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Mediating the Paradoxes of Organizational Governance through Numbers

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Abstract

Despite abundant prescriptions regarding what boards *should* do, we know little about what they actually do, especially in the face of the paradoxical goals of both ensuring control (as expressed in agency theory) and fostering collaboration (as expressed in stewardship theory) simultaneously. Drawing from the study of a co-operative over a 10-year period (including ethnographic data collection spanning 3 years), this paper shows the role of numbers in mediating paradoxes of governance. We show that numbers from very different spheres support different models of governance, prompt their change, but also their coexistence. Paradoxical control–collaboration dynamics are embraced, fed by two number-supported micro-practices: personalizing/professionalizing issues and creating new calculable spaces. These practices enable board members to both "act at a distance" and control, while they are also "kept at a distance" from the general manager, who ensures the board's collaboration.

Keywords

co-operative, governance, mediation, numbers, objects, paradox

Introduction

Many calls have been formulated for organizational governance researchers to take a "boards-in-action", ethnographic turn (Samra-Fredericks, 2000), to open the "black box of actual board behavior" (Huse & Zattoni, 2008) and better understand what boards do in practice (McNulty and Pettigrew, 1999). Despite this lack of understanding of "what goes on beyond the door of the boardroom" (Clark, 1998, cited in Samra-Fredericks, 2000, p. 245), prescriptions as to what boards *should* do are plentiful.

These prescriptions are derived from theories and models of governance, with agency theory (Fama & Jensen, 1983) as the dominant perspective (Daily, Dalton, & Cannella, 2003; Golden-Biddle & Rao, 1997; Lynall, Golden, & Hillman, 2003). Alternative theories such as stewardship/

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collaboration theory (Davis, Schoorman, & Donaldson, 1997) and resource-dependence theory (Pfeffer & Salancik, 1978), for instance, have been proposed, with different, often contradictory roles and responsibilities for the board to assume. Advocates of each theory tend to ignore the others, and Daily et al. (2003) observed that

> one of the greatest barriers to advancing the field of corporate governance […] is empirical dogmatism. That is, researchers too often embrace a research paradigm that fits a rather narrow conceptualization of the entirety of corporate governance to the exclusion of alternative paradigms. (p. 379)

Such dogmatism is particularly problematic as it masks the true complexity of board roles and board-management dynamics. Such dynamics may actually be inherently paradoxical, with multiple and sometimes contradictory roles being required for effective governance. Indeed, Sundaramurthy and Lewis (2003) put forward a paradox approach to governance, suggesting that control and collaboration (respectively linked to agency theory and stewardship theory) be treated as paradoxes of governance—i.e., as contradictory yet interdependent roles simultaneously played by the board.

This paper adopts a paradox perspective on organizational governance to study board-management dynamics in a third sector organization with a specific focus: the role of numbers, conceived as "mediation objects" (Hussenot & Missonier, 2010) supporting different board-management dynamics, their change over time, and the simultaneous enactment of paradoxical models. Through a qualitative, longitudinal investigation of board meetings and governance-related material covering a 10-year period, the study reveals the evolving role of numbers at our focal organization, the EcoloWorld Co-op to answer the following research question: how do numbers contribute to and mediate between different forms of board governance over time?

Organizational Governance and the Paradox Perspective

In addition to agency and stewardship theories, Cornforth (2004) identified resource-dependence, stakeholder and managerial hegemony theories, as well as the democratic perspective as governance models present in third sector organizations such as the EcoloWorld Co-op. Yet, agency and stewardship theories remain the two opposite "dominant source theories" (Kreutzer & Jacobs, 2011, p. 615) for most organizational governance research. Further, as suggested by Kreutzer and Jacobs (2011), these two theories "on their own do not fully explain CSO [civil society organizations] board behavior, but each theory nevertheless emphasizes an important aspect" (p. 630).

Agency theory (Fama & Jensen, 1983) assumes that the interests and goals of the firm's owners and managers conflict. According to agency theory, managers, given their privileged, insider knowledge of the organization, may exploit information asymmetry in an opportunistic manner that would not serve the owners' interests. Agency theory thus focuses on the board's monitoring responsibility in order to protect owners' interests, and focuses on the control function, by the board, of managers' actions and performance. Based on diametrically opposed assumptions, according to stewardship theory (Davis et al., 1997), "the *suggested board behavior* is to take on a strategic role of supporting management to achieve the organization's mission by operating as a collaborative partner with the management" (Kreutzer & Jacobs, 2011, pp. 617–618). Stewardship theory supposes that the board and managers do share common goals and objectives, and that they work together towards the accomplishment of the organization's overarching mission. Consequently, board members act as collaborators, as coaches to support managers in this endeavour, with relations founded on mutual trust. While each theory puts forward one of the board's central responsibilities (i.e., control or collaboration), when taken alone, each incompletely conveys the complexity of organizational governance, but also the paradoxical nature of board-management dynamics.

Generically speaking, a paradox perspective explores "how organizations can attend to competing demands simultaneously" (Smith & Lewis, 2011, p. 381). In contrast to "dilemmas" (which force a choice between two mutually exclusive options; Smith & Lewis, 2011), paradoxes are composed of "contradictory yet interrelated elements that exist simultaneously and persist over time" and that must rather be accepted and embraced than resolved (Smith & Lewis, 2011, p. 382). With specific regards to board-management dynamics and governance, a paradox perspective was proposed to account for the multiple, contradictory roles to be played simultaneously (Cornforth, 2004; Kreutzer & Jacobs, 2011; Sundaramurthy & Lewis, 2003). In this view, control and collaboration, despite their contradictory natures, need to be enacted at the same time in board-management meetings and relations—and thus the control–collaboration paradox should be accepted and embraced instead of being avoided. In addition to this "acceptance strategy", other ways of dealing with the contradictory elements of a paradox between two contradictory elements A and B, include their synthesis (finding a new, third way out of the paradox), their physical separation (A and B coexist at the same time, but in different spaces) or their temporal separation (A and B exist at different times in the same location) (Poole & van de Ven, 1989).

Although not formulated as such, Huse and Zattoni (2008) and Huse, Hoskisson, Zattoni, and Viganò's (2011) work can be associated with the temporal separation strategy, since these scholars plead for the consideration of organizational life-cycles in the study of boards. Indeed, "the stage of organizational life-cycle […] influences the roles of boards and executives" (Kreutzer, 2009, p. 118). As formulated by Lynall et al. (2003), "it is not a question of if existing theories are helpful to our understanding of boards and firm performance, but a question of when each is helpful" (p. 416). This can only be revealed by following boards over time, via what Gabrielsson and Huse (2004) call "evolutionary studies" that explore both board context and behaviour "by comparing and contrasting longitudinal data to better understand changes" (pp. 22–23).

The possibility that boards' roles may differ over time has been explicitly formulated in research on third-sector organizations (mainly nonprofits and co-operatives such as the EcoloWorld Co-op). Wood's (1992) empirically-derived model of cyclical board behaviour predicts a first "founding period", marked by the intense involvement of founding members, collegial decision-making and little distance between board and management. In this period, the executive director, first unpaid, is often chosen amongst board members and gradually gains confidence and influence. Then, resulting from a critical event (client base erosion, funding issues, etc.), a crisis happens, leading to the reassessment of the board's role and to a "supermanaging phase" marked by the professionalization of the board, an increase in the number/frequency of meetings and committees, and a tendency for board members to "micromanage". With the end of the crisis and supermanaging phase comes a "corporate phase", when board-management dynamics gradually evolve into a model of oversight, as the board becomes more dependent on the executive. Until another crisis arises, Wood (1992) foresees that the board stays in a "ratifying phase", with ritualized decision-making processes and unquestioned staff recommendations. Although her model clearly displays an evolution of a board's role over time, Wood did not explore the triggers of change ("the force or forces driving the cycle"; Wood, 1992, p. 157) from one phase to another. Further, Wood's (1992) model founding period might convey multiple, simultaneous models of governance (e.g., resource-dependence and collaboration), but the following phases portray board behaviour as relatively straightforward: controlling the executive or rubber-stamping his/her recommendations.

In their proposed paradox perspective to study governance, Sundaramurthy and Lewis (2003) argue for both control and collaboration to be balanced and posit that reinforcing cycles of (exclusive) collaboration or control foster strategic persistence and organizational decline. While Sundaramurthy and Lewis (2003) implicitly refer to the governance of capitalistic firms, a paradox perspective was also conceptualized by Cornforth (2004) to shed light on the complexity and peculiarities of third-sector organization governance, marked by specific challenges (for instance, the lack of a dominant external stakeholder, balancing of social and economic goals, and interdependencies between board and management; Spear, Cornforth, & Aiken, 2009). Kreutzer and Jacobs (2011) offer the only empirical application of the paradox perspective on governance. Their longitudinal study of control-collaboration board-management dynamics shows

> how the behavior of a CSO [civil society organization] board of directors over time can switch from apathetic to controlling; to controlling and coaching; and then finally to a situation where the behavior of the board could be characterized by a coaching focus, in one and the same organization. (Kreutzer & Jacobs, 2011, p. 631)

However—and similar to Wood (1992)—the authors themselves recognize that they did not track the factors that triggered change, nor the influence of funds, amongst other factors, on governance dynamics.

Following and building on these two last leads, this paper suggests that, given their prevalence in governance, number-related objects (of financial and many other spheres), conceived as "mediation objects" (Hussenot & Missonier, 2010), can prompt changes to board-management dynamics and support the control–collaboration paradoxes of governance.

