

The Impact of New Ways of Working on Organizations and Employees: A Systematic Review of Literature

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ABSTRACT

A new research stream emerged in the 2000s dedicated to flexible work arrangements in public and private organizations called “new ways of working” (NWW). This article aims to examine NWW from both a theoretical and empirical perspective focusing on definitional issues as well as on HR outcomes of this new concept. Current definitions of NWW are manifold and based on rather vague theoretical foundations. As NWW outcomes may be both positive and/or negative we mobilize the “mutual gains” vs. “conflicting outcomes” theoretical debate to discuss the results of our literature review. This review is based on 21 articles (out of 90 initially selected for eligibility) dealing with NWW as a concept or as a bundle of practices. Findings demonstrate that NWW definitions are diverse and somewhat imprecise lacking theoretical foundations and leading to fragmented research designs and findings. Findings also highlight the current lack of empirical data which therefore does not allow any real conclusions on NWW’s effects on employees’ and organizations’ well-being and performance.

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1. INTRODUCTION

During the past 30 years a wave of technological economical societal demographic and environmental changes has occurred which has pushed public and private organizations to find solutions to remain innovative responsive flexible and more efficient and effective (Palvalin 2017;Taskin et al.2017;Van Steenbergen et al.2017). With various concepts emerging in the international literature on the new world of work (Kelliher and Richardson 2012;Wessels et al.2019) this article aims to shed light on new ways of working (in this article we use NWW and NWoW interchangeably for “new ways of working”) a human resources (HR) approach introduced into many organizations worldwide and facilitated by mobile devices and internet facilities (Blok et al.2011;de Leede and Nijland 2017;Bijl and Gray 2011). NWW’s most common definition is that it constitutes forms of work that allow workers to choose when and where they work using information and communication technologies (ICT) to be available anywhere anytime (Nijp et al.2016;ten Brummelhuis et al.2012).

NWW is seen as a viable answer to incompatibilities between people’s professional and personal lives stemming from major societal issues being boosted by current COVID-19 pandemic issues (Mitev et al.2021). NWW can also positively address professional life challenges like women’s labor market access work–life balance and well-being at work and young workers’ (millennials) new expectations (Brandl et al.2019;van Meel2011).

Finally the green imperative has also played a role in NWW implementation because NWW potentially diminish the amount of carbon monoxide produced via commuter reduction which has been clearly demonstrated during the COVID-19 crisis. For instance air quality as measured by carbon monoxide has notably improved during the COVID-19 crisis (please see the referenced research for more details) (Ruostela et al.2015;Taskin et al. 2017).

Because of NWW’s rapid increase in organizations its relevance and outcomes on organizations and employees are important to determine for both research and practice. As NWW practices promise to give

employees better control over their work time and more autonomy what are the real effects of such HR practices for employee well-being and performance? As stated by Cvenkel(2020 p. 68): “Well-being has become one of the most important issues of the twenty-first century world of work a challenge not just for individuals in terms of their mental and physical health but for employers and governments who have started to assess its social and financial implications.”

Regarding NWW-related academic research much research has been published in recent years dealing with NWW as a broader change of the world of work see for example Kelliher and Richardson(2012);Aroles et al.(2021) and Mitev et al.(2021). With a few exceptions almost no research deals specifically with NWW outcomes. One literature review focuses on NWW’s psychological outcomes (Kotera and Correa Vione2020) and includes seven studies assessing mental demands like workload autonomy blurred work family psychological borders fatigue and work engagement. However the results are inconclusive and the authors do not investigate whether NWW is mutually beneficial to organizations and employees or contribute to contradictory effects. Another literature review made by Ajzen et al.(2015) analyzes the organizational motives behind the implementation of NWW offering a broader perspective of the «new ways of organizing work» but without focusing more precisely on NWW outcomes. In order to improve the current state of knowledge this article aims to answer the following research question:

Does empirical evidence exist regarding either mutual gains from NWW (i.e. positive effects for both organizations and their employees) or contradictory/conflicting effects (i.e. beneficial organizational effects but negative employee effects or vice versa)?

This question is essential for further academic research as well as management practices because it remains unclear how NWW can be implemented to optimize both employees’ performance and well-being representing the two main outcomes researched in the HR literature (see for example Van De Voorde et al.2012). Therefore the main objectives of this article are the following:

- To discuss definitional issues of NWW in order to strengthen this new field of research and systematize the analysis of NWW’s outcomes;
- to discuss NWW-related empirical outcomes thus far using the HR Performance-Link framework and the related discussion about mutual gains–conflicting outcomes; and to suggest further research avenues by highlighting theoretical issues that should be clarified when analyzing NWW’s effects on employees and organizational outcomes.

The methodology is based on a systematic literature review including articles explicitly referring to NWW as a concept or as a bundle of practices leading to 21 of initially 90 selected articles.

The article is divided into four sections: The first explains the theoretical perspective adopted in this literature review. The second is devoted to methodological aspects. The third presents the main empirical results. The final section discusses these results and propose new avenues for future research.

2. A MUTUAL GAINS–CONFLICTING OUTCOMES THEORETICAL APPROACH

NWW is clearly a field where practice precedes theory. Although individual HR practices being part of NWW (such as flexitime) have started to be implemented during the seventies in many countries (see for example eAjzen et al.2015) the NWW concept as such originated mainly in the Netherlands (Jemine et al.2019;van der Voordt2003;Vos and Van der Voordt2001) and began to be used in the 1990s (Kingma2019). Academics contribute from various fields including organizational psychology (Peters et al.2014) management (Assarlind et al.2013) HR management (Peters et al.2014) and architecture (Gorgievski et al.2010).

