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How combinations of control elements create tensions and how these can be managed: An embedded case study

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ABSTRACT

This paper explores how combinations of management control (MC) elements can create tensions, and what supervisors can do to manage these tensions. We extend the literature on the interplay of MC elements by examining the underlying micro-processes that give rise to tensions between MC elements. Specifically, drawing on both the MC and the organization literature, we investigate how interactions between MC elements can simultaneously enhance and diminish control effectiveness, for which we coin the term *tension complexity*, and how these tensions can change over time, which we label *tension dynamics*. We empirically inform our study with an embedded case study in a public sector organization in the Netherlands. Using interviews, desk research, and observations, this study specifically investigates how an organization-level MC element (the value 'self-management') relates to departmental MC elements, creating tensions. The findings highlight that tensions, because of their dynamic and complex nature, require continuous attention from managers. Furthermore, the case findings demonstrate how department managers can influence the tensions by affecting the balance, balance tendency, and intensity of the MC elements within them. We conclude by providing suggestions for further research into the interactions of MC elements.

1. Introduction

Management control (MC) elements such as organizational values, performance measures, and rules can be used to serve various purposes, including the communication and implementation of strategy (Simons, 2000; Wouters and Roijmans, 2011). Given that they are often used in combination (Friis et al., 2015), it is important to recognize that some MC elements interact and affect each other's outcomes. As a consequence, the simultaneous use of several MC elements produces control outcomes that differ from the sum of the control outcomes of the individual MC elements (see e.g. Bedford et al., 2016). Various authors have emphasized the importance of examining interactions of MC elements, and have identified for instance complementary effects of certain combinations of MC elements (e.g. Van Veen-Dirks, 2006; Widener, 2007; Grabner and Moers, 2013; Friis et al., 2015). This stream of literature is primarily concerned with the aggregate effect of interactions among MC elements in terms of being positive (complementarity), negative (substitution), or non-existent. However, what has been left largely unexplored are the inner workings of combinations of MC ele-

ments and how and why control combinations generate positive or negative effects on control outcomes. The aim of our study is to enhance the understanding of the underlying processes that create such effects by examining the relationships between MC elements.

Some empirical studies in the MC literature have also used the notion of dynamic tensions to examine control interrelations (e.g. Henri, 2006; Mundy, 2010). These studies argue that different MC elements (e.g. boundary/belief systems or diagnostic/interactive control systems, see also Simons, 1995) are in tension and need to be balanced to achieve effective control (Simons, 2000; Mundy, 2010; Tessier and Otley, 2012; Kruis et al., 2016). However, this balancing act is a challenge for managers. An issue of particular relevance here is that the literature is often unclear as to what such balancing acts entail. Indeed, the MC literature on tensions has been criticized for using tension-related terms too loosely (Lövstål and Jontoft, 2017). We aim to clarify conceptual and empirical issues related to the notion of tensions, for instance by specifying what it means for a tension to be dynamic or complex.

In order to define tension complexity, we draw on the concept of

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complementarity (indicating a positive effect of a control combination), and the concept of competition (indicating a negative effect of a control combination).[1] Tension complexity is used to indicate that a certain control combination generates both complementary and competitive effects simultaneously. As Lewis (2000, p. 760) notes, tensions can have both positive and negative aggregate effects on organizational outcomes since they can "both hamper and encourage organizational development". By recognizing that tensions involve both positive and negative effects (i.e. tension complexity) and that they can change over time (i.e. tension dynamics), one will be better placed to do justice to the complex and dynamic nature of tensions in practice.

We also draw on the literature on paradoxes and tensions (cf. Poole and Van de Ven, 1989; English, 2001; Smith and Lewis, 2011; Epstein et al., 2015; Miron-Spektor et al., 2018; Lewis et al., 2019). Schad et al. (2016) observe that the Western philosophical foundations of paradox emerged from the ancient Greeks, as reflected in the terms *para* (contrary to) and *doxa* (opinion). Accordingly, in the management literature, a paradox can be defined as a "persistent contradiction between interdependent elements" (Schad et al., 2016, p. 10). Lewis et al. (2019) used the notions of paradoxes and tensions in the field of MC and highlighted their potential to theoretically contribute to the MC literature. Our paper explores the underlying processes that create tensions, focusing specifically on the capacity of a tension to produce both positive (complementarity of MC elements) and negative effects (competition among MC elements) simultaneously. We do so theoretically by mobilizing the organization literature on tensions and paradoxes, and empirically by conducting an embedded case study. In the case study, we examine how an organization-level MC element (i.e. the value of self-management) relates to MC elements employed at the department level, and how managers can balance the use of the elements in the tension.

Our study offers three main contributions to the management accounting and control literature. First, we contribute to the literature on interrelationships among MC elements by conceptually clarifying the notion of tensions. We develop an understanding of tensions as being relations that can involve positive (complementary) and negative (competition) effects simultaneously (tension complexity) and can change over time (tension dynamics). Second, we mobilize the organization literature to theorize on why tensions that involve complementarity and competition may emerge, and we distinguish balance, balance tendency, and intensity as key characteristics of a tension. In so doing, we extend the MC literature that draws on complementarity theory by exploring the micro-processes that underlie these effects, while relying on the literature on paradoxical tensions (see, e.g., Poole and Van de Ven, 1989; Lewis, 2000; English, 2001; Smith and Lewis, 2011; Epstein et al., 2015; Lewis et al., 2019). Third, we show the ongoing need for managers to engage in a balancing act because internal and external forces continuously shape and influence the balance between the elements in a tension. In this regard, insights into how managers deal with tension dynamics and complexity can provide a basis for considering various strategies that managers might use to balance tensions. We empirically inform our theoretical developments with a detailed empirical narrative about an embedded case study that illustrates what complex and dynamic tensions are, how they can

emerge, how managers can balance the tensions, and what their effects can be.

In the next section, we examine the literature on relationships among MC elements, and further develop the notion of dynamic tensions. Furthermore, we draw on the organization literature to identify key characteristics of tensions, how and why tensions may emerge, and their potential consequences. Section three provides a description of the research methods, and in section four we present our embedded case study that examines tensions in a Dutch public sector organization. Section five discusses the findings in the light of the present literature, followed by conclusions and implications for theory and practice in section six.

2. Theory

To theoretically inform our study of the underlying processes that create tensions, we draw on the literature on tensions. First, we discuss how the accounting and control literature has used tension-related terms, after which we will further develop the notion of tensions while drawing on the organization literature.

2.1. Management control and tensions

The management accounting and control literature that examines tensions has grown substantially in the past fifteen years (see e.g., Henri, 2006; Kruis et al., 2016; Mundy, 2010). According to a recent literature review, this has not, however, led to convergence on what such a tension constitutes:

> "many [tension-related] terms are used in the articles, often interchangeably and without really clarifying their definitions" (Lövstål and Jontoft, 2017, p. 65).

First, there is a substantial stream of tension literature in the field of accounting and management control that draws on Simons' (1995) levers-of-control framework (cf. Henri, 2006; Kruis et al., 2016; Mundy, 2010; Widener, 2007). Simons (1995, 2000) argues that it is important to *balance* the four levers (belief, boundary, interactive control, and diagnostic control systems) to manage the inherent tensions in organizations. He refers, for instance, to the tension between intended and emergent strategies, and the tension between employees' self-interest and their desire to contribute to the organization. Mundy (2010) also emphasizes the importance of balancing the levers of control for dynamic tensions to materialize. While she sees tensions as a source of enhanced performance in organizations, she considers the absence of tensions as foreshadowing difficulties in achieving desired organizational outcomes.

Another strand of literature looks at dynamic tensions while drawing on other categorizations of MC elements. For example, Stouthuysen et al. (2017) investigate how the simultaneous use of behavior and outcome controls may generate a dynamic tension that is helpful in an alliance setting. The authors argue that while the combined use of outcome and behavior controls helps to create this necessary tension, a preference for one formal control type over the other may disrupt the ability to simultaneously address demands for both exploration objectives and predictable exploitation objectives, and ultimately hinder the performance of ambidextrous alliances. Again here, the balance in the use of controls is considered important for the generation of dynamic tension.

While researchers seem to agree on the importance of balance, the meaning of balance and the question of how balance can be achieved are dealt with in different ways. Simons (1995, 2000), for example, posits that the four levers of control are all necessary to create dynamic tension, and thus an effective control environment, and some researchers accordingly equate balance with a proportional use of different types of control. This has led to the proposition that the use of one type of control should lead to an increased use of another type of

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[1] A substantial part of the literature studying the interplay of MC elements relies on the distinction between *complementary* and *substitutive* relations (Widener et al., 2008; Grabner and Moers, 2013; Abernethy et al., 2015; Bedford, 2015; Friis et al., 2015). We divide substitutive relationships into two types: full substitution and competition relationships. The former type ultimately results in the full substitution (i.e. disappearance) of one element (for instance as an MC design decision by management), while the latter type acknowledges the decrease in the returns of both elements while both elements remain simultaneously present in the organization. While accepting that both types are substitutive relations according to the commonly used definitions, we distinguish between the former (full substitution) and the latter (competition).

control, and that the combination of two types of control results in dynamic tension which is associated with better performance (cf., Widener, 2007; Henri, 2006). For instance, Henri (2006, p. 541) operationalized dynamic tension as the outcome of "a product term between diagnostic and interactive use".

