Fueling workplace commitment with New ways of working (NWW): insights from the public sector

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I. Introduction

1.1. The context (NWW and challenges to performance)

As many post-bureaucratic theoretical models and empirical evidence call for considering the ongoing hybridization in public work environments (Emery and Giauque, 2014; Simonet, 2014; Stoker, 2006; Osborne, 2006), the employment relation between public servants (now mainly named as *public employees*) and their newly reformed organizations demands further investigation. This article will focus on employee commitment in relation with New Ways of Working (NWW) in public organizations. Public sector reform was primarily concerned by new ways of managing public sector organizations (Laegreid & Rykkja, 2015; Christopher Pollitt & Bouckaert, 2004; C. Pollitt & Bouckaert, 2009), with a special emphasis put on HRM (Organisation de coopération et de développement économiques (Paris), 2011; Peters, 1997). In this domain of modernization, the spotlight has recently been oriented towards innovation in workplace design. NWW, as a macro concept, describes any arrangement meant to enable employee performance within a flexible work environment (De Leede, 2016). How NWW may influence employee commitment remains largely unexplored.

For long, workplace commitment has been portrayed as the individual identification, attachment and loyalty to the organization or the workplace globally conceived of (Meyer and Herscovitch 2001). Relating to this latter, the notion the employment relation, epitomized in workplace commitment, can be extended to attitudes towards work, or in a broader perspective, towards multiple possible foci within the workplace (Meyer and Morin 2016). Conversely, it has recently become more and more apparent that organizations may also need to commit to their employees (Boxall, 2012; Boxall & Macky, 2009; Donate, Pena, & de Pablo, 2016; Fabi, Lacoursiere, & Raymond, 2015). Similar to the psychological contract, commitment is a bidirectional relation between two parts, i.e. employee and employer. Such an organizational commitment is perceivable, among other strategies, in workplace arrangements pertaining to the place, tools and time devoted to public employees (De Leede, 2016). Effectively, one of the main categories of determinants of workplace commitment encompass organizational and job characteristics (Hackman & Oldham, 1976), which also means Work design (the way tasks, time and social exchanges are organized in a more or less formalized way within the workplace), and by extension NWW. The latter goes beyond a mere re-organization of workspaces or telework, in a digital government era (Dunleavy, Margetts, Bastow, & Tinkler, 2006) to integrate a broadened conception of work and attitudes towards work. Furthermore, behind the re-design of workplaces is the willingness of organizations to respond to the evolving expectations of their employees. This, not only is meant to contribute to their motivation at work, but also to commit them better to the organizational goals and missions.

1.2. The issues (at stake)

In an era of heavy professional changes the authors of the present paper are curious about the role that NWW could play in the formation and development of unique (read public) and durable relations between individuals and their work environments (Bietry, 2012).Since the 1970's, the work on the nature and the drivers is plethora, both in the private and public sector(Buchanan, 1974a, 1974b; Choudry, 1989; Hoy (Walton, 1985) and Sousa, 1984; Wechlser and Balfour, 1996, 1991, 1990).

In parallel, NWW are often portrayed to be a broad vector of upheaval of work design. Several studies have highlighted the link between NWW implementation and outcomes such

as employee performance (Gajendran, Harrison, and Delaney-Klinger 2015), job satisfaction (Baltes et al. 1999), or innovative work behaviors (Moll and de Leede 2017) for instance. However, no study has so far examined the potential relationship between NWW and commitment, even less in the public sector. This scarcity of work pertaining to NWW and commitment in post-bureaucratic work contexts therefore prompts the necessity of the current article (Meyer et al. 2002b). Thereof, his is the core objective of this article.

Indeed, since NWWs are often mentioned among the tools for re-energizing workplace's attractivity (Mathieu & Zajac, 1990; J. P. Meyer, Stanley, Herscovitch, & Topolnytsky, 2002), it seems interesting to examine if the huge amounts material resources mobilized were worth it. Especially, our aim in the present research is to analyze the effect of variations in the adoption of NWW on commitment foci in the public sector. An increasing number of authors now strive to enlarge workplace commitment in the public sector beyond the organizational focus (Becker and Billings, 1992, 1996). These foci are deemed to be related to work conditions and realities not exclusively organizational in nature (Allen and Meyer 1990, Vandenberghe 2005, Meyer et al. 2002a), and would potentially be present in the way their job is organized and overall designed.

II. Literature Review

2.1. Workplace commitment in the public sector and the role of work experience

This paragraph reviews the literature on the effects of job and structural variables (which will be useful later regarding NWWs) on organizational and Workplace commitment. In the remaining of this paper, we opt for using the more encompassing term of (Public) Workplace commitment in lieu of Organizational commitment, while focusing on the particular context of the public sector.

Originally, interest for the study of Workplace commitment was oriented towards identification, attachment and loyalty to the organization. The famous TDM of commitment, drawing from work by Porter and al. defines organizational commitment as a "(1) a strong belief in and acceptance of the organization's goals and values; (2) a willingness to exert considerable effort on behalf of the organization; and (3) a strong desire to maintain membership in the organization…" (Allen & Meyer, 1990; R. T. Mowday, R. Steers, & L. W. Porter, 1979, p. 226).

Considering the literature reviewed by Mathieu and Jazac, Gupta, and Allen and Meyer, the determinants of workplace commitment can be synthetized in three categories: Individual characteristics, work experiences and organizational characteristics (Mathieu & Zajac, 1990; J.P. Meyer & Herscovitch, 2001; Moon, 2000). Firstly, the literature commonly describes the Individual factors of workplace commitment as being age, tenure, values and gender. For instance, the effects of gender are explained by the fact that the nature of the job often differs between men and women. Besides, Protestant work ethics, rooted in individual values shapes the attachment to excellent work (Mathieu & Zajac, 1990; Morrow & Wirth, 1989).

Secondly, factors related to work experiences pertain to the kind of tasks performed by individuals within their workplaces. Here, the notion of role is of prime importance. In fact, ambiguous tasks, with scant feedbacks would reduce workplace commitment (Mueller, Boyer, Price, & Iverson, 1994). More so if the tasks are repetitive, involve no responsibility, or provide no intrinsic satisfaction (Aziri, 2011). Thus, work experiences are an important determinant of commitment, since those experiences are an area where specific explicit and implicit exchanges are manifest (Baron, 2007; Blau, 1964; D. M. Rousseau, 1989; D.M. Rousseau & Schalk, 2000; Solinger, Hofmans, Bal, & Jansen, 2015). The autonomy enjoyed in one's job or the kind of relations developed with work colleagues are part of these

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experiences, and depend on the way the job is organized to meet organizational goals and missions.

Finally and most importantly regarding the purpose of this article, organizational characteristics can be equated to all the policies and practices enacted by the organization to improve the sense of belonging and relatedness experienced by its employees. Of course, all HRM practices may contribute to employee commitment: the way organizations recruit, select, train, evaluate, reward and promote their employees are potential sources of workplace commitment (Bentein, Stinglhamber, & Vandenberghe, 2000; John P Meyer, Allen, & Allen, 1997). Since the managers somewhat embodies some of the organization's features (at least in the eyes of subordinates), and are the most important actors who implement HRM practices, they stand as an important catalyst of organizational policies and decisions. In this regard, their ability to implement HRM processes, as well as their management style, may considerably influence employee commitment (Lok & Crawford, 2004; J. P. Meyer & Morin, 2016; Subramaniam, McManus, & Mia, 2002; Sun & Henderson, 2016).

Another dimension of organizational characteristic particularly salient in contemporary public administration is the constant mix of private and public managerial principles, namely hybridization. As recognized by an growing stream of research, post New public management hybridization is borne out the idea that the two entities in relation, do not only co-exist; rather they mingle to give birth to a new entity[1] (Bishop & Waring, 2016; Emery & Giauque, 2014; Emmert & Crow, 1988; Pesch, 2008; Stoker, 2006). Hybridization (and is perceivable at the organizational (structural, strategic and managerial – especially for what concerns HRM) and individual (identification, motivation and attachment) levels (Horton, 2006; Reissner, 2017). Given the theorized and empirically demonstrated influence of managerial practices on employee attitudes and behaviors at work (Latorre, Guest, Ramos, & Gracia, 2016), the current process of hybridization in the public sector should not be looked down in examining workplace commitment.