According to Blok et al.(2016) “there is no clear theory which provides a foundation for NWW and the scientific proof for the effectiveness of NWW so far is very limited” (p. 157). Following Nijp et al.(2016 p. 616) neither the “sunny” nor “gloomy” perspective on NWW has been clearly confirmed. The current literature on NWW outcomes is scarce and in the vast majority focus only on one or two practices being part of NWW (like flexitime or activity-based offices). In this regard the research done by Taskin et al. (Taskin 2012;Taskin et al.2019) which highlights the de-humanization of activity-based offices is emblematic. Looking at the results of the literature dealing with NWW is rather disappointing because the results are contradictory. Like other HR practices NWW-related practices may generate positive outcomes like increased motivation job involvement task autonomy and better work–life balance which in turn positively impact employees’ performance. However these practices may also decrease job motivation by generating a feeling of isolation lack of social interaction and organizational support and uncontrolled working time which can lead to stress and burnout.

In order to systematically analyze the outcomes of NWW it is useful as a theoretical foundation to refer to the HR–Performance Link framework and the related discussion about the mutual gains vs. conflicting outcomes for both employees and employers (Paauwe 2009;Van De Voorde et al.2012). Moreover this for at

least three reasons: First because this framework gives a well-recognized classification of HR outcomes by making a distinction between performance and well-being issues it will help us to classify and analyze NWW outcomes (see methodological part). Second research made on the HR– Performance link also demonstrate that bundles of HR practices generate greater outcomes on performance and well-being than individual HR practices do (Gooderham et al.2008; Gould-Williams2003;Guest et al.2004;Min Toh and Champion2008;Subramony2009; Wright and Boswell2002). The “bundle” argument is based on the fact that horizontally integrated and synergistically interacting HR practices are supposed to have a stronger impact than isolated practices (Barrette2005). As we will show in the discussion about the definitional issues of NWW NWW are made of several practices which are inherently linked and should be implemented as a bundle in order to generate positive outcomes. Third because HR outcomes demonstrated by empirical research on NWW impact both employees and employers and they may be positive or detrimental for employees and for employers. This discussion has started several years ago and is frequently referred as the “mutual gains vs. conflicting outcomes” discussion.

Consequently our literature review refers to the HR–Performance Link framework and the associated discussion about the mutual gains vs. conflicting outcomes of HR practices commonly used in the HR-management literature (Ho and Kuvaas2020;Peccei and van de Voorde2019;Van De Voorde et al.2012).

2.1. *The Mutual Gains Approach*

The mutual gains perspective constitutes an optimistic view of HR management practices’ impact on organizational performance and employees’ well-being (Guest2011; Ogbonnaya and Messersmith2019). This mutual positive effect is supported by several theories. Social exchange theory (Blau1964;Colquitt et al.2014;Lawler et al.2008) explains that employees will perceive good HR management practices as their organizations’ efforts to support them which is associated with employees’ willingness to become more committed to their organization leading to higher overall organizational performance. Moreover according to the ability–motivation–opportunity (AMO) model (Appelbaum et al.2000) adopting certain HR management practices will enable employee development of skills and abilities increase their opportunities for organizational participation and also increase their motivation and commitment level thus positively impacting organizational performance.

2.2. *The Conflicting Outcomes Perspective*

A more pessimistic version of the relationships between management practices employee well-being and organizational performance exists: the conflicting outcomes perspective. This approach criticizes the so-called unitarist employee perspective which indicates that anything beneficial for the employee benefits the employer and vice versa. Its basic argument is that pursuing organizational goals may negatively influence employees’ wellbeing by increasing stress and fatigue and decreasing employees’ control over their own activities (Peccei and van de Voorde2019). This argument has been frequently used in relation to high-performance work systems which promise a higher level of performance to the detriment of employees’ well-being (Jensen and Van De Voorde2016;Spector 2016).

The conflicting outcomes approach is based on the idea that organizational performance and employee well-being are parallel phenomena that may never meet (Boxall et al. 2016;Boxall and Macky 2016). Consequently management practices can negatively impact employee well-being (by generating stress burnout or demotivation) without impacting organizational performance positively impact organizational performance without impacting employee well-being or positively affect organizational performance while negatively affecting employee well-being. In this case management practices constrain employees leading them to redouble their efforts to achieve organizational goals. This critical perspective comes from labor process theory in particular (Godard and Delaney 2000;Ramsay et al.2000) stressing that organizations prioritize economic and financial profitability objectives so management tools and practices including HR management are developed to pressure employees leading to their deteriorating well-being.

The common thread running through our literature review is this confrontation of perspectives mutual gains vs. conflicting outcomes to identify whether empirical results currently exist to test these two perspectives.

3. **METHODOLOGY**

We conducted a systematic literature review between October and November 2019 using Web of Science Science Direct SAGE and Emerald. These databases were selected to ensure a broad search across disciplines including management HR management business social sciences and psychology. The search results were collated in Zotero.

The searched terms were chosen to identify articles that specifically address NWW in a work context. As NWW can also be a generic term used in various sectors initial searches returned a high number of irrelevant

articles. Therefore we identified the most common keywords using additional search terms in our review: “new ways of working” “NWW” “NWOW” and “NewWoW”. As the aim of our review is to define the concept of WW we included only papers that specifically used this terminology. Only peerreviewed English articles published from 1993 (when NWW was first mentioned) to 2019 were selected (Brunia et al.2016;Kingma2019). Two researchers separately searched all databases allowing a double check of articles; they then compared the selected articles and deleted duplicates. We retained only articles containing the words “new ways of working” in the title abstract or keywords which restricted our review to articles related to NWW as a specific bundle of HR practices. Two researchers screened the bibliography of each selected article to find additional references to include in our literature review.

