

Chapter 5

Theoretical Approaches Supporting Workplace Innovation

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5.1 Introduction

The publication of this book underlines that Workplace Innovation (WPI) has become popular in research and policy making and is finding its way to practice (see the policy debate in Part I of this volume). Simultaneously, organisational practices that can be identified as WPI-like are in dire need of appropriate conceptualisation (see the EUWIN website and their Knowledge bank of cases¹). Whereas policy makers stress the importance of empirical evidence of WPI and the positive effects it may have (Chap. 6), a unitary theory of WPI is missing. This chapter addresses the topic of theory. In general, a theory is an idea, a coherent set of ideas or a general principle that is intended to explain facts or events. Because of the lack of theory on WPI, the evidence is scattered, and practitioners are missing hands-on advice regarding WPI implementation. This chapter undertakes a review of different theoretical approaches that inform us about WPI and that could be useful when thinking about WPI.

The purpose of this chapter is to show how well-known approaches support workplace innovation practices and its claims for results and discuss what we can learn from each approach for WPI. Indeed, each approach can contribute in its own

¹EUWIN's knowledge bank is hosted by UKWON at <http://portal.ukwon.eu/euwin-knowledge-bank-menu-new>.

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unique way to WPI. We seek to discuss three issues: (1) provide a working definition of WPI; (2) discuss a number of different theoretical approaches that can be informative to the study and practice of WPI; (3) highlight some ways in which these approaches can inform a theory of WPI.

Approaches in the literature differ substantially. Some approaches to WPI, for example, are practice-oriented, like the Fifth Element model (Totterdill and Exton 2014). Other approaches focus on definitions of WPI and try to capture the mechanisms that explain how WPI can lead to better performance and quality of working life, as in the Eurofound report on 51 case studies (Oeij et al. 2015). Yet others are focused on applying concepts to measure the theoretical constructs that together constitute WPI and the possible effects of WPI (e.g., Mohr and Van Amelsvoort 2016; Oeij and Vaas 2016). Most of the theoretical endeavours, including our own, are normative and descriptive, only some are explanatory and predictive (e.g., Van Hootegem 2016). Hence, the question arises what commonalities these approaches share in supporting WPI.

In our work (Eeckelaert et al. 2012; Oeij et al. 2012, 2015; Oeij and Vaas 2016; Pot 2011)² we have consistently emphasized that WPI is not a goal in itself but

²In the past years, we ourselves have proposed four, highly overlapping, definitions, which evolved over time.

Definition 1: In 2011 Pot wrote: “Workplace innovation is defined as the implementation of new and combined interventions in the fields of work organisation, human resource management and supportive technologies. Workplace innovation is considered to be complementary to technological innovation. (...) by introducing workplace innovation, improvement of quality of working life (QWL) and organisational performance can be achieved simultaneously” (Pot 2011, pp. 404–405). The definition asserts that combined interventions targeting work organisation, HRM and supportive technology could result in both improved quality of performance and quality of working life. Pot’s article was however less concerned with theory than with providing practical, empirical examples of WPI and its effects, and to convince policy makers of the promise of WPI.

Definition 2: Oeij et al. (2012) wrote: “Pot stresses new and combined interventions, by which “new” is understood as “innovation” and “combined” as a bundle of measures referring to work organisation, Human Resource Management and supportive technologies. In this respect, workplace concerns several elements of the organisation. This viewpoint is also shared by Totterdill (2010), who calls workplace innovations “collaboratively adopted changes in a company’s work, organisational and human resource management practices that lead to improved operative/human performance and that also support other types of innovation”. One can see that Totterdill underscores the participative role of people with the word “collaboratively”. Totterdill sees WPI particularly as a process leading to the desired outcomes. It makes sense to say that workplace innovations have to do with organisation and people. The term innovation is taken up by Pot as “renewal” and by Totterdill as a “change” leading to improvements.

Pot’s and Oeij et al’s definitions of WPI take the point of view that a number of interventions together constitute workplace innovation, which aligns with the argumentation behind combining several HR-measures into ‘HR-bundles’ as in the theorising on ‘high-performance work systems’ (Boxall and Macky 2009); and ‘dynamic capabilities’ that provide unique competitive advantage for organisations (Helfat et al. 2007). These two streams can be traced back to the ‘resource based view of the firm’ (RBV).

Definition 3: Oeij and Vaas (2016, pp. 106–107) contend that “DC [Dynamic Capabilities] is a theory about economic strategic management, while HPWS (High Performance Work Systems—

rather that it is instrumental to achieve two objectives simultaneously, namely, improved organisational performance and improved quality of working life. As a consequence, the innovative capability of the organisation as a whole should be positively affected. Thus, WPI is a means to achieve these objectives. In turn, WPI is influenced by the strategic choices of the organisation's leadership, by their preferences for certain management 'philosophies' and organisational designs (e.g., centralisation vs. decentralisation), and the manner in which people are being deployed and involved in decision-making at various levels. Therefore, an integral approach to WPI is superior to interventions targeting separate problems, such as singling out people issues with HR-measures or technical issues with technological innovations. WPI thus refers, on the one hand, to a process of implementing interventions; and on the other hand, it refers to achieving results such as better performance and working life quality. In conclusion, we observe an evolution of the WPI definition within the field in that (1) WPI should benefit both organisations and people (as a goal); and (2) WPI is simultaneously seen as a process of innovative change and adaptation (as an activity), and (3) WPI as a theoretical conceptualisation of what is going on in organisations that apply WPI-like measures and interventions (as a way of framing and understanding).

