g. De Lange et al. 2003).

Like the JCM, the job demands-control model has been critiqued and extended. Bakker and Demerouti (2007) proposed the job demands-resources model, which theorises a wider range of job resources beyond autonomy and skill discretion, such as career opportunities and participation in decision-making. Among the resources, evidence for the positive effects of social support is especially clear and consistent. Social support can not only fulfil basic needs for belongingness, but also promote the achievement of work goals, thus both results in motivational outcomes (e.g. engagement) and alleviates strain (Demerouti and Bakker 2011).

In further extension of the job demands-control model, scholars have divided demands into challenge demands and hindrance demands (LePine et al. 2005). Challenge demands create opportunities for development and achievement, such as job scope and responsibility, whereas hindrance demands are regarded as obstacles to achievement and growth, such as role ambiguity and job insecurity. Crawford et al. (2010) suggested that both types of demands are associated with strain, but hindrance demands are also associated with other negative outcomes such as turnover and withdrawal whilst challenge demands are positively related to motivation and performance. It is noticeable that even with challenge stressors, there might be a tipping point at which excess or sustained levels are damaging to individuals. Rather than investigating how to categorise demands into challenges and hindrances, it may be of value to integrate appraisal theory to consider how demands are appraised by the particular individual (Ohly and Fritz 2010). Appraisals also vary for individuals in different situations (Fisher et al. 2013).

Challenges and Future Directions

Whilst the above perspectives have been, and continue to be, important, there are also future directions to consider including theoretical development of the motivation model (e.g. Parker and Ohly 2009), of the demands-resources model (Bakker and Demerouti 2007), and of other models. Recommendations are also often made for methodological improvements, such as more longitudinal studies, better

incorporation of levels issues or the consideration of configurations (for a summary of suggestions from recent reviews, see Parker et al. (in press)). Here, we focus on five directions that we consider most important.

Changing Theory in Light of a Changing Context

Although there have been rich advances in work design theory, researchers need to more thoroughly consider the effects of remarkable changes in work context over the past few decades, as well as forthcoming changes, and adapt work design theory and models accordingly (Grant and Parker 2009; Grant et al. 2010). All the changes in workplace and workforce give rise to important and rather neglected research issues. We illustrate this in relation to three example changes.

An Ageing Population in Many Countries

The workforce in most industrialised countries is ageing. Because of increasing life expectancies and changing welfare policies, many older people will need to continue to work for many years after standard retirement ages. Some individuals enjoy their work and will want to work longer, but others will not. Meanwhile, many organisations are interested in retaining older workers because of their accumulated knowledge, skills and experiences. From a societal perspective, retaining older workers is needed for an effective economy. Thus it is imperative to consider how work can be better designed to attract and retain older people (Zacher and Griffin 2015).

When individuals age, there are changes in their physical health and abilities, cognitive abilities and even their personality, across the lifespan. At the same time, older individuals often have accumulated job-based knowledge and greater crystallised intelligence. Thus it is important to consider what types of work design can promote healthy and engaging work which is more suitable for ageing people, especially in the context of changes occurring work in general (e.g. rising intellectual and technological demands). Ng and Feldman's (2010) meta-analysis found that older workers have more positive job attitudes in part because of their perceived time limitations. They have a greater interest in emotionally fulfilling activities, meaningful work and have more generative motives. These aspects should be integrated into productive work design. Future research should also take account of the interactions between individuals and the work. For example, Kooij (2015) argued that ageing workers can enact different types of proactive behaviours to improve their current and future person-job fit and job environment, and thus age more successfully.

Increasing Digitalisation of Work

Across all industries, jobs and roles are undergoing dramatic changes due to rapid advances in digital technology. Bradlow (2015: 45) foresaw that cognitive computing and digitalisation means that 'the nature of employment—the type of work humans do—is going to change dramatically in the coming few decades'. Computers and robots are increasingly replacing humans, resulting in some patterns and forms of work disappearing, leaving only high-skilled jobs with more cognitively complex activities and challenging analytical, problem-solving and decision-making tasks. Meanwhile, amongst the remaining jobs, characteristics of tasks and roles performed by workers are also being transformed by digital technology. Since work design is all about the tasks people do, it is important to consider how tasks can be allocated between people and computers. For example, in a study of a telecommunications company that adopted complex technologies to ensure standardised service, scholars (e Sá and de Sá 2015) indicated that frontline employees confronted conflicting demands between delivering highly consistent service and customising it to each customer. The authors concluded that more autonomy and feedback is needed in the job if employee and customer satisfaction are both to be enhanced.