Through this process we collected 100 references in our database excluding 10 duplicates. Then we defined inclusion and exclusion criteria to apply to the remaining 90 studies.

Included studies:

- examined NWW practices as a bundle which means studies that include several practices of NWW such as telework and flexitime. The bundle of NWW practices selected for this research is inspired by the definition of de Leede: NWW as “practices in which employees are able to work independent of time place and organization supported by a flexible work environment which is facilitated by information technologies” (de Leede2017 p. xiii) or
- referred explicitly to the notion of NWW and examined one of its components such as IT use activity-based working and schedule or place flexibility.

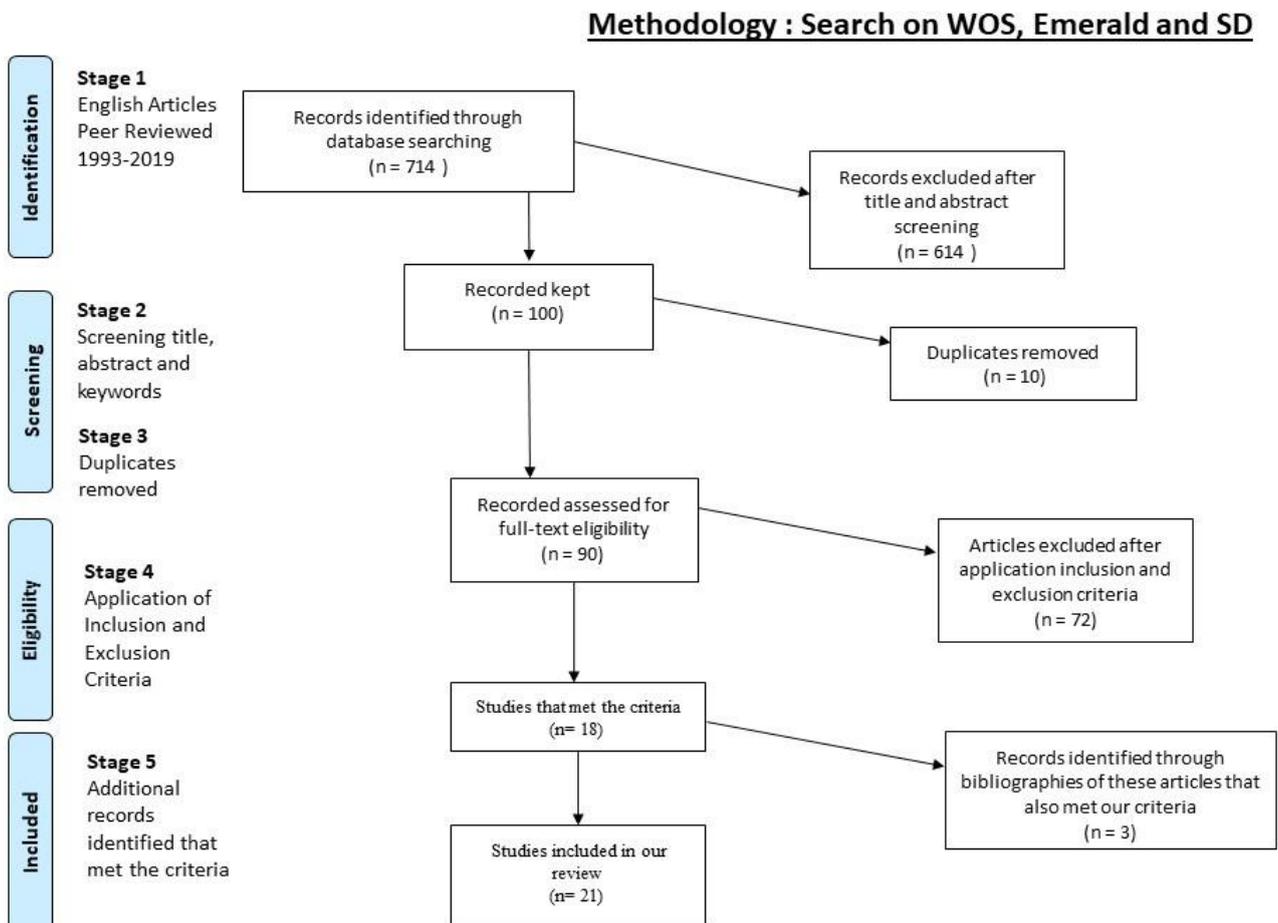
Excluded studies:

- did not mention NWW; this review focuses on NWW’s emergence as a concept and considers only articles that specifically refer to this;
- focused on self-employed workers only as our review attempts to understand NWW as part of the broader change of world of work and organizational structures; and used NWW (or other selected keywords) without referring to related scientific literature such as using NWW in everyday language.

As shown in the figure below seventy-two articles did not meet the criteria and were removed from our sample. The final corpus comprised 21 articles.

Figure 1 presents the PRISMA flow diagram.

Figure 1. Literature review methodology. Furthermore the 21 articles are listed in Table 1 below.



4. RESULTS

4.1. Preliminary Observations

Table 1 summarizes key information for all 21 articles regarding NWW-associated practices theoretical framework and performance and well-being-related results.

First we observed all articles were published after 2010 except for van der Voordt (2003) and Vos and Van der Voordt (2001). Because NWW to our knowledge was first used in a management context in the early 1990s it is notable the concept spread to the academic field some 10 years afterward.

Table 1. Variables in new ways of working (NWW) studies.