We, as authors, have been stressing different elements in pointing out the mechanisms or interventions that explain why WPI would lead to such outcomes (see Footnote 2). Sometimes we were generic instead of specific when we spoke of 'interventions in the field of work organisation, human resource management and supportive technologies' or a 'bundle of measures' referring to those same categories. Sometimes we mentioned that improved labour relations and optimized use

(Footnote 2 continued)

see further on in the main text) is a theory about organisational processes acknowledging people as a strategic factor. Both variants of the RBV can be linked with the socio-technical systems theory, which states that changes in the technical system must be aligned with changes in the social system, to not only improve organisational performance, but to also simultaneously guarantee an acceptable quality of working life and better labour relations (De Sitter et al. 1997). Therefore, the roots of workplace innovation can be traced back to the socio-technical systems theory, as it underscores the urgency in aligning technological and workplace innovation". Moreover, technology is just as little a specific area of attention in the RBV as in WPI (in this definition); and that is why the RBV and workplace innovation seem to match well, say Oeij and Vaas. Workplace innovation is defined as a strategic renewal in organising and organisational behaviour; it is an organisational capability.

Definition 4: In our fourth and most recent definition, workplace innovation is: a developed and implemented practice or combination of practices that structurally (division of labour) and/or culturally (empowerment) enable employees to participate in organisational change and renewal, in order to improve quality of working life and the organisational performance (Oeij et al. 2015, p. 6; Howaldt et al. 2016, p. 2). Structural aspects refer to the production system and the design of organisational departments, teams and jobs, while cultural aspects point to behavioural phenomena like cooperation and communication and enabling certain behaviours, attitudes and motivations. This definition basically consists of the same ingredients as the earlier ones, but shows the relevance of both structural and cultural elements by implicitly including a root-cause approach that goes beyond combatting symptoms of organisational underperformance and lesser job quality (Oeij et al. 2015, pp. 12–14, 18–19, 61).

of human talent should be part of those measures. At other times, we stressed the importance of ‘process’ instead of solely paying attention to ‘content’, and suggested that employees should always play a participatory role (i.e., engagement, involvement) when it comes to designing and implementing interventions. And, last but not least, we advised practitioners to integrate structural change, like the design of an organisation and of jobs, with cultural change, such as leadership behaviour and honest, transparent communication. Whereas our thinking has evolved over time, three core ideas regarding WPI have clearly emerged:

- WPI has the combined objective of improved organisational performance and quality of working life;
- it stresses a participatory role for employees in the process;
- it underlines the need for an integral approach to WPI to achieve the objectives.

Therefore, the ‘working definition’ of WPI that we propose based on our previous work is:

Workplace Innovation is an integral set of participative mechanisms for interventions relating structural (e.g., organisational design) and cultural aspects (e.g., leadership, coordination and organisational behaviour) of the organisation and its people with the objective to simultaneously improve the conditions for the performance (i.e., productivity, innovation, quality) and quality of working life (i.e., wellbeing at work, competence development, employee engagement).

In this working definition, ‘participative mechanisms for interventions’ are synonymous to employee engagement in decision-making processes and represent a precondition for WPI (Totterdill and Exton 2014)³.

5.2 Other Theoretical Approaches

Several theoretical approaches, definitions and concepts can be related to the above working definition. In fact, there are many approaches that strive for similar objectives as WPI, but they use different terminologies, other variables and vary in their point of departure.

³Unless work processes are completely automated or robotised, workplaces are manned by people. The present economy is knowledge-based and more organised in networks and forms of interactive cooperation. The place of people is less one of a functionalist link in a standardised process (as in the times of mass production), but all the more a relational one within processes that are less standardised and static but often evolving and unique. As a consequence, workplaces require employees to be more proactive, responsive and interactive. Employees are requested to deploy their brains instead of just their hands (Drucker 2003). In such changed employment relationships, given that relations at the same time become more electronical and virtual due to IT (Sennett 1998), employee engagement is crucial for success, which means that producers of goods and services—in both modern and traditional industries—should take human relationships seriously (Gittel 2016; Herriot 2001).

Figure 5.1 is built up around the notion that agents, namely researchers, policy makers and practitioners, have their own unique ideas regarding WPI. The figure tries to express that each agent has a preferred point of departure when starting an intervention to change the primary or supportive process of an organisation. Some start with people, others with systems, yet others with the process itself. These starting points are (sometimes) implicit for most agents, and reflect their choices regarding strategy, management regime and affiliated political regime. Together these preferred starting points and strategic choices have implications for how WPI is applied as a means to an end (the arrow points to the intended end in this case). That end is not always the simultaneous goal of better organisational performance and better quality of working life. For some, WPI is a manner in which to design organisations (Chap. 17), but for others it can be an organisational change approach (Chap. 18), or a combination of the two (Chap. 20).