Other researchers seek a more dynamic understanding of the concept of balance and how it relates to dynamic tension. For example, according to Mundy (2010), balance is neither an object in itself nor a static concept: while managers attempt to balance different uses of controls, they are constantly hindered by new and updated information and by shifting priorities. Mundy (2010) furthermore explains why tensions are dynamic: "there are *continual* and varied strategic forces acting both internally and externally", which complicates the 'balancing' of controls by managers (Mundy, 2010, p. 502, emphasis added). This quote highlights that dynamic tensions inherently require continuous attention and a manager's ability to emphasize different controls at different moments in time in order to deal with forces inside and beyond the organization that are 'continual'. Despite this acknowledgement of the importance of balancing, Mundy (2010) paid only limited attention to the dynamic and complex aspects of tensions, i.e. their volatility over time and how internal or external forces can continuously shape and influence the balance between the elements' complementary and competitive aspects, and the changing intensity of their use. This has left the MC literature with a potentially powerful but underdeveloped notion of tensions among MC elements (Lövstål and Jontoft, 2017), which is problematic since conceptual clarity is a necessary building block for the further development of theory (Whetten, 1989).

The aforementioned literature has provided a solid basis for understanding relationships between MC elements. However, we will also draw on organization literature on tensions and paradoxes, which will provide additional insights on what constitutes a dynamic tension, why they emerge, how they can be (re)balanced, and their possible consequences.

2.2. Tensions and paradoxes

The literature on tensions and paradoxes relates organizational dynamics and human behavior, for instance by examining how individuals act in organizations if different motivators, controls, and objectives play a role simultaneously, and the balance between them changes over time. The increasing research attention to the concept of tensions and their ability to describe and analyze complex organizational phenomena has resulted in a useful body of literature (e.g., Poole and Van de Ven, 1989; Lewis, 2000; Sundin et al., 2010; Smith and Lewis, 2011; Lewis et al., 2019). Lewis (2000) studied the tension between flexibility and control and observed that tensions are not so much about trying to 'balance' and 'compromise' but, rather, about awareness of simultaneity and the constant motion across opposing and complementary forces (i.e. tension complexity) in organizations, and the need to balance them (see also Smith and Lewis, 2011). In a similar vein, Sundin et al. (2010) argued that the noun 'balance' can be problematic and that the verb 'balancing' is often more appropriate since it presents balancing as an active and *dynamic* process, rather than a steady state or static outcome. Tensions thus need maintenance and continuous effort, in part because objectives can have different priorities at different times. Furthermore, the extent to which tensions are "salient" can vary. In this respect, Lewis et al. (2019, p. 489) highlight that paradoxical tensions can be latent: they can sometimes "remain unnoticed by organisational members". Organizational responses may therefore vary depending on the salience of the tensions.

Although their precise foci differ, authors such as Poole and Van de Ven (1989), Lewis (2000), English (2001, 2010), Smith and Lewis (2011), and Lewis et al. (2019) have researched tensions and provided insights into how to structure the understanding of tensions and engage in a balancing act (see in this context also, for example, Bledow et al.,

2009; Epstein et al., 2015). These authors' understanding of a tension is based on the idea that it concerns the simultaneous presence of two contradictory 'poles': competition and complementarity. Lewis (2000, p. 762) and English (2001, 2003), for example, illustrate tensions by stating that two elements can be like 'yin' and 'yang', which simultaneously oppose and reconcile, or complement and compete, while the intensity of the elements in the tension can vary over time. Lewis (2000) underlines that these poles can in fact be interrelated and are not only simple contradictions. In our context, this could mean that an 'MC package' can contain elements that are interrelated in a rather complex manner (cf. Malmi and Brown, 2008; Lewis et al., 2019). The paradox literature stresses that it is by appreciating the interwoven nature of competing demands that a better and more integrative understanding of opposing forces can be gained (Schad et al., 2016). English (2001, 2010) states that a tension relationship can 'create' something that would not have been created if the phenomena would not have been joined (complementarity), but also at the very same time can 'destroy' something else (competition). It is thus recognized in this literature that the relationship between elements that are in tension has two dimensions that can be individually identified: complementarity and competition.

To enhance our understanding of tensions, it is important that such tensions are identified and that researchers, and perhaps also practitioners, can draw on a precise vocabulary to describe the key characteristics of tensions. Based on the examined literature, we therefore propose balance, balance tendency, and intensity as key characteristics to describe a tension between two elements (Lewis, 2000; English, 2010; Smith and Lewis, 2011; Epstein et al., 2015). *Balance* deals with the relative (i.e. not absolute) strength or presence of the elements in the tension when compared to each other at one moment. When both elements in a tension are equally weak or equally strong, the balance can be regarded as 'equal'. When one of the elements is relatively stronger, this can be regarded as a 'bias' of the tension toward that control element. *Balance tendency* refers to the dynamic characteristics of a tension over time, i.e. the extent to which a tension 'oscillates', in the terminology of English (2010, p. 870), or moves in one particular direction. The focus here is on whether the relationship between two elements is stable or unstable over time. Aspects such as the influence of external factors on the tension highlight the need for 'balancing' acts by managers because the elements in the tension are not in a stable balance. *Intensity* refers to the extent to which control elements are used, i.e. the absolute strength of the elements in the tension relationship. Treating intensity as a separate trait from balance also allows one to distinguish between, for instance, two MC elements that are in balance but hardly used (low intensity) and two MC elements that are in balance and both used extensively (high intensity). In both situations, the two tensions can be in balance but may require different actions. Although Henri (2006) refers to the work of English (2001) when conceptualizing dynamic tensions, only the *intensity* of the combined use of two levers of control is captured in his paper, and not the tension characteristics *balance tendency* and *balance* (cf. English, 2001, 2010).[2]

2.3. Tensions, their antecedents and effects

Dynamic tensions involve both a complementing relationship and a competing[3] relationship between elements, and as such are *two-*

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[2] This is also acknowledged by Bedford (2015, p. 18): "Henri models dynamic tension as a product term, reflecting intensity of combined use rather than the relative balance between levers." While we recognize the references made to the work of English by Henri (2006), we believe that the work and the terminology of English have not yet been used to its full potential in the MC literature.

[3] The MC literature on complementarity and substitution takes Milgrom and Roberts (1995) as a starting point and considers MC elements to be complements (substitutes) "when the being or doing more of one control element

dimensional relationships. Dynamic tensions between two MC elements may be necessary and may be designed as such. It has been argued, for instance, that in creative settings some tensions are inevitable:

> "A tolerance for failure requires an intolerance for incompetence. A willingness to experiment requires rigorous discipline. Psychological safety requires comfort with brutal candor. Collaboration must be balanced with a individual accountability." (Pisano, 2019, p. 62)

Accordingly, we expect that tensions can be designed by managers to deal with inherent conflicts between different organizational goals. In a similar vein, although Lewis (2000) considers collaboration on the one hand and autonomy and individual accountability on the other as potentially contradictory, she views them as interrelated control elements that need to be balanced such that opposing forces are in equilibrium. It is also possible that a dynamic tension emerges unintentionally. This could occur when, for instance, MC elements are imposed by different managerial layers without these managers knowing of each other's actions. To date, it remains unclear how exactly tensions come about, and what managers can do to use these tensions in such a way that they help to achieve organizational goals. Empirical evidence that could support our expectations regarding the origins of such tensions is also lacking, and therefore we will explore in our case how the dynamic tensions came about.

Given that competition between MC elements leads to a *decrease* in the return on the combined elements and that complementarity provides an *increase* in the returns, the aggregated return from a two-dimensional relationship involving both competition and complementarity can be positive (when complementarity is stronger than competition) or negative (when complementarity is weaker than competition).[4] The possibility of tensions generating positive and negative effects has led researchers to describe them as a "double-edged sword, potentially sparking innovation and peak performance, but also spurring anxiety that can raise stress and counterproductive defenses" (Miron-Spektor et al., 2018, p. 27).

Since organizational performance is ill-suited to measure the effectiveness of MC elements, a positive or a negative effect of a

combination of MC elements may well be seen in terms of its effectiveness in resolving the control problems present in an organization (Bedford, 2015). In our review of the MC literature on dynamic tensions, we saw that most research discussed positive aggregated returns from dynamic tensions (Curtis and Sweeney, 2017; Lövstål and Jontoft, 2017), with very little evidence of negative aggregated returns. Mundy (2010) does hint at negative returns if tensions are not managed effectively: "purposeful intervention by senior managers" is needed in order to ensure that tensions yield positive net returns (Mundy, 2010, p. 516). This implies that a lack of such purposeful intervention may create conditions in which productive tensions (i.e. tensions with a positive aggregated effect on control effectiveness) do not emerge, and perhaps even unproductive tensions (i.e. tensions with a negative aggregated effect) may emerge. Lewis et al. (2019, p. 489) argue that a management response is needed when tensions are rendered "salient", for instance when internal or external forces "bring the opposing elements into juxtaposition". Yet, how managers can respond to such situations has not been studied in the MC literature.

To enhance our understanding of the notion of tensions and possible strategies to deal with them, we adopt an integrative approach. This means that we study such relationships in the contexts in which they occur (cf. Hopwood, 1983), using case evidence collected in interviews, desk research, and observations. The following section provides details on our research method.