In addition, new contexts such as virtual work have emerged because of advances in technology that enable transcending traditional barriers of time and location. Technology such as smart phones and other such devices have also blurred distinctions between work and nonwork (Olson-Buchanan and Boswell 2006). Work design theories need to answer questions about whether and how we should separate employees physically and temporally from their organisations. Research is then needed to investigate the effects of these new work situations have on the employees and the performance of the work. It is also important to design work to support effective collaboration since virtual teams can have difficulties in coordinating (Erez 2010).

Because of the advances of technology, many companies have adopted flexible working arrangements (e.g. reduced hours and remote working). Although this has provided more autonomy to workers, attention should be paid to potential unanticipated outcomes such as work intensification. Kelliher and Anderson (2009) identified three different types of work intensification resulting from flexible working: imposed intensification, influenced by the different work time arrangements of other employees; enabled intensification, such that flexible working employees increase their work time proactively; and intensification as an act of reciprocation or exchange. They argued that although no negative effects were found in their study, this interpretation should be taken cautiously, since longer term effects were not studied. Longitudinal research is needed to explore the effects of flexible working, and to compare different types of flexible working, such as comparing the traditional approach to allow flexible hours with contemporary experiments in (for example) results-only work environments (Perrow 2011).

Combating Sedentary Work

A further direction is to actively design work to better combat physical strains. These days, there is a shifting concern from physically demanding or risky occupations to sedentary occupations in which there is insufficient physical activity. People currently spend much time being sedentary, and are likely to spend more sedentary in the future because of increasing availability of technology. Existing research has suggested that sedentary behaviours are detrimental to health, such as being associated with obesity and related chronic diseases (Choi et al. 2010; Boyle et al. 2011). New paradigms are required to design work that protects or improves employees' physical health and capacity (Straker and Mathiassen 2009). For example, designing work with reasonable work hours, and with sufficient opportunity for walking breaks, is one way to help address the issues arising from increasingly sedentary jobs in many occupations.

Longer Term and More Strategic Perspectives on the Value of Work Design

Although motivational work design theory has been extended in various ways and can be extended further, Parker (2014) argued that designing work for motivation is not enough, especially given to the rapid changes in the nature of work and workforce. Rather than just adding extra dependent variables to empirical studies, we need to explore when, why and how work design can help to achieve different purposes. Besides the role of work design in facilitating motivation, performance, health and well-being, work can be designed to achieve at least two other key outcomes (Parker 2014).

First, work design can be a vehicle for learning and development. At the aggregate level, there is a great shortage of skills globally. At the individual level, employees require skills to be effective within a complex environment. It is important to consider how to design work that can promote employees' learning and development. For example, Parker (2014) argued that individuals' cognitive capabilities can be enhanced via good work design and, relatedly, that levels of cognitive decline (and even dementia) can be reduced. Likewise, good work can promote the development of values, motivations and identities that can, in turn, facilitate healthy ageing (Wu et al. 2015; Rodin 2014).

Second, increased environmental complexity and pressure to satisfy many stakeholders require scholars to consider how to design work that promotes more than one outcome at the same time, especially competing outcomes, for example, control and flexibility. Parker (2014) reviewed three forms of work design that are beneficial for reconciling the tension between control and flexibility-ambidexterity, enabling bureaucracy, and high-reliability organising. For example, work designs that empower employees to allocate their time to best address the conflicting

demands of exploration and exploitation may be a beneficial element of ambidexterity (O'Reilly and Tushman 2008; Gibson and Birkinshaw 2004). In highly centralised contexts, enabling bureaucracy as a concept recognises that employees can be motivated by participation and high levels of accountability even though their job autonomy is low (Adler and Borys 1996; De Treville and Antonakis 2006). In high-reliability organisations (HROs), control and flexibility can be achieved through under-specification of structures, which allows the subordination of hierarchical authority during critical events (Weick et al. 2008). Overall, despite the relevance of these perspectives, they have rarely been considered from a work design point of view, and there is much more theoretical speculation than there is rigorous research.