The quest of individual and organizational performance has always oriented the improvement of management practices, mainly through a number or arrangements in work conditions. These organizational determinants of WPC are also bound to a more general theoretical framework, within the paradigm of social exchange: organizational support and justice (Eisenberger and al., 1990; Eisenberger, Huntington, Hutchison et Sowa, 1986; Benkhoff, 1997). Indeed, individuals who feel supported in their work, either through distributive/procedural justice or flexible structures and interactions at work would return that good treatment in being committed and performant (Zeffane, 1994). Thus, creating the conditions of such a support by means of certain practices fostering autonomy, discretion and collaboration are the kind of measures which fosters individual commitment at work (Bentein et al., 2000; Robinson, 1994).

2.2. The multiple foci of commitment in the public sector

At first trying to unveil the antecedents of commitment attitudes and behaviors in public settings, research on commitment in the public sector has quickly shifted, following NPM reforms and the development of a publicness theory, to public private comparisons (Danny L. Balfour & Wechsler, 1996; Boyne, 2002; Lyons, Duxbury, & Higgins, 2006; Markovits, Davis, & Van Dick, 2007; Simosi, 2013). Yet, public and private employees have mainly been compared in terms of their levels of commitment, and oftentimes, researchers have resorted to the TDM (Allen & Meyer, 1990), sometimes with the aim of identifying specific antecedents, if not profiles of organizational commitment. Contrary to popular belief (trying to

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[1] A common image use to portray hybridity is that of the Centaurs in Greek mythology

maintain the idea that public employees are less committed than their private counterparts), this stream of research has been unable to determine whether it can be said that overall, public employees are less committed by their private counterparts (Boyne, 2002).

More than fifty years later of ongoing development of research in that field, scholars tend to converge in the thinking that broadening that concept to the workplace makes more sense than limiting it within its organizational boundaries. Indeed, the mid 1980s and early 1990s have witnessed the emergence of a stream of literature interested in alternative foci of commitment, more or less related to the organization (Becker, 1992; Morrow, 1983; Morrow & Goetz, 1988; Reichers, 1985). And even if organization remain as important place where employment relations mostly take place. Workplace commitment as broader concept undoubtedly enables a better comprehension of individual attitudes and behaviors at work (Becker, Kernan, Clark, & Klein, 2015; Fornes & Rocco, 2013; Klein, 2016).

The multi-foci approach to Workplace commitment is one of the latest developments in the research on that theme (J. P. Meyer & Morin, 2016; Morin et al., 2011; Paillé, 2009). It enriches the traditional conceptualization of workplace commitment which used to rely exclusively on its organizational anchor (Schein, 1993). In that sense approaching commitment by its target/foci allows a thinner understanding of workplace attitudes and behaviors, particularly in the public sector where many studies converge towards the conclusion that the organization is perhaps not the most important focus of workplace commitment (Danny L. Balfour & Wechsler, 1996; Boyne, 2002; Clugston, Howell, & Dorfman, 2000). Not to mention other developments relating to the identification of its antecedents and profiles based on Allen and Meyer's TDM, the approach of Workplace commitment considering its foci holds interesting promises for research in the public sector, especially for what concerns the specification of a *public* workplace commitment (Danny L Balfour & Wechsler, 1990; Vandenberghe, 2005).

Among the multiple foci of commitment in the public sector are *Public time, Social interactions* and dynamics, and *Management design*. These foci of commitment form a macro profile of commitment foci, namely Workdesign (Y. Emery, Forthcoming). Adopting the career anchor logic and methodology by E. Schein (1978), our own qualitative inquiry of the anchors (foci) of commitment in a variety of contexts involving function and organizations more less located in the bull's eye of public policies resulted in the unveiling of 18 foci of commitment. Among the latter are the above-mentioned components of Workdesign (Schein, 1978; Y. Emery, Forthcoming).

To put it in a nutshell, the way individuals relate to their workplace is materialized in their commitment foci. Prior research by one of the authors has already revealed several extra-organizational foci of commitment, interviewing public employees holding a variety of jobs (more or less public) within different workplace contexts. These foci, which comprise aspects of Workdesign, add to the knowledge about the five universal foci (occupation, career, team, supervisor, job) identified in the commitment literature (Riketta and al., 2005; Meyer, Allen, and Smith, 1993; Morrow, 1989). However, commitment itself, as analyzed above, strongly rests on several organizational characteristics, literally shaping the peculiar way work is performed. Based on the latter's findings, we also try to characterize the studied organizations as per the kind of tools or practices (flex space, flex time, or flex tools) deployed. Could NWW exert a prominent role in this equation?

2.3. NWW: definitions and practices

Within the last decades, fast socio-demographic and technological changes have strongly impacted the way work is structured and perceived. New generations of workers are demanding more flexibility in the way their work is designed to reach a better work life balance. Technological advances and in particularly information and communication technologies (ICT) have substantially altered the way people communicate and interact within organizations, and thus the way work is designed (Moll and de Leede 2017).

All these environmental changes have led many organizations to "redesign their approach of work" (ten Brummelhuis et al. 2012) toward more flexibility (Nijp et al. 2016). This flexibility and its associated practices are gathered under the label of New Ways of Working (NWW). Although theoretical literature is still scarce (De Leede 2016), scholars agree on the three main characteristics associated to NWW: flexible work time, flexible work space and a technological basis (ten Brummelhuis et al. 2012, Demerouti et al. 2014). More precisely: Flexible work time refers to the autonomy given to the employees with respect to the time schedule of their work. In the NWW employees are free to choose when they work. The flexible work space refers to the freedom employees have when it comes to choose where they want to work. Many types of occupations and activities are possible to be achieved in other places than in the traditional office. Indeed, in the NWW, individual workplaces in the offices are replaced by plain workspaces accessible to every employee according to the task he wants to achieve. To sum up, employees are free to choose their work place, according to their tasks but not to their job position. As for the technological basis is a characteristic that is present in many works of the literature on NWW. It is possible to discuss either ICT (smartdevices, video-conferences, social networks, etc.…) are a third characteristic of NWW (employee's freedom in terms of communication medium) or simply a support for the two other characteristics (De Leede 2016). Indeed, ICT offer simultaneously the mean to be flexible (time and space) and connected to the group.

Based on these three fundamental principles, it is possible to define NWW from very different manners. Some authors propose a broad definition, such as Baane, Houtkamp, and Knotter (2010 translated by De Leede, 2016):"NWW consist of four basic principles. 1. Time and place independent works, 2. Steering on output, 3.Free access to knowledge, experience and information, 4.Flexible labor relations." Other scholars are more focused on the practices NWW drag. According to De Leede (2016) "NWW are 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." In other words, NWW can be defined either as an approach, or as a concrete bundle of managerial practices. NWW include several practices that are listed by De Leede (2016) in the table 1.

Table 1 : NWW practices (adapted from De Leede, 2016)

Table 2 : NWW practices	Description
Teleworking	Doing the work (partly) from home, fully connected to the office network
Mobile working	Enabling employees to work while commuting
Satellite offices	Offices outside an organization's office buildings, for example at customer's locations
Flexible workspaces	Flexible workspaces in the office building that are shared among employees and offer specific environments that correspond to the various tasks to facilitate effective working (single workspace, meeting workspace, workspace for interview, etc.)
Flexible working hours	Allowing to start and end the workday outside of the core time

Freedom in Choice of Tools	Employees can choose themselves from a variety of digital tools to share, collaborate and work remotely
Social networks	Using smartphones and other mobile devices to allow employees to stay digitally connected via for example work-email at home, Facebook or LinkedIn with internal and external networks
Collaborative tools	Using smartphones and other mobile devices to enable video conferencing, digital collaboration and document sharing

Within this emergent corpus of research, studies on NWW implementation within public sector organizations are crucially lacking. Although few papers use case studies methods on public sector organizations, their conception of NWW is blurry (Keast and Brown 2006) or unspecific to the public sector (Procter et al. 2016). Yet NWW experiences are exponentially increasing within public sector organizations. This is the case, for instance, of the Belgium social security or of the Geneva canton energy company which adopted recently various NWW practices, substantially redesigning their conception of work.

2.3. The outcomes of NWW

What are the effects of NWW on organizations and individuals? A large part of the existing literature tries to analyze the outcomes of NWW. Both "sunny" and "gloomy" perspectives of NWW are emphasized (Nijp et al. 2016).

The sunny perspective authors show that NWW have many positive outcomes. Long before NWW diffusion, Hackman and Oldham (1976) have shown that employee's autonomy could lead to more motivation. More generally, it has been showed that flexible work practices arrangements could improve employee performance (e.g. by telecommuting (Gajendran, Harrison, and Delaney-Klinger 2015), job satisfaction (Baltes et al. 1999), fit between employees work, non-work and family life (Nijp et al. 2012, Erin, Phyllis, and Eric 2011) and employees' innovative work behaviors (Moll and de Leede 2017), collaboration and knowledge sharing (van der Voordt 2004) (Demerouti et al. 2014) (Peponis et al. 2007). All factors that have been found to compose the behavioral expressions of workplace commitment (Bentein et al., 2000; Klein, 2016; Mathieu & Zajac, 1990). At the organizational level, flexible workspace practices can increase productivity (Kelliher and Anderson 2010), enhance cost reductions (van der Voordt 2004), improve communication, collaboration (Demerouti et al. 2014) and knowledge sharing (Peponis et al. 2007).