We should acknowledge that this figure is a simplified model and that the different elements can influence each other. Our goal is to show that the discussed theoretical approaches are rooted in those preferences (1, 2, 3 4) and how each starting point can support WPI. Note that, although, we obviously favour a genuine role for employees to play a part in that process, we do not intend to prescribe how WPI should be developed and implemented.

When agents strive for the innovation of workplaces some prefer to concentrate on people (1, human relations and communication), others on systems (2, work organisation, technology, rules) and, again others on change processes and interventions (3). The content of the three points of departure depends on strategic business choices, as well as chosen management regimes (the degree of centralisation as in ‘command & control’ or ‘participation & trust’), for which the room to manoeuvre is dependent upon the current system of a country’s political economy (e.g., ‘free market economy’ or ‘social market economy’) (4). Most authors represent a point of interest as their perspective, and by doing so, they express their preferred choices and solutions. While there are undoubtedly more good options than just ‘one way of organising’, some options might be simply suboptimal as compared to an integrative viewpoint. Our point of view is, that, while each perspective has its merits, integrating them provides more value.

We will discuss each of these points of departure with brief examples from the literature. The purpose is to discuss how these approaches support WPI, which fields they integrate and what we can learn from each approach for WPI.

We will first discuss these theoretical approaches. In the subsequent section we will relate them to WPI and how they can support WPI.

1. *Human relations and communication*

A. *Relational Coordination*

Relational Coordination (RC) proposes that highly interdependent work is most effectively coordinated through relationships that are characterized by shared goals, shared knowledge and mutual respect, and that are supported by frequent, timely, accurate and problem-solving communication (Gittell 2016). Research shows an

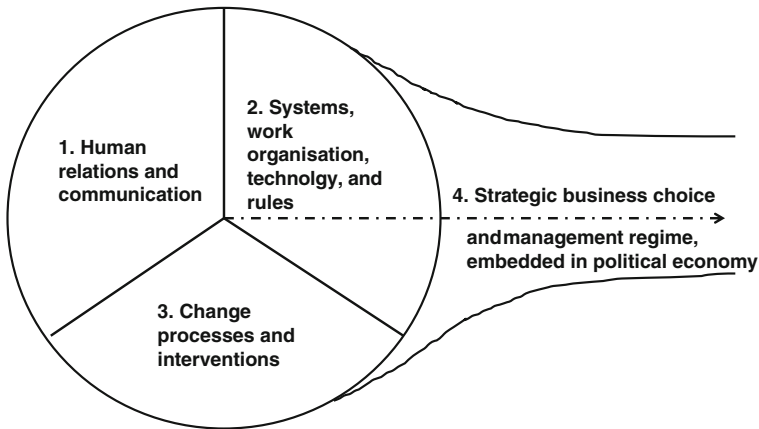


Fig. 5.1 Categorizing approaches related to WPI

association between RC and a wide range of positive performance outcomes for organisations and employees. The design of work systems can support or undermine RC. RC is first of all communicating and relating for the purpose of task integration—a powerful driver of performance when work is interdependent, uncertain and time-constrained. RC's key concept is 'team work' (Gittell 2016). RC relates to WPI through employee engagement.

B. *Job Demands-Resource model*

The Job Demands-Resources (JD-R) model (Bakker and Demerouti 2014; Demerouti et al. 2001) is used to predict employee burnout and engagement, and consequently, organisational performance. The JD-R model assumes that employee well-being is explained by job demands and job resources. Research has provided evidence for the existence of two simultaneous processes: the health process and the motivational process. High job demands exhaust employees' mental and physical resources and therefore lead to the depletion of energy and to health problems (i.e., the health process). In contrast, job resources foster employee engagement and extra-role performance (i.e., the motivational process). Several studies have shown that job resources may buffer the impact of job demands on stress reactions. In addition, research has confirmed that job resources have motivational potential particularly when job demands are high. While the JD-R model and the Job Demands- Control-Support model of Karasek (1979; see below) are both concerned with individual well-being, the latter plays a larger role in the design of jobs and organisations (mainly at the team level as in modern sociotechnology), whereas the first plays a larger role in the management of burn-out, stress and engagement (mainly at the individual level). The JD-R model includes more subjective or personal job resources than Karasek's model, whose focus is on objective job characteristics as job resources. More recently the JD-R model has been connected to job crafting, i.e., changes employees may make regarding their job demands and

job resources, which, in fact, combines individual and job characteristics in changing one's work (Bakker and Demerouti 2014; but there is also attention for collective job crafting which is relevant for teams, see Oldham and Fried 2016). This underlines the relationship of the JD-R model with employee engagement, a central aspect of WPI.