3. Methodology

A case study method is considered appropriate for exploring the interplay between MC elements and developing the notion of dynamic tensions (Ahrens and Dent, 1998; Otley and Berry, 1994). By studying an embedded case, we are able to examine the dynamics between various MC elements employed on different hierarchical levels and study their "combined effects" on those who are subjected to the MC elements (Van der Kolk, 2019, p. 516). We investigate the MC elements and their interrelationships in the municipality of 'Bluetown' in the Netherlands, while paying specific attention to how dynamic tensions played out for employees working in two departments within this municipality: a maintenance department and a policy department. We conducted interviews, desk research, and observations to examine tensions among MC elements in the contexts in which they occurred.

3.1. Case study

We study dynamic tensions among MC elements, and specifically scrutinize their effects on employees. A case study design can be powerful in exploring mechanisms or developing theory (e.g. Alvesson and Kärreman, 2004), and so we chose to study dynamic tensions in two departments with different activities, in which we expected to find different interrelationships among MC elements. This embedded case study design will ensure some variation and differentiation in the contexts in which we investigate dynamic tensions (Flick, 2009) and has the potential to make the empirical evidence and analytical arguments more robust (Yin, 2014). We provide a synopsis of the control background of the two departments within the municipality of Bluetown in Table 1, and categorize the MC elements using the four categories of the 'object-of-control' (OOC) framework[5] by Merchant and

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(*footnote continued*)

increases (decreases) the returns on the being or doing more of the other element" (Friis et al., 2015, p. 242). Although this definition of substitution leaves room for the simultaneous presence of two elements that are in a substitutive relationship, the implicit assumption in this literature seems to be that when elements are in a substitutive relationship, organizations will make different control design choices, e.g. "substitute" one MC element with another, than when they are not. Such conscious control design choices may subsequently lead to the disappearance of one of the two elements that are substitutes of each other. For instance, Dekker (2004) discusses the relationship between trust and formal control: "A substitutive relationship suggests that trust and formal control are inversely related; more trust results in less use of formal control mechanisms and vice versa. When, for instance, a firm has a reputation for being trustworthy, its *partners may choose* to use less formal control mechanisms compared to a firm with a less favorable reputation." (Dekker, 2004, p. 33, emphasis added) So, following Dekker (2004), in this case not only the *returns on* the being or doing of one control element (e.g. the returns on formal control) may be decreased by the being or doing of another element (e.g. trust), but also the being or doing *itself* (i.e. the presence of formal control) may be decreased because of the design choices made by the organization. Some substitutive relationships may thus result in the disappearance of one of the elements, while in other cases both elements remain present. Following the definition by Friis et al. (2015), both types of relationships can be considered 'substitutive relations'. In this paper, we distinguish between the former (a *fully substitutive* relationship) and the latter (a *competing* relationship). Such a competing relationship can also be understood as a 'negative complementary' relationship between two elements (cf. Nikias et al., 2005).

[4] Theoretically speaking, it would also be possible to include a category in which competition exactly equals complementarity. Given that this possibility seems largely 'hypothetical', we have not included it here.

[5] The OOC framework distinguishes four types of control. *Personnel controls* are mechanisms that aim to organize the 'human resources' in organizations. Examples of such controls include selection interviews and training, but also job design, appraisal interviews, and coaching activities may be classified as 'personnel controls'. *Cultural controls* deal with the use of norms, values, and group dynamics to align subordinates' behaviors with the organization. For example, norms and values expressed by top management are cultural controls, and also the 'tone-at-the-top' can be considered as such. *Results controls* focus on the outcome or output of the subordinate. The monitoring of results and individual

Table 1
Portrayal of key MC elements.

Centralized TNO program	
- Organizational value of self-management	
Maintenance Department	**Policy Department**
Personnel controls	*Personnel controls*
- Selection of new hires focuses on technical skills and fit with the existing group	- Strong selection process for new hires
- Training is frequently offered and participation is encouraged by managers	- Coaches support employees and teams
	- Requests for training or education are encouraged and often approved
Cultural controls	*Cultural controls*
- Managers and employees engage in very direct communication	- Mutual monitoring and horizontal feedback is encouraged by management
- Mutual monitoring takes place informally	- Individualistic culture in department is reinforced by high level of autonomy and task ownership
- Humor during meetings reinforces informal culture	- Offices typically shared with one other colleague
- Office team has desks in an office square and the service team is mostly on the road	
Results controls	*Results controls*
- Output information about work times and output is measured through software system	- Output information about individual performance is mostly subjective
- Timeliness and effectiveness of tasks form an important dimensions of output	- Weak link between results and rewards
- Weak link between results and rewards	
Action controls	*Action controls*
- A detailed log of daily activities	- Very limited attention to procedures
- Safety procedures for maintenance tasks	- Advisors highlighted their own responsibility to do the right things
- Small rewards for good teamwork	
- Workflow diagrams for repetitive tasks	
- Little prescribed procedures for problem-solving tasks	

Van der Stede (2007).

At the time of the study, the municipality of Bluetown had about 130,000 inhabitants and employed around 1200 full time equivalents. We selected – together with the municipal financial controller – two departments with different task characteristics to ensure variety between the embedded cases (Flick, 2009; Ouchi, 1979). One selected case had an assumed 'high' level of knowledge of the transformation process and output with a 'high' measurability (the Maintenance Department), and the other case was seen as having a 'low' level of knowledge of the transformation process and 'low' output measurability (the Policy Department).

3.2. Interviews and data triangulation

We used several data collection methods in order to triangulate and verify the obtained findings (following Modell, 2009; Vaivio and Sirén, 2010). The core of our research consists of 25 recorded and fully transcribed semi-structured interviews, which we held with civil servants and politicians (see Appendix A for a list of interviewees). The average length of the interviews was 70 minutes. To mitigate potential biases and to ensure a representative sample, the interviewees were selected on the basis of the following criteria: work experience, gender, and age (cf. Miles et al., 2014). We interviewed people on all three hierarchical levels in the municipality (cf. van Hengel et al., 2014, p. 56): top, medium, and department levels. The first set of interview questions dealt with the MC elements that were used, for instance "Do employees have to deliver results? If so, in which areas?", "Do employees monitor each other? If so, how, and to what extent?", "Are employees held responsible for their actions? If so, how?" and "Do employees know what is expected from them in their current position? If so, how?" Having acquired a good understanding of the configuration of the MC package, we asked follow-up questions about the interplay of the MC elements within the MC package used, such as: "Do you experience that control practices interfere with one another?" and "Do you feel that some control instruments strengthen each other's use?",

after which we asked the interviewees to elaborate on their answers by providing examples or anecdotes. All the interviews were fully transcribed.

Supplementary data were gathered from field observations and desk research. We spent 30 days – in the period from June 2013 to May 2014 – in the case organization, and witnessed a wide range of organizational events, such as official meetings, informal lunches, and also day-to-day work activities. A detailed account of activities undertaken was kept, and field notes were entered in a research diary. A list of official meetings that were attended is provided in Appendix B. Informal conversations, observations, and meetings (e.g. in elevators and corridors and near the coffee machines) are not listed here, but also helped in making sense of the data during the case analyses and were reported in a document with field notes. We were granted full access to departmental and municipal documents and a set of 68 documents[6] were collected that provided additional insights into the technicalities, use, and effects of the MC elements.

3.3. Identification of the variables

We analyzed and coded the collected case data in Atlas TI, a software tool designed for analyzing qualitative data. The semi-structured interviews were transcribed and Atlas TI provided a possibility to simultaneously view multiple transcriptions, which allowed direct comparisons between the transcriptions within each of the groups of interviewees. The information regarding the use and interplay of MC elements (from the interviews, field notes, observations, and documents) was then summarized for each department and formed the basis for our understanding of the MC elements used in the two departments. Subsequently, we studied the relationships among the MC elements and examined tensions among MC elements in the two departments, using the tension characteristics balance, balance tendency, and intensity. We scrutinized the interviews, field notes, and documents for information that could further deepen our understanding of the MC elements and the related tensions among them (cf. Miles et al., 2014). In the following section, we provide detailed accounts of how tensions among MC elements are complex (simultaneously complementing and

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(*footnote continued*)
performance evaluations can be seen as results controls. *Action controls* aim to influence the behavior of subordinates through prescribing and monitoring desired behavior and actions, for instance by protocols, rules, and procedures (Merchant and Van der Stede, 2007).

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[6] For instance, minutes of meetings, the content and evaluations of training programs, internal presentations, policy documents, individual performance evaluations, and strategic plans.

competing) and dynamic (changing over time), and we explore why this is the case and what managers can do to manage the tensions.

4. Embedded case study

4.1. Dutch municipalities, Bluetown, and the TNO program

Municipalities in the Netherlands are the "most important and visible level of sub-national government" (van Hengel et al., 2014, p. 55). They have autonomous power and carry out various activities that directly affect local residents. For instance, youth care, issuance of passports, maintenance of roads and public buildings, and waste collection are part of every municipality's tasks and responsibilities (cf. Van der Kolk et al., 2019). The political responsibility for the activities at municipalities lies with the mayor and a team of executive politicians (the aldermen). Although local variations exist, most of the approximately 400 Dutch municipalities consist of a top management layer, a middle management layer including department managers and team leaders, and the civil servants on the operational level.