Author(s)	Methodology	Theoretical Framework	NWW Facet(s)	Dependent Variable(s)	Interaction Variable(s)	Outcomes	Mutual Gains/Conflicting Outcomes
(Baek and Cha 2019)	Two sets of experiments Trilateration-based BLE	-	Information and communication technology (ICT) Flexible workspace	-	-	-	-
(Blok et al. 2012)	Case study	-	Teleworking Flexible workspace Flexible working hours ICT	Work behavior Collaboration Employee satisfaction Knowledge-sharing	-	No changes on employees' satisfaction or collaboration Decrease in knowledge-sharing	"One-sided" study, focused only on employees' well-being No change in well-being
(Brandl et al. 2019)	Ethnographic fiction science	Economics of convention	Flexibility Teleworking Flexible workspace Flexible working hours Flexibility in working relations	-	-	-	-
(Brunia et al. 2016)	Questionnaire and interviews descriptive/explorative	-	Flexible workplaces	Employee satisfaction	-	Employees' satisfaction linked to work environment's physical characteristics	-
(Gerards et al. 2018b)	Survey data from representative panel of Dutch households collected by RMI	Job demands-resources (J-DR model)	Time- and location-independent work Output management Access to organizational knowledge Flexibility in working relations Freely accessible open workplace	Work engagement	Workplace social interaction Transformational leadership	Output management positively affects work engagement Access to organizational knowledge fully mediated by interaction variables Flexible workplace positively affects work engagement, fully mediated by interaction variables	"One-sided" study, focused only on employees' well-being. Unilateral gain + well-being
(Gorgievski et al. 2010)	Survey interviews with decision-makers, document analysis, personal observations	-	-	-	-	-	-
(Jemine et al. 2019)	Longitudinal qualitative study: interviews and observations	Institutional work and sociology of translation	Physical environment (especially based on space and buildings)	-	-	-	-
(Kingma 2019)	Case study with diverse sources. Longitudinal—before and after implementation	Production of space	Flexible Workspace Teleworking ICT	Employees' perceptions on NWW introduction	-	Difficulties for some employees to work without fixed workspace; disturbances from noise; Decrease in work engagement and social cohesion	"One-sided" study, focused on employees' well-being. Unilateral well-being loss

Table 1. Cont.

Author(s)	Methodology	Theoretical Framework	NWW Facet(s)	Dependent Variable(s)	Interaction Variable(s)	Outcomes	Mutual Gains/Conflicting Outcomes
(Laihonen et al. 2012)	Literature review	-	-	Knowledge worker productivity	-	-	-
(Niip et al. 2016)	Comparison between reference and intervention group quasi-experimental design within large company	-	Flexible workspace Flexible working hours ICT	Control over work time and place; working hours; work location Work-nonwork balance, stress, fatigue, and general health In-role and extra-role performance Organizational commitment and job satisfaction	-	Employees work more hours at home, general working hours pattern remains the same, i.e., during weekdays and daytime no effect on work-nonwork balance Non-significant change on performance and health	No significant change on employees' outcomes. No mutual gains No well-being change No performance change
(Palvalin 2016)	Scale's development to measure knowledge workers' performance	-	Teleworking Flexible workplace ICT	Knowledge work performance	-	-	-
(Palvalin et al. 2015)	Scale's development to measure knowledge workers' performance	-	Teleworking Flexible workplace ICT	Knowledge work performance	-	-	-
(Palvalin 2017)	Scale's development to measure knowledge workers' performance	-	Teleworking Flexible workplace ICT	Knowledge work performance	-	-	-
(Peters et al. 2014)	Survey data	HRM-process model and JD-R	Employee empowerment, home-working, trust-based relationships	Absorption, work enjoyment, and intrinsic work motivation	-	Positive effects on employees' outcomes	"One-sided" study focused on employee well-being. Unilateral gain + well-being
(Ruostela et al. 2015)	Two case studies	-	Flexible workspace Flexible working hours ICT	Knowledge work productivity	-	Organizational performance Improvement	-
(Schmoll and Süß 2019)	Experimental study: paper-and-pencil survey randomized vignette-based experiment	Signaling theory	Flexible workspace Flexible working hours	-	-	Temporal flexibility and spatial flexibility positively affect organizational attraction	-
(ten Brummelhuis et al. 2012)	Five-day diary study: questionnaire in large telecom company	JD-R	Flexible workspace Flexible working hours ICT	Work engagement and exhaustion	Communication quality	NWW positively related to daily engagement and negatively to daily exhaustion	"One-sided" study focused on employees' perceptions of well-being. Unilateral gains and loss: + engagement—health
(van der Voordt 2003)	-	-	Flexible workspace	Employee satisfaction Productivity	-	Decrease of productivity Mixed effect on employee satisfaction	Conflicting outcomes—gains and loss: - organizational performance (productivity) + well-being
(van Meel 2011)	Historical description based on literature, documents, handbooks, movies, etc.	-	-	-	-	-	-
(Van Steenberghe et al. 2017)	Three waves (one before and two after transition). Data collected via online surveys	JD-R	Flexible workspace Flexible working hours ICT	Work engagement Burnout	Job demands and job resources	Mixed effects on employees' outcomes Burnout and work engagement remained stable	"One-sided" on employee well-being. No significant change.
(Vos and Van der Voordt 2001)	-	-	Teleworking Flexible workspace	Satisfaction about NWW	-	-	-

NWW interested authors are from diverse disciplines which makes comparison difficult but also means a richer more robust corpus for analysis. Dutch scholars are dominant having written all but three studies (Austrian (Brandl et al.2019) Belgian (Jemine et al.2019) and American (ten Brummelhuis et al.2012)). Consequently NWW has been studied in Dutch organizations.