2. *Systems, work organisation, technology, rules*

A. *Modern Socio-Technical Systems Design*

The aim of modern socio-technical systems design (M-STSD or modern sociotechnology⁴) is to simultaneously achieve improved organisational performance (e.g., quality, flexibility, effectiveness, and efficiency), quality of working life, and better labour relations (see also Chap. 17). One core idea of M-STSD, related to job level, is the balance between 'control requirements' (quantitative and qualitative job demands) and 'control capacity' (job control or autonomy). Control capacity in jobs is improved by decentralizing decision latitude as much as possible, which results in rich and complex jobs. Therefore, De Sitter's motto was: "from complex organisations with simple jobs to simple organisations with complex jobs" (De Sitter et al. 1997). To improve the quality of jobs, M-STSD has integrated the 'job demands-control-model' (Karasek 1979) into its theory, which was helpful to design 'active jobs' that ensure a balance of challenging job demands and required job autonomy (see below). The link with WPI is that M-STSD aims at both better jobs and performance.

B. *Job Demands-Control-Support model*

The job demands-control (JDC) model (Karasek 1979; Karasek and Theorell 1990; Theorell and Karasek 1996) predicts that high job demands combined with high job control foster motivation and learning and result in 'active jobs'. High job demands combined with low job control engender a risk of work-related stress and result in 'high-strain jobs'. The JDC-model was extended with the social support dimension (S: support of colleagues and supervisor) and with innovative and productive work behaviour (Karasek and Theorell 1990). There is empirical evidence supporting the JDCS-model (Häusser et al. 2010). Especially the presence of job control has been associated with positive outcomes, such as learning, job engagement, well-being, and organisational commitment (see Chap. 8). Based on the theory underlying the model, design rules can be derived concerning 'active jobs'. The promises of WPI regarding competence development, well-being at work and prevention of work-related stress are partly based on the JDCS model.

⁴The M in M-STSD points to modern; M-STSD is 'modern' because it is partly based on the longstanding history of socio-technical systems design theory dating back to the 1950s (De Sitter et al. 1997; Van Eijnatten 1993; Van Eijnatten and Van der Zwaan 1998).

C. *Lean Management*

Lean production (also Lean Management—see also Chap. 13 for a Lean approach applied to improving the psycho-social work environment) is a rather similar design theory to modern sociotechnology (M-STSD). The original idea was that reduced ‘waste’ was to be reinvested in the job quality and competences of employees, making lean production a win-win for the organisation, the employees and the customers (Womack and Jones 2005). Few research projects indicate that this win-win was actually achieved (e.g., Landsbergis et al. 1999). This seems to only be the case if employees participate in the interventions from the beginning; if not, working conditions (notably standardization, high workloads and limited autonomy) are deteriorating (De Menezes et al. 2010; Koukoulaki 2014). Lean Management, thus, can only contribute to WPI if quality of working life is one of the objectives and employee participation is part of the process.

3. *Change processes and interventions*

A. *Fifth Element Model*

The Fifth Element Model (Totterdill and Exton 2014) refers to the chemistry of integrating four elements: ‘work organisation’ (first element), ‘structures and systems’ (second element), ‘learning and reflection’ (third element) and ‘workplace partnership’ (fourth element), that should result in increased customer focus, employee engagement, an enabling culture, resilience, positive employment relations, and enterprising behaviour. When these four elements are integrated, the approach, which is more practice-based than most of the others, will culminate in high performance, good work and sustainable organisations (Totterdill and Exton 2014). This approach to “*workplace innovation describes the participatory and inclusive nature of innovations that embed workplace practices grounded in continuing reflection, learning and improvements in the way in which organisations manage their employees, organise work and deploy technologies*” (Pot et al. 2016, p. 15).

B. *Employee-Driven Innovation*

Employee-Driven Innovation (EDI) (Høytrup 2012, see also Chap. 19) is based on the fundamental belief that all employees have the potential to contribute to innovation and growth in a company. Unlike innovation that is determined and driven from the top of an organisation, EDI is a bottom-up process and an experience/knowledge based practice tied to employees’ daily challenges. The philosophy of employee-driven innovation is typically based on individual (direct) participation and the assumption of a community of interests among the stakeholders in the company. The Norwegian Confederation of Trade Unions goes a step further and also sees EDI as a way to democratize innovation processes. They argue that EDI should be based on both direct and indirect participation (Kallevig 2012). WPI advocates employee participation as well.

C. *Democratic Dialogue*

Democratic Dialogue is firmly related to worker participation. Dialogue starts from the point of view of communication. *“Because a given reality can be seen and interpreted in different ways, with no supreme court to decide which way is the right one, there is a need for a process that can make people, without the force of an unequivocal reality, adjust their concepts in relation to each other to a degree sufficient to make joint action possible”* (Gustavsen 2016, p. 193). A set of dialogue criteria should ensure that all participants have equal opportunities of influencing the dialogue. Based on egalitarian, innovative and trust-promoting patterns of communication, additional criteria are the degree of trust between the actors involved, their willingness and ability to cooperate and ensure participation in developing new forms of organisation (Gustavsen 2015). Democratic dialogue contributes to WPI in particular by supporting a smoother process for workplace interventions.