Numbers as Mediation Objects in Organizational Governance

In this paper, I approach organizational governance as an evolving interactional space in which board members, managers and mediation objects are involved. Drawing from Actor-Network Theory (e.g., Latour, 2005), Hussenot and Missonier (2010) put forward the concept of mediation object to allow researchers "to understand how objects help structure interaction and collective activities over time", and more precisely to dynamically follow objects and their (potentially changing) roles in the evolution of interactions marked by controversies and compromises.

For Hussenot and Missonier (2010), controversy is "a dissident action, calling into question a relationship", while "conversely, compromise appears when different stakeholders define a common approach to a shared matter" (p. 271). Specifically, Hussenot and Missonier describe

> a controversy as anything (a discourse or action) that challenges the status quo between actors. Thus, controversy can appear in any change, innovation, or project. A controversy implies a negotiation in order to find a new definition of a relation […] Conversely, the concept of compromise deals with the stability of the socio-technical network after a controversy. Latour (2005) uses the notion of closure of controversy to underline the stabilization of associations within the socio-technical network. Moreover, the modalities of compromise are defined during the deployment of the controversy. Thus, controversy and compromises are embedded. They are both sociotechnical processes, in which objects play a crucial role. (2010, p. 272)

Compromise, in the lay sense, is often thought of as a third or middle way between divergent perspectives, and controversy is often associated with polemics. The previous excerpt shows how Hussenot and Missonier (2010) offer definitions of compromise and controversy that differ from our common understanding of these concepts, and that have more to do with the notions of stability and change. It should also be noted that the preceding excerpt suggests the triggering role of controversies, which challenge the stability brought about by compromises.

Hussenot and Missonier (2010, p. 273) highlight three roles played by mediation objects: they can be carriers of controversy, compromise or prescription. Hussenot and Missonier (2010) also state that a mediation object "can be either modifiable, or interpretable by actors, or neither modifiable, nor interpretable by actors" (p. 274), the latter case being associated with the prescription role. While they note that most research deals mainly with physical objects, Hussenot and Missonier enlarge their consideration to those that are abstract (citing ideas, concepts and theories as examples). That being said, in their paper, Hussenot and Missonier consider only one mediation object—a contract—in the evolution of an inter-firm partnership. Given its ability to account for objects' potentially contradictory roles in interactions as well as for their evolution over time, the concept of mediation object was deemed particularly relevant for this study. More specifically—and as will be explained in the methodological section—the EcoloWorld Co-op case will illustrate how numbers of different types (thus more than one object) appear as mediation objects in organizational governance over time.

Numbers—and, more generally, calculative measurement practices—have been described as an important dimension of organizational governance. According to Keevers, Treleaven, Sykes, and Darcy (2012),

> in the last two decades, organizational governance has shifted dramatically […] The key features of this new governance regime include emphasis on calculative measurement practices, quantification of many aspects of organizational practices to render them visible to government funding agencies, development of a plethora of performance indicators and reliance on data-driven evidence to guide policy and decision-making. (p. 98)

Numbers are common means to express many performance indicators, financial or not. They represent and simplify a complex reality—which they also construct and constitute (Hopwood, 1983, 1987; Vaivio, 2004; Vollmer, 2003). At the macro level, the relation between numbers (especially statistics) and politics is documented and its intensification historically recounted (Porter, 1995; Rose, 1991; Vollmer, 2003). According to Rose (1991), statistics emerged "as one of the key modalities for the production of the knowledge necessary to govern" (p. 676). At a more micro level, concerned with accountability and decision-making, a rich literature has developed, mostly in the accounting field. This literature has shown how, because of their perceived objective and neutral nature, accounting numbers can, amongst many other roles, persuade (Chua, 1996), create trust (Mouritsen & Thrane, 2006) and allow for organizing (Fauré, 2007; Fauré & Rouleau, 2011; Hopwood, 1983). As powerful (Denis, Langley, & Rouleau , 2006) as numbers may be, some authors also demonstrated how problematic and messy (Andon, Baxter, & Chua, 2007), debated and challenged (Ezzamel 1994; Ezzamel, Willmott, & Worthington, 2004; Hopwood, 1983; Lowe & Jones, 2004; Vaivio, 1999) they can also be. That is, building on Hussenot and Missonier (2010), numbers as mediation objects can feed both compromise and controversy.

Further, as argued by Power (2004),

> specific measurement systems may be defective and fail, but they also constantly reproduce and reinvent an institutional demand for numbers. Political power can be understood as the ability to make even controversial counting and measurement systems appear natural and unavoidable, preventing the widespread institutionalization of distrust in numbers and supporting a variety of schemes for monitoring and control. (p. 769)

Going back to organizational governance models, we thus see that numbers can support the control model by allowing the board to "act at a distance". Inspired by Actor-Network Theory, the notion of acting at a distance has been discussed in previous work on numbers, and more specifically on managerial accounting (e.g., Miller, 1994, 2001; Preston, 2006; Robson, 1992). As summarized by Lowe (2001), "[a]ccounting techniques give the principal the potential ability to control at a distance. Managers and owners make use of budgeting and reporting techniques to give an appearance, at least, of 'remote' control" (p. 34). And "domination involves the exercise of a form of mastery made possible by those at the center having a particular type of information about events and persons distant from them" (Miller, 1994, p. 243). Following numbers enables boards to create calculable spaces, i.e., "abstract spaces [that] are objects to be known and regulated in terms of their performance, and to be brought into relation with other abstract spaces" (Miller, 1994, p. 253). Applying this to board-management dynamics, we can think of numbers as inscriptions (Robson, 1992) that allow board members to grasp managers' actions and to exert some kind of remote control over them. As suggested by Quattrone and Hopper (2005), "accounting inscriptions render distant segments homogenous, visible, and simultaneously controllable […] Hence corporate HQs [headquarters] develop surveillance activities such as accounting to monitor subsidiaries and reduce distance" (p. 742).

Yet if numbers—and, more specifically, management control systems—can create control over managers, workers or subsidiaries, they can also enable them through access to information, thus offering them better resources for flexibility, autonomous decision-making and problem-solving (Mundy, 2010). In the same vein, Ahrens and Chapman's (2004) study of a chain of restaurants illustrated how management controls can be designed for both flexibility and efficiency. For Miller (2001), "management accounting seeks to affect the conduct of individuals in such a way that they act freely, yet in accordance with specified economic norms" (p. 380). This study seeks to engage in this "paradox-inspired" strand of the literature on numbers and quantification by following numbers as mediation objects of tensions in organizational governance over time.

In sum, the literature on governance needs to account for paradoxes, and to better explain what triggers changes in board-management dynamics, i.e., how different governance models can succeed each other, and even co-exist. The notion of mediation object, as developed by Hussenot and Missonier (2010), can be mobilized to follow the evolution of interactional processes marked by compromises and controversies—such as board-management dynamics. Given their capacity to allow "action at a distance", numbers and calculative practices have been described, in the accounting literature, as tools of control, but also as enabling tools that facilitate flexible decision-making and problem-solving. Using the mediation concept and a paradox perspective on organizational governance, in this paper, I explore how numbers can prompt the succession, through time, of different governance models, but also paradoxical control-collaboration dynamics via number-supported practices.

Methods

Data collection

A longitudinal, ethnographic case study was conducted. Empirical material includes over 170 hours of observation and all documents contained in the EcoloWorld Co-op general manager's computer and folders. The data that fed this paper is a "governance-related" subset of these data and includes the observation of 16 board meetings and 3 general assemblies of members (2006–2009), governance-related documents covering a 10-year period (1999–2009) and 4 formal semi-structured interviews carried out in 2006 (see Table 1). Many archival documents were only available in hard copy and required transcription before being coded in NVivo.

Negotiating access to board meetings can be extremely difficult (Daily et al., 2003; Leblanc & Schwartz, 2007; Samra-Fredericks, 2000). An initial negative answer to my request, in 2005, actually fed into the research process, allowing me to later grasp the importance of the governance crisis that was going on when my request was declined. In 2006, the same request was received in a completely different manner, once the crisis was history. Extensive notes were taken during and following non-participant board observation. The transcription of board recordings can be very time-consuming (Samra-Fredericks, 2000, mentions a 1: 25–30 record/transcription time ratio). First observations were transcribed integrally, but as research questions became more precise, I selectively transcribed discussions involving numbers, issue streams, controversies and compromises.

Data analysis

A first step in the analysis was to write up the story of the case over the 1999–2009 period drawing on the raw data collected to construct the narrative (Langley, 1999, p. 695), with special emphasis on the main events, issue streams, controversies and compromises. Langley, Mintzberg, Pitcher, Posada, and Saint-Macary (1995) put forward "issue streams" as an alternative to the idea of "decision processes". Like Golden-Biddle and Rao (1997), I identified "compelling" and relatively "dramatic" moments of the complexity observed at the EcoloWorld Co-op, i.e., moments that were "highly significant events" for the Co-op members and that "rendered manifest the latent contradictions that board members experienced" (p. 598). Concretely, the governance crisis issue stream appeared central.

The focus on numbers emerged from reading the material and writing the narrative, about half-way through real-time fieldwork. I did not intend to study numbers. Indeed, as I was (re)reading different governance-related documents and my own observations of board and assembly meetings, I was struck by the omnipresence of numbers in controversies and compromises. Different numbers seemed to have invited themselves into the governance of the EcoloWorld Co-op, prompting me to look at them more carefully to unpack their various natures and roles in board-management dynamics.