On the other hand, some scholars support a more gloomy perspective of NWW implementation, particularly highlighting its less desirable impacts. To sum up, three main cons appear in the literature:
- Employees work longer. Authors like van Echtelt, Glebbeek, and Lindenberg (2006) have shown that employees who are free to set their schedules (flexible work time) make longer work weeks leading to what they call the "autonomy paradox". This work intensification may be amplified by the overuse of ICT (Fenner and Renn 2010). Consequently, boundaries between work and non-work life may be blurred and this would increase employee's stress and discomfort. Besides, "blurring of work-family boundaries may particularly occur when flexible work arrangements are combine with increased electronic communication (Katz and Aakhus 2002)"(ten Brummelhuis et al. 2012).

- Employees work harder. Kelliher and Anderson (2010) argue that flexible working practices lead to work intensification, i.e. an improving of "the effort employees put into their jobs during the time that they are working". Besides, ICT nonstop

connectivity may overload employees with information, disturbing their work and thus causing stress and loss of productivity (Demerouti et al. 2014). Work intensification is associated with greater exhaustion, stress and wok life balance discomfort (ten Brummelhuis et al. 2012, Boxall and Macky 2014).

- Employees work alone. First of all, flexible work arrangements may lead to isolate individual from their social anchors and out their structure (Allen, Renn, and Griffeth 2003). Halford (2005, 21) argues that "spatial separation from the organizational environment removes individuals from [the] established social networks and opportunities, causing isolation and anxiety." Secondly, high employee autonomy gives them more responsibility vis-à-vis their work outcomes. This phenomenon may increase employees stress and then discomfort, loss of productivity, and deteriorate employee's health.

Note that many studies concern the outcomes of various isolated NWW practices (teleworking, flexible work time, etc.…) but scarcely observe the effect of simultaneous bundles of NWW practices (Nijp et al. 2016). These negative consequences of NWW may also exert a negative impact on employee commitment.

2.4. NWW and workplace commitment foci in the public sector: a relationship to be explored

The preceding review shows that NWW encompasses all organizational arrangements directed towards the improvement of individuals' work experiences. Particularly important are those organizational characteristics that bring autonomy, responsibility, flexibility and feedback to the employee. When studies exist on the influence of workplace arrangement on employee attitudes and behaviors, less so has been devoted on the so-called NWW. In fact, scholars of NWW have mainly emphasized organizational performance as a key outcome. A domain where they seem to have mainly relied on management practices, as independent solutions to be mobilized in the process of organizational change, especially for what concerns public sector reform. The role of managers has henceforth been abundantly studied. Specifically, managerial action is manifold, stretching from relational attitudes or leadership style to more tangible elements related to the ways of working (Denhardt, Denhardt, & Aristigueta, 2001; Mazouz, 2008).

Given the theorized relations between organizational and job characteristics and workplace commitment, the effects of NWW on commitment need to further be explored. This relationship is all the more important to study as NWWs are potentially linked to commitment not by their interference on the contents of work but rather by the capacity of NWWs to modify the design of work, namely work design. Here we root commitment on its foci, aiming at analyzing what workplace commitment foci in the public sector appear as certain NWW practices are enacted. In this logic, this study's main objectives are detailed below.

III. Methods

3.1. Objectives

The main objective of this study is to examine the very nature of commitment at work for public employees in organizations working in environments where some NWW project has been deployed. Adopting a positivist stance devoted to specifying the role of NWW in the commitment of public employees at work, our main objectives are as follows:

1. Map the workplace commitment foci, as related to NWW tools and practices (flexible space, flexible time, and flexible tools)

2. Analyze the role NWW plays in the relation between the surveyed individuals and one particular bundle of commitment foci, namely Commitment to Workdesign.

To be clear, and following the logic adopted here, NWW themselves could well be considered as a focus of commitment. Yet we chose to consider them among the potential environmental (or contextual) determinants of workplace commitment in the current work. The reason is that while NWW have mainly been conceived of as hard dimensions of workplace organization, commitment to work design adopts a broader stance including such abstractions as the organizational climate or the type of leader-follower relationship (Y. Emery, Forthcoming).

3.2. Sample

Our population consists in a sample of 25 Swiss public employees spread in 22 different organizational sub-units retrieved from the previous study mentioned before (Y. Emery, Forthcoming). We rely on small workgroups or units to be venues where NWW's effect can be optimally observed. The unit of analysis is individual recruited in the framework of one of the authors' PhD thesis to elicit the complexity and richness of commitment foci in the public sector. We reached back to the same respondents in order to collect environmental data related to the NWW practices enacted at their unit levels. In order to do so, we asked them to refer us to someone from their team so as to make sure that the environments described are the same as those in which our primary respondent were used to working. Given the variability in work conditions, some of our respondents working in the same organization, but within different sub-unit may well experience different managerial practices in terms of workplace design. We paid attention to request as many referents as dictated by the change in work settings, so as to attain a satisfying variability in the sample. By the same token the sub-unit sized was also asked to the respondents. The sub-unit size is mobilized here as a control variable to check whether it plays a role in the occurrence of our dependent variable: Commitment to workdesign.

Tableau 1: Respondents, organizations and services

Resp.	Gender	Age	ORG. Code	Organization	Service	SIZE[2]
YZ	Male	45	AS01	Swiss confed.	Dpt. of migrations	20
MN	Female	55	AS03	Swiss confed.	Dpt. of migrations	20
TT	Female	28	AS04	Swiss confed.	Dpt. of migrations	20
IF	Female	50	UN06	University	Dpt. Pharmacology	46
BE	Male	40	EM01	Town hall -2	Retirement home	30
JB	Female	40	EM02	Town hall -2	Retirement home	30
CB	Female	42	EM03	Town hall -2	Retirement home	20
PD	Male	49	FI01	Canton of Geneva	Tax department	6
ER	Female	38	FI02	Canton of Geneva	Tax department	6
ES	Female	38	FI03	Canton of Geneva	Tax department	6
LM	Female	45	GE01	Urban planning agency	Architecture service	6
LA	Female	52	GE02	Urban planning agency	Architecture service	6
NZ	Female	47	GE03	Urban planning agency	Architecture service	6
MS	Female	42	NY01	Town hall -1	Youth and childhood service	50
MCF	Female	55	NY02	Town hall -1	Environment services	32
FJ	Female	50	NY03	Town hall -1	Dpt. of energy	60
MC	Female	30	NY04	Town hall -1	HR department	9
LT	Male	29	NY05	Town hall -1	Finance department	9
FT	Male	36	NY06	Town hall -1	Dpt. of energy	60
AB	Female	33	NY07	Town hall -1	Dpt. of energy	60
CD	Female	50	UN01	University	Genomic integrative center	30
VG	Female	40	UN02	University	HR services	30
JP	Female	28	UN03	University	HR services	30
NC	Female	30	UN04	University	Genomic integrative center	30
SB	Female	25	UN05	University	HR services	30

3.3. Approach

Our approach is foremost quantitative using a hypothetical-deductive tool (the survey). For this work, workplaces and contexts were varied to see what different employees shared or not in terms of workplace commitment in the public sector. These respondents are more or less employed in places enacting policies related to NWW. We have chosen to limit the scope of the current research to some variables particularly important for the employee-employer relationship. The latter are embodied some work design characteristics broadly considered.

Thus, our data were collected by means of interviews, each of them lasting around one hour. During the interviews the respondents were given enough "space" to account of the dominant features of their workplace commitment. Some of these commitment foci, particularly for those concerning the work design are used as outcome variables in this

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[2] Size of the respondent's organizational subunit.

paper. Thus, In order to identify the most significant configurations of NWW mobilized leading to certain workplace commitment foci, and examine whether an innovative workplace design could emerge as an important commitment focus (as the result of the deployment of NWW practices), we mobilize a Fuzzy-set Qualitative Comparative Analysis (fs/QCA) (Berg-Schlosser, De Meur, Rihoux, & Ragin, 2009; Rihoux, 2006). The QCA particularly matches our set of data for, at least, three reasons: First, QCA is adapted to small Ns (ref). Second, it's an interesting tool to support researches testing configurational propositions (Backes-Gellner, Kluike, Pull, Schneider, & Teuber, 2016; P.C. Fiss, 2007). Conversely to linear regression, in which each factor is supposed to contribute independently and cumulatively to the variation of a dependent variable (i.e. the "net effect"), QCA analyses the effect of combinations of causal conditions (Hai, Roig-Dobón, & Sánchez-García, 2016). In the case of NWW, as for various management tools, measures must be considered in combination with one another. Third, it supports the goal of the present research which is not to estimate the average effect of each variable, but explore the complex relationships between different combinations of NWW practices and various commitment foci. Furthermore, QCA fits in researches aiming to "*explore in an inductive way which combinations of causal factors are related to an outcome in an observed case sample*"(Backes-Gellner et al., 2016, p. 758).