D. *Labour Process Approach*

The Labour Process Approach (Knights and Willmott 1990), tracing its origins back to Marxism, views capitalism as a system of unbalanced power relations and explains how employees are controlled by management through deskilling, polarization of job skills, low wages and a minimum of social security. Proponents of this view strove to improve employee working conditions, remuneration and quality of jobs by collective actions such as strikes. Although we consider this approach as too radical because many employers are aware of the need of investing in employees, the Labour Process Approach informs WPI by pointing out that power relations are ever present and co-creation is only possible in social systems and organisations in which there is a tradition of institutionalized negotiation and a certain level of trust.

4. *Strategic business choices, management regimes*

A. *Resource Based View/Dynamic Capabilities/High Performance Work Systems/Knowledge-based Capital*

These approaches start from a systemic perspective and they all focus not only on the competitiveness of products and services but also on internal resources for competitive advantage, such as management skills, work organisation, knowledge and competences. Competitive advantage can be achieved when these resources improve efficiency and efficacy and when they are rare or difficult to copy. The Resource Based View and Dynamic Capabilities approach (Eisenhardt and Martin 2000) take necessary adaptations to changes in the environment into account, namely “the capacity of an organization to purposefully create, extend, or modify its resource base” (Helfat et al. 2007). In turn, the OECD looks at all the assets needed to support firm growth. They acknowledge that company-accounting does undervalue what they call ‘knowledge-based capital’ (KBC) (OECD 2012). Investing into KBC, such as, for instance, in ‘managing human resources, reinforces the innovation capabilities of a firm. Other resource-based approaches

underline the importance of competences and are usually framed under ‘High Performance Work Systems (HPWS)’ (Appelbaum et al. 2011; Boxall and Macky 2009). Many HPWS approaches aim especially at improving economic performance, and to a much lesser extent at the quality of jobs. They simply assume that quality of work associates with high productivity, but they do not always study job autonomy. Within the family of HPWS, however, one member, ‘High Involvement Work Systems’, stresses the importance of job autonomy and employee engagement. According to recent research by Boxall and Macky (2014, p. 1) “*Higher involvement is a key factor predicting higher job satisfaction and better work–life balance*”, which supports workplace innovation. These strategic and management regime approaches can align with WPI only when they take quality of working life into account, that is, when economic goals are not their exclusive motive to innovate.

B. *Managerial Technology*

The managerial technology approach (Bloom and Van Reenen 2010) states that different combinations of ‘managerial capabilities’—or management practices and tools—should be aligned to improve economic performance. Management makes choices about these measures and organisation is not the result of ‘pure market forces’. Bloom and Van Reenen go to great lengths to show how performance, also innovation performance, requires a clear strategy to combine measures and resources. The focus is on the shift from tangible, hard technological innovations to intangible, managerial practices that can influence productivity differences. In other words, management can actively choose to take WPI interventions as a point of departure for innovation, if they believe that employee engagement is crucial for performance and productivity improvement. Inspired by this perspective, organisation researchers (Dhondt et al. 2013) have developed the ‘capability maturity model of workplace innovation’ that identifies 37 capabilities to manage control, human resources, the production process, and communication and information. These capabilities can be seen as components of WPI for which organisations can develop interventions and measures and thus improve performance and quality of working life.

C. *High Reliability Organisations*

High Reliability Organizations (HROs) are operating “*under very trying conditions all the time and yet manage to have fewer than their fair share of accidents*” (Weick and Sutcliffe 2007, pp. 17–18; see also Chap. 8). They include power grid dispatching centres, air traffic control systems, nuclear aircraft carriers, hospital emergency departments, and accident investigation teams. Although the core of the process of HROs is safety, their ideas concerning highly concerted team work and linking organisational goals to shop floor operation starts seeping through to non-HROs (Oeij 2017). Whereas HROs have a high degree of standardization and formalization to prevent mistakes and disasters, at the same time, they do not fully rely on those rules because they know that real-life situations are unique and never

the same. Hence, they are continuously critically examining and revising those same standards and rules. Therefore, HROs have designed operational jobs without a rigid division of managing and executing tasks. *“In HROs, this separation between thinking and doing, conception and execution, is broken down. The individuals who execute the routines are also involved in the critical examination, adjustment and improvement of them”* (Christis 2010, p. 44). HROs therefore have ‘active jobs’, and such jobs are a hallmark of WPI.

5.3 Integrating the Perspectives

The working definition of WPI implies taking an integral approach to change as organisations consist of parts that influence one another. WPI is not a goal in itself, but a means to contribute to the desired goals of improved organisational performance and quality of working life. Based on this integral approach viewpoint we discuss the approaches and perspectives above (Table 5.1; Fig. 5.1) in light of how they could strengthen the goals of WPI.

The approaches mentioned under ‘Human relations and communication’ (dimension 1) stress the role of humane and personal relations to improve performance and job quality. They acknowledge that business success is impossible without dignified human interactions in the world of work. This strengthens the element of employee engagement and involvement (Job Demands-Resource model) of WPI and implies that those human features (Human/Social Capability approach) and relations (Relational Coordination theory) should be part of interventions developed from the WPI integral perspective.