For Hussenot and Missonier (2010),

> following an organizational process […] leads to a description of interactions, associations, and mediation between actors and between actors and objects. [This requires] first to specify interactions over time, and second, to construct a conceptual grid with which to plot the evolution of the object. (p. 271)

Accordingly, the following phase relied on a "temporal bracketing strategy": decomposing the data into successive adjacent periods to "enable the explicit explanation of how actions of one period lead to changes in the context that will affect action in subsequent periods" (Langley, 1999, p. 703). The goal was to identify the main periods of the board story, to see whether they were characterized by distinct governance dynamics and by different numbers playing different roles and prompting changes. Five periods were identified. The unit of analysis was numbers; analysis aimed at following numbers over time to understand their roles in supporting different governance dynamics across controversies and compromises.

While the first periods were characterized by the succession of single models of governance (i.e., control or collaboration), in the last period (2007–2009, when most of my real time observations were conducted, see Table 1), the control and collaboration models were simultaneously

Table 1. Governance-related data (within a wider data set).

Timeline and details of the governance data collection process	1999–27 Aug. 2006	28 Aug. 2006–Dec. 2006	2007	2008	2009
	Archives	Real-time, first-hand collection	Real-time, first-hand collection	Real-time, first-hand collection	Real-time, first-hand collection
DOCUMENTS					
Board meeting minutes and related documents + special committees' minutes (in brackets, number of agendas without associated minutes)[1]	64 (16)	3 (0)	10 (1)	8 (1)	9 (0)
Minutes of general assembly meetings	7	1	1	1	1
OBSERVATION[2]					
16 board meetings (28 hours of audio-taped meetings)	0	3	4	3	6
3 members' general assembly meetings (6 hours of audio-taped assemblies)	0	1	1[3]	1	
FORMAL INTERVIEWS	1 in 2005	3			
With: a long-time user member; general manager (who is a founding member); founding member and ex-board member; store manager					

[1]Master document of the board minutes and related documents has a length of 416 pages, single-spaced, to which ethnographic observation notes and transcriptions must be added (149 pages). I also subscribed to the board's mailing list and received the emails between board members between 2006 and 2009.
[2]Board meetings lasted between 60 and 150 minutes (average: 100 minutes).
[3]Since I was out of the country, this observation was conducted by a research assistant, authorized by the assembly to record the meeting.

enacted. This led to a third phase of analysis—a "zooming in" (Nicolini, 2009)—to identify the number-supported practices associated with this control–collaboration duality. The approach here is similar to that of Samra-Fredericks' (2003) for it combines an ethnographic report with a close analysis of some illustrative vignettes.

The EcoloWorld Co-op case

Founded in 1999 by a group of 10 friends and neighbours, the EcoloWorld Co-op (fictitious name) is a multistakeholder co-operative based in Quebec (Canada). It operates a retail store and café which opened its doors in November 2000 to sell eco-friendly and/or fairtrade products such as office supplies, cleaning products, personal care products and food. Supported by a vibrant local community, it is an important space for neighbours to meet and for eco-political alternatives to be exposed and debated.

A co-operative is a member-based, owned and controlled organization. At the EcoloWorld Co-op, three categories of members coexist: worker, user and support members. All have equal rights at general assemblies (one member, one vote). A social share is CAD$10 for users and workers alike; CAD$100 for support members. The 8000 members are unequally split into the three categories: about 7800 user members (consumers), ten worker members (the Co-op's employees: general manager, store manager and floor/café workers) and more than a hundred support members (e.g., consumers who agree to pay $100 share, suppliers, etc.). Despite uneven member distribution across categories, the nine-member board is composed of three elected representatives of each category. Board members are elected at the annual general assembly for a 3-year term and can run for re-election once their term is over.

The EcoloWorld Co-op thus presents a complex governance structure that integrates multiple stakeholders both at its board and members' assemblies. With equal rights, user, worker and support members may potentially have different interests, skills and levels of knowledge of the Co-op, thus exacerbating the challenges, in nonprofit and co-operative organizations, of the lack of a dominant external stakeholder, of the actual power of board to control management, and of managing the interdependencies between board and management (Spear et al., 2009). The Co-op case hence appeared as a stimulating setting for the study of governance dynamics.

Findings

Findings will be presented in two steps. First, I will examine how organizational governance dynamics between board and management evolved over time. I will first sketch the five periods that emerged from temporally bracketing the data, describing the salient model of governance in each period, and showing the different numbers and roles they played in modifying the governance dynamics of the EcoloWorld Co-op. Then, I will zoom in to the fifth period to present some illustrative vignettes in which numbers support the co-existence of control and collaboration between the board and management.

Numbers as Triggers of Evolving Governance Dynamics

Period 1: Emergence: rousing, mobilizing numbers (1999–2000)

From the foundation of the Co-op, in 1999, to the store opening in November 2000, the first period is marked by the founders' intense involvement, with frequent meetings (weekly meetings before the opening) and a great deal of volunteer work to initiate the project. Board meeting minutes show a complete absence of distinction or distance between board and management: board members collaborate and are involved in all sorts of decisions and tasks, from the most operational to the most strategic ones. In other words, the board manages and in fact, *is* the organization (Wood, 1992).

Meetings are held in a collegial mode, at one or another board members' house, and characterized by the expression of trust in the project, as demonstrated by the following excerpt from a members' assembly meeting minutes, in which the emergence phase is recalled:

> Mike presented an overview of the renovations. He had to work with an extremely tight budget ($34,000) and pressing deadlines. He explains that the Co-op was eligible for the City program for street revitalisation and that the Co-op received $10,000 out of that fund. Mike pointed out that only stubbornness and faith in the project made us finally succeed.

This excerpt talks both of this trust (even "faith") and of the combined lack of time and money, which required board members to collectively contribute their efforts in order to compensate. The project's envisioned mission brings them together under an overarching goal: to open the Co-op's doors. Interestingly, in this young, closely-knit board, the control function is externalized, with the challenging questions and monitoring coming from funding agencies, and not from within the board, as shown by the following example. There is no official worker until the store opens, although from the start, one of them—i.e., John—is overtly presumed to become the general manager, given his deep involvement and leadership of the project. According to the minutes of a board meeting held in July 2000, this choice is challenged by one funding agency, who wonders whether John, a community organizer, is the best candidate to manage the Co-op. At the risk of a declined funding request, the board answers that only John can do the networking job required to get the project started.

The financial set-up, developed with the help of funding agencies, required board members to raise CAD$20,000 in the community through the sale of social shares prior to the store opening. Selling social shares had a double function: the money collected brought the founders closer to their objectives of launching their project; additionally, its success acted as an indicator of legitimacy and support in their fundraising efforts with social economy support organizations.

In governance terms, the collaboration model of governance is clearly dominant in the emergence phase. Numbers are associated here with objectives to be reached and as such, they express rousing, motivating goals that bring together board members and the (future) general manager in order to start the project and, from then on, as hoped by the founders, to start "changing the community". This project is clear and shared: the EcoloWorld Co-op is a store, but it is also seen as a means to educate and engage the community. As recalled in an interview by a founding member:

> It was a community economic development project, and it was a co-op, and it was about getting people involved. It was about education too. It wasn't about selling things…Well, it was about selling things to the point where we'd keep the door open.

In line with this view, the central numbers in this period are thus not yet related to the project's financial viability. Rather, they express objectives that rally the founders and facilitate their collaborative efforts. Indeed, the attainment of start-up objectives is what triggered the change in dynamics, allowing for the actual opening of the store, which is the change (or "controversy", in Hussenot and Missonier's terms, i.e., anything that challenges the status quo between actors), that leads us to the next period, and to the gradual appearance of control dynamics within the board towards John in his new position, as general manager.

Period 2: First years of operation: missing numbers, increasing control (2001–2004)

This period starts with the opening of the store. Some of the money and support obtained previously came with strong recommendations from funding agencies: the Co-op needed to invest in a point-of-sale (POS) system, namely Acomba. Meant to facilitate the work of the Co-op workers by easing the production of sales and inventory reports, Acomba entailed a steep learning curve and large investments in time. When not busy serving customers, recruiting them as members or putting products on the shelves, the few workers thus spent most of their time entering product information. Getting acquainted with Acomba was an enormous challenge for the workers; not only was it very time consuming, it also implied some concrete work with new numbers related to sales and inventory. On the governance side, John now plays a different role: he is now paid to run the store and must formally report to the board. The following excerpt (from the July 2001 board meeting minutes) gives a good idea of perceptions of the POS system:

> John spoke of the new POS system. Both he and David [marketing manager] were very happy about having the system but it was clear it would take some time getting it in place. John expected that they would have everything up and running in time for the next board meeting.