Bluetown is a medium-sized municipality, and as the capital of a province it also serves an important function for the region. The municipality is often described as innovative and 'best in class' regarding its human resources practices:

> "I am proud of [Bluetown] being the best employer in the non-profit sector and of the fact that we're currently the only municipality having earned the 'Investors in People' certificate." (MAYOR OF BLUETOWN)

At the time of our study, the municipality was confronted with decreasing budgets from central government as a consequence of the 2008 financial crisis. Bluetown's top management team therefore decided to cut costs dramatically by removing most of the team leader positions in the municipality's middle management. Consequently, the "span of support' of the remaining middle managers increased and simultaneously employees were urged to become more 'self-managed'. In this context, the human resources department developed a municipality-wide program called 'The New Official' (TNO), which served as an umbrella for various changes to employees' tasks, teamwork, training programs, and self-management practices. In an internal policy document, TNO was introduced as follows:

> "It's about renewing the physical workspace, the organization structure and culture, the management style and the mentality of the employees and managers […] [Bluetown] designed a development program that has to result in an inspired, self-managing and result-oriented way of working: The New Official."

As emphasized in this quote, the TNO program aimed to increase employees' self-management, making them less dependent on others in the organization. From a control perspective, the core of the TNO program can be seen as a 'cultural' or 'ideological' MC element. The central value of the TNO program was self-management: 'to do things on your own', according to the initiator of the TNO program. In the organization, the value of self-management was associated with independence, proficiency, professionality, result-orientation, autonomy, and trust, and was repeatedly communicated in presentations, blogs, mailings, speeches, and on the municipality's websites.[7] Posters and screens containing TNO's core self-management-related message were highly visible in busy spaces in the municipality's buildings, accompanied by texts such as "The New Official: Do you have what it takes?" (see Appendix C). The value of self-management was also repeatedly

emphasized in training[8] sessions that were offered to Bluetown's employees and managers, during which participants were challenged to put the municipality's values into practice by translating them into implications for their everyday work.

The initiator of the TNO program motivated the program by referring to the program's ability to unlock employee potential while simultaneously potentially cutting costs:

> "[We want to communicate to employees:] you are already 'complete' yourself; you can do many things on your own! We say this partly because we want to economize, but also really because we think that currently people work with too many others, and that it's way more effective and powerful to do things by yourself." (HR ADVISOR 2)

The TNO program was implemented in all parts of the organization, regardless of the employees' education level, types of tasks, and the measurability of the outputs of the department. All department managers thus had to work with this organizational value of self-management: ignoring this organizational MC element did not seem an option. We conducted our embedded case study in this particular setting because this allowed us to examine the possible tension between the TNO program and 'local' MC elements (see Table 1) used in the Maintenance Department and the Policy Department. We analyzed tension complexity and dynamics, while particularly paying attention to the tension characteristics. We also examined how managers tried to deal with the tensions and what the effects of the tensions were on control effectiveness.

4.2. Maintenance department

The Maintenance Department employed around 38 employees at the time of our study, and is tasked with the maintenance of all municipal buildings and installations, such as bridges, water pumps, and traffic lights. The department includes maintenance employees 'on the road' to fix breakdowns or to do maintenance, and a team of planners and coordinators who mainly work in the municipal offices. Here, we focus on the former group of employees, also called the service team. We examine the tension between TNO's focus on self-management and the explicit requirement to log tasks when they are finished.

For maintenance employees it was impossible to be unaware of the TNO emphasis on self-management since this was frequently communicated to them in various ways from the start of the TNO program. For instance, large digital screens that were placed in the shared spaces of the department (where the daily coffee breaks and lunches were held) repeatedly showed several self-management related words, and training was offered to further implement the TNO program and to help employees translate 'self-management' to their own work situation. The department head tried to convince employees to take part in such training sessions by "giving a platform to people [during department meetings] who took the training and were enthusiastic to share their story" (DEPARTMENT HEAD). The value of self-management was believed to be central to the activities of the Maintenance Department, as illustrated in the following quote:

> "Self-management is just necessary here. You have to be able to

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[7] We were given access to a wide range of internal documents, including internal evaluation documents, schedules, notes from meetings, training material, and presentations related to the TNO program that were used in the 2009 – 2015 implementation period.

[8] The training consisted of at least three half-day elements, and although participation was on a voluntary basis, a large proportion of the employees and managers at Bluetown took part. Our interviewees could reproduce the central TNO ideas related to self-management without any problems, and an internal evaluation document on the training also indicated that the training was effective since Bluetown's self-management approach had become clearer for "almost all participants" (source: internal evaluation document TNO training). We had access to the content of the TNO training, discussed the training with various interviewees, and had access to internal documents that evaluated the TNO training.

solve stuff on your own. […] Yesterday, for instance, an external engineer was working on an installation. While he was working on it, the installation broke down; it was already a bit old, but it went completely down and there was no way to get it working again. All computers went blank, everything was dark, coffee machines, everything. And at that moment we had to solve it. […] So, we immediately ordered a new one that would be there the same day. It was a temporary one, but we would deal with the details later. We just had to find a solution [to turn on the electricity again], because everything had to go online again. All sorts of things were depending on the systems: parking garages, remote control bollards, everything was connected to it, and nothing worked. So, we had to deal with that at that moment. And at that moment it's not that important what the costs would be. We would deal with that later." (MAINTENANCE EMPLOYEE 2)

The urgency of most of the employee's tasks was an important reason why the value self-management strongly resonated with the maintenance employees. Furthermore, an element of self-management was more formally embedded in the department, as its strategic plan stated that maintenance employees should be able to solve over 80 % of the breakdowns quickly and 'on their own'. At the same time, employees in this department are required to log their activities in Microsoft Sharepoint, a software program that is used to allocate, register, and monitor the tasks of maintenance employees. Whenever a task is finished, the maintenance employee has to report this in Sharepoint so that others, including the department head, know what he has done (and how long it took).

Self-management and the logging of tasks can be understood as elements that complement one another and help to carry out tasks in a more effective manner. This can be illustrated with a quote by a maintenance employee:

"We have to log the breakdowns in the Sharepoint system. We also include some information in it like what was exactly going on. In this way, a colleague who is confronted with a similar issue next week understands better which things work and whether the problem goes deeper. So, with that type of information, you *help yourself and your colleagues* [to work efficiently and effectively]. And, in the management report, they get a good understanding of the 'productivity' in terms of solving breakdowns. It's nice to get an overview like that, to see things like 'we solved so many breakdowns within this time frame'. It means you can put the meter on your own activities." (MAINTENANCE EMPLOYEE 3)

This quote shows how registration can help employees self-manage and carry out tasks better on their own (in the future), and the interviewee also indicated that the registration also gives the supervisor a better understanding of the 'productivity' of the employees. Ex-post control seems in these situations an appropriate way to exercise control because the work of maintenance employees is difficult to predict, since a significant number of tasks are responses to urgent problems. Self-management particularly resonated with the tasks and the task understanding of the Maintenance Department and enabled the staff to carry out their tasks effectively:

"Responsibility should be 'lower' in the organization, they now say. But for me it doesn't really change anything, I already feel responsible for my work […] if you don't do your work well during the week, you are confronted with it during the weekends: the breakdowns will then come back to you [shifts of team members were available to deal with breakdowns at night and in the weekends]. So, it's better to make sure that everything functions well during the week, and that you have your stuff done." (MAINTENANCE EMPLOYEE 3)

Choosing to let employees self-manage while assessing their activities ex-post seems thus a well-fitting combination, which was also

acknowledged in strategic documents at the municipality level about the functioning of the TNO program: "Taking responsibility and being accountable [by logging the tasks] creates self-steering power at the employee level." (TNO REPORT ON SELF-STEERING) This was also supported by quotes from employees indicating that the high degree of self-management helped them to carry out their tasks, for instance:

"The things I do, I do because they're good for me, for the team, and for the department. I'm not 'forced' to do those things. The procedures I follow and that are handed to me are helpful and useful and support me in my activities." (MAINTENANCE EMPLOYEE 1)

However, although the complementary relationship between the elements seems clear, self-management was also reported to hamper the reporting of tasks, indicating a simultaneous competing relationship. For instance, the urgency of some tasks and the freedom to self-manage distorted to some extent the registration of the tasks:

"Because we're self-steering, there are also other people [outside of the organization or department] who ask us to do things for them […] but these tasks are not assigned through the official system […] I should actually get used to reporting a task in Sharepoint when I leave a site: I did this and that, and at this time I drove away. But mostly I just go back to the car, to the next [urgent] task. And, at the end of the day, it's difficult to remember everything I've done. Often it's two weeks later that I find out: S**t! I still have to fill out my tasks! What have I actually done? […] Sometimes a number is missing, so then I just make up something. That might give a distorted image." (MAINTENANCE EMPLOYEE 2)

Another maintenance employee added that registering tasks simply got in the way of carrying out his tasks in time - highlighting that timeliness and quickly solving breakdowns were important aspects of his work. "If we would have to report everything we do, we would need a private secretary. Of course, [the higher level managers] want me to report everything, but I simply have no time for that; if I did, I couldn't finish all my tasks in time, which is more important than all the administrative stuff." (MAINTENANCE EMPLOYEE 3)

When comparing the use and emphasis placed on the two MC elements, it seems that the balance leans more toward the value of self-management than to the logging of tasks in Sharepoint. The fact that some tasks were not reported, and the subsequent incompleteness of the information in the registration software, led to a discussion during some of the observed meetings of maintenance employees. During one meeting, maintenance employees complained that higher-level managers relied excessively on information from the system and indicated that the information it contained was "far from complete" (OBSERVATION NOTES) because of the missing information. In response, the department manager used this discussion as an opportunity to manage the tension that was now rendered salient, making clear that reporting tasks in Sharepoint was of key importance. He emphasized and repeated the relevance of reporting tasks in Sharepoint by indicating that this was one of his main sources of information to evaluate employee performance and gain an overview of the activities of the department. Furthermore, he "insisted that employees should correct each other if they do not log their tasks well" (OBSERVATION NOTES). This action can be seen as an effort to shift the balance in the tension toward the registration of tasks, and the department head thus suggested mutual monitoring to ensure that maintenance employees would report their finished tasks in the system. He managed the tension by making clear that self-management should not come at the expense of the reporting of tasks.