The approaches Modern Sociotechnology and Lean Management mentioned under ‘systems work organisation, technology, rules’ (dimension 2) are systemic approaches that acknowledge that the whole is more than the sum of its parts. Both

Table 5.1 Approaches that support WPI from different fields

Field	Approaches
1. Human relations and communication	A. Relational Coordination B. Job Demands-Resource model
2. Systems, work organisation, technology, rules	A. Modern Sociotechnical Systems Design B. Job Demands-Control-Support model C. Lean Management
3. Change processes and interventions	A. Fifth Element B. Employee-Driven Innovation C. Democratic Dialogue D. Labour Process Approach
4. Strategic business choices, management regimes	A. Resource Based View/Dynamic Capabilities/High Performance Work Systems/Knowledge based capital B. Managerial Technology C. High Reliability Organisations

M-STSD and LM underline the imperative role of team work for the quality of performance. For M-STSD, meaningful work for employees is an implicit assumption, built into how core work processes are designed (maximising job complexity and job control), which fits with the WPI body of thought. In Lean Management this is somewhat ambiguous, as its Japanese origin of the Toyota-system valued the collective team performance higher than individual job satisfaction. The Japanese valued collective team input for continuous improvement in so-called quality circles for the sake of organisational performance. Therefore, the Job Demands-Control-Support model is crucial for WPI as it provides hands-on advice on how to design 'active' jobs with learning opportunities that enable employee engagement and involvement.

The approaches Fifth Element model, Employee-Driven Innovation and Democratic Dialogue, mentioned under 'change processes and interventions' (dimension 3) focus on employees as active participants with voice in the process of change and renewal. Participation ensures commitment and is beneficial for organisational performance. Hence it is no wonder that these approaches show affinity with dimension 1, human relations and communication, which is more theory-based than dimension 3. For many authors within this dimension 3, who are more practice-based, WPI hinges on the active, even political role that employees play in the work process.

The approaches Resource Based View, Dynamic Capabilities, High Performance Work Systems and Managerial Technology mentioned under 'strategic business choices and management regimes' (dimension 4) all propose that there is choice regarding the strategy, management models ('philosophies') and political economic motivation. These streams are aligned with WPI if these choices not only benefit the business, but also the interests of employees and customers. To best serve customers, employees should have excellent skills and organisational facilities, which, in turn, improve the quality of working life. High Reliability Organisations are a special branch because their strategic choice represents a focus on safety and reliability. While being largely rule-based, hence showing affinity with dimension 2 on systems and rules, they explicitly choose to design teams with broad tasks and create organisational slack, so as to promote learning organisations that are equipped to deal with unexpected events. In acknowledging the dependence of organisational success on human efforts, motivation and competencies all approaches have a clear relationship with WPI goals. In these approaches the internal resources are being optimised to improve organisational operational excellence and innovative capability. But we only regard them as being relevant to WPI when employee interests are taken seriously.

The field of WPI and the community of researchers, practitioners and policy makers might need an integral perspective to change, competitiveness and innovation that includes all four dimensions, for which relating the mentioned approaches can be helpful. Figure 5.1 is informative for a needs analysis that would provide a starting point for WPI interventions. It is further useful to look for learning opportunities from other approaches. For each of the four dimensions we

have tried to assess how it strengthens WPI as a means to improve organisational performance and quality of working life.

We, however, have no intention to be conclusive at this point, because for every situation each agent has unique possibilities in terms of how to go about it. We propose that future agents make an integral needs analysis of all four dimensions in Fig. 5.1 to assess a situation. But we would not suggest that all the different approaches mentioned are necessary at the same time. Within and across the four dimensions some approaches can even be interchangeable. If one, for example uses M-STSD, one might not need Lean Management; or when agents apply job crafting by using the JDC(s)-model they may not need to bother too much about Democratic Dialogue as that has been inherently taken care of. The key check is whether employees are engaged and involved in the developed and implemented changes (as concluded in Oeij et al. 2015).

One of the initiatives that has been making a start in expanding the WPI-body of thought is Total Workplace Innovation (TWIN) (discussed in Chap. 17). This approach takes M-STSD as a point of departure and discusses perspectives from business administration, operations management, HR, and ICT that could become part of the concept of Total Workplace Innovation. While this TWIN-model requires further elaboration, the promising point of departure is its strong conviction that employees need to be involved for better organisational performance and better quality jobs to emerge.

5.4 Conclusion and Discussion

This chapter has proposed a working definition for WPI and has presented approaches that support WPI. WPI-approaches in research, practice and policy acknowledge the indispensability of the people factor for organisational performance and innovation capability. The presented approaches are in line with WPI-goals, provided that employee interests are included, and that efficiency-driven interventions are not dominant. Purely Tayloristic and bureaucratic views, full top-down management strategies and an extensive division of labour and flexibilisation of contracts and payment systems, for example, are serious threats to the WPI-body of thought and its endeavours (Dhondt and Van Hootegem 2015). At the same time, WPI is no straitjacket. The presented approaches can all be helpful as long as employee employability and empowerment is serious and not rhetorical (Herriot 2001). Even though we have not presented a complete overview of approaches that we regard as being related to WPI, we believe that our overview sufficiently underpins our argument.