This expectation appeared unrealistic: the finalization of the POS was endlessly postponed throughout the 2001–2004 period. At the same time, on the governance side, with Acomba in the background, (user and support) board members gradually, though not insistently, began to ask for figures: cash flow and financial report requests are noted as far back as January 2001 in board meeting minutes. At that time—and even months later, as the following excerpt shows—we can still note a collaborative relationship between the board and management, with board members asking for numbers, but also offering their support to the workers:

> John presented sales figures for May, noting that we are coming close to our break even point of $600 per day in sales. Eric [worker member representative at the board] volunteered to do a profit per item analysis of our sales, and the Board wished him well in the effort! Mike would like to see a breakdown of sales and costs in overview for presentation at the general assembly. Rick [treasurer, user member representative] agreed to make some graphs showing these types of numbers. A discussion ensued about the time and (lack of) resources for sales and marketing activities and most other store tasks. We also discussed the responsibilities of the Board, and ways to recruit volunteer and casual worker members. (Board meeting minutes, 22 June 2001)

Problems with Acomba and bookkeepers were frequently mentioned to justify the absence of full financial reports from the general manager to the board—who was only presenting sales figures—and further by Rick, the treasurer, to all members at the 2001 General assembly when, contrary to what was planned, only partial results were presented. Speaking of these problems, in interview, John recalls:

> You know the movie Spinal Tap? It's about a rock band, a fictitious rock band where the drummer is always dying. You know, he blows up or dies in any crazy way. And the joke was that being the bookkeeper for the co-op was like being the drummer in Spinal Tap! Because, first I had a nervous breakdown. The second guy, sort of the same thing, just never kind of understood. We weren't speaking the same language. All the bookkeeping staff were completely negating the fact that we were a co-op. You know, they wouldn't account for the social shares […] We would have, I would think—well, all of us were confident—we would have good books that would accurately reflect the reality of the place. But they were always late, you know.

After having benefitted for the first two years from the collaboration and patience of the board for incomplete, late numbers, John started being criticized by some board members for numbers that were “too infrequent to properly analyze and act upon the situation” (Board meeting minutes, 23 October 2003). John asked for proper training on accounting issues at the beginning of 2004.

Requests for timely reports kept being formulated by some board members, and John’s justifications—namely the lack of time and human resources—led to the hiring of Chris, a store manager, to decrease his workload. This decision, as we will see next, was taken without full knowledge of the Co-op’s financial situation. It was also apparently done too late, as John asked for a sick leave in December 2004. The marketing manager, David, replaced him as interim general manager, ending another year marked by deficit, in a climate of rising suspicion and increased demands for control fed by the lack of numbers.

In governance terms, the second period thus appears as characterized by the gradual passage from collaboration to control. Again, this change in the dynamics of the board—the controversy, in Hussenot and Missonier’s words—is provoked by numbers: more specifically, it is brought about by the absence of full financial reports, as John leaves the boat with another deficit.

Period 3: Crisis: opposing financial and democratic numbers (2005)

When David took over John’s position as interim general manager, with the help of Gerry, treasurer of the Co-op at that time, and the newly hired store manager, he also found himself taking over a disarrayed financial situation. David reported to the board that he and Gerry discovered an accounting mess, as expressed in the following excerpt from 9 March 2005 board meeting minutes:

> The following items are reported:
>
> - It is difficult to get reliable and complete data from our system;
> - Invoices have been lost;
> - Some suppliers are refusing to send products because we have not paid our bills;
> - $32,000 of invoices were carried over in January from 2004;
> - We paid penalties for paying income tax instalments late;
> - Visa bill is $2900 ($2000 of which is from 2004);
> - Acomba is not responsive enough for our needs. It is hard to rely on the numbers. There are inconsistencies between what Acomba says we have in inventory and what actual physical count reveals;
> - After the 2004 reconciliation, we will be able to make updates to the system to reflect real numbers
>
> There is some discussion as to why these financial difficulties are coming to light now. There is discussion around the increase in human resources in the fall. Hiring store manager was not a wise move. The board members would like an explanation as to why any financial problems were not brought to our attention earlier (the September numbers that were given to us supported hiring another resource). John explains that our sales were below the target for October and November by $13,000 for the two months. Even with December sales being over by $8000, there is a $5000 difference. The board members need a full report on this situation when final numbers are available.

From then on, financial numbers, after having tried to enter the board on many occasions, rapidly became VIP members that can no longer be left knocking at the door. In the following months, accusations and justifications based on their neglect became the new language of the Co-op’s board, and John’s management was increasingly put on trial. Numbers appeared as an “objective” way to accuse him, backed by softer issues of bad human resources management. A special committee was formed to look into the situation and report on the general manager's case. It concluded that there had been mismanagement by John, and that he should not be allowed to return to his position once his sick leave was over. Throughout the spring and summer of 2005, although on sick leave, the general manager kept his seat on the board and defended himself at board meetings. His main line of defence was that there was too much to do and that he was sick in order to justify the neglect of the administrative side of the Co-op. But this mostly personal, subjective line of argument was not sufficient to fight the powerful numbers that had triggered the control button function. The general manager (GM) was fired retroactively (in July), by means of a letter sent in September.

John could not fight back with the same numbers, i.e., the financial ones. He had not proved himself able to manage them properly in the past, and was unable to convince the board that he was competent in that matter. To the board's numbers, this ex-community organizer thus opposed the numbers he mastered: democratic numbers. This was first done by mobilizing fellow worker members in a workers' special assembly. Indeed, the board was (erroneously) informed that a worker board member could not be fired. Since John was still on the board, the board thus thought that to fire him, he had to be removed from the board. This meant that worker members had to democratically withdraw their confidence in him. A special assembly of the workers was called, during which the majority of workers, mobilized by John, refused to revoke his seat at the board. Second, the democratic numbers again played in John's favour when he got ("his") support members to attend the annual general assembly, in October. Recall that the Co-op's board members are democratically elected by the general assembly for 3-year terms, some of which were over, hence a vote for board members was due to take place.

At this assembly, Gerry, the treasurer, explained the situation as follows:

> This year we can expect the deficit to grow about $40,000 because there's no grant money left. The $61,000 accumulated deficit will probably grow by another $50,000. The big question is what do we do about it? We'll have to close doors if we don't have fundamental shift. Big questions have to be asked. Can we recover, and how long will it take? This is for the new board to take on. Numerous ideas floating around have serious potential, not all doom and gloom, that include you the membership, financial loans, grants. […] We have neglected that running the store is a complex task, and we had serious decisions to make. We're not a malicious Board, we're just looking at the numbers and the financials have been mismanaged. David and Chris spent better part of 6 months fixing things. For 6 months we didn't know what the financial status was in 2004. […] It was handed over in disarray, which makes it hard for a store to maintain profitability.

Despite this alarmist discourse, the packed assembly got two motions adopted, asking for John's reinstatement and for the development of a human resources policy (including evaluation process) to be applied retroactively. Out of the four seats open for election to the Board, three of the newly elected board members were in clear support of the general manager. In John's words:

> There were four seats available, but one was a worker member and we couldn't count on that vote, so we elected three people. We mobilized. We had 30 support members there out of about 100, so we knew that we had that covered. The thing is that it was so crazy, the support members were the people who had given $100 at the beginning, they were all people whom I knew. […] There were 113 people at the meeting. I would say 100 were there to support me. […] And we were very strategic: we presented a resolution that the board adopt a human resources policy that include proper evaluations, and that it be applied to me retroactively. And that I'd be re-instated, and entitled to [compensation] retroactively. Then we elected the board members. It was a 4-hour meeting, it was very difficult, but we won the day. (Interview with John)

Board meetings following the October general assembly took the form of battles opposing "old" board members to the newly elected ones, who were overtly in favour of reinstating John (they had been elected with the explicit mandate to do so). Until January 2006, when one of the last "old" members resigned—thus allowing for new members to take board control—meetings were marked by divided views on John's reinstatement. The majority voting numbers, again, had won.

In terms of governance models, different dynamics of control are observed. Although the board-management relations are first clearly marked by the board's will to control John's actions, given the two levels of control in the Co-op's governance, we later observe a shift in the direction of control and in relations, as the sovereign general assembly, as principal, exerts control on the board to re-instate John. Once again, we note the importance of numbers in triggering change in organizational governance: those associated to financial mistakes greatly fed the control model and supported the central controversy of this period—i.e., the board's decision to fire John. Then, democratic numbers and majority voting fed yet again control, but control of a different type, i.e., control of the general assembly over members of the board. As we will see next, this paved the way for new dynamics, and new numbers supporting them.

Period 4: Repair: pacifying numbers (end 2005–2006)

With newly elected board members taking over the board majority in January 2006, negotiations were quickly undertaken, and John was reinstated a month later. While numbers had been used to accuse, create panic and mobilize in the previous period, they played a pacifying, smoothening role in 2005–2006, in which repair was needed of both the board towards John, and of John's credibility. The first repair implied compensating John for the financial losses due to his dismissal and discussing wage increases for him and for the other workers. The second repair meant, for John, to provide the board with the numbers they requested, once a compromise was found, i.e., once board members stated what exact performance indicators were deemed necessary. It also meant, moreover, that John had to make every possible effort to ensure the Co-op would generate its first ever surplus.

> John: The whole place has been so consumed with the issue of me last year [2005] that right now, the discussion is about "what is the bottom line?" A lot of people supported me, but at the end of the day, when I came back, you know […] People thought: "what if we were wrong? What if they were right?" [laughter] I really worked hard to prove these people wrong and show that we could make a surplus, and that we can have the books and have all the reports done on time […] The discussion has focused mostly on that, it hasn't gone beyond that, now. (Interview with John)

The board explicitly stated the set of number-related selected indicators, as the following resolution, unanimously carried at the 30 January 2006 board meeting, shows:

> On a monthly basis, the General Manager will report to the Board of Directors, the following:
>
> 1. Number of new members
> 2. Activities to promote the Co-op
> 3. Late bill payments
> 4. New suppliers and suppliers lost
> 5. Any financial penalties
> 6. Cash flow statements and balance sheets for the most recent month closed—including monthly sales figures and general ledger.