During another department meeting, a similar issue was raised, and this time employees voiced their concerns more clearly by explaining that the required reporting of tasks and the compulsory following of some procedures deprived them of their autonomy and their feelings of being a professional. From the observation notes:

"There is much agitation regarding the new organizational practices. [...] During the meeting there is much talk about the *what* and the *how* questions: the maintenance employees feel threatened regarding their autonomy and knowledge. They fear that the *how* [i.e. the way how they carry out their tasks and self-manage] will be taken away from them [because of the renewed emphasis on reporting and procedures]." (OBSERVATION NOTES)

In line with this observation, maintenance employees also indicated that "a supervisor shouldn't try to take over the wheel from a specialist" (MAINTENANCE EMPLOYEE 3). This fear, that the 'how' would be taken away from the employees, suggests that the balance tendency was not stable, but moving away from self-management, after its initial emphasis, toward the more controlling reporting and logging requirements. The team leader of the maintenance team responded to the tension that was rendered salient by acknowledging that the employees needed some space for self-management, but also emphasized the importance of task registration. In the reports of result-driven agreements that were made yearly with all employees, this issue was also raised, which can be illustrated with this example from such a report of a maintenance employee:

"Tasks have to be reported 'as finished' as quickly as possible. If that is not possible a comment should be included in Sharepoint. This way a reliable overview of the activities can be obtained."

The yearly appraisal conversations and the individual meetings between the supervisor and employee thus formed a good opportunity for the supervisor to shift the balance of the tension, emphasizing (i.e. increasing the intensity of) those MC elements they considered to be most important at that moment.

As a consequence of the increased emphasis on reporting activities, the maintenance team leader acknowledged that he sometimes heard back from employees that he "treated them as children". In one situation, a maintenance employee felt "threatened and feeble" because of what was required from him in terms of reporting activities. "At some point, I had to speak with him together with someone from the central HR department, because he did not feel he was taken seriously" (TEAM LEADER MAINTENANCE). As such, the compulsory reporting task did not yet produce the information the managers hoped for, and some maintenance employees felt they were not being taken seriously, while they hoped to be treated as 'craftsmen' and 'self-managing professionals'.

Although there was already some emphasis on self-management in the Maintenance Department, the intensity of self-management was increased by the TNO efforts, which initially shifted the tension balance more toward self-management. Later, however, supervisors in the Maintenance Department intentionally shifted the balance back, by focusing more on the reporting of tasks and thus increasing the intensity of that type of control, taking away some of the self-management and freedom from employees. The changes in the balance and the efforts to balance the tension indicate that the tension is dynamic, while the simultaneously complementary and competing relationships between the MC elements indicate that the tension is also complex. Furthermore, this case shows that the tension between self-management and task reporting does not stand in isolation, but also relates to other MC elements, such as the TNO training (to instill the self-management value) and the yearly results-driven agreements (which also affected the balance in the tension).

4.3. Policy department

The Policy Department had a staff of around 32 employees, and was charged with developing policy in the fields of education, culture, health, and society, and advising politicians about new developments in these areas. The general level of education in this department was fairly high, with most employees having completed at least a university

bachelor degree. Generally, the policy advisors had considerable freedom regarding how they carried out their tasks and managed their agendas. Although the strong emphasis on self-management in the municipality-wide TNO program initially seemed to fit well with the employees' characteristics and tasks, it also gave rise to a tension that required the constant attention of the department head: a tension between the newly emphasized value of self-management on the one hand, and the department head's initiatives to stimulate horizontal feedback and cooperation on the other.

Self-management was at the core of the TNO program and it was also traditionally an important aspect of working in the Policy Department, as acknowledged by various interviewees: "Much attention is given to individual responsibility, professionalism, and making choices *independently*" (POLICY ADVISOR 3). Furthermore, policy advisors could also easily reproduce the TNO keywords related to self-management. Self-management implies a less directive and controlling type of management by the superior and, as such, feedback from peers and horizontal collaboration can form a fitting and complementary type of MC in such situations, as acknowledged by the department head.

"I think that the organizational culture and personnel control fit very well together. There is a lot of space to make specific arrangements [...] and in every function there is some combination regarding a space in which you can make your own decisions and the need to do the 'regular' tasks that are expected. [...] Working from home really can help in this respect, I see more people do that and I realize this also myself. If you're here, you get sucked up in all sorts of activities. And if you think: 'I need to get some respite [...] so that I can do something creative' [on my own], working from home also really helps. So, we should organize things in such a way that the circumstances help to make everything work well together." (DEPARTMENT HEAD)

The department head indicated that he advised people to work from home for specific tasks that could indeed be self-managed, while he also stressed that for other activities it is important to be physically present at the department. Other interviewees also indicated that balance is important for the different types of activities, and that feedback and collaboration can sometimes – but not always – be very helpful in carrying out their tasks. Regarding the balance of the elements in this tension, it seemed that self-management had a higher value than other MC elements when the TNO program was introduced: the balance was skewed toward self-management.

In addition, the interviewees also indicated that, for addressing the content of their policy work in advising politicians, it is better to receive horizontal feedback from a colleague who is engaged in the same types of tasks rather than vertical feedback from a supervisor, because a supervisor does not always have the same in-depth understanding of the field in which the policy advisors operate. In other words, the policy advisors acknowledge that when feedback from peers is well received and processed by autonomous professionals, it has the potential to improve the quality of the work done at the Policy Department, suggesting a complementary relationship between the self-management value and horizontal feedback and collaboration.

Besides this complementary relationship, we also identified a competing relationship between these two MC elements. Given that the municipality's top management and the central human resources department repeatedly communicated the need to be a self-managing professional, employees showed more individualistic behavior. In other words, they emphasized the 'self' in self-management. This undermined the use and effectiveness of peer feedback.

"Policy advisors don't really work together or share experiences among each other. Neither do they provide feedback to each other extensively. It just doesn't happen a lot. However, [the department head] tries to bring those things to the attention through team coaching processes" (DIRECTOR).

Giving and receiving feedback requires strong ties among colleagues, but the connections within the peer group were weakened by the individualistic way many of the department members worked, fueled by the emphasized 'self-management' practices. "I have my own task package, and I don't need to cooperate with colleagues if I don't want to" (POLICY ADVISOR 1). Statements such as these support the competing relationship between employee self-management and collaboration. Furthermore, while we were present in the department, we were also told that there was some competitiveness within the department, because some policy advisors saw their work in this department as a necessary step for being promoted to higher level management or policy functions. This internal competition for more senior positions may also have decreased the willingness of policy advisors to work together.

To further explore the background of the competing relationship between self-management and feedback mechanisms, we examined an internal evaluation of management practices carried out by Bluetown's own human resources department. In this evaluation, the weaker social ties as a result of the self-management practices among employees were also seen as one of the reasons for the low levels of collaboration and horizontal feedback:

"Both employees and managers indicate that we are not used to giving each other critical feedback […] We're not used to critiquing one another and to approach each other constructively. If critique is expressed, it is normally not perceived as constructive but as negative and out of proportion." (INTERNAL EVALUATION DOCUMENT)

While the balance tendency of the tension was fairly stable, i.e. the emphasis on the control elements in this tension did not fluctuate greatly over time, the department head did actively try to subtly influence the balance of the tension, thereby demonstrating the importance of managing the tension's dynamics over time. The department head seemed aware of the difficulty to influence the tension because of its inherent complexity:

"We're not always working efficiently. They [the policy advisors] have a whole journey ahead of them learning to cooperate, delivering their 'products', to put it like that: with whom and when they should work together. It's also two-sided, on the one hand they should work together more, but I also don't want everyone to be involved in every project. Then we'd lose all our efficiency" (DEPARTMENT HEAD).

Although horizontal informal feedback played a role in the MC of the department, some policy advisors indicated that this control mechanism was not yet used to its full potential: "Regarding the informal feedback, I can't oversee everything of course but, as far as I know, it doesn't happen a lot. We are not that generous when it comes to providing each other with feedback on something" (SENIOR POLICY ADVISOR 1). Other interviewees indicated that they had followed some training on giving feedback, but that in practice the feedback process was not yet where they wanted it to be: "The theory is nice, but the practical implementation demands more direction from management" (POLICY ADVISOR 3). This quote illustrates that employees expect the manager to influence the balance of the tensions between self-management and collaboratively working together and providing horizontal feedback, by making more explicit what is expected from employees in different situations.