The above outcomes of work design—learning and development, and achieving a balance between control and flexibility—have had significantly less attention in the literature relative to motivation and health outcomes. We hope that future research will develop these perspectives, so we can go beyond existing mainstream paradigms.

More Attention to Bottom-Up, Employee-Initiated Forms of Work Design

With global, economic and technological developments, there is increasing uncertainty and complexity in organisations as well as within employees' careers. Grant and Parker (2009) suggested that management in organisations should no longer design fixed and static jobs, but rather design flexible jobs to allow and motivate employees to behave adaptively and proactively in order to best manage the uncertainty and complexity they face. Such flexible jobs also allow individuals the chance to craft their work to achieving a good balance between work demands and resources (Tims et al. 2012). Indeed, scholars have suggested that even employees who occupy jobs characterised by low levels of autonomy can customise, or craft, their jobs to some degree to meet their individual needs and preferences (Wrzesniewski and Dutton 2001; Berg et al. 2010). Job crafting has been found to be significantly and positively related to the attitudinal outcomes (e.g. job satisfaction) and behavioural outcomes (e.g. in-role performance) of employees (Petrou et al. 2012; Tims and Bakker 2010). Job crafting, negotiating idiosyncratic deals (i-deals), and other forms of proactive agentic behaviour that shape one's tasks and responsibilities can be considered to be 'bottom up' forms of work design.

Although research on the topic has gathered pace in recent years, there is still relatively little research on bottom-up forms of work redesign like job crafting, including its different forms. Wrzesniewski and Dutton (2001) proposed three kinds of job crafting (cognitive crafting, task crafting and relational crafting), and Tims et al. (2012) developed a scale consisting of four types of job crafting that pertain to the job demands-resources framework (increasing social job resources, increasing

structural job resources, increasing challenging job demands and decreasing hindering job demands). Slemp and Vella-Brodrick (2013) highlighted the role of cognitive crafting. More research is needed on when different forms of crafting arise, and their different drivers and outcomes. Likewise, the mechanisms underpinning job crafting need more attention. For example, Bakker et al. (2012) concluded that employees with proactive personality will actively change their work environment to ensure their job demands and resources are suitable for their own abilities and needs, thus facilitating engagement and performance. Slemp and Vella-Brodrick (2014) applied self-determination theory (SDT; see Gagné and Deci 2005) and argued that job crafting satisfies psychological needs and thereby can predict individuals' well-being.

Greater Attention to Why Poor Work Design Continues

There continues to be many low-wage, low-quality jobs in advanced and developing countries (Osterma and Shulman 2011) and indeed a widening gap between good and bad jobs in the US (Kalleberg 2011). Large-scale surveys, like the European Working Conditions Survey, also show evidence of poor work design. The version of this survey conducted in 2010, involving more than 44,000 participants across Europe, showed that more than 20 % of jobs have poor intrinsic quality. Poor work design is also witnessed in new jobs, such as weatherisation jobs (making houses more energy efficient) in the United States (Osterma and Shulman 2011).

Within the Asia Pacific region also, there is evidence of poor quality work. For example, Dollard et al. (2012) assessed more than 5000 employees in Australia and identified some industries (e.g. Transport and storage, accommodation, cafes and restaurants and Health and community services) as experiencing a high risk of poor psychological health as a result of their work. They also identified the problem of long working hours, with more than 40 % of participants working more than standard hours and 18 % working longer than 48 h per week. This phenomenon is also common in other countries, such as Japan, Korea, Taiwan and other regions of China: large numbers of employees are required to work long hours, which results in overworked, stressed individuals who experience physical and mental symptoms such as fatigue, musculoskeletal discomfort, sleeping disorders, depression and anxiety (Cheng 2015).