Theme diversity can be divided into three categories:

1. Three conceptual articles focused on retracing NWW terminology's origins (Brandl et al.2019;Jemine et al.2019;van Meel2011).
2. Three empirical studies with a case study approach (Blok et al.2012;De Bruyne and Beijer2015;Kingma2019).
3. Empirical research on NWW outcomes further subdivided into three subcategories:
 - five articles on NWW's impact on employees' outcomes like work engagement or well-being (Gerards et al.2018b;Nijp et al.2016;Peters et al.2014;ten Brum-melhuis et al.2012;Van Steenbergen et al.2017);
 - six articles on NWW's impact on productivity or organizational outcomes (Laihonen et al.2012;Palvalin20162017;Palvalin et al.2015;Ruostela et al.2015;Schmoll and Süß2019); and
 - five articles on one NWW component's effect like activity-based working or aspects of private territory on concentration or employee satisfaction (Baek and Cha 2019;Brunia et al.2016;Gorgievski et al.2010;van der Voordt2003;Vos and Van der Voordt2001).

4.2. NWW Definitions

Before analyzing NWW outcomes the lack of coherence among the authors' definitions should be noted. Though NWW has been defined during the past two decades in many ways the term is still used as an "umbrella term" and a comprehensive definition is still lacking. As shown in Table1 authors who investigated NWW issues differ in their use of the terms "NWW" "flexible working" "flexible work practices" (Kingma2019) and "flexible work arrangements" (Blok et al.2012;Brandl et al.2019;Schmoll and Süß 2019;Van Steenbergen et al.2017). An examination of these definitions demonstrated their diversity commonalities and differences. For example there are definitional differences between the notions of flexible work arrangements telecommuting/telework and new ways of working (see Table2for details of these differences).

As Ruostela et al.(2015) stated NWW consists of "a set of approaches and a philosophy for questioning the dominant ways of organizing work practices" (p. 283) implicitly referring to "old ways of working" in other words all employees working together in the same office at the same time. NWW concerns "working smarter not harder" to achieve better communication among employees improve creativity and innovation share knowledge more efficiently increase autonomy and utilize office space more efficiently (Ruostela et al.2015 p. 384).

The most common definition was the following: NWW allows workers to choose when and where they work while using ICT to be available anywhere and anytime (Laihonen et al. 2012;Nijp et al.2016;ten Brummelhuis et al.2012;Van Steenbergen et al.2017). Authors agree unanimously on two components: anytime and anywhere and ICT availability. The former component corresponding to spatial/temporal flexibility enables employees to work independently with for example annualized hours or flexible schedules through teleworking satellite offices or mobile working. They may also use freely accessible workspaces such as activity-based offices or non-territorial offices (Brunia et al.2016). The latter component provides free access to and use of organizational knowledge on tablets smartphones or computers so employees can easily contact and collaborate with colleagues and managers through videoconferences and chats.

Authors have also linked NWW practices to autonomy (Palvalin2017;Schmoll and Süß2019;van der Voordt2003;van Meel2011). For example ten Brummelhuis et al.(2012) stated that "it is important to emphasize that the overarching theme of NWW is providing employees autonomy by giving them control over their work content time location and communication" (p. 383).

Authors have disagreed on the following management-style elements. Some studies include "output management" style (Laihonen et al.2012) in the NWW definition whereas others do not (Nijp et al.2016). The question then arises as to whether transactional management style (Gerards et al.2018a;Jemine et al.2019) is part of NWW or is a fundamental (pre-)condition for NWW. Others (Blok et al.2012;Jemine et al.2019) include trust-based management despite other scholars considering these to be "conditions for success" rather than constituents of NWW. Moreover the literature is divided on whether flexibility in working relations (Gerards et al.2018b) is part of NWW (Laihonen et al.2012;Nijp et al. 2016;ten Brummelhuis et al.2012).

As we show below these author discrepancies are at least partially due to an under-theorization of NWW. In the 21 reviewed articles only eight anchor NWW in an existing theoretical framework (see Table1) including the job demands–resources model (Gerards et al.2018b;Peters et al.2014;Van Steenbergen et al.2017) HR-

management process model (Peters et al.2014) economics of conventions (Brandl et al.2019) sociology of translation (Jemine et al.2019) Lefebvre's theory on production of space (Kingma2019) and signaling theory (Schmoll and Süß2019). These theoretical perspectives are as varied as they are difficult to compare. While the J-DR model is well known in the field of organizational commitment and well-being studies the same cannot be said of signaling theory which aims to focus more strongly on the communication processes within organizations. As for the economics of conventions inspired by the central work of Boltanski and Thévenot (1991) it questions the existence of common "superior worlds or principles" influencing individual behaviors and competing in each organization. The legitimacy of NWWs can in fact be apprehended in very different ways depending on the values or principles on the basis of which the evaluation of professional activities is carried out. The sociology of translation or Actor–Network Theory (Callon and Latour1981) states that organizations should not be read in terms of social groups but as networks in which objects and "techniques" or technologies should be seen as real actors. What makes the organization or the social are the relationships and mediations between humans and non-humans in organizations and the analysis should focus on these associations. Lefebvre's Marxist-inspired theory emphasizes that space is a product built by human societies and that once constructed this geographical space has an impact on society. This theory therefore invites us to consider the NWW as a production of space and its impact on work collectives. As can be seen these different theories do not all share the same ontological and epistemological foundations and do not necessarily contribute to the production of comparable empirical results. The cumulativeness of knowledge is therefore not yet favored despite the diversity of perspectives deployed.