Another interviewee added that managerial interventions were indeed needed to ensure the tensions resulted in the desired outcomes. The interviewee illustrated this with a story about an unsuccessful manager who was replaced after only a very short time because "things went completely out of hand" (SENIOR POLICY ADVISOR 2). As a reason for this, it was suggested that this manager did not effectively manage the tensions present. In fact, this manager also used to proclaim that he did not 'see himself as a real manager' because he did not want

to intervene with the activities of the policy advisors. In contrast, the current department head was described by interviewees as the person "where it all comes together" (POLICY ADVISOR 1), implying that he indeed actively monitors all sorts of information, and recognizes, interprets, and balances the tensions between MC elements by increasing or decreasing the intensity of certain control elements as necessary.

An occasion where the current department head could typically 'manage' the tension between self-management and collaboration was during the weekly department meeting near the coffee machine on Thursdays. Most policy advisors would normally be present at this meeting and for this reason most policy advisors were present on Thursdays – on some other days of the week the office was rather empty. Although the meeting seemed 'informal', the department head was clearly in charge of the 'agenda' of the meeting, which typically consisted of some news from the top management and the political level, comments on personnel issues, projects, achievements, and personal celebrations such as birthdays and promotions. We highlight one such meeting in which the department head emphasized that it was very important to be physically present at the department, and that some policy advisors were, in his view, too often 'on the road' or working from home.

"Everyone is gathered in the space between the offices. [The department head] explains what was discussed in the management meeting of department heads, and what topics were discussed between the executive politicians and the municipality's top management […] In relation to working at home, it is mentioned that this cannot be 'holy'. Even if it's your work-from-home day, you have the duty to be in the office if there is some type of meeting." (OBSERVATION NOTES)

So, while the department head acknowledged the employees' autonomy and self-management, he also emphasized that these principles were not sacrosanct. He explicitly made the point that a physical presence is key for effective collaboration. Furthermore, he specified the conditions under which collaboration would be considered more important than self-management, namely, when a meeting was planned with colleagues. This effort by the department head can be seen as an action to increase the intensity of collaboration and horizontal feedback, and thus shift the balance toward collaboration, stimulating the conditions under which this might occur and by making his expectations clear to the department's employees.

The evidence suggests that the tension between the self-management and the collaboration and horizontal feedback mechanisms is both complex (the elements are simultaneously complementing and competing) and dynamic (although the balance tendency is relatively stable, the manager still has to intervene to effectively manage the tension once it has been rendered salient). The balance between the elements can be influenced by managers when they increase or decrease the intensity of an MC element, such as the horizontal feedback mechanism in this case, which then results in a shift in the tension balance. Furthermore, managers can also address the tension by outlining the conditions under which one element in the tension should prevail - as illustrated with the example about being physically present in the office at certain times.

5. Discussion

Drawing on the MC and organizational literature on tensions, this paper has examined the relationships between MC elements and explored the inner workings of control combinations. Whereas previous research has tended to focus on the aggregate effects of control combinations, we pay particular attention to the complexity and dynamics of combinations of MC elements. We explore the underlying processes that create tensions between MC elements and how and why these tensions generate positive or negative effects on control outcomes. Specifically, the embedded case study demonstrates how the

organization-level *value of self-management* created tensions with the departmental MC elements *task logging* and *horizontal feedback and collaboration*. In this section, we discuss the theoretical implications of our case findings. We show how our findings and analysis contribute to a better understanding of interactions among MC elements and the consequences of these interactions in terms of control outcomes. We also provide theoretical insight into the role managers have in balancing tensions between MC elements.

5.1. Tension complexity and dynamics

The case findings add greater depth to our understanding of the inner workings of tensions. The findings highlight that tensions can be complex – i.e., they involve the simultaneous presence of complementary and competing forces among MC elements – and dynamic – i.e. the intensity with which these elements are used fluctuates, and the relative balance of the elements in a tension changes over time. In the Policy and Maintenance Departments, tensions emerged because of a municipality-wide program to promote 'self-management' in order to remove a managerial layer and cut costs in Bluetown. In both departments, the centrally coordinated TNO program to promote the value of self-management both complemented and competed with existing 'local' MC elements. In the Maintenance Department, for instance, the effectiveness of the task-logging system was reinforced by the value of self-management, which signifies a complementary relationship: the system allowed employees to manage their own tasks more effectively ('*[by logging the tasks] you help yourself and your colleagues*'). At the same time, the case evidence revealed that the reporting of tasks could diminish employees' feelings of being an autonomous professional ('*he did not feel he was taken seriously*'), which suggests a competing relationship between these MC elements. As such, our analysis demonstrates in detail how centrally coordinated efforts to exercise MC through an organizational value may lead to 'local' problems even though, on the surface, the communicated value of self-management would seem to benefit all parts of the organization ('*everywhere in our organization we say: our employees are professionals*'). We highlight the *simultaneous* positive and negative effects that such a centrally coordinated organizational value may have: the tension created has both complementary and competing aspects.

Our study enhances the understanding of the simultaneously complementary and competing relationships that may exist between MC elements, nuancing and broadening the implicit assumption in the literature that the interplay among MC elements is limited to aggregated, one-dimensional complementarity and substitutive relationships. The insights provided by the embedded case study help in understanding the dynamic tensions as two-dimensional relationships that involve both complementarity and competition. Competing relationships and negative 'aggregate effects' (when the competing relationship outweighs the complementary one in a tension) have received very limited attention in the literature on interrelations among MC elements (cf. Malmi and Brown, 2008, p. 297), and our study contributes to this literature by disentangling what it means for a relationship to be 'competing'. Although earlier studies have hinted[9] at the existence of

competing relationships among MC elements, this remains a largely unexplored area. On the level of one-dimensional relationships, the notion of competition between two MC elements further enhances our understanding of substitutive relationships (see e.g. Friis et al., 2015) by distinguishing it from 'full substitution'.[3] A competing relationship resembles ideas about 'negative complements' – elements that decrease each other's usability as MC elements (cf. Nikias et al., 2005) – and, by using it here, we seek to enhance the MC literature by introducing this analytical category and providing empirical evidence on such competing relationships between MC elements.

The evidence presented also contributes to the MC literature by making clear what it means for MC elements to be in a tension that changes over time. In the Maintenance Department, for example, the emphasis on the reporting and logging requirements increased, after the messages about self-management intensified by the implementation of the TNO-program. This shows how internal and external forces may shape the tension over time and shift its balance. In addition, the case findings reveal how the centrally coordinated focus on self-management by the municipality of Bluetown created a need for the heads of both departments to deal with changed employees' perceptions of what was expected of them, i.e. to change the intensity of MC elements that they could influence directly. The tensions changed over time, requiring managers to take appropriate action (e.g. by making a clarifying statement regarding the prioritization of the MC elements during a meeting) to ensure the tension would continue to generate positive effects on control effectiveness. This finding highlights the 'dynamic' aspect of tensions, further developing the importance of the time aspect in tension management (cf. Mundy, 2010; Sundin et al., 2010).

5.2. The emergence of tensions and their characteristics

The case findings show the mechanisms that create and underpin dynamic tensions, and generate theoretical insights into why these tensions emerge. Examining the introduction of an organization-level MC element in two departments, we identify three triggers that can give rise to tensions: 1) MC elements are introduced by different hierarchical managerial levels, 2) MC elements are introduced at different moments in time, 3) MC elements send different messages regarding employee empowerment. These reasons alone do not per se give rise to tensions, but they create the conditions in which the tensions can emerge.

Bluetown's idea of adopting self-management as a new core value was inspired by their desire to remove a layer of managers as a means to cut costs. It was Bluetown's top management that decided to emphasize the value of self-management via the TNO program, spearheaded by the HR department. The case study in the Maintenance Department reveals that, after its introduction, this value of self-management interacted with other 'local' MC elements, at *different hierarchical managerial levels*. The findings also demonstrate that tensions can arise when the value of self-management is stressed while there are still clear rules in place (e.g. the reporting activities) that were introduced previously; the organization-level MC element and the local MC elements are thus introduced at *different moments in time*. Further, employees in the Maintenance Department felt that they were not being taken seriously as '*self-*

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[9] For instance, Granlund and Taipaleenmäki (2005) identified a tension between a research-oriented culture and formal financial controls, and found that a research-oriented culture can lead to less respect for financial controls, making it "difficult to see the value-added of the finance function" (Granlund and Taipaleenmäki, 2005, p. 47), suggesting a competing relationship between two MC elements. Beyond the tension literature in accounting, there are only few works that shed some light on the combined use of different types of power, which strongly resembles notions of control in organizations. For instance, Etzioni (1964a, 1964b) claims that organizations typically use one type of control to exercise their power: religious organizations for instance mostly use normative (ideological) control, while for-profit organizations make more use of utilitarian (remuneration and incentive-based) control. If those two types of

(*footnote continued*)

control are used simultaneously, this could "result in some waste of power resources through neutralization, and some loss of involvement because of the ambivalence of lower participants exposed to conflicting expectations" (Etzioni, 1964b, p. 55). This quote concerning neutralization resembles the idea of competition. Furthermore, Etzioni acknowledges that sometimes the use of two types of control can simultaneously increase the overall effectiveness, despite the tensions this may generate: "There may be some tension between the two modes of control, some ambivalence and uneasy feeling among members about the combination, but undoubtedly the total control is larger" (Etzioni, 1964b, p. 8). This suggests that MC elements can complement each other while also simultaneously competing with each other.

managing professionals' and complained that they were '*treated like children*'. In a recent MC study, Lewis et al. (2019) also highlighted the importance of empowerment in handling tensions between management control elements.[10] They stated that when an organization 'psychologically' empowers its employees by repeatedly communicating values such as self-management, but then fails to provide 'structural' empowerment by reducing formal rules or granting decision rights and power to those employees, one can speak of 'illusory empowerment'.[11] Our findings similarly suggest that empowerment can be a source of tension between MC elements. More specifically, we suggest that MC elements that send *different messages regarding employee empowerment* may (perhaps unintentionally) generate tensions. In addition, the Maintenance Department case shows that employees identified themselves with the organizational ideal of a self-managing professional, and therefore felt that MC elements such as monitoring and ex-post control were out of place – although various MC frameworks suggest that these MC elements would fit this context with its highly contractible tasks related to maintenance work (Ouchi, 1979; Merchant, 1982). This finding challenges the idea that solely focusing on task characteristics, an approach traditionally put forward in the MC literature (Ouchi, 1979; Merchant, 1982), is sufficient to examine the appropriateness and effectiveness of MC elements.