Part of the mission of this book is to contribute to how to better integrate these approaches into a WPI-theory and provide a set of hands-on tools (see also Part IV in this volume). Future research could support this by including WPI-elements in empirical studies, for example in the European Working Conditions Survey and the European Company Survey; both of Eurofound (Chap. 16). However, learning from

interventions implemented in practice is welcomed as well, as these can be evaluated on their WPI-characteristics. Last but not least it remains imperative to try to assess the direct and indirect effects of WPI on three types of outcomes: organisational performance, quality of working life, and innovative capabilities of firms and innovative abilities of people.

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References

- Appelbaum, E., Hoffer Gittell, J., & Leana, C. (2011, April). *High-performance work practices and sustainable economic growth*. Washington, DC: The Center for Economic and Policy Research (CEPR).
- Bakker, A. B., & Demerouti, E. (2014). Job demands—Resources theory. In P. Y. Chen & C. L. Cooper (Eds.), *Work and wellbeing: A complete reference guide* (Vol. III, pp. 1–28). Chichester: Wiley.
- Bloom, N., & van Reenen, J. (2010). Why do management practices differ across firms and countries? *Journal of Economic Perspectives*, *24*(1), 203–224.
- Boxall, P., & Macky, K. (2009). Research and theory on high-performance work systems: Progressing the high-involvement stream. *Human Resource Management Journal*, *19*, 3–23. doi:10.1111/j.1748-8583.2008.00082.x
- Boxall, P., & Macky, K. (2014). High-involvement work processes, work intensification and employee well-being. Work Employment Society. doi:10.1177/0950017013512714 published online June 12, 2014.
- Christis, J. H. P. (2010). Organization and job design: What is smart organizing? In H. A. M. van Lieshout, L. Polstra, J. H. P. Christis, & B. J. M. Emans (Eds.), *Management of labour. Societal and managerial perspectives* (pp. 39–71). Groningen: Hanzehogeschool Groningen University of Applied Sciences.
- De Menezes, L., Wood, S., & Gelade, G. (2010). The integration of human resource and operation management practices and its link with performance: A longitudinal latent class study. *Journal of Operations Management*, *28*(6), 455–471.
- De Sitter, L. U., den Hertog, J. F., & Dankbaar, B. (1997). From complex organizations with simple jobs to simple organizations with complex jobs. *Human Relations*, *50*(6), 497–534.
- Demerouti, E., Bakker, A. B., Nachreiner, F., & Schaufeli, W. B. (2001). The job demands resources model of burnout. *Journal of Applied Psychology*, *86*(3), 499–512.
- Dhondt, S., Oeij, P. R. A., van der Meulen, F. A., Preenen, T. Y. P., Vergeer, R., van der Kleij, R., et al. (2013). *Platform workplace innovation: Workplace innovation in a capability maturity framework*. Leiden: TNO.
- Dhondt, S., & Van Hoetegem, G. (2015). Reshaping workplaces: Workplace innovation as designed by scientists and practitioners. *European Journal of Workplace Innovation*, *1*(1), 17–24.
- Drucker, P. F. (2003). The productivity of the knowledge worker. In P. F. Drucker (Ed.), *A functioning society. Selections from sixty-five years of writing on community, society, and polity* (pp. 169–178). New Brunswick, London: Transaction Publishers.
- Eeckelaert, L., Dhondt, S., Oeij, P., Pot, F., Nicolescu, G. I., Webster, J., et al. (2012). *Review of workplace innovation and its relation with occupational safety and health: Literature review*. Bilbao: European Agency for Safety and Health at Work.