4.3. *NWW Outcomes*

This lack of a common definition directly affects the interpretation of empirical evidence using mutual gains vs. conflicting outcomes. The evidence regarding NWW practices' outcomes illustrates three key points (Table1): First the selected studies analyzed different components of NWW practices such as teleworking flexitime and flexible workspaces or analyzed different bundles of these; for example Gerards et al.(2018b) focused on different types of flexibility including flexible working relations and Van Steenbergen et al.(2017) included three NWW types while excluding flexible working relations. This makes comparison between studies difficult. Second methodologically many articles were single case studies from various organizational contexts mostly in the Netherlands which complicates generalization. Third the studied outcomes differ among articles falling predominantly into two categories: employees' health/well-being and employees' performance. Only one study focused on organizational performance.

Eight articles undertook empirical analysis. Employee well-being was measured using job satisfaction work engagement absorption work enjoyment intrinsic work motivation fatigue exhaustion and burnout. Six studies focus specifically on well-being and the effects of NWW on employees' well-being are not straightforward. Whereas Gerards et al. (2018b) founded a positive impact of NWW on work engagement Van Steenbergen et al. (2017) found no significant effect of NWW practices on work engagement or burnout. However these authors found specific relationships between NWW practices and job demands or job resources. Their findings indicate that NWW can be either beneficial (i.e. lead to a decrease in mental demands and workload) or detrimental (i.e. lead to a decrease in autonomy and in professional development opportunities) for employees. Using Absorption work enjoyment and intrinsic work motivation as main dimensions for measuring well-being Peters et al.(2014) found a positive association between NWW practices and well-being. ten Brummelhuis et al.(2012) examined the effects of NWW practices on work engagement and exhaustion. They investigated whether communication quality may mediate these relationships. They found a positive effect of daily use of NWW practices on daily work engagement and a negative effect of the use of NWW practices on daily exhaustion. The study of Kingma(2019) using a longitudinal research strategy before and after implementation based on ethnographic fieldwork found that the use of NWW practices can lead to a decrease in social cohesion. Contradictory results are also available specifically with respect to the relatedness dimension of well-being. NWW practices have been found to positively influence social interaction (Gorgievski et al.2010; ten Brummelhuis et al.2012) but they have also been found to be negatively related to negative collective consequences such as reduce social cohesion (Kingma2019). These studies demonstrate that it is of great relevance to study the effects of NWW on multiple dimensions of well-being namely on health issues work engagement and thriving at work but also on the social dimension of organizations.

Regarding employee performance studies either found no or a negative effect of NWW (Nijp et al.2016;van der Voordt2003). Employees' performance has been less studied than well-being although NWW is supposed to positively influence many aspects of at least in-role performance.

Furthermore interaction variables like management style or trust appeared to partially mediate relationships between NWW and employees' outcomes for example work engagement (Gerards et al.2018b). However only three studies used interaction variables although these have been proven to be of utmost importance in HR management research (Ho and Kuvaas2020).

To summarize NWW's impact on employees' outcomes has been found to be either neutral one-sided positive or negative and contradictory (only in two articles) according to the conflicting outcomes perspective.

5. DISCUSSION

As shown in Table1 current research on NWW effects provides little useful information for supporting either the mutual gains or conflicting outcomes perspective. In our opinion this is because of the weakness of theoretical foundations on which NWW research is based and a lack of systematic research design regarding NWW outcomes and interaction variables. In this section we will discuss four main findings:

- The definitional issue of NWW leading to our own definition of NWW;
 - the current under-theorization of NWW studies and this stream of research’s real novelty;
 - the lack of systematic thinking regarding outcomes and interaction variables; and
 - the lack of reflection on such practices’ mutual gains or conflicting outcomes.
- We link these different points to a query regarding current research gaps and potential new avenues.

5.1. The NWW Definition Issue

Authors having contributed to NWW literature used the terminology of flexible work arrangements (FWA) or NWW indifferently (Brandl et al.2019;Schmoll and Stüß 2019;Van Steenbergem et al.2017). The literature on flexible work arrangements seems more consistent as different authors provide similar definitions (Brandl et al.2019). The covered literature mainly agrees that FWA include a large amount of different practices all being geared toward more flexibility for the employee regarding his work. Literature dedicated to FWA includes several core practices some of them also included in the NWW literature (flexible working hours; alternative workplaces or remote offices) some others not included (compressed working time; annualized working hours; flexibility in employment relationships; job-sharing; career breaks; family-related leaves and other professional leaves).

Table2below summarizes three different concepts which are currently very popular and underlines what they include or not. Flexible work arrangements are all practices that offer some work flexibility to employees and a large variety of work arrangements. On the other hand telework or telecommuting (de Vries et al.2019;Caillier2012) include both time and space flexibility in relation with the use of different ICTs. This bundle of practices is specific in its purpose because they focus on the aim for workers to gain geographic and time flexibility while using ICTs outside of the employer’s premises. Last NWW focus on a specific bundle of practices including both time and space flexibility which go along with an extensive use of information and communication technology aiming at more flexibility for employees regardless of the underlying purposes.

Table 2. Comparison of various concepts: flexible work arrangements telework or telecommuting and NWW.