The three triggers also apply to the case of the Policy Department, where the increased emphasis on self-management also gave rise to tension with existing MC elements at the 'local' level. Although a moderate level of self-management does not necessarily contradict horizontal feedback giving and cooperation, the increased emphasis on self-management by the higher hierarchical level led to an imbalance and an overly strong focus on professionalism, independence, and individualistic behavior at the expense of cooperation, sharing experiences, and learning. The competing relationships that formed part of the tension in the two departments demonstrate how two elements that are in a competing (substitutive) relationship can coexist because, in these cases, no control design choice was made to 'replace' one of the two elements with the other (cf. Dekker, 2004). One possible reason for this is that managers have no or only limited influence over the existence of other MC elements: lower-level Bluetown managers, for instance, had no direct influence on the development or existence of MC elements designed by the top-level managers. Another possible explanation for not replacing one element is that a manager is unaware of other MC elements in a tension relationship or about a competing relationship between MC elements. For instance, the top management in Bluetown seemed unaware of the tension between their municipality-wide emphasis on 'self-management' and the MC element in the feedback and mutual monitoring practices of the Policy Department. This suggests that a manager's or a supervisor's limited understanding of MC (cf. Malmi and Brown, 2008) can lead to the use of MC elements that strongly compete with other MC elements, which can result in a negative 'net effect' on the control outcomes.

In addition, the constant interaction of the MC elements used in both the Policy and Maintenance Departments with the municipality-wide value of self-management shows the dynamism of control and illustrates that MC elements do not operate in isolation. Further, this indicates that MC elements can interact with other MC elements including ones that originate in other (hierarchical) parts of the organization or at different times (cf. Malmi and Brown, 2008; Van der Kolk

and Schokker, 2016; ter Bogt and Scapens, 2019). This potential of MC elements to be in a competing or complementing relationship with other MC elements, or to be in a tension relationship that involves both simultaneously, should be taken into account when assessing their effectiveness. Since in the end it is the individual manager of a department who has to live with paradoxes and reconcile tensions between controls, the attention should not be focused on only the organizational level, but also on the level of the managers and their behavior. At the level of individual managers, who play a key role in trying to make the organization work effectively, it is important how they succeed in fruitfully managing initiatives for control changes with existing controls. In such a situation a balanced use of controls is needed to generate dynamic tensions. This suggests that to a certain extent the organization should allow managers to make their own choice as to how they manage tensions and find the balance that fits their specific context and employees (cf. Gibson and Birkinshaw, 2004; Mom et al., 2007; ter Bogt and Scapens, 2019).

Besides the three identified triggers – which can unintentionally create tensions – we propose that managers could also consciously continue to use MC elements that create tensions, or even intentionally create tensions. The underlying rationale for managers lies in the fact that MC elements do not operate in isolation (cf. Malmi and Brown, 2008; Friis et al., 2015). One possible reason for managers to keep using tension-creating MC elements is that this may be necessary to deal with conflicting demands that are inherent to organizations. In a similar vein, the tension-creating MC elements may be kept because they have different strengths in serving various control purposes. Alternatively, it is possible that managers allow certain competing MC elements to exist because an element that competes in one relationship may be complementary in other relationships with other MC elements. In addition, it is possible that some relationships between MC elements that are competing in the short term, may be complementary in the longer term. Outside of the accounting literature, Epstein et al. (2015)[12] discussed this possibility in their study on managing social, environmental, and financial performance. Our study thus contributes to the accounting and control literature by providing several potential explanations for the presence of complementing and competing relationships among MC elements in organizational settings.

Finally, the introduction of balance, balance tendency, and intensity as tension characteristics allowed us to analyze the features and dynamics of the different tensions in more detail, thereby addressing the need for a more precise vocabulary to examine tensions in organizations (cf. Lövstål and Jontoft, 2017). The first of these tension characteristics, balance, helps to identify and distinguish the different relative strengths of MC elements in tension, such as the dominance of the self-management value in the policy case before the department head intervened. The second, balance tendency, relates to the dynamics of the tension, and helped us establish that, in the Policy Department, the tension was relatively stable and could be influenced by the department head, whereas, in the Maintenance Department, the balance seemed to be increasingly shifting away from the value of self-management. The third characteristic, intensity, denotes the *absolute* strength of the elements used, which for instance was influenced by the Policy Department's head when he emphasized the 'duty' of being at the office when there were meetings. Distinguishing intensity from balance, which is about the *relative* strength of the elements, allows a more precise identification of tensions in organizations (cf. Henri, 2006; Bedford, 2015).

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[10] Lewis et al. (2019) labeled a similar situation *illusory empowerment.* They illustrated this situation by analyzing a published case study in which a managerial layer was also removed and where values started to play a more important role (cf. Barker, 1993).

[11] MC in the Policy Department involved somewhat more 'structural empowerment' than in the Maintenance Department, and is therefore probably less clearly connected to one of the empowerment 'stereotypes' identified by Lewis et al. (2019).

[12] "The relationship between social, environmental and financial goals is typically characterized with short-term competition and inconsistencies and long-term benefits […] More specifically, while these initiatives may benefit one another in the long-term, they are often conflicting in their need for resources […] Managers must make resource allocation trade-offs between these multiple goals" (Epstein et al., 2015, p. 37).

5.3. Managing tensions

The case findings show how the department managers sometimes chose to increase the intensity of the self-management value based on their assessment of the needs of the employees and what would be needed to achieve the departmental and organizational goals. In particular, evidence from the Policy Department illustrated the central role of managers in balancing the various tensions. This is in line with previous studies that indicated that the response of a manager to tensions "may be a fundamental determinant of an organization's fate" (Smith and Lewis, 2011, p. 381). The head of the Policy Department advised employees to work from home for certain tasks - emphasizing self-management - while he made clear that at other moments they should be present for meetings, to give feedback to one another and to cooperate more. The simultaneous use and persistence over time of both MC elements highlights the importance of both elements in the tension (Lewis and Smith, 2014). Occasions such as formal and informal meetings can be used to manage the tension and create clarity regarding what is expected at a certain moment from employees. Such meetings can be as a group (e.g. the meeting near the coffee machine) or individually (e.g. appraisal conversations with policy advisors). The embedded case study also provides a deeper understanding of how managers use MC elements to 'balance' different objectives, extending the earlier work on balancing in the management accounting and control literature (cf. Mundy, 2010; Sundin et al., 2010).

Even though employees saw themselves as self-managing professionals, they also highlighted that they expected a manager to actively balance tensions with respect to the level of cooperation and result orientation, and to clarify what is expected from them, especially when there are salient tensions between two important but seemingly conflicting goals. The manager of the Maintenance Department shifted the emphasis toward self-management by actively stimulating employees to participate in the TNO training, and by giving a platform to enthusiastic colleagues who had already taken the training to convince their colleagues of its merits. Policy Department interviewees reported that a manager who did not effectively balance the tensions was quickly replaced because the employees needed more clarity in dealing with the various tensions inherent in their job. This points towards the "fragile" (Lewis et al., 2019, p. 492) and volatile tensions that can exist between different MC elements, and the importance of the manager in actively guiding employees in their responses to these tensions. The initial manager shifted the balance between the controls too much toward self-management (which was considered counterproductive), whereas the new manager found a better balance that the interviewees saw as productive. Our findings regarding the role of managers in guiding employees also offer key insights into how and why the impact of tensions may depend on how individuals experience and respond to them. A recent paper by Miron-Spektor et al. (2018) focuses on an individual's approach to addressing tensions and introduces the concept of a *paradox mindset* as an approach to addressing tensions. Individuals with a paradox mindset "view tensions as paradoxes rather than either/or dilemmas [and] gain a deeper understanding of opposing elements and seek more integrative solutions" (Miron-Spektor et al., 2018, p. 27). Our findings suggest that the managers of the two departments both embraced a paradox mindset. With this we complement previous research, by showing that also the manager's approach to tensions, and more specifically the way in which they provide guidance to employees in dealing with tensions, is crucial for the employees' ability to see and accept the positive potential of tensions in their work and for the organization to become more effective.