As a result, board meetings somewhat became reporting moments for the general manager to present (overloads of) spreadsheets and numbers, as shown in the following minutes from the 8 May 2006 board meeting:

> Co-op is 18 to 20% over sales predictions in March & April. 7% of sales in April were due to rain barrel sales (60 sold in 5 weeks!). Averaged $1,700 per day in April. See attached stats. VISA has been completely paid off 1.5 month ahead of schedule (was $4,000 in early February). Credit union loan roughly $6,700, there is no benefit from paying it off early. New idea for financing is an agreement with a member for a low interest line of credit to make purchases (equipment or inventory) with conditions of repayment negotiated each time an amount is loaned. We have been setting aside GST & PST [taxes] collected from sales to be able to pay off GST & PST bill each quarter. We have actually been setting aside more money than we need, allowing us to pay other expenses faster too. The financial committee has created different funds […] These funds will be accounted for in Acomba when John next meets with bookkeeper. Other financial issues discussed was an equipment loan of roughly $10,000 for a new fridge ($3,000), coffee grinder ($1,500), 2nd cash register ($1000), filter coffee machine ($1000). John feels that all are an ASAP priority to further stimulate sales. It was agreed that if possible, we would purchase all these items together in order to get a better deal.

In this fourth period, in the form of compensation and of performance indicators, numbers contributed to successively bringing back both collaborative and controlling, in the form of stable relationships between board and management. This new focus on (mostly financial) indicators, combined with cuts in the payroll (in terms of hours worked) and with increased sales, translated in a first CAD$19,586 surplus for 2006. This positive outcome—yet another number—prompted a further evolution in board-management dynamics.

Period 5: Numbers rule: supporting the control–collaboration duality (2007–2009)

Reporting dynamics established in 2006 were institutionalized. In this fifth period, not only do they dictate board meeting agendas, they greatly orient how projects are proposed and defended, and issues dealt with (specific practices involving numbers will be detailed in the next section). Most of board meeting content is comprised of reports presented by the general manager, and mainly of financial nature, with a secondary focus on activities and outreach. From being dismissed from his job by previous board members who judged that he could not manage the Co-op's (financial) numbers, John turned himself into a skilful mobilizer of those numbers—and new ones—to direct board and general assembly meetings, to justify his proposals; in other words, to influence and convince. The following extract, taken from the 2007 annual report (written by John), gives a good idea of the kind of number rhetoric that contaminated the Co-op organizational governance:

> 2007 was a pivotal year for the Co-op […]. Coming off of our first surplus in 2006, the Board, the Worker members and Staff worked hard in 2007 consolidating increases in staffing, gains in sales and improvements in administrative structure. We ended the year posting our 2nd consecutive surplus. All of this happened while we ran a store 7 days a week (354 days last year!!) serving an average of 127 customers per day (more than 45,000 different transactions!!), a number that does not include all of the passersby, members or not, who drop by during the day to say hello. Add to this the more than 60 events held in 2007 and, all of the people who attended those events, and it is easy to see that the Co-op is fulfilling its mission as an important community source for environmental products and information. The launch of a new website in 2007 helped to greatly increase the visibility of the Co-op. Unique visitors, page views and hits have more than doubled since the establishment of the new site and have continued to grow into 2008.

This quote exemplifies the ubiquity of numbers. While John did not initially feel at ease with the business component of the Co-op, he now admits that he is "smarter with money", and that he never thought he would ever be preoccupied by numbers.

> You know, our idea's always been that we make money, and part of it gets put in the community, and it goes to the worker members, and it's reward for the community. I think that's what we need to do. But, you know, we can only do that if we do development. (John to board members)

With the first surplus—the number that brings about the passage from period 4 to 5—comes the question of the Co-op's development. Two major development projects have been put forward for the Co-op, mainly driven by John: the launch of a new, online sales website (which will be further discussed later), and the purchase of the building it is renting a space in. To justify them to the board, new numbers, mainly of statistical nature, were introduced: website visits, bestselling products, percentage of members living outside of the neighbourhood, etc. And to make these projects come true and enrol Co-op members, other numbers have also been mobilized, associated to loans, an increased inventory to answer the expected web orders coming in, and investments from the community through privileged shares.

Table 2 encapsulates the succession of governance models over the five periods and shows the relation between these findings and the following described "zoom in" exercise.

The arrows allow us to understand the role of numbers as mediation objects in changing governance dynamics, given the research gaps previously identified with regard to the triggers of change. Numbers are involved in all of the controversies—i.e., "anything […] that challenges the status quo between actors" (Hussenot & Missonier, 2010, p. 272)—that provoke the move to another period marked by different governance models: the attainment of start-up objectives (from period 1 to 2, from collaboration to increasing control); the problematic financial reports and deficit (from period 2 to 3, control and changes in its directions); further financial numbers but also democratic, voting numbers (from period 3 to 4, from control to control and collaboration), and the first surplus (from period 4 to 5, from control and collaboration at different times to their simultaneous presence).

In the final period, it is also worth noting that numbers come from new domains: while the prevalent numbers were often related to finance in the past, they are also associated to new spheres such as demographics and website or store operation statistics. And in comparison with previous periods in which different governance models succeeded each other, in this period, interestingly, numbers allow for both control and collaboration to be enacted simultaneously, i.e., for the control–collaboration paradox of governance to be embraced. How do numbers achieve this? Through which concrete practices do numbers allow control and collaboration to coexist? A "zooming in" real-time, ethnographic observation of board meetings and general assemblies (end 2006–2009) data led to the identification of specific actions allowing for both models to be embraced.

Number-Supported Micro-Practices Enabling Simultaneous Control and Collaboration

From the zoom-in and iteration between emergent and deductive coding, and theorizing of my observations of board meetings and general assemblies, I identified two specific micro-practices enabling the interplay of control and collaboration. In the following paragraphs, vignettes taken from data covering the fifth period will illustrate these two concrete number-supported practices.

Table 2. Integrative summary of the results.

	1999-2009 EVOLVING GOVERNANCE MODES					
	Period 1 1999-2000	Period 2 2000-4	Period 3 End of 2004-5	Period 4 End of 2005-6	Period 5 2007-9	ZOOM IN – end of 2006-2009
	Emergence of the Co-op	1st years of operation	Crisis	Repair	Numbers rule	*Numbers allow the enactment of both control and collaboration through 2 number-supported micro-practices:*
Salient numbers in governance material-discursive practices	Objectives in terms of start-up funds and membership (number of members and shares)	Retail operation related: sales, number of products, inventory, delays	(Negative) financial data: expenses, unpaid accounts; then majority voting	Compensation, wages; agreed set of reporting indicators	Explosion of quantified information, related to all spheres (e.g. web stats, member demographics)	
Numbers' role/action	Mobilizing, rallying, motivating, legitimating	(Expected) reporting, but lacking and frustrating	Creating distrust, supporting accusations, then mobilizing,	Pacifying, trust (re) building	Justifying, prescribing action, embracing paradoxes	
Main governance model(s)	Stewardship	From stewardship to agency/control	Agency/control	Agency and stewardship at different moments	**Simultaneous enactment of agency and stewardship**	*1) personalizing/ professionalizing issues* *2) creating new calculable spaces*
Financial results	Looking for start-up money	2001: ($2,973) 2002: ($7,638) 2003: ($26,260)	2004: ($22,821) 2005: ($19,297)	2006: $19,586	2007: $17,318 2008: ($47,728)	
Controversy leading to the next period	Opening of the store once objectives (numbers) are reached	Departure of the general manager (GM) in a climate of missing numbers and another deficit	Firing of the GM; 2005 General assembly where majority votes in favor of GM's reinstatement and elects new board members with this mandate	First (ever) operating surplus in 2006	n/a	

Personalizing/professionalizing issues

Despite the multiple stakeholders at the board (recall that the EcoloWorld Co-op board is comprised of worker, user and support members), the 2006 and 2007 financial years were characterized by very little representation and advocacy by the different types of members of their own interests. On numerous occasions, user and support members even preceded workers' requests, and a generous catching-up of employees' working conditions was consented to by all board members. After a second surplus in 2007, the possibility of another deficit in 2008 prompted user members to express concerns and to reactivate control over managerial actions, as the following vignettes demonstrate.

Given the reporting dynamics described in the fifth period, when user members put on their "user representative" hats to complain—thus "personalizing" their comments—they mobilized performance indicators related to their "consumer" concerns. Not only could the managers (general and store) "talk numbers", other board members, too, could translate their concerns with "quantifiable" indicators, as the following excerpt from an observed board meeting (11 February 2009) shows:

User member (UM):	well, if you wanted to increase the budget, you'd have to work like hell to make sure that your sales increase…
John:	yeah
UM:	you know, there's a lot of products that we should be selling and that we don't have…there's, you know, customer service that I think sometimes is lacking…Sometimes, people are waiting a long time […] If things are expensive, more than what they can get at [the supermarket close by], we have to go above and beyond in terms of service, you know.
John:	huhummm
UM:	Give people something! You're trying to sell, don't let people wait at the cash when people at the cash are just talking there, at the coffee machine, just like that, when people are waiting and nobody notices that they're there.
Other UM:	there's a culture of patience at the Co-op.
[Laughter]	
UM:	Look, I have no problem with it, now, I'm just saying that when you're in a really bad economic time and you want to get people's business, there should be an extra effort for customer service.