Concepts:	Contents:	Main Focus:	Main Purpose:	Necessary Conditions:
Flexible work arrangements	Consist of practices, including both time and space flexibility, as well career breaks and family-related leaves	Work delivery and employer–employee relations	Increased flexibility for both employer and employee	Contractual flexibility over time
Telework or telecommuting	Focus on working outside of the employer’s premises with the support of ICTs. It can be carried out in different places, not necessarily only at home, and with the support of different technologies (smartphones, computers, tablets, etc.).	A primary interest in the workplace and the technologies used. Flexibility in working time is also mentioned.	Allow greater flexibility in work, greater individual autonomy. More flexible working hours to cope with the vagaries of life.	New communication technologies are essential, as is a new management philosophy.
New ways of working	Offer the possibility to choose where (inside or outside the office place) and at what time to work. The NWW are also interested in new forms of work that allow for greater flexibility and autonomy in work.	Work delivery (time and location)	Flexibility of work delivery (flexible work execution)	Knowledge workers only. Extensive use of ICT. Empowerment of workers.

According to Jemine(2021) there are five different ways (both theoretically and methodologically) of understanding the concept of New Ways of Working. It can be conceived as a management fashion as a set of discourses as practices of organizational change as material workspaces or as emerging work practices. Finally these five dimensions would constitute the most recent the most complete but also the most accomplished definition of NWW. That said such a definition however comprehensive is difficult to transfer to empirical research. There is little doubt that the five dimensions mentioned above are all very important but for the purposes of empirical research and comparison a more operational definition seems more appropriate. On the basis of the comparison proposed in Table2 and with respect to the relative vagueness of the definition of NWW we propose the following definition as a synthesis of the current thinking in the literature on NWW:

As part of a broader transformation of the world of work and organizations NWW are made of practices supported by ICT intended to increase the flexibility autonomy work performance as

well as well-being of knowledge workers in their delivery of daily work letting them choose when and where to work.

Therefore in general the difference between NWW concepts and other related concepts is that the notion of NWW is broader and includes a wider reflection on the future of work and organizations. Our definition of NWW is close to the one proposed by Mitev et al. (2021 p. 3): “NWW can be regarded as part and parcel of the wider trend of workspace differentiation and flexibilization. This transformation encompasses the flexible use of home workspaces in terms of ‘teleworking’; the flexibilization of office spaces under the form of ‘hot desking’ ‘coworking’ or ‘nomadic working’; as well as ‘mobile working’ (i.e. ‘third space’) between all of these workspaces”. In this sense it is also more philosophical and rhetorical to refer to some of the dimensions of the concept proposed by Jemine(2021). The notion of telework and flexible work arrangements focus more closely on the temporal spatial and technical dimensions of work thus neglecting the more global aspects of the evolution of the economic environment organizations and work.

5.2. *Under-Theorization of NWW and Novelty*

Thinking concerning NWW is nascent which likely explains why our literature review contains few scientific articles. However the reviewed articles are strikingly oriented toward empirical or practical considerations (approximately 50%). Most authors’ main concern was the development of tools and managerial advice for NWW implementation (Baek and Cha2019;Palvalin 2017). Our literature review demonstrates that NWW research is not based on very structured theoretical foundations. There is significant fragmentation of theoretical references which complicates comparison and knowledge accumulation starting with the fact that no clear definition is accepted among scholars. NWW definitions from the 21 selected articles are multiple not always convergent and overlap with other related concepts’ definitions like flexible working arrangements flexitime and activity-based work. There is a clear lack of agreement on what this concept means as well as what it represents in terms of managerial/HR practices and tools. Without a more stable definition of the NWW phenomenon it will be problematic to contribute substantially to reflection on the contemporary world of work and its characteristics.

Related to NWW under-theorization is the question of its genuine novelty. An investigation of new working forms and ways is a rather banal subject from a management perspective. This issue is actually as old as any foundational managerial concern (Adler 2009). For decades countless studies and publications concerning isolated HR practices constituting NWW have been available on such topics as office configurations (Brunia et al.2016;Gorgievski et al.2010;Ruostela et al.2015) time management flexibility and teleworking (Blok et al.2012;de Vries et al.2019) and organizational knowledge use (in relation to knowledge-sharing and organizational learning) (Gerards et al.2018a). Therefore NWW’s newness may lie in the bundle argument defined in HR literature which claims bundles of HR practices impact people more than isolated HR practices (Wright and Boswell2002) particularly horizontally integrated and synergistically interacting HR practices (Barrette2005). In this regard NWW research should systematically include all related practices as independent variables not one or two selected practices to produce scientifically robust results.

The ultimate question is whether this concept can contribute to changing our perspectives on organization functioning and working conditions. The literature review shows the novelty may lie in the “relative” professional nomadism implied by the NWW notion and in particular that employees are given more autonomy regarding working time and workplace. Freeing oneself from time/place constraints is it seems to us this concept’s originality which is rooted in a contemporary reality related to the COVID-19 crisis which has led to telework’s near generalization for knowledge workers. Undoubtedly the “remote” organizational measures that were quickly implemented will have a lasting effect on how we think about our relationship to work and how we organize it. To date the procedural organizational and human conditions necessary for the development of these NWW are not yet fully known. Necessity at least in the case of the COVID-19 crisis is probably an essential condition but other factors still must be identified and tested through rigorous research designs. As things stand though many NWW-dedicated articles are based more on managerial wishes and potentialities than on proven concrete empirical findings.

5.3. *Lack of a Systematic Research Model*

The selected articles highlight why NWW have developed rapidly in recent years by stressing the importance of different factors favoring NWW’s emergence development and implementation. According to these authors NWW represent an adequate response to economic social and environmental changes but their claims are based on insufficient empirical foundations.

State-of-the-art research on HR practices like NWW should include a full range of HR results and interacting variables to be reliable and valid. The 21 selected studies investigated so few outcomes that most of them can be regarded as incomplete. These outcomes include employee satisfaction work commitment interorganizational knowledge-sharing innovative behavior stress professional fatigue burnout in-role and extra-role performance and productivity. Scant studies are interested in explaining these same variables; therefore it is still challenging to draw sound conclusions about NWW’s impact on these different outcomes.