QCA methodology is a case-oriented approach which test relationships between conditions and an outcome using set theoretic reasoning. The latter draws its reliance on symbolic and bolean logic from mathematics. What is important here is the nature and relations between sets of conditions leading to an outcome variable. Given the complex nature of social phenomena, QCA's openness to equability goes beyond probabilistic methods to tap into independent, and additive influence of variables on an outcome. Our approach to QCA used in this paper is the Fuzzy set QCA[3], of which Ragin (2008, 2014) gives a broad description (Charles C. Ragin, 2008; Charles C Ragin, 2014). On the contrary of Crisp-set QCA which dichotomizes the presence and absence of condition and outcome variables (presence=1; absence=0), Fuzzy-set QCA resort to different levels ranging from non-membership to full membership. The concrete operationalization of the outcome and condition variables are as follows:

The outcome: Commitment to Workdesign

Based on comprehensive interviews, data on workplace commitment foci were collected by means of interviews with 25 respondents, each of them lasting around one hour each. During the interviews the respondents were given enough "space" to account of the dominant features of their workplace commitment. Some of these commitment foci, particularly for those concerning the work design, are used as outcome variables in this paper. Following the same logic used for the majority of workplace commitment scale (Fields, 2002; Kanungo, 1982; J.P. Meyer, Allen, & Gellatly, 1990; R. T. Mowday, R. M. Steers, & L. W. Porter, 1979), the respondents were asked about the most prominent and structuring aspects of their relation to work in terms of identification, attachment and loyalty[4].

Continuous categorization and regrouping gave us a total of 18 foci of commitment, of which three specific related to Workdesign are analyzed in this research (Y. Emery, Forthcoming)::
- *Public time*
  Respondent of the first study reported to be pretty much attached to the way time is

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[3] Ragin, Charles, and Sean Davey. 2014. *fs/QCA [Computer Programme]*, Version [2.5/3.0]. Irvine, CA: University of California.

[4] An interview question would go as follows: What aspect/dimension of your workplace (design) would you like to take with you when you quit your current job? Or even the following one: What does your job represent to you?

managed in the public sector. Aside of the autonomy and flexibility often granted to them, one important dimension of their commitment dwells in the very conception of time and its use in the public sector.

- *Social interactions* and dynamics as another focus of commitment pertains to the extent to which interpersonal relations of public employees with their colleagues and managers facilitate everyday work and even enriches it. Whatever the organization, employees are mostly loyal to their most proximate work team or unit as providers of a necessary social bond at work. Here collective work is of particular importance.

- *Management design* alludes to how people management and work coordination are vertically and horizontally exercised. This has much to do with the manager's leadership style (which is expected to be more transformational in an ever-changing public sector), but not only. Management design goes so far as concerning the way the proximal manager represents the employing organization.

All three types of commitment foci might well belong to a macro category termed Workdesign. Even is such a proposition merits further testing, it seems logical to assume that the above-mentioned foci of commitment all relate to a certain way of organizing work in terms of time and social interactions which is particularly important to the people working in the public sector. Relying on our coding of qualitative material in nodes related to the three dimensions of Workdesign, namely Public time, Social interactions, and management design, we retrieved the number of references per node for each of our 25 respondents. This gives us a hint on the extent to which the public employees interviewed valued Workdesign as a target of their workplace commitment whatever the type of organization.

The three foci of commitment have been aggregated in a single outcome variable called Workdesign summing the number of references in each commitment focus. The summation was made bade on the number of references made of each of the individual foci of Workdesign. Since the commitment foci constituted as much nodes (following the Nvivo terms), the collected accounts of our qualitative survey were deconstructed into unit of sense and gathered under each node. In that logic a unit sense could well be a word, an expression, a whole sentence, or a paragraph. The output to be analyzed is made up with a table cross tabulates nodes with their respective verbatim, in fact the references aggregated to obtain a value measuring the intensity of commitment to work design. Hence the more committed the respondent, the more reference would be gathered under the Workdesign node.

The causal conditions: NWW practices

Contextual information was gathered at the sub-unit level, which means the very workgroup/team where our respondents work. We assume that HR practices are likely to be similar within the same sub-unit, because they are implemented by one manager. After having conducted the interviews to collect data on commitment foci, we listed the sub-units represented in our sample. To collect data on our interviews respondent' sub-units NWW current practices, we asked to the interview respondents to refer us to a person of their immediate team, foremost a colleague. In order to gain in robustness, we collected information on the NWW practices of the sub-units by questioning the mentioned one of our respondents' colleague, for the reasons described in 3.2., by phone (see the questions below, table 2). If the interviewed person was not able to provide us any colleague name, we decided to conduct the questionnaire on the NWW practices with him.

For each variable, a corresponding question was asked to the respondents. Questions were partly inspired by the work of (Moll & de Leede, 2017). Respondents had to attribute a mark between 0 (not at all) and 5 (absolutely) to the following questions:

Tableau 2: Measures of the causal conditions

New Ways of Working items	Questions	Scale
Teleworking	Does your organization offer you the opportunity to work from home?	
Mobile working	Does your organization offer you the opportunity to work in transportation? (Train, bus, etc ...)	
Satellite offices	Does your organization offer you the opportunity to work from a different location than those mentioned above? (E.g. in a third-party office)	
Flexible workspaces	At the office, does your organization offer you the opportunity to change your place of work whenever you want, according to your needs?	0 = "*not at all*" 5 = "*Absolutely*"
Flexible working hours	Does your organization offer you the opportunity to start and finish your work day at the hours you want?	
Freedom in choice of hard tools	In addition to the common tools in the organization, does your organization offer you the opportunity to choose the *devices* (telephone, tablet, etc.) you work with and collaborate with your team?	
Freedom in choice of soft tools	In addition to the basic tools in the organization, does your organization offer you the opportunity to choose the *dematerialized tools* (Skype, doodle, WhatsApp etc.) with which you work and collaborate with your colleagues?	

The last two questions, regarding the choice of tools, slightly vary from the literature review (table 1) and the work of (Moll & de Leede, 2017). As their distinction between collaborative tools and social networks tools was unclear, we decided to split between what we call hard tools and soft tools.

In sum seven condition variables (Teleworking, Mobile working, Satellite offices, Flexible workspaces, Flexible working hours, Freedom in choice of hard collaboration tools, Freedom in choice of soft dematerialized collaboration tools) are meant to explain one outcome, i.e. employee workplace commitment to the work design. Raw data will be found in Table 3 hereby.

Tableau 3: Raw data for condition and outcome variables

Resp.	ORG. Name	TELEW	MOBW	SATOFF	FLEXW	FLEXHR	FRETONE	FRETWO	WDSGN[5]
YZ	Dpt. of migrations	1	0	0	0	5	0	0	14
MN	Dpt. of migrations	5	5	5	0	5	0	5	3
TT	Dpt. of migrations	5	5	5	0	5	0	5	6
IF	University	4	2	5	0	4	3	5	9
BE	Retirement home	0	0	0	0	0	3	4	10
JB	Retirement home	0	0	0	0	0	3	4	6
CB	Retirement home	2	0	0	2	3	0	0	8
PD	Tax department	5	0	0	0	5	0	0	9
ER	Tax department	5	0	0	0	5	0	0	12
ES	Tax department	5	0	0	0	5	0	0	22
LM	Urban planing agency	0	0	2	0	3	4	0	16
LA	Urban planing agency	0	0	2	0	3	4	0	2
NZ	Urban planing agency	0	0	2	0	3	4	0	9
MS	Town hall	3	1	5	0	4	0	5	6
MCF	Town hall	3	1	5	0	4	0	5	29
FJ	Town hall	3	1	5	0	4	0	5	16
MC	Town hall	3	1	5	0	4	0	5	8
LT	Dpt. of energy	3	1	5	0	4	0	5	8
FT	Dpt. of energy	3	1	5	0	4	0	5	14
AB	Dpt. of energy	3	1	5	0	4	0	5	11
CD	University	5	0	0	0	5	3	5	8
VG	University	1	1	3	1	3	0	5	12
JP	University	1	1	3	1	3	0	5	11
NC	University	5	0	0	0	5	3	5	14
SB	University	1	1	3	1	3	0	5	5

The Fuzzy QCA procedure requires calibrating the raw data in order to determine the level of set membership in the condition and outcome variables. This is an advantage as compared to the Crisp-set QCA analysis which relies on a binary dichotomization to attribute membership to the cases. FsQCA mitigates the potential loss of information in the analysis. Here, we use a four-value approach for calibration. This procedure is straightforward for condition variables given the 0-5 scale adopted here. Adding a constant point of 0.001 to the mean since Ragin recommends not to use the exact value of the mean for the mid-point (Peer C Fiss, 2011), the cutoff point becomes 2.501 for condition variables. The other thresholds are 3.5 and 1.5. For what concerns the Outcome variable, we depart from the median (represented by 9 references coded to the Workdesign focus) in order to fix up a point of substantive difference upward, or backward. That procedure, gives us thresholds at 14, 9.001 (using Ragin's recommendation) and 6 for our calibration of Workdesign. See Table 3 beneath for a detailed presentation.