By mobilizing vague, non-quantified—yet quantifiable—indicators that are related to her own (user) concerns, a user member tries to shorten the distance between the board and management. Indeed, this user member's remarks are implicitly invoking numbers; whether these are associated with budget and sales, delays, inventory or prices, they are stated from a user member's personal perspective and interests. Through her quantifiable remarks, the user member's preoccupations are expressed to the manager, and the user member oversteps the board's more "strategic" responsibilities to jump into very operational, managerial competencies and exert control, while at the same time trying to collaborate with the general manager to improve the Co-op's situation.

The following excerpt (immediately occurring after the user member's intervention) shows how this tentative incursion into the management of the Co-op with soft quantifiable arguments was replied to with other justifications and a few explicit numbers:

John: There's no doubt that there are things that we can add. And you know, we talked about that, we brought things in. For me, right now, what needs to be done in terms of products is to get products on the website. If we have more stuff, we're gonna sell more stuff there, and it's stuff that we have. So we don't have to deal with new suppliers, we don't have to deal with the cashflow issues, it's marginally increasing what you already bought […] and we're focusing on things that are close by, that are easy to get […] and if we have enough when they buy it online, we can have it sent in 2 days, […] never more than 3 days.

The user member directly seizes on these indicators to further develop her point as follows:

UM: but that's another thing, you know, not having something. You know, people are coming to the Co-op to buy a product that they can get at [the supermarket] for cheaper than they can get it at the Co-op, and they get there, and you're out of stock. That's…that's bad. They're not gonna… "Forget that", they'll say.

John: we've invested $14,000 to address that…it's the kind of inventory that we have. You know, 80% of the stuff, 80% of the sales come from 30% of your stuff. And you need to have that stuff and you need to have all of the other stuff too, and that's what we struggle with. And one way to address that was to spend $14,000 to bump up inventories, in things that we always have. So I would say that we've addressed that to a certain extent.

UM: yeah…

This excerpt shows how the user member's intervention is immediately followed by the general manager's use of numbers to answer some of her critiques and to close the debate. By mobilizing numbers that moved the discussion away from an "interest-based" to a more objective and professional level, John showed managerial competence while reassuring board members and, importantly, ensuring their support and collaboration.

At that same meeting, the precision of numbers was later reinforced and emphasized to display the general manager's knowledge and his own control over numbers, and to consolidate approval from board members. Indeed, when a user member (the same as above) told John he could say "$3000" instead of the more precise "$2965" when talking about some costs, John answered "well, that's $2965". This reinforced the importance of exactness, with numbers being mobilized to resettle the distance to be kept between the board and management after a user member's attempt to shorten it by controlling John, challenging his authority yet trying to help find solutions.

These vignettes illustrate how the manager answers to board members' critiques—associated with what we may label "collaborative control", but also linked to their specific, personal interests, associated with their category of membership—by providing more precise numbers that show his own professional control over the situation. In doing so, issues are depersonalized, i.e., detached from the member's personal interests, and professionalized, and both control and collaboration enacted, mediated by numbers. "Collaborative control" is exerted from the board towards management, and control demonstrated by the general manager over numbers to facilitate collaboration with the board. The next vignette will show another type of movement supported by numbers, this time over new calculable spaces.

Creating new calculable spaces

In the last vignettes, issues were raised by a board member using quantifiable indicators to enact "collaborative control" over the general manager, who responded with more numbers to reassure the board and retain support and collaboration. In what follows, another dynamic is observed: with numbers, John himself problematizes a situation, then proposes a solution which, interestingly, creates new calculable spaces. The following two excerpts show how the general manager introduced and justified the development of online sales for the Co-op, first with the board, then later at the general assembly:

> You know, I look at the stats on the website and we're still getting about double of what we were getting in terms of traffic on the old website. Like, people, when they come to our webpage now, they look at more pages—they look at twice as many pages as they looked before, and there's more than twice as many people looking at the page. […] The second page that they look at…Yeah, it varies, but there's a substantial amount of people that are staying for a good few minutes, like, more than 10 minutes. The second most visited page is the products. That's where people go right away. (John, board meeting, 2007)

> About 10% of our membership lives off the island. We receive emails every week from people all over Quebec asking about products, asking about when we're gonna have things available online. (John, 2008 annual general assembly meeting)

Indeed, on numerous occasions and with various supporting numbers (statistics showing the increasing popularity of the Co-op's website, frequency of requests received for online sales, percentage of members living out of town, sales plateau, etc.), online sales (and more specifically the new potential sales it holds out the prospect of) are presented as the solution to solve the Co-op's problematic issues (namely the ones mentioned by the user member in a preceding excerpt, i.e., stock-outs, slow customer service, and need to increase sales). The following excerpt from a board meeting is one of the many mentions of trust in a webstore to settle budget matters:

> John: Anyway, that's an issue with the budget [sales down, cashflow issues]. I just wanted people to be aware about it, because that's a problem and I'm not sure about the way to fix it. Well, you know, you fix that problem by having 4 sales a day online, of $50 each. Totally fixed, there's no problem at all.

After having first mentioned that he did not know how to fix the budget issue (thus admitting having little control over the situation and laying himself open for control questions from the board), John rapidly puts forward the solution of online sales, which permits the creation of new numbers to fix the problematic ones. The webstore solution is presented like a rallying project, bringing together the board and management into a collaborative mode to solve problems, while at the same time offering new indicators to build controllable, calculable spaces, i.e., "abstract spaces [that] are objects to be known and regulated in terms of their performance" (Miller, 1994, p. 253).

In sharp contrast with the community, local orientations of the Co-op's (physical) space, the development of the webstore appears as a step to reach out to new, unknown, and very likely non-member customers. These potential customers, contrarily to the members who come to visit the Co-op and live close by (the majority of the members reside in the immediate neighbourhood), are known impersonally, through new indicators based on their IP address, demographics, and website browsing and ordering patterns, as these board meeting excerpts clearly show:

> John: And online, so far, 86% of the sales are to women. You know, 40% of the sales are menstrual products. All of the sales made online so far have personal care products in them.
> Then, later in that same meeting:

John:	from January 7 to February 6, 2867 visits, that's 2459 different people.
UM:	how do you know?
John:	because it tells you…
UM:	oh, because it's a different URL…
John:	yes, a different IP. 1800 page views, the average page views per visit are 6.29, 3 minutes and 15 seconds average on the site… that's good.

With the launch of the webstore thus comes a whole new set of indicators, based on the average amount of online sales, frequency and repetition of orders, number of items purchased and origins of the online customers—data that had never been communicated to the board for in-store sales. An average online "quantified customer" (Vaivio, 1999), emerges, in practice, and displaces the tensions related to both local retail-related critics (members trying to exert control, get closer to the management and criticizing local store operations) and market limitations (sales plateau, and need to reach out to a larger pool of customers). Specific local issues are being escaped by the promise of the new, distant potential customers, inhabiting newly created calculable spaces that facilitate collaboration through their potential to solve problems. Numbers here enable the justification of this movement away from the core membership base, while also allowing the board to relate to the new customers through some new indicators. In this sense, the calculable spaces created by online sales allow the board to act at a distance. As argued by Quattrone and Hopper (2005), "the remote and unfamiliar is rendered close and recognizable, and thence controllable, through action at a distance" (p. 741).

The new numbers thus allow both the board and management to get hold of new calculable spaces. These same numbers allow both the board and general manager to exert some control over new operations and their performance, while rallying everybody in a collaborative mode to solve the local issues faced by the Co-op.

As will be discussed below, the number-supported practices enacted in the previous vignettes—personalizing/professionalizing issues and creating new calculable spaces—offer the board the means to act at a distance and to potentially control managerial actions, while at the same time ensuring the board's collaboration with the general manager and the possibility, for the latter, to keep the board at a distance. These practices allow us to better distil the role of numbers in simultaneously supporting different models of organizational governance and modulating—mediating—the relational dynamics and space between the board and management over time, as will be proposed next.

Discussion

As stated initially, the central question of the study was: how do numbers contribute to and mediate between different forms of board governance over time? In the following paragraphs, this question will be answered first by discussing the role of numbers in the evolution of the EcoloWorld organizational governance over time, then by expanding on the "acting at a distance/keeping at a distance" tension formulated in the last part of the findings.

Numbers supporting and challenging different models over time

The period-by-period analysis used to present the evolution of EcoloWorld Co-op board-management dynamics over a 10-year period allowed for the identification of distinct models of governance that succeed each other, and then later co-exist. Indeed, collaboration was first observed, followed by control. The two models were later enacted one after the other, and finally, as shown in the second part of the findings, through number-supported practices, a dynamic control–collaboration interplay was observed. Without a longitudinal research design, the study of the EcoloWorld board-management relationships would have been incomplete, since we could not have captured their evolution. This evolutionary approach (Gabrielsson & Huse, 2004) contributes to answering the specific calls, by Wood (1992) and Kreutzer and Jacobs (2011), to unveil the triggers of governance model change, which in this case were related to numbers of different kinds that acted as mediation objects (Hussenot & Missonier, 2010). This explicit and systematic consideration of objects in the study of governance dynamics is a second contribution to the governance literature.