With abundant evidence of continuing poor work design, at the same time as evidence that poor work design is harmful to individuals and often to organisations, it is vital to understand the research of drivers or antecedents of work design. Parker (2014) identified several drivers of poor work design, including increased competitive pressure, national polices and institutions, changes such as outsourcing and IT, a lack of managerial awareness of the returns of good work design from relevant professionals, and difficulties and challenges in implementing work design in organisations. Morgeson et al. (2010) similarly called for researchers to explore the

genesis of work design, and highlighted the role of occupational and organisational context on work design. In their review, they identified two distinct ways that context might influence work design: as a main effect on work design characteristics and as cross-level moderators that shape the relationship between work characteristics and outcomes of work design.

A related perspective comes from Dollard and Bakker (2010), who developed the psychosocial safety climate (PSC) model. PSC refers to policies, practices and procedures in an organisation that enable the protection of worker psychological health and safety. These authors identified PSC as causally affecting working conditions. Applying the job demands-resources (JD-R) framework, they regard PSC as an organisational resource that can influence both job resources and job demands. Building on previous work, Idris and Dollard (2014) focused on the effects of PSC on job demands that are divided into challenge demands and hindrance demands. They suggested that organisational PSC levels can predict levels of hindrance demands, so PSC should be regarded as an important factor when creating healthy and safe working environment.

Despite the recent interest in determinants of work design, overall, research on this topic is very limited. In order to understand why poor-designed jobs persist and to achieve better work design, we need more attention to the forces that create or sustain poor work designs.

Developing Culturally Appropriate Theories of Work Design

Culture was rarely regarded as a critical variable to explain organisational behaviours before Barrett and Bass's (1976) review of cross-cultural industrial and organisational psychology literature. However, because of increasing globalisation, there is a particular need for researchers and practitioners to pay more attention to the effects of culture on work design. Moreover, the adaption of work design theories evolved in Western cultural contexts might not be suitable and effective in other sociocultural contexts. Thus existing work design theories and constructs that have been developed in Western cultural contexts cannot be automatically assumed to apply to different cultural environments.

On this topic, Erez and Earley (1993) argued that national-level cultural values shape whether certain work designs enable employees to experience a sense of self-worth and well-being. Erez (2010) further analysed how culture influences work design by comparing three major work design models that emerged in three different cultures. For example, American values are known to shape and encourage people to be distinct from others to achieve a sense of self-worth and well-being (Brewer and Chen 2007; Markus and Kitayama 1991). The job enrichment work design (Hackman and Oldham 1980) is in accordance with American cultural values because it focuses on giving individuals opportunities to experience a sense of autonomy and personal responsibility, consistent with high individualism and low power distance values. Under this individualistic culture, it is not surprising

that relational characteristics are less emphasised in the job enrichment model. Erez (2010) also suggested that culture moderates the relationships between certain work characteristics (autonomy and feedback) and their behavioural outcomes. For example, work autonomy and empowerment are regarded as important motivational factors in individualistic cultures. However, a study of Indian employees showed opposite results, with less satisfaction in employees who were empowered by their boss and higher satisfaction in those who were simply told what to do. This finding was attributed to the high power distance and collectivistic values in India (Robert et al. 2000), although as it is just a single study, such an interpretation needs further validation. As a further example, work family conflict (WFC) arising from poor work design varies in different cultural environments. Research suggested that the WFC of Chinese employees resulted more from work demands, whereas the WFC of American employees resulted more from family demands (Yang et al. 2000). In China there is also a greater gender-based division of WFC because of the culture: both work-to-family conflict and family-to-work conflict affect women's well-being because they are dually exposed to work and family demands (Li and Angerer 2014).

Cross-cultural research on how culture shapes work design, as well as how employees in different culture perceive certain job characteristics, will help enable good work design according to different cultural environments and values.

Conclusion

Work design is an important topic, and we have learned much about how to design work, the costs and benefits of different types of work design, and how and why work design leads to a diverse set of outcomes. Of course, there is always more to learn, and our chapter has highlighted five key areas for future research. We hope that researchers will take up some of these challenges, in close collaboration with practitioners, so that we can achieve the ILO's goal: 'to promote rights at work, encourage decent employment opportunities, enhance social protection and strengthen dialogue on work-related issues' (http://www.ilo.org/global/about-the-ilo/mission-and-objectives/lang-en/index.htm).

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