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[5] The calculation of this variable is explained in the sub-section "The outcome: Commitment to Workdesign"

Tableau 4: Fuzzy-set calibration thresholds

Outcome/Conditions	Raw values	Fuzzy-set calibration Thresholds
Work design	2-29	29 "full membership" 14 9.001 6 2 "full non-membership"
Teleworking Mobile working Satellite offices Flexible workspaces Flexible working hours Freedom in choice of hard tools Freedom in choice of soft tools	1-5	5 "full membership" 3.5 2.501 1.5 0 "full non-membership"

Once entered in the FsQCA software (C.C. Ragin, 2000; Charles C Ragin, 2014)[6], Fuzzy-set membership values are computed and printed to be used for building the Truth Table. All raw values are standardized to range from 0 to 1, with 1 meaning full membership to the condition, respectively the outcome variable. The Truth Table represents a series configurations of conditions leading more or less to the Outcome with a report of their level of consistency and coverage (the proportion of cases explained by the solution formula. The Calibrate Fuzzy-set values are given in Table 5 below.

Tableau 5 : Fuzzy-set calibrated values for membership in conditions and outcome

Cases.	ORG. Name	TELEW	MOBW	SATOFF	FLEXW	FLEXHR	FRETONE	FRETWO	WDSGN
YZ	Dpt. of migrations	0.01	0.00	0.00	0.00	1.00	0.00	0.00	0.02
MN	Dpt. of migrations	1.00	1.00	1.00	0.00	1.00	0.00	1.00	0.27
TT	Dpt. of migrations	1.00	1.00	1.00	0.00	1.00	0.00	1.00	0.77
BE	Retirement home	0.00	0.00	0.00	0.00	0.00	0.82	0.99	0.00
JB	Retirement home	0.00	0.00	0.00	0.00	0.00	0.82	0.99	1.00
CB	Retirement home	0.18	0.00	0.00	0.18	0.82	0.00	0.00	0.05
PD	Tax department	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.27
ER	Tax department	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.65
ES	Tax department	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.05
LM	Urban planing agency	0.00	0.00	0.18	0.00	0.82	0.99	0.00	0.50
LA	Urban planing agency	0.00	0.00	0.18	0.00	0.82	0.99	0.00	0.00
NZ	Urban planing agency	0.00	0.00	0.18	0.00	0.82	0.99	0.00	0.77
MS	Town hall	0.82	0.01	1.00	0.00	0.99	0.00	1.00	0.27
MCF	Town hall	0.82	0.01	1.00	0.00	0.99	0.00	1.00	0.99
FJ	Town hall	0.82	0.01	1.00	0.00	0.99	0.00	1.00	0.27

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[6] Ragin, Charles, and Sean Davey. 2014. *fs/QCA [Computer Programme]*, Version [2.5/3.0]. Irvine, CA: University of California.

Cases.	ORG. Name	TELEW	MOBW	SATOFF	FLEXW	FLEXHR	FRETONE	FRETWO	WDSGN
MC	Town hall	0.82	0.01	1.00	0.00	0.99	0.00	1.00	1.00
LT	Dpt. of energy	0.82	0.01	1.00	0.00	0.99	0.00	1.00	0.05
FT	Dpt. of energy	0.82	0.01	1.00	0.00	0.99	0.00	1.00	0.50
AB	Dpt. of energy	0.82	0.01	1.00	0.00	0.99	0.00	1.00	0.95
IF	University	0.99	0.18	1.00	0.00	0.99	0.82	1.00	0.86
CD	University	1.00	0.00	0.00	0.00	1.00	0.82	1.00	0.50
VG	University	0.01	0.01	0.82	0.01	0.82	0.00	1.00	0.95
JP	University	0.01	0.01	0.82	0.01	0.82	0.00	1.00	0.99
NC	University	1.00	0.00	0.00	0.00	1.00	0.82	1.00	0.95
SB	University	0.01	0.01	0.82	0.01	0.82	0.00	1.00	0.86

IV. Findings

Analysis of necessary conditions

Using Commitment to Workdesign as the Outcome, all conditions were tested for their necessity. It appears that Flexible working hours (0.89; 0.56) and Freedom in choice of soft communication and collaboration tools (0.828; 0.657) were both necessary conditions for the realization of the outcome. Consistency measures are satisfactory since they exceed the standard of 0.78 (Backes-Gellner et al., 2016). As for Freedom in choice of soft communication and collaboration tools, it yields an acceptable coverage of 0.65 of our cases.

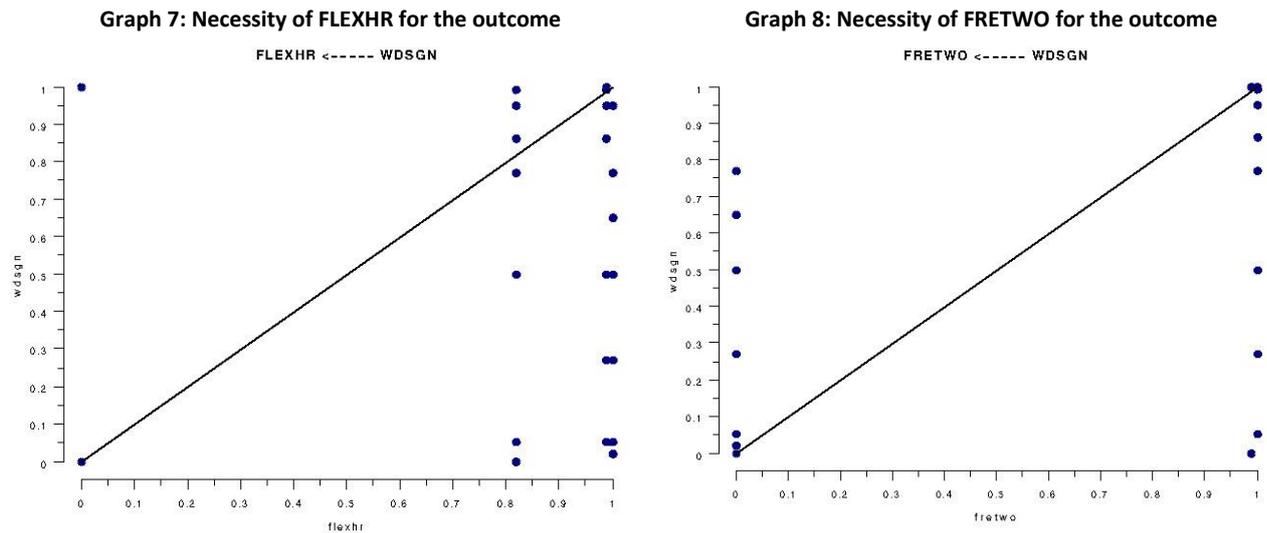**Tableau 6: Necessary conditions for Commitment to Work design**

Conditions	Code	Consistency	Coverage
Flexible working hours	FLEXHRS	**0.899***	0.560
Freedom in choice of soft tools	FRETWO	**0.828***	**0.657***
Size of the subunit	SIZE	0.670	0.679
Teleworking	TELEW	0.590	0.570
Freedom in choice of hard tools	FRETONE	0.313	0.598
Mobile working	MOBW	0.097	0.578

Conventionally this result is written as follows:

FLEXHR ← WDSN
FRETWO ← WDSN

It can be seen from graphs 7 and 8 below that accordingly the FLEXHR has more consistency in terms of necessity for the outcome. The majority of the cases fall beneath the diagonal. There is only one deviant case (JB) for coverage (upper left), the case of a respondent working in a retirement home (see annex 3 for the complete analysis grid).