While the evolution, from collaboration to increasing control, and the unfolding of a crisis could have been predicted by Wood's (1992) model, the roles played by numbers in supporting and challenging these models, however, were unforeseen. The first part of the findings thus highlights the triggering capacity of numbers—successively related to start-up objectives, problematic financial results, democracy, compensation, benefits, and finally to different performance indicators ranging from financial to demographic and web-related figures—to transform board dynamics.

In terms of paradox-management modes, the unfolding of different strategies to deal with the collaboration–control paradox is observed: from temporal separation (collaboration, then control, and their rapid succession later) to the acceptance and enactment of both control and collaboration through number-supported practices. It is also worth noting that what we have labelled "collaborative control" was also observed in vignettes associated with the practice of personalizing/professionalizing issues. This collaborative control, exerted by a user member, shows how both models, despite their inherent tensions, can be brought together when coaching yet monitoring behaviours are adopted in board-management exchanges.

Sundaramurthy and Lewis (2003) recommended that control and collaboration be balanced. But while they proposed this could be achieved a) through the self-correcting cycle of embracing trust *and* conflict, b) by another self-correcting cycle of promoting diversity *and* shared understanding, and/or c) by the external interventions of blocks of institutional investors or shareholder activists, my observations have pointed to some specific actions of numbers, especially in period 5, where collaboration and control are, paradoxically, jointly enacted. In that sense, numbers not only trigger changes from one model to another; they can foster the paradox acceptance perspective described by Poole and van de Ven (1989), and later proposed, in governance, in the writings of Sundaramurthy and Lewis (2003), Cornforth (2004) and Kreutzer and Jacobs (2011).

Numbers and the control–collaboration paradox: Acting/keeping at a distance

It has already been argued, in the accounting literature, that accounting systems appear as a tool for transparency and trust (e.g., Porter, 1995; Mouritsen & Thrane, 2006), and that calculation appears as a rhetorical form which conveys an image of neutrality, objectivity and independence, whereas "non-quantitative argument is more easily dismissed as being 'subjective', 'mere opinion' or 'metaphysical speculation'" (Chua, 1996, p. 140). Findings related to the practice of personalizing/professionalizing issues do confirm such trends, with the user member's quantifiable yet unquantified and interest-based critiques quickly dismissed through the use of more precise, "objective" and professional numbers presented by the general manager. But the findings also allow us to expand on the following two points: an exploration of numbers unrelated to accounting, and the proposition that numbers, as mediation objects, modulate the distance between the board and management, allowing board and management to sustain the control–collaboration paradox by simultaneously allowing the board to act at a distance, and the management to keep the board at a distance.

While performance indicators had been developed and selected in the previous period, the zoom-in analysis conducted on the ethnographic material gathered in the fifth period showed how board members and the general manager made intense use of them. Initially mostly related to accounting, the range of indicators exploded in the final stage, with mobilization of numbers related to operations (number of customers served, days opened, website visits, etc.). The analysis highlighted the important roles indicators of all kinds—not only the traditional, accounting ones—played in board-management dynamics, and showed how they can be the source of problems (activating the control function), but also the source of solutions (making collaboration possible). This exploration of new numbers offers a fresh contribution to the literature on their potential roles in governance dynamics, and it also further expands Hussenot and Missonier's (2010) focus on a single mediation object (i.e., a contract), a limitation that they themselves acknowledged.

The second point is related to the notion of distance, which was sketched in the second section of findings, mainly with the observation of numbers' capacity to facilitate board members' action at a distance. The association between numbers, action at a distance and control has thus already been discussed—and the EcoloWorld Co-op case illustrates it. Elected representatives of the user and support members' categories used indicator-filled reports as a means through which some control could be exerted, at a distance (which they try to reduce), over the management of the EcoloWorld Co-op to prevent the drifts of the past (i.e., crisis and deficits) from recurring. What this case additionally shows is how numbers can create a dynamic interplay between the controlling/acting at a distance (thus distance reduction) and a collaborating/keeping at a distance (augmentation). Indeed and paradoxically, the "acting at a distance" possibility offered by numbers to user and support members alike at the board was accompanied by a contrasting "keeping at a distance" action for the general manager. Indeed, numbers keep user and support members at a distance from management, allowing John to preserve discretion over the store operations, as long as he demonstrates that he is in control of numbers.

As such, numbers constantly modulate—i.e., mediate—the distance between board and management. For user and support board members, numbers shorten the distance between board and management—to control. In contrast, providing user and support members with numbers allows the manager to retain the board's support and collaboration, as well as to have free reign over store operations. While the accounting literature has shown how (accounting) numbers can feed a controlling–enabling tension (Ahrens & Chapman, 2004; Miller, 2001; Mundy, 2010), explicit links with the governance literature, but also with the burgeoning paradox perspective (Smith & Lewis, 2011) were not clearly stated. This is a major contribution of this paper: the proposition that numbers, by modulating the distance between board and management, allow for the control–collaboration paradox of governance to be embraced.

Altogether, the answers offered to the central question of this study thus allow for integrative, conclusive reflections on the concept of mediation with regards to organizational governance, and for the proposition that mediation be envisioned as both a) changing relations in, and b) modifying the spaces of organizational governance. This follows Mouritsen et al.'s (2001, cited in Mouritsen & Thrane, 2006) suggestion "that the calculations performed by open book arrangements and functional analysis not only organized a space between firms, but also redefined the participating firms themselves" (p. 243).

Hussenot and Missonier's (2010) "mediation object" stresses the role of objects in modifying interactions—a role that was confirmed in answering the governance evolution question of this paper. But the description of the actual micro-practices associated with numbers in the control–collaboration paradox allowed us to identify another role played by mediation objects: that of modifying the distance, and thus the space between board and management. The relation between mediation and space has already been proposed by Vinck (2009), who argued that mediation can be seen as the creation of a space that allows for the "articulation between heterogeneous social worlds" (p. 66). Given the multistakeholder governance of the EcoloWorld Co-op, this conception appears as particularly relevant. This study demonstrated how (accounting, but also other) numbers both modified the relations between the board members and managers and the distance between them.

Conclusion

The paper offered a "boards-in-action" (Samra-Fredericks, 2000), ethnographic observation-based look at "what boards do" (McNulty & Pettigrew, 1999), over time, and more specifically, how they deal with the paradoxes of governance (Cornforth, 2004; Kreutzer & Jacobs, 2011; Sundaramurthy & Lewis, 2003), in practice. More specifically, it demonstrated how different numbers played a role in fostering different models of governance, but also, importantly, their succession and co-existence. While the opening to multiple types of numbers, as mediation objects, appears as a contribution with regards to Hussenot and Missonier (2010), the possible existence of additional, unexplored mediation objects in the governance of the EcoloWorld Co-op must be acknowledged.

Although third-sector organizations such as the EcoloWorld Co-op do present peculiarities in terms of organizational governance (Spear et al., 2009), they nonetheless do share some features with both capitalistic and public organizations (respectively, viability issues and presence of stakeholder representatives at the board), making them "hybrids" with features of both other sectors, and "valuable research sites" for the topic of organizational governance (Maitlis, 2004, pp. 1276–1277). That being said, the peculiarities of the governance of third-sector organizations should not be underestimated, especially given the importance of democratic numbers in the crisis episode and board meetings that followed the 2005 general assembly. Despite the need to contextualize them, the results enhance our understanding of how numbers can powerfully act upon tension-filled organizational contexts, while engaging in a reflection on the complex relation many members of third-sector organizations foster with numbers of different types. This points out to the practical challenges and implications, in third-sector organizations, to develop fluency in the language of numbers (the "language of [mainly accounting] numbers" described in Chua, 1996). Still, as important as the financial numbers appeared in the different vignettes, one must recall how they did not resist the opposition offered by those of democracy. Nurtured by institutionalized governance processes and spaces offered by the co-operative form of organization, these numbers actually changed the course of the history of the EcoloWorld Co-op, or at least that of its board and general manager.

Performance indicators and numbers of all kinds successfully enrolled the majority of Co-op's board members and maintained this majority despite subsequent elections. However, this last compromise is not irreversible and could, again, be subject to further tests, given the very co-operative, democratic processes. Denis et al. (2006) have suggested that "on its own, a system of numbers is rarely sufficient to deal with the complexity of strategy making in pluralistic contexts. [...] Numbers can be powerful for a while, but pluralism strikes back" (p. 374). This opens up two research avenues. First, further investigation would be required to tell how the number-supported micro-practices remain or differ over time and space. As expressed by Power (2004), "the puzzle of measurement is that numbers are powerful and fragile, simple and qualified, trusted and distrusted simultaneously" (p. 779). It must also be noted that while the control and collaboration models were deemed central in the EcoloWorld case, other complementary models (for instance, the resource–dependence model in the first period, or the democratic model in the third) were also observable in the background. Finally, the paper has focused on the internal board and general assembly dynamics. Since the managerial discourse of governance and requests for performance indicators often result from exogenous pressures (e.g., Townley, Cooper, & Oakes, 2003; Keevers et al., 2012), an open system, more macro-contextual view (e.g., Hopwood, 1983; Hung, 1998; Pettigrew & McNulty, 1995; Pye & Pettigrew, 2005) might be envisioned to better locate/connect the importance of the language of numbers with the larger, institutional context.

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References

Ahrens, T., & Chapman, C.S. (2007). Management accounting as practice. *Accounting, Organizations and Society, 32*(1–2), 1–27.