As the findings indicate, it is the individual manager, responsible for effectively managing his/her department, who is confronted with paradoxes and tensions. For that reason, further attention should be given to the level of the individual manager and how they live with paradoxes and control their department. How can and do they contribute to organizational effectiveness in a dynamic context, which is characterized by controls and changes therein originating from different levels and different moments in time, and with paradoxes and tensions? Our findings indicate that the managers of the Maintenance as well as the Policy Department succeeded in finding workable forms of control. This suggests that these managers were given sufficient space to react in a flexible way and to make their own judgments as to how they combine internal incentives to change control with the existing control and that they succeeded in doing this in such a way that conflicting demands were reconciled (cf. Gibson and Birkinshaw, 2004, p. 211; Mom et al., 2007, p. 926; Lewis et al., 2019). So, having 'sufficient leeway' seems to be important for the individual managers to enable them to make the combination of new and existing control practices acceptable to the various groups in the organization. Apart from this, and this needs to be researched in the future, the individual managers might of course also be confronted with certain external pressures for changes in controls (Birkinshaw et al., 2008; Miron-Spektor et al., 2018).

We observed various managerial strategies to deal with tensions. For instance, the head of the Policy Department explicitly accepted the existence of tensions and their possible negative consequences ('*that can conflict every now and then*') and used the tensions strategically by sometimes emphasizing and sometimes downplaying one of the MC elements when that fitted the departmental needs. These changes over time show the dynamic qualities of tensions and the latitude that managers have to influence the balance, balance tendency, and intensity of a tension. Further, the department head also advised employees to temporarily separate elements associated with self-management and cooperation ('*don't try to do both things simultaneously or within the same part of the day*') and brought in a new MC element (training and coaching activities) to help employees apply the organization-level value in their daily work activities – "smoothing" the tension between an organization-level value and department-level MC elements and tasks. In the Maintenance Department, the tension seemed relatively less well accepted by the employees ('*I don't believe we need supervision*') and by the department head, which may be a reason why some of the negative effects of the tension were more visible there. The maintenance employees for instance indicated that they felt 'threatened and feeble', suggesting a negative (competing) effect of promoting (and raising the expectation of) self-management among employees, while still monitoring their actions and requiring them to report on their actions. Again in this department, the department head also brought in the MC element of training activities to help employees apply self-management in their daily activities, which can be seen as a way to help employees deal with the existing tensions.

These findings resemble strategies identified in the organization literature for dealing with tensions and paradoxes (cf. Poole and Van de Ven, 1989; Hengst et al., 2019). These can be mobilized by supervisors to make sense of tension management by: 1) accepting tensions and using them constructively, 2) clarifying the levels on which different elements in a tension apply, 3) temporarily separating different elements, and 4) introducing new elements to resolve the paradox. When we examine the efforts made to manage the tensions among the MC elements in the two departments, we can see that especially the first, third and fourth strategies were used by managers to balance the complex and dynamic tensions. The fourth strategy is particularly interesting in our case context as it not only relates to the *use* of an MC element, but also to the *design* and implementation of a new MC element (for instance, the "TNO training" to further embed the TNO values

in the organization and facilitate employees in applying the value of self-management in their daily activities). It should be noted, however, that this fourth strategy was initiated by Bluetown's top management - the department managers did not have a real say in the content of the training. Nevertheless, the department managers could decide to encourage employees to take the training, or not.

Overall, these identified strategies contribute to a more in-depth understanding of what Mundy (2010) coined 'purposeful intervention'. The illustrations in our embedded case study highlight how managers can deal with tensions and improve the effectiveness of MC in an organization.

6. Conclusions

We extend the literature on interactions among MC elements by examining the inner workings of tensions, and by investigating what managers do to balance these tensions. Our study makes three main contributions to the literature. First, we have clarified and deepened the notion of tensions by highlighting that they simultaneously involve complementarity and competition among elements (tension complexity) and that they can change over time (tension dynamics). This understanding of tensions as complex and dynamic extends the MC literature on control interrelationships (cf. Simons, 1995; Malmi and Brown, 2008) and tensions (cf. Henri, 2006; Mundy, 2010; Kruis et al., 2016). Second, we utilize the organization literature on tensions to theorize why tensions that involve complementarity and competition may emerge, and point to MC elements' different hierarchical origins, different introduction moments, and empowerment-related messages as triggers for tensions. In this context we also indicate the importance of paying attention to the level of individual managers and the leeway they have to reconcile different controls and changes therein and the related tensions (cf. Gibson and Birkinshaw, 2004; Mom et al., 2007). Furthermore, balance, balance tendency, and intensity are identified as key tension characteristics, and the MC literature on complementary and substitutive relationships among MC elements (cf. Van Veen-Dirks, 2006; Grabner and Moers, 2013; Friis et al., 2015) is extended by integrating insights from the paradox literature (cf. Poole and Van de Ven, 1989; Lewis, 2000; English, 2001; Smith and Lewis, 2011; Lewis and Smith, 2014; Epstein et al., 2015; Lewis et al., 2019). Third, our paper emphasizes the ongoing need for managers to actively balance the tensions present since internal and external forces continuously shape and influence the tension balance. We identify and discuss various strategies of managers to balance tensions (Hengst et al., 2019) between MC elements. We add to the prior literature (cf. Mundy, 2010), by revealing how the lack of a *purposeful intervention* can result in situations where the competing component of the tension outweighs the complementing relationship, and by highlighting the importance of the manager's role in balancing the forces within a tension between MC elements.

Several managerial implications follow from our study. First, organizations and managers need to be aware of the importance of communication between various managerial layers concerning the use of MC elements in order to prevent strongly competing relationships between MC elements emerging. Second, managers – working in a specific context with a package of controls – need to be aware of the possible volatility of the combination of controls which could be perceived as productive at a certain moment (and with respect to certain individuals) and detrimental at others, giving rise to the need to

continuously engage in a balancing act. Third, this all implies that managers who are new to organizations need to be well informed about the types of MC elements that are being used. Further, following from this, being well informed also provides a 'better' basis for 'purposeful intervention' by managers (cf. Mundy, 2010) that can ensure that the MC elements create dynamic tensions with positive aggregated returns.

There are a number of limitations to this study. Although the multiple case study method allows an in-depth study of several cases and to compare and replicate the findings, the limited 'generalizability' inherent to this type of research remains an issue. For this reason, future research in other organizational contexts, such as the profit sector, could focus on dynamic tensions using the analytical terms developed in the current study, and provide additional insights into the complementing and competing roles and their origins. Furthermore, although we aimed to determine the context in which the MC elements were used in the current study, we acknowledge that even more complex relationships than the ones we identified might exist. It could be, for instance, that a certain MC element is in a dynamic tension with another MC element that results in a negative effect on control effectiveness, while that same MC element is in a dynamic tension with a third MC element that produces a positive net return. Such 'networks of dynamic tensions' seem to warrant further attention since they may form a fruitful basis for further research that may teach us more about the complex interactions within packages of MC elements (cf. Friis et al., 2015; Van der Kolk, 2019). Finally, the current study has focused on dynamic tensions using case material from various sources in order to triangulate the data and to provide a reliable account of tensions in their context. Future case or event studies, perhaps involving a larger set of organizational contexts, could focus more specifically on contingencies and external pressures that influence the strength of the complementing and competing relationships. We would also like to encourage future research that further examines relations between the tension characteristics (balance, balance tendency, and intensity) and, for instance, control effectiveness. Overall, we hope that this study can serve as a steppingstone to future research and may inspire others to contribute to the stream of literature studying the complex and dynamic interplay of MC elements.

Appendix A. List of interviewees

Title	Date
Top management-level interviewees	
Alderman 1	13-11-2013
Alderman 2	28-11-2013
Alderman 3	22-11-2013
Director 1 (responsible for Policy Department)	3-10-2013
Director 2 (responsible for Maintenance Department)	24-10-2013
HR Advisor 1	15-10-2013
HR Advisor 2	31-10-2013
HR Advisor 3	9-10-2013
Middle management-level interviewees	
Department head Policy Department	16-10-2013
Department head Maintenance Department	11-10-2013
Financial Controller Policy Department	3-10-2013
Financial Controller Maintenance Department	11-10-2013
Team leader Maintenance Team	14-10-2013
Internal Client Maintenance Department	14-10-2013
Policy Department interviewees	
Senior policy advisor 1	1-10-2013
Senior policy advisor 2	9-10-2013
Policy advisor 1	3-10-2013
Policy advisor 2	26-9-2013
Policy advisor 3	26-9-2013
Maintenance Department interviewees	
Maintenance employee 1	18-10-2013
Maintenance employee 2	16-10-2013
Maintenance employee 3	5-11-2013
ICT administrator	16-10-2013
Planner 1	17-10-2013
Planner 2	23-10-2013

Appendix B. Attended meetings

Observation	Date
Familiarization meeting with Department Head (Policy)	12-9-2013
Familiarization meeting with Department Head (Maintenance)	12-9-2013
Meeting about Budget Cuts and Austerity (Policy)	17-9-2013
Monthly Meeting with Service Team (Maintenance)	17-9-2013
Monthly Meeting Team Society (Policy)	24-9-2013
Evaluation of Education Program (Policy)	24-9-2013
Introduction into SharePoint (Maintenance)	26-9-2013
Weekly Meeting Department (Policy)	26-9-2013
Monthly Meeting Department (Policy)	01-10-2013
Monthly Meeting Team Health (Policy)	15-10-2013
Meeting about Social Work in Districts (Policy)	28-1-2014
Observation Service Team work (Maintenance)	28-1-2014

Appendix C. Value communication through posters

The real name of the municipality was removed from this picture. Originally, it said "DNA *Bluetown*. Do you have what it takes?", where DNA stands for "De Nieuwe Ambtenaar" (English: "The New Official").

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