Graph 7: Necessity of FLEXHR for the outcome

FLEXHR <----- WDSGN

Graph 8: Necessity of FRETWO for the outcome

FRETWO <----- WDSGN

Analysis of Sufficiency conditions

A prerequisite to the analysis of sufficient conditions is to build the Truth Table, which cross tabulates rows of cases (N=25 for the current study) to columns of conditions and outcome. The table shows all possible condition of occurrence and non-occurrence of the outcome, namely Commitment to work design. We hereby only display the configurations for which the outcome is realized for a consistency exceeding 0.78 (Backes-Gellner et al., 2016). The Truth table also presents the related cases for each solution (full Truth table analysis to be found in Annex 3).

Table 9: "Truth Table"

SIZE[7]	TELEW	MOBW	SATOFF	FLEXW	FLEXHR	FRETONE	FRETWO	WDSGN	Raw Constcy[8]	PRI Constcy	Cases.
1	0	0	1	0	1	0	1	1	1	1	VG, JP, SB
1	1	0	1	0	1	1	1	1	1	1	IF
1	1	0	0	0	1	1	1	1	0.824	0.727	CD, NC
1	1	0	1	0	1	0	1	0	0.677	0.538	MS, MCF, FJ, FT, AB
0	1	0	1	0	1	0	1	0	0.607	0.564	MC, LT
0	0	0	0	0	1	1	0	0	0.516	0.312	LM, LA, NZ
1	0	0	0	0	0	1	1	0	0.500	0.500	BE, JB
0	1	0	0	0	1	0	0	0	0.329	0.125	PD, ER, ES

Bolean minimization of the Truth Table yields two main solutions. We retain the most parsimonious solution because it has greater coverage, albeit with negligibly less consistency (0.92 as compared to the complex and intermediate solutions, of 0.95 each in consistency). Capital letters signal the presence of the variable whereas small letters indicate its absence.

[7] Size of the organizational subunit.

[8] Consistency

Table 10: Parsimonious solution after Bolean minimization

Solutions		Raw coverage	Unique coverage	Consistency
S1	telew*FLEXHR*FRETWO	0.266	0.266	0.965
S2	FLEXHR*FRETONE*FRETWO	0.158	0.157	0.86
		Solution coverage		0.424
		Solution consistency		0.927*

The two solutions demonstrate good consistency separately and together. Yet they show rather a weak coverage in relation to the entire sample of 25 public employees, since it is verified in a bit more than 40% of our cases. Still, in reference to the necessity analysis, it can be said that FLEXHR and FRETWO are dominant features participating in the explanation of employee commitment to Workdesign. The following notation can therefore be written:

- telew*FLEXHR*FRETWO $\rightarrow$ WDSGN
- FLEXHR*FRETONE*FRETWO $\rightarrow$ WDSGN

As can be noticed from graphs 11 and 12 Solution 1 comprises more cases consistent with the necessity argument than Solution 2. The latter yields one irrelevant case (lower left of the diagonal): a young graduate working in a Town hall. Both graphs echo the statement made earlier that although our solutions yield good consistency, the coverage remains low, thus not empirically explaining a satisfying number of cases.

Graph 11: Pathway 1 to the outcome

Graphs 12: Pathway 2 to the outcome
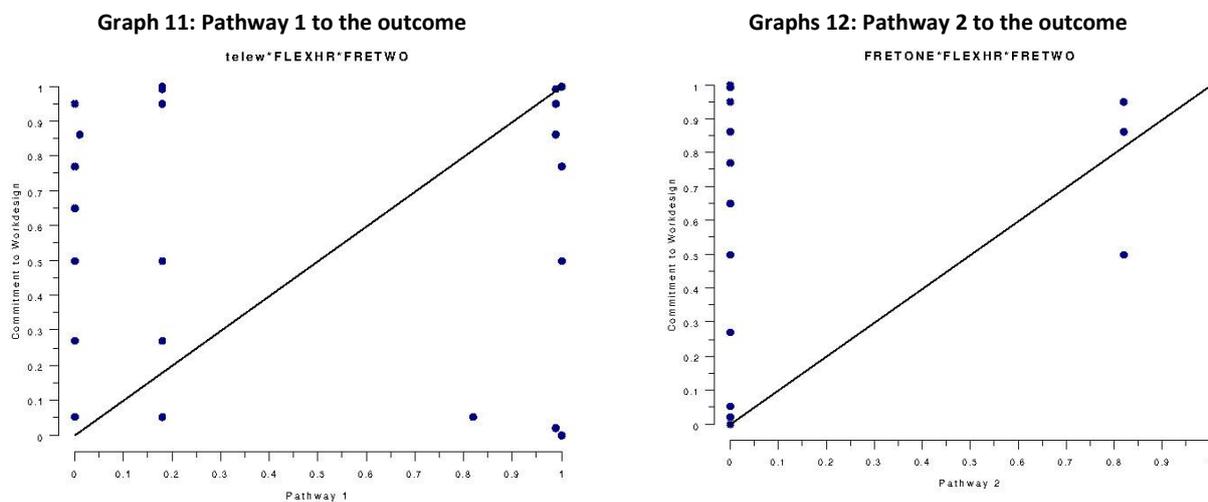
The fact that both solutions concern people working in a university setting is interesting[9]. Universities are organizations which cannot be considered as fully belonging to the core of governmental activities, because they function on hybrid management principles (mixing up educational service imperatives and efficiency obligations). Besides, the cases covered by the solution do not appears in instances where the outcome does not occur (Charles C Ragin, 2014). This is an important indication of non-contradictory results. As a robustness check, we also analyzed the sufficient condition for the non-realization of the outcome. This procedure is useful to rule out the possibility that the same solutions explain both the presence and absence of the outcome variable (in our case Commitment to work design). The hereby parsimonious solutions do not show that the same causal paths for the

[9] - Cases with greater than 0.5 membership in term ~TELEW*FLEXHR*FRETWO: **VG** (0.82,0.95), **JP** (0.82,0.99), **SB** (0.82,0.86). Cases with greater than 0.5 membership in term FLEXHR*FRETONE*FRETWO: **IF** (0.82,0.86), **CD** (0.82,0.5), NC (0.82,0.95

realization of Commitment to Work design do not (also) explain the negated outcome:

$$flexhr*fretwo \rightarrow wdsgn \ (consistency = 0.98); \ TELEW*flexhr \rightarrow wdsgn \ (consistency = 0.96)$$

V. Discussion and implications.

Main theoretical implications

Even if any direct and universal link between NWW's practices and commitment in the public sector cannot be inferred from our results, they raise several interesting elements. Thus our main contribution is undoubtedly to have been able to elicit a configuration of conditions leading to the dimension of workplace commitment considered here. Thus, employees who are committed to work design (management style, time management and social interactions dynamics) mostly report to work in areas where they can more or less choose when to start and stop work, and how to interact with their peers, be it with hard or soft collaborative tools. The parsimonious solution of our Fuzzy-set analysis reveals either those three conditions (FLEXHRS, FRETONE, and FRETWO) are present, or two of them (FLEXHRS and FRETWO) exist without a policy whereby employee can work from their homes. The latter proposition yields even more consistency (0.96) than the first. At the same time, measure of teleworking are seldom possible, even in the public sector, or reserved to a category of employee who mostly happen to be people holding important executive or managerial positions. In their majority, the respondents recruited for our sample are employees with no manager status.

Elsewhere, the most effective and determinant policies of work design seems not to be so much related to TELEW and FLEXW, and MOBW. Often considered as dominant and innovative measures of flexible workspace (Caillier, 2013; Stavrou & Kilaniotis, 2010), these conditions do not appear in any of our solutions, even the most complex one (see *Appendix 3*). Apart from FLEXW, policies like Telework or Mobile workspace could be a source of stress. It might thus be in the end hard for employees to see them as an improvement of their working conditions. For instance, many studies report that Telework might contribute to blurring the thin line between private and professional life (Kooij et al., 2013; Macky & Boxall, 2008; Maxwell & McDougall, 2004 ; Ronda, Ollo-Lopez, & Goni-Legaz, 2016). The public employees in our sample seem to have a preference for a combination of flexible work hours and the social link they can enjoy in having different possibilities to interact with their colleagues. This echo the fact that both measures of flexible work tools (FRETONE and FRETWO) appear in the parsimonious solutions of our QCA analyzes.