Furthermore future studies must consider many unexplored variables such as work motivation relatedness well-being or attachment to an organization. The frequently used typology of HR results (i.e. employees' performance in-role and extrarole variables and employees' well-being happiness health and relatedness variables) (Van De Voorde et al.2012) may help to systematically analyze NWW outcomes.

Furthermore important interactional variables have been largely ignored. Referring to the set theory for example perceived organizational support and trust in organizations (both trust between employees and between employees and management) (Alfes et al.2012; Cho and Ringquist 2011;Destler 2017) which appear central to NWW work configurations should be included. It would also be of great interest to assess the importance of organizational climate (Clarke2006;Gould-Williams2007) or organizational culture (Alvesson 2002;Su et al.2009;Taylor2014) as interacting variables between NWW and various work outcomes. Other important variables are frequently used in HR-management studies including leadership (Alimo-Metcalfe et al.2008); and HR attributes (Van Beurden et al. 2020) both of which may moderate or mediate the NWW and work outcomes relationship. Finally sectoral differences (e.g. between private and public organizations) may be of interest as HR results frequently differ between them (Perry and Hondeghem2008). Thus there is strong potential for new research by increasing and diversifying work outcomes and making research models more complex by integrating interacting variables the effects of which other HR-management studies have demonstrated.

5.4. *Mutual Gains or Conflicting Outcomes*

Based on our literature review we cannot address the dilemma concerning conflicting outcomes vs. mutual gains perspectives not only because the results do not show any definitive trend but also because the number of empirical studies and their external validity are insufficient. Interestingly besides our questions related to NWW impacts on employees' well-being and performance a third question arises considering the nomadism argument developed above:

Are NWW more beneficial for employees than employers because the former may use and even abuse their newly gained freedom?

Most certainly the answer is related to the diverse representations and experiences of employees utilizing these different NWW practices (Mackey2016;Nishii et al.2008; Van De Voorde and Beijer2015). Depending on the constraints (or demands) on employees and available resources positive or negative perceptions/attributions may be formed. The contrasting empirical results regarding the mutual gains–conflicting outcomes issue suggest that further research is necessary to identify whether NWW practices can mutually benefit employees and employers as well as under which conditions (i.e. interacting variables) this ideal situation may occur.

Furthermore NWW should generate positive outcomes by changing employees' behavior so they return the organizational efforts made to give them more favorable organizational conditions to their employer. This issue is not addressed by current NWW research. In fact NWW introduces more flexibility for employees but flexibility does not per se change behavior (Blok et al.2012). Pure availability of NWW practices (e.g. freely accessible workspaces) is insufficient in our opinion to evaluate NWW's impact on employees. To test its real impacts longitudinal studies are needed which are currently rare (Jemine et al.2019;Kingma2019;Nijp et al.2016;ten Brummelhuis et al.2012;Van Steenberghe et al.2017).

6. STRENGTHS AND LIMITATIONS

The present review has several strengths. To our knowledge it is the first review on NWW aiming to understand their effects on employees' well-being and job performance. As we mentioned earlier a first attempt was made by Kotera and Correa Vione(2020) but it mainly focuses on NWW's psychological outcomes. We also included studies from various fields namely historical social research architecture HRM management and psychology with the goal of gaining a multidisciplinary perspective of NWW's constituent elements. Furthermore our article questions the lack of theoretical foundations for NWW which seems to be regarded as unimportant by researchers. Indeed most studies try to assess these practices effects without clearly understanding what they are and by ignoring the motivations underlying their introduction in organizations. Finally our article proposes a new definition of NWW which includes a broader vision of the new world of work where employees benefit from an increased autonomy and flexibility to self-organize their daily work.

The review has some limitations as well. By focusing on peer-reviewed articles we did not consider other sources that could have deepened our NWW knowledge. Particularly the book edited by de Leede(2017) should be mentioned as it aims to have a critical positioning about NWW's content and to assess their effects on both job performance and psychological outcomes. We also discarded work such as PhD theses (e.g.Palvalin2019) and reports (e.g.Medik and Stettina2014) which contained interesting NWW insights. We also disregarded non-English publications for example those in French (Ajzen et al.2015; Taskin and Raone2014).

7. CONCLUSIONS

This article contributes to reflection on NWW through the first systematic review focused both on well-being and performance issues. It highlights existing definitions' plurality and NWW's different effects on HR and organizational outcomes highlighting that current research results are not convergent and insufficiently theoretically anchored. Our literature review demonstrates that a major effort is needed to define NWW and provide a sound theoretical foundation to account for more subtleties in the organizational and social mechanisms that empirical studies demonstrate.

The multiplication or even replication of field investigations based on the same research design is essential to better understand NWW's positive and negative effects on organizations and employees. Researchers should use more sophisticated research designs related particularly to interacting variables and HR outcomes.

Finally a more interdisciplinary approach and perhaps slightly more critical reading would help broaden the NWW discussion which currently is frequently confined to techniques or technology employed. Consequently such discussions tend to underestimate human and organizational variables. It seems clear future NWW discussions cannot avoid questioning both the phenomenon's material and contingent aspects (the progress of technical and technological infrastructures) and the factors related to organizational governance (the legitimacy of changes in terms of structures procedures and rules) that are fundamentally linked to the human dimensions of management and organizations. This leads us to plead for an interdisciplinary perspective that would allow a richer view of the NWW phenomenon than the managerial or technical perspective which still dominates the literature.

Conflicts of Interest:

The authors declare no conflict of interest.

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