- Eisenhardt, K. M., & Martin, J. A. (2000). Dynamic capabilities: What are they? *Strategic Management Journal*, 21(10–11), 1105–1121.
- Gittel, J. H. (2016). *Transforming relationships for high performance. The power of relational coordination*. Stanford, California: Stanford University Press.
- Gustavsen, B. (2015). Practical discourse and the notion of democratic dialogue. *European Journal of Workplace Innovation*, 1(1), 25–35.
- Gustavsen, B. (2016). Democratic dialogue. In B. J. Mohr & P. Van Amelsvoort (Eds.), *Co-creating humane and innovative organizations. Evolutions in the practice of socio-technical system design* (pp. 186–200). Portland ME: Global STS-D Network.
- Häusser, J. A., Mojzisch, A., Niesel, M., & Schulz-Hardt, S. (2010). Ten years on: A review of recent research on the Job Demand-Control (-Support) model and psychological well-being. *Work & Stress*, 24(1), 1–35.
- Helfat, C., Finkelstein, S., Mitchell, W., Peteraf, M., Singh, H., Teece, D., et al. (2007). *Dynamic capabilities: Understanding strategic change in organizations*. Malden, MA: Blackwell.
- Herriot, P. (2001). *The employment relationship: A psychological perspective*. Hove: Routledge.
- Howaldt, J., Oeij, P. R. A., Dhondt, S., & Fruytier, B. (2016). Workplace innovation and social innovation: An introduction. *World Review of Entrepreneurship, Management and Sustainable Development*, 12(1), 1–12.
- Høyrup, S. (2012). Employee-driven innovation: A new phenomenon, concept and mode of innovation. In S. Høyrup, C. Hasse, M. Bonnafous-Boucher, K. Møller, & M. Lotz (Eds.), *Employee-driven innovation: A new approach* (pp. 3–33). Basingstoke and New York: Palgrave Macmillan.
- Kallevig, A. (2012). *Medarbeiderdrevet innovasjon*. <http://www.arbeidslivet.no/Arbeid1/Naringspolitikk/Medarbeiderdrevet-innovasjon/>. Accessed October 15, 2012 (in Norwegian).
- Karasek, R. A. (1979). Job demands, job decision latitude, and mental strain: Implications for job redesign. *Administrative science quarterly*, 24, 285–308.
- Karasek, R. A., & Theorell, T. (1990). *Healthy work; Stress, productivity and the reconstruction of working life*. New York: Basic Books.
- Knights, D., & Willmott, H. (1990). *Labour Process Theory*. London: Macmillan.
- Koukoulaki, T. (2014). The impact of lean production on musculoskeletal and psychosocial risks: An examination of sociotechnical trends over 20 years. *Applied Ergonomics*, 45(2), 198–212.
- Landsbergis, P. A., Cahill, J., & Schnall, P. (1999). The impact of lean production and related new systems of work organization on worker health. *Journal of Occupational Health Psychology*, 4(2), 108–130.
- OECD. (2012). *New sources of growth, knowledge-based capital driving investment and productivity in the 21st century*. Paris: OECD.
- Oeij, P. R. A. (2017). *The resilient innovation team. A study of teams coping with critical incidents during innovation projects*. Ph.D. dissertation. Open University of The Netherlands.
- Oeij, P. R. A., Dhondt, S., Kraan, K. O., Vergeer, R., & Pot, F. D. (2012). Workplace innovation and its relations with organisational performance and employee commitment. *LLinE, Lifelong Learning in Europe*, 4 (no page numbers). <http://www.elmmagazine.eu/articles/workplace-innovation-and-its-relations-with-organisational-performance-and-employee-commitment/>
- Oeij, P. R. A., & Vaas, F. (2016). Effect of workplace innovation on organisational performance and sickness absence. *World Review of Entrepreneurship, Management and Sustainable Development*, 12(1), 101–129.
- Oeij, P., Žiauberytė-Jakštienė, R., Dhondt, S., Corral, A., Totterdill, P., & Preenen, P. (2015). *Workplace innovation in European companies*. Study commissioned by Eurofound. Luxembourg: Office for Official Publications of the European Communities.
- Oldham, G. R., & Fried, Y. (2016). Job design research and theory: Past, present and future. *Organizational Behavior and Human Decision Processes*, 136, 20–35.
- Pot, F. D. (2011). Workplace innovation for better jobs and performance. *International Journal of Productivity and Performance Management*, 60(4), 404–415.

- Pot, F., Totterdill, P., & Dhondt, S. (2016). Workplace innovation: European policy and theoretical foundation. *World Review of Entrepreneurship, Management and Sustainable Development*, 12(1), 13–32.
- Sennett, R. (1998). *The corrosion of character. The personal consequences of work in the New Capitalism*. New York, London: Norton.
- Theorell, T., & Karasek, R. A. (1996). Current issues relating to psychosocial job strain and cardiovascular disease research. *Journal of Occupational Health Psychology*, 1(1), 9–26.
- Totterdill, P. (2010). *Workplace innovation: Europe 2020's missing dimension*. Report of a workshop hosted by DG Employment, Social Affairs and Equal Opportunities, June 23, 2010, UKWON, Nottingham.
- Totterdill, P., & Exton, R. (2014). Defining workplace innovation: The fifth element. *Strategic Direction*, 30(9), 12–16.
- Van Eijnatten, F. M. (1993). *The paradigm that changed the work place*. Assen: Van Gorcum.
- Van Eijnatten, F. M., & van Der Zwaan, A. H. (1998). The Dutch IOR approach to organizational design: An alternative to business process re-engineering? *Human Relations*, 51(3), 289–318.
- Van Hootegem, G. (2016). Changing the nature of work: Toward Total Workplace Innovation. In B. J. Mohr & P. Van Amelsvoort (Eds.), *Co-creating humane and innovative organizations. Evolutions in the practice of socio-technical system design* (pp. 326–343). Portland ME: Global STS-D Network.
- Weick, K. E. & Sutcliffe, K. M. (2007). *Managing the unexpected: Resilient performance in an age of uncertainty*, (2nd Edn.; 1st Edn. 2001), San Francisco: Jossey-Bass.
- Womack, J. P., & Jones, D. T. (2005). *Lean solutions: How companies and customers can create value and wealth together*. London: Simon & Schuster.

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