Our results also further reveal that a subset of our sample, namely employees of a university service, was exclusively concerned by the solutions. This finding is important to the extent that even if the contextual group or unit-level information about the work environment is the same for those employees (or organization in more global sense), their commitment foci cannot be predicted to be alike, not to mention the level thereof. In that sense, the FsQCA approach adopted here was a good strategy to capture the variability of commitment to the existing work design within the workplace investigated. Despite the potential variability, our respondents seem to identify and express attachment/loyalty mostly to work design when asked about their workplace commitment. Consequentially, the study contributes to unveiling a group-level commitment towards Workdesign (J. P. Meyer & Morin, 2016; John P. Meyer, Stanley, & Parfyonova, 2012). It is therefore possible to consider that a profile of commitment to work design exist in organizations akin to universities, where a mix of public service principles and managerial (efficiency) imperatives exist. Such organizations can be labelled as hybrids on the contrary of others involved in core state activities, for instance social and

security government agencies (Anderson, 2012; Pesch, 2008). Therefore, our results contribute to enlighten the importance of environmental characteristics for the development of NWW. In a subset of our sample, hybridity seems to have been a necessary or it might be that employees in hybrid organisations are more receptive to (and expecting) these practices. This latter assumption could confirm the work of Emery and Kouadio (*forthcoming*) who contend that commitment foci vary according to the publicness of the organisations to which public employees belong (Y. Emery, Forthcoming).

As a pioneer-study on the relationship among NWW and commitment to work design in the public sector, this research raises several theoretical issues: Firstly, our research invites to consider NWW not as an opaque bundle of practices but one that is made up of specific configurations. Hence, NWW as a growing phenomenon in the public sector need to be further studied at least to achieve a contextualized definition of the concept (Keast and Brown 2006, Procter et al. 2016). In this context, our research shows the significance of dissecting the prevalence of configurations rather than considering NWW as a black box of practices, similar to bundles of HRM (Gooderham, Parry, & Ringdal, 2008; Guerrero & Barraud-Didier, 2004; Macduffie, 1995; Toh, Morgeson, & Campion, 2008). As a consequence of the bundles dissections, we identify for instance, the bounded importance of flexible collaborative tools at work as a central element participating to the occurrence of commitment to workdesign. Secondly, our study shows the significance of the very context where NWW are implemented. The solution drawn here was indeed particularly consistent and representative of hybrid environments. Thus NWW outcomes might significantly depend on the characteristics of the environment in which there are implemented, as long as on the individual characteristics of the adopters and the management style of the organisation.

Managerial implications

New ways of working are portrayed as "a must" in contemporary organizations. In the absence of substantive studies on their veritable impacts, managers should be aware that NWW implementation do not automatically favor employee commitment to work design. More so in the public sector, where this concept is still under-studied (Procter et al. 2016) and where environments and jobs are becoming more and more hybrid (Kirkpatrick, Altanlar, & Veronesi, 2017; Krotel & Villadsen, 2016; Perry, Hunter, & Currall, 2016). While some NWW may be attractive in the likeness of Mobile workspaces (e.g. employees choosing whatever desk they want among a number of standardized and flexible workplaces), their effect on employee commitment toward the organizational work design, is far from being guaranteed. This study reveals that in some hybrid organizations like universities managers seeking to secure the commitment of their employees should invest in measures that give the latter freedom and autonomy in three important areas: firstly, facilitates time management arrangement. This means allowing, when possible, employees to decide the moment of their availability to the employer during a workday, provided his tasks are performed. Secondly, employee may be provided with the necessary tools potentially enriching social interactions within their workplace. Multiple mobile devices now exist beyond smartphones. Tablets for instance have gained popularity in everyday life and are starting to populate work arenas as valuable working devices. Thirdly, and in relation to the second managerial implications, the hard communication and collaboration tools could well be supplemented by soft ones, often used in a social networking context. Even if the red line can easily be crossed between a professional and personal use of those tools, organization should privilege their capacity to reinforce the social tissue, an important source of organizational commitment (Esteve, Urbig, van Witteloostuijn, & Boyne, 2016; Liu, 2004; Parker & Bradley, 2000; Rhoades & Eisenberger, 2002; Tremblay, Cloutier, Simard, Chenevert, & Vandenberghe, 2010).

VI. Limits and avenues for future research.

One of the main limitation of this study is the low explicability of the commitment to work design of our model. Indeed, many other factors can explain the observed commitment (individual factors, management styles, organizational culture, etc.). Our study may have suffered from limited diversity, manifest in the fact that the solution only explains roughly one in two cases of our sample, even if the FsQCA analysis yields a good consistency of the parsimonious solutions retained, which satisfactorily covers the subset of university administrative employees in our sample. Since no case seems to contradict our findings, it might be useful to recruit more employees in the other organizations to see whether our parsimonious solution formula could cover beyond university employees. The QCA method is well-suited for small Ns (Charles C Ragin, 2014). Yet it remains possible to exceed our 25 respondents. Another limitation concerns the calibration of the Outcome variable WDGN. Even if we followed some of the main recommendations and well-established procedures in the QCA scholarship (Backes-Gellner et al., 2016; Berg-Schlosser et al., 2009; Charles C Ragin, 2014; Schneider & Wagemann, 2010), there are no real standard to determine the threshold for full or non-membership of the cases. We tried to rely on our good knowledge of the cases and the theory of Workplace commitment, but different sensibilities may still exist between two researchers conducting the same study. Nonetheless, we believe that a good proxy to tap the importance of a concept in qualitative data remains the number of times reference is made of the concept. That's why we did not resort to mere word counts to go from our Nvivo qualitative material to QCA raw quantitative data. To mitigate potential suspicions, we tried our best to make the different procedures used in this paper the most transparent possible. Besides, the robustness checks made to confront our findings to the negated outcome rule out the possibility of contradictory solutions.

Another limitation concerns the potential tautology which consists in analyzing NWW as a condition to Commitment to workdesign, whereas the latter could well also encompass some features of NWW. Clearly stated, underlying the interviewed public employees' commitment to Workdesign might well be commitment to some aspects of NWW. While this cannot be fully ruled out, we adopted the stance to consider NWW only in its hard (physical) dimensions, thus leaving more abstraction on the side of Commitment to Workdesign. That way we draw a conceptually sound separation between what we view as NWW, or Commitment to Workdesign. Subsequent studies might solve that issue by examining the links between NWWs and all the other foci or commitment unveiled in our prior research (Y. Emery, Forthcoming).

Other interested researchers could supplement this study first with a *Process-tracing* analysis aiming at confirming the causal paths discerned here for commitment to work design, second carry on an in-depth cross case comparison between our subset of university employees and those from other organizations in the public sector. These may be done after a replication of our study on a much larger sample.

Conclusion

Extending the concept of commitment makes sense in an era where the very notion of work needs to be extended too (the development of protean careers in a post-industrial era and the emergence of new expectations from individuals, among which public employees now navigate. Our aim in this article was show how precisely employees in the public sector relate their workplace commitment to the way their work environment is designed. Whereas the workplace commitment of public servants is a critical issue in post-bureaucratic contexts, scant research has tried to unveil how the emerging NWW would potentially affect individual attitudes and behaviors at work. Our contribution addresses the Commitment-foci vs NWW relation and broadens our understanding of the importance of work arrangements and design for the way employees relate to their employer, organization, or their job strictly speaking. Our study reveals that they are core conditions that feed commitment to work design. These are policies promoting flexible work hours, and better social interactions by means of different hard and soft tools to be used by employees in their communication and collaboration. Another important contribution resides in the possible mobilization of flexible workplace design in fostering the commitment of public employees (Gavino, Wayne, & Erdogan, 2012; Guthrie, 2001; Stephen Wood & De Menezes, 1998; S. Wood & de Menezes, 2011). What is more, the results of the current study could pave the way for an alignment of modern HRM practices to the specific challenges of hybrid work environments in the public sector.