Andon, P., Baxter, J., & Chua, W.F. (2007). Accounting change as relational drifting: A field study of experiments with performance measurement. *Management Accounting Research*, *18*(2), 273–308.

Chua, W.F. (1996). Teaching and learning only the language of numbers: Monolingualism in a multilingual world. *Critical Perspectives on Accounting*, *7*(1), 129–156.

Cornforth, C. (2004). The governance of social enterprises: A paradox perspective. *Annals of Public and Co-operative Economics*, *75*(1), 11–32.

Daily, C.M., Dalton, D.R., & Cannella, A.A. (2003). Corporate governance: Decades of dialogue and data. *Academy of Management Review*, *28*(3), 371–382.

Davis, J.H., Schoorman, D.F., & Donaldson, L. (1997). Toward a stewardship theory of management. *Academy of Management Review*, *22*(1), 20–47.

Denis, J.-L., Langley, A., & Rouleau, L. (2006). The power of numbers in strategizing. *Strategic Organization*, *4*(4), 349–377.

Ezzamel, M. (1994). Organizational change and accounting: Understanding the budgeting system in its organizational context. *Organization Studies*, *15*(2), 213–240.

Ezzamel, M., Willmott, H., & Worthington, F. (2004). Accounting and management-labour relations: The politics of production in the “factory with a problem”. *Accounting, Organizations and Society, 29*(3–4), 269–302.

Fama, E.F., & Jensen, M. (1983). The separation of ownership and control. *Journal of Law and Economics*, *26*, 301–325.

Fauré, B. (2007). Les propriétés organisantes du langage des chiffres. Actes de calcul et esthétique des comptes: Le cas de la fabrique du budget [The organizing properties of numbers. Calculations and aesthetics of accounts: The making of the budget]. *COOMposite*, *1*, 74–108.

Fauré, B., & Rouleau, L. (2011). The strategic competence of accountants and middle managers in budget making. *Accounting, Organizations and Society*, *36*(3), 167–182.

Gabrielsson, J., & Huse, M. (2004). Context, behavior, and evolution: Challenges in research on boards and governance. *International Studies of Management & Organization*, *34*(2), 11–36.

Golden-Biddle, K., & Rao, H. (1997). Breaches in the boardroom: Organizational identity and conflicts of commitment in a nonprofit organization. *Organization Science*, *8*(6), 593–611.

Hopwood, A.G. (1983). On trying to study accounting in the contexts in which it operates. *Accounting, Organizations and Society, 8*(2–3), 287–305.

Hopwood, A.G. (1987). The archeology of accounting systems. *Accounting, Organizations and Society*, *12*(3), 207–234.

Hung, H. (1998). A typology of the theories of the roles of governing boards. *Corporate Governance*, *6*(2), 101–111.

Huse, M., Hoskisson, R., Zattoni, A., & Viganò, R. (2011). New perspectives on board research: Changing the research agenda. *Journal of Management and Governance*, *15*, 5–28.

Huse, M., & Zattoni, A. (2008). Trust, firm life cycle, and actual board behavior: Evidence from "one of the lads" in the board of three small firms. *International Studies of Management & Organization*, *38*(3), 71–97.

Hussenot, A., & Missonier, S. (2010). A deeper understanding of evolution of the role of the object in organizational process: The concept of "mediation object". *Journal of Organizational Change Management*, *23*(3), 269–286.

Keevers, L., Treleaven, L., Sykes, C., & Darcy, M. (2012). Made to measure: Taming practices with results-based accountability. *Organization Studies*, *33*(1), 97–120.

Kreutzer, K. (2009). Nonprofit governance during organizational transition in voluntary associations. *Nonprofit Management and Leadership*, *20*(1), 117–133.

Kreutzer, K., & Jacobs, C. (2011). Balancing control and coaching in CSO governance. A paradox perspective on board behavior. *Voluntas*, *22*(4), 613–638.

Langley, A. (1999). Strategies for theorizing from process data. *Academy of Management Review 24*(4), 691–710.

Langley, A., Mintzberg, H., Pitcher, P., Posada, E., & Saint-Macary, J. (1995). Opening up decision making: The view from the black stool. *Organization Science 6*(3), 260–279.

Latour, B. (2005). *Reassembling the social. An introduction to actor-network-theory*. Oxford, UK: Oxford University Press.

Leblanc, R., & Schwartz, M.S. (2007). The black box of board process: Gaining access to a difficult subject. *Corporate Governance*, *15*(5), 843–851.

Lowe, A. (2001). "Action at a distance": Accounting inscriptions and the reporting of episodes of clinical care. *Accounting Forum*, *25*(1), 31–55.

Lowe, A., & Jones, A. (2004). Emergent strategy and the measurement of performance: The formulation of performance indicators at the microlevel. *Organization Studies*, *25*(8), 1313–1337.

Lynall, M. D., Golden, B.R., & Hillman, A.J. (2003). Board composition from adolescence to maturity: A multitheoretic view. *Academy of Management Review*, *28*(3), 416–431.

McNulty, T., & Pettigrew, A. (1999). Strategists on the board. *Organization Studies*, *20*(1), 47–74.

Maitlis, S. (2004). Taking it from the top: How CEOs influence (and fail to influence) their boards. *Organization Studies*, *25*(8), 1275–1311.

Miller, P. (1994). Accounting and objectivity: The invention of calculating selves and calculable spaces. In A. Megill (Ed.), *Rethinking objectivity* (pp. 239–264). Durham, NC: Duke University Press.

Miller, P. (2001). Governing by numbers: Why calculative practices matter. *Social Research*, *68* (2), 379–396.

Mouritsen, J., & Thrane, S. (2006). Accounting, network complementarities and the development of inter-organisational relations. *Accounting, Organizations and Society*, *31*(3), 241–275.

Mundy, J. (2010). Creating dynamic tensions through a balanced use of management control systems. *Accounting, Organizations and Society*, *35*(5), 499–523.

Nicolini, D. (2009). Zooming in and out: Studying practices by switching theoretical lenses and trailing connections. *Organization Studies*, *30*(12), 1391–1418.

Pettigrew, A., & McNulty, T. (1995). Power and influence in and around the boardroom. *Human Relations*, *48*(8), 845–873.

Pfeffer, J., & Salancik, G.R. (1978). *The external control of organizations: A resource-dependence perspective*. New York, NY: Harper & Rowe.

Poole, M.S., van de & Ven, A.H. (1989). Using paradox to build management and organization theories. *Academy of Management Review*, *14*(4), 562–578.

Porter, T.M. (1995). *Trust in numbers: The pursuit of objectivity in science and public life*. Princeton, NJ: Princeton University Press.

Power, M. (2004). Counting, control and calculation: Reflections on measuring and management. *Human Relations*, *57*(6), 765–783.
Preston, A.M. (2006). Enabling, enacting and maintaining action at a distance: An historical case study of the role of accounts in the reduction of the Navajo herds. *Accounting, Organizations and Society*, *31*(6), 559–578.
Pye, A., & Pettigrew, A. (2005). Studying board context, process and dynamics: Some challenges for the future. *British Journal of Management*, *16*, S27–S38.
Quattrone, P., & Hopper, T. (2005). A "time–space odyssey": Management control systems in two multinational organisations. *Accounting, Organizations and Society*, *30*(7), 735–764.
Robson, K. (1992). Accounting numbers as "inscription": Action at a distance and the development of accounting. *Accounting, Organizations and Society*, *17*(7), 685–708.
Rose, N. (1991). Governing by numbers: Figuring out democracy. *Accounting, Organizations and Society*, *16*(7), 673–692.
Samra-Fredericks, D. (2000). Doing "boards-in-action" research: An ethnographic approach for the capture and analysis of directors' and senior managers' interactive routines. *Corporate Governance*, *8*(3), 244–257.
Samra-Fredericks, D. (2003). Strategizing as lived experience and strategists' everyday efforts to shape strategic direction. *Journal of Management Studies*, *40*, 141–174.
Smith, W.K., & Lewis, M. (2011). Toward a theory of paradox: A dynamic equilibrium model of organizing. *Academy of Management Review*, *36*(2), 382–403.
Spear, R., Cornforth, C, & Aiken, M. (2009). The governance challenges of social enterprises: Evidence from the UK. *Annals of Public and Cooperative Economics*, *80*(2), 247–273.
Sundaramurthy, C., & Lewis, M. (2003). Control and collaboration: Paradoxes of governance. *Academy of Management Review*, *28*(3), 397–415.
Townley, B., Cooper, D.J., & Oakes, L. (2003). Performance measures and the rationalization of organizations. *Organization Studies*, *24*(7), 1045–1071.
Vaivio, J. (1999). Examining "the quantified customer". *Accounting, Organizations and Society*, *24*(8), 689–715.
Vaivio, J. (2004). Mobilizing local knowledge with 'Provocative' non-financial measures. *European Accounting Review*, *13*(1), 39–71.
Vinck, D. (2009). De l'objet intermédiaire à l'objet-frontière. Vers la prise en compte du travail d'équipement. *Revue d'anthropologie des connaissances*, *3*(1), 51–72.
Vollmer, H. (2003). Bookeeping, accounting, calculative practice: The sociological suspense of calculation. *Critical Perspectives on Accounting*, 3, 353–381.
Wood, M.M. (1992). Is governing board behavior cyclical? *Nonprofit Management and Leadership*, *3*(2), 139–163.

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