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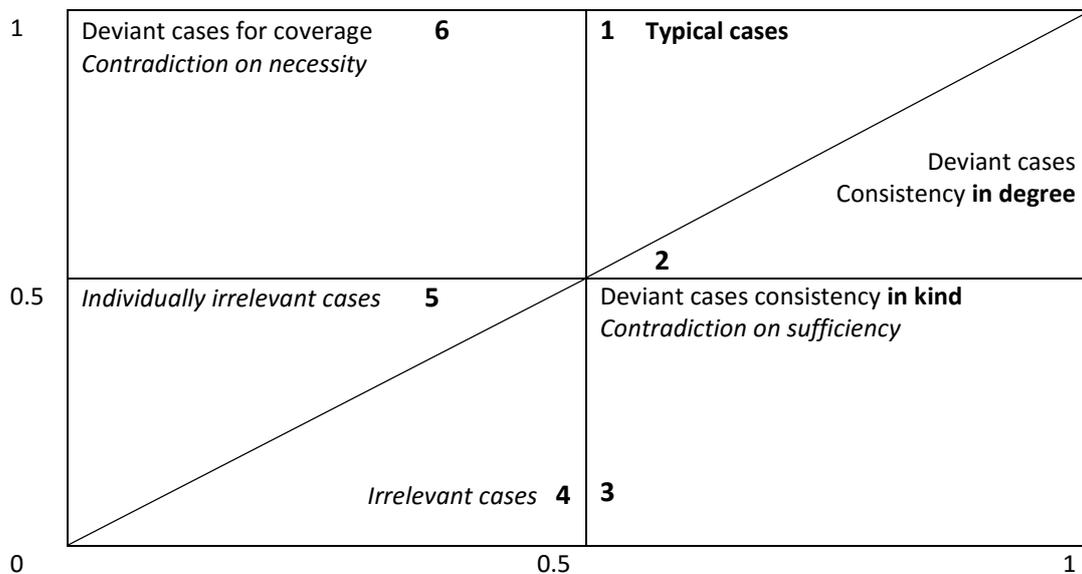
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Annex 1: Full Raw data

RESP.	ORGANIZATION	SERVICE	PUBHYB	SIZE	TELEW	MOBW	SATOFF	FLEXW	FLEXHR	FRETONE	FRETWO	DISOC	TPSPUBL	MDSGN	WDSGN
YZ	Swiss confed.	Dpt. of migrations	1	20	1	0	0	0	5	0	0	0	2	3	14
MN	Swiss confed.	Dpt. of migrations	1	20	5	5	5	0	5	0	5	2	1	5	3
TT	Swiss confed.	Dpt. of migrations	1	20	5	5	5	0	5	0	5	2	1	8	6
IF	University	Dpt. Pharmacology	0	46	4	2	5	0	4	3	5	4	2	6	9
BE	Town hall -2	Retirement home	0	30	0	0	0	0	0	3	4	0	1	2	10
JB	Town hall -2	Retirement home	0	30	0	0	0	0	0	3	4	10	3	9	6
CB	Town hall -2	Retirement home	0	20	2	0	0	2	3	0	0	1	2	3	8
PD	Canton of Geneva	Tax department	1	6	5	0	0	0	5	0	0	3	1	4	9
ER	Canton of Geneva	Tax department	1	6	5	0	0	0	5	0	0	3	4	3	12
ES	Canton of Geneva	Tax department	1	6	5	0	0	0	5	0	0	3	1	2	22
LM	Urban planing agency	Urban planing agency	1	6	0	0	2	0	3	4	0	2	1	6	16
LA	Urban planing agency	Urban planing agency	1	6	0	0	2	0	3	4	0	0	0	2	2
NZ	Urban planing agency	Urban planing agency	1	6	0	0	2	0	3	4	0	2	4	5	9
MS	Town hall -1	Youth and childhood service	1	50	3	1	5	0	4	0	5	3	0	5	6
MCF	Town hall -1	Environment services	1	32	3	1	5	0	4	0	5	6	4	6	29
FJ	Town hall -1	Dpt. of energy	1	60	3	1	5	0	4	0	5	2	3	3	16
MC	Town hall -1	HR department	1	9	3	1	5	0	4	0	5	14	1	14	8
LT	Town hall -1	Finance department	1	9	3	1	5	0	4	0	5	3	0	3	8
FT	Town hall -1	Dpt. of energy	1	60	3	1	5	0	4	0	5	0	2	7	14
AB	Town hall -1	Dpt. of energy	1	60	3	1	5	0	4	0	5	9	0	5	11
CD	University	Genomic integrative center	0	30	5	0	0	0	5	3	5	2	2	5	8
VG	University	HR services	0	30	1	1	3	1	3	0	5	7	0	7	12
JP	University	HR services	0	30	1	1	3	1	3	0	5	5	0	11	11
NC	University	Genomic integrative center	0	30	5	0	0	0	5	3	5	10	0	4	14
SB	University	HR services	0	30	1	1	3	1	3	0	5	2	0	10	5

Annex 2: Analysis grid of QCA graphic representations

Tableau 13: Necessity and sufficiency in QCA analysis

Deviant cases for coverage **6** *Contradiction on necessity*	**1** Typical cases	
		Deviant cases Consistency **in degree**
	2	
Individually irrelevant cases **5**	Deviant cases consistency **in kind** *Contradiction on sufficiency*	
Irrelevant cases **4**	**3**	

- The cases above or under 0.5 (set membership score) have different meanings according to their relation with the outcome (Y). This holds for cases which share a membership with the condition (X) as compared to those which do not. Thus all the cases on the diagonal do not represent typical cases of the solution formula, and cases that do not align with the diagonal are different types of deviant cases. Above the diagonal, all the cases are consistently sufficient for the outcome. Conversely, all the cases beneath the diagonal are consistently necessary to realize the outcome.
- Typical cases (1) represent sufficient conditions of the outcome and hence good examples of conditions (X) leading to the outcome (Y).
- The cases having no relation either with X or Y are not pertinent in terms of sufficiency (4 and 5).
- Area 5 regroups cases that differs from those in area 6, since the latter are mobilized for inter-case comparisons.
- Area 3 gathers cases which are contradictory with sufficiency. They are deviant cases *in kind*. They belong to the conditions, yet are not good empirical illustrations of outcome Y.
- Cases in area 2 are deviant in terms of consistency. They exemplify a difference *in degree*.
- Area 6 regroup cases which are contradictory with necessity, albeit sufficient. These are unexplained cases leading to the realization of the outcome (Y>0.5), but not for sufficient conditions (Y<0.5). They are deviant *in coverage*.

Annex 3: Full "Truth Table" analysis

COMPLEX SOLUTION[10]

Solutions		Raw coverage	Unique coverage	Consistency
S1	SIZE*TELEW*mobw*flexw*FLEXHR*FRETONE*FRETWO	0.154	0.154	0.885
S2	SIZE*telew*mobw*SATOFF*flexw*FLEXHR*fretone*FRETWO	0.246	0.245	1
		Solution coverage		0.400
		Solution consistency		0.952*

Cases with greater than 0.5 membership in term
SIZE*TELEW*mobw *flexw *FLEXHR*FRETONE*FRETWO:
- IF (0.82,0.86)
- CD (0.77,0.5)
- NC (0.77,0.95)

Cases with greater than 0.5 membership in term
SIZE*telew *mobw *SATOFF*flexw *FLEXHR*fretone *FRETWO:
- VG (0.77,0.95)
- JP (0.77,0.99)
- SB (0.77,0.86)

PARSIMONIOUS SOLUTION[11]

Solutions		Raw coverage	Unique coverage	Consistency
S1	telew*FLEXHR*FRETWO	0.266	0.266	0.965
S2	FLEXHR*FRETONE*FRETWO	0.158	0.157	0.869
		Solution coverage		0.424
		Solution consistency		0.927*

Cases with greater than 0.5 membership in term
 telew *FLEXHR*FRETWO:
- VG (0.82,0.95)
- JP (0.82,0.99)
- SB (0.82,0.86)

Cases with greater than 0.5 membership in term
 FLEXHR*FRETONE*FRETWO:
- IF (0.82,0.86)
- CD (0.82,0.5)
- NC (0.82,0.95)

---

[10] *Frequency cutoff*: 1; *Consistency cutoff*: 0.824675

[11] *Frequency cutoff*: 1; *Consistency cutoff*: 0.824675

INTERMEDIATE SOLUTION[12]

Assumptions: FLEXHR (present), FRETWO (present)

Solutions		Raw coverage	Unique coverage	Consistency
S1	SIZE*TELEW*mobw*flexw*FLEXHR*FRETONE*FRETWO	0.154	0.154	0.885
S2	SIZE*telew*mobw*SATOFF*flexw*FLEXHR*fretone*FRETWO	0.246	0.245	1
		Solution coverage		0.400
		Solution consistency		0.952*

Cases with greater than 0.5 membership in term
SIZE*TELEW*mobw *flexw*FLEXHR*FRETONE*FRETWO:
- IF (0.82,0.86)
- CD (0.77,0.5)
- NC (0.77,0.95)

Cases with greater than 0.5 membership in term
SIZE*telew *mobw*SATOFF*flexw*FLEXHR*fretone *FRETWO:
- VG (0.77,0.95)
- JP (0.77,0.99)
- SB (0.77,0.86)

---

[12] *Frequency cutoff*: 1; *Consistency cutoff*: 0.824675