Praxis and its mediators in 'Strategy as Practice': the role of technology use consolidating the strategizing

Samir Adamoglu de Oliveira[a], Kleber Cuissi Canuto[b], Fabricio Baron Mussi[c]

[a] Doctor in Management by the Federal University of Paraná – (PPGAMD/UFPR). Professor of the Master's and Doctoral Management Program of Positivo University (PMDA/UP), Curitiba – PR, Brazil, and Associate Researcher in Instituto Brasileiro de Estudos e Pesquisas Sociais (IBEPES), Brazil, e--mail: samir.oliveira@universidadepositivo.com.br

[b] Coordinator of Information Technology and Data Governance in Federation of Industries of the State of Paraná (FIEP) and Doctoral student at Management Post-Graduation Program of Federal University of Paraná – (PPGADM/UFPR), Curitiba – PR, Brazil, e-mail: klebercanuto@yahoo.com.br

[c] Doctoral student at Management Post-Graduation Program of Pontifícia Universidade Católica do Paraná (PPAD/PUC-PR), Curitiba – PR, Brazil, and Contracts Manager in Itaipu Binacional, Foz do Iguaçu – PR, Brazil, e-mail: fabricio_mussi@hotmail.com

Abstract

Despite claims for more qualitative and quantitative approximations between fundamental areas of Organization Studies, so to unlock its explanatory potentials, there are still some theoretical gaps that hold such integrations back. An example regards Strategy and Technology themes, when the following question is considered: what is the role of technology use in the strategizing? Motivated by this issue, the essay aims at developing an analysis focused on the strategic purposes of the empirical studies conducted and portrayed by Orlikowski (1992) and Schultze and Orlikowski (2004), attempting to bridge Strategy and Technology topics from a practice-centered approach, capitalizing from epistemological, theoretical and methodological convergence of the 'Strategy as Practice' and the 'Technologies-in-Practice' approaches. The essay evidences that the technology use in organizations works as a mediator for the praxis of strategy practitioners concerning issues and activities of framing and enacting practices that sustain the organizational strategy, at the same time as this very technology tool-kit usage comes from the practitioner's strategic thinking and acting.

Keywords: Technologies-in-practice; Strategy as practice; social practices; structuration.

Introduction

Chen and Hirschheim's researches (2004) point out to the predominance (about 81%) of positivist research in the information systems field. Orlikowski and Baroudi (1991) also criticize the domain of positivistic studies in the area of technology, suggesting more interpretive approaches – likewise Cibona (1997) recommends –, in relation to the alignment between strategy and technology studies. One of the advances in this context was made by Callon (1991), Monteiro (2000) and Santos (2006) whereby they propose the use of Actor-Network Theory (ANT) in alignment between strategy and technology research. In the field of strategy, contributions from Whittington (2006), Jarzabkowski (2004) and Johnson *et al.* (2007) also stand out. They suggested some redirection of the domain of studies emphasizing, among other aspects, the need to closer examine the practices that support organization's strategy, meaning the observation of the strategy in practice without getting entangled in cause-effect relations, prioritized in the previous studies of the field. Another contribution they brought is an argument of methodological nature. The recommendations require the researcher to approach the field considering more than one single level of analysis, using, for example, a more ethnomethodological approach. It is in this way and in this theoretic perspective that this essay intends to address the matter.

From the "practice turn" in social theory occurred from 1980 onwards (SCHATZKI; KNORR CETINA; SAVIGNY, 2001), several areas in the management field started incorporating elements and conceptions of distinct thinkers, advocating a return to practical reason for a better understanding of the reality of organizations. Theorists of this scientific movement – Anthony Giddens, Pierre Bourdieu, Michel de Certeau, Stephen Turner, Andreas Reckwitz, Theodore R. Schatzki, among others – argue (despite some crucial differences in their understandings) in favor of a perspective that integrates the explanatory poles of "methodological individualism" and "structural sociology" by social practices collectively sustained, in order to do justice both to the effort of individual actors and macro-social conditioning pressures.

In light of this change, we can identify two specific areas in organization studies that undertook an expansion of their explanatory potential in the last fifteen years, regarding relevant phenomena to them: the areas of strategy and technology. These two areas have been treading new paths from merging – significantly, but not exclusively – the structurational conceptions of Anthony Giddens into more 'practical' perspectives: the 'Strategy as Practice' and the 'Technologies-in-Practice' approaches. Assuming the possibility of cross-fertilization between these two approaches, the central idea of this theoretical essay is greatly indebted to two out of six research

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questions proposed by Whittington (2002b), regarding strategizing and organizing processes from a 'strategy as practice' perspective:

> **4. What are the common tools and techniques of strategizing and organizing and how are these used in practice?** Researchers are beginning to compile inventories of common strategy and organizational tools (Rigby, 2001; Mallone et al., 1999). We also know from the institutionalist literature how managerial tools are diffused over time and across borders (Abrahamson, 1996; Djelic, 1998). What we know much less about is how such tools are used in action (Jarzabkowski, 2002). Orlikowski's (2000) close analysis of the use of Lotus Notes in two different offices shows workers' active and creative engagement with apparently standard software, demonstrating a clear distinction between 'designed technologies' and 'technologies-in-use'. [...] We need to know more about strategic and organizational technologies 'in-use', and to appreciate the demands they place on their users and the range of artful improvisations made in practice. [...] **6. How are the products of strategizing and organizing communicated and consumed?** [...] There remains a large research agenda here in the technologies of communicating strategic and organizational designs and the ways in which they are 'consumed' throughout the enterprise (WHITTINGTON, 2002b, p. 122-123, our emphasis).

From these two outlined research questions, the aim of this theoretical essay is to elucidate the role of technology use in structuring the process of organizational strategy, articulating it from Orlikowski's (1992; 2000) 'technologies-in-practice' perspective, thus comprising instrumental and practical spheres highlighted by Whittington (2006), in order to answer the following question: what is the role of technology use in strategizing?

The essay is structured as follows: firstly, we discuss the 'strategy as practice' perspective envisaging explanation of its main theoretical-methodological concepts; after that, we present an epistemologically similar reading (also based on practice theory) on technology – the 'technologies-in-practice' perspective – envisaging to compose, on the paper's final section, a common language for an analysis that involves both themes, from two empirical researches – Orlikowski (1992), and Schultze and Orlikowski (2004). By building such a bridge, we present concluding remarks for the essay, briefly suggesting some ideas for future research, while sensitive to some methodological implications.

Strategy as a Social Practice

Within the development of the field of strategy, since the most basic approaches in 1960 until the contemporary efforts, we can identify a sophistication increase of its theoretical corpus that certainly reflects its complexity, accompanying trends in Social Sciences and Humanities along the second half of the 20th century. This development

was the result of interactions and integrations between different intellectual traditions in many different areas – such as Economy, Sociology, Philosophy, Psychology, Cultural and Communication Studies – by which the management field almost naturally needed to comply, aiming at its strengthening and growth (MINTZBERG; AHLSTRAND; LAMPEL, 2000).

Specially in the case of strategy, Whittington (2004) highlights that the mentioned expansion of the theme reflects a return to practical reason whereby social theory as a whole has been experiencing since 1980 (SCHATZKI; KNORR CETINA; SAVIGNY, 2001), indicating a healthy (and indispensable) pluralism to enrich theoretical and empirical understanding of how a dynamic and complex process such as organizational strategy, occurs. This has direct implications in political, cultural, ethical-moral, technical, and structural aspects in organizations (WHITTINGTON, 2002c; WHITTINGTON *et al.,* 2003). Such a return to practical reason allows incorporating complex and plural aspects to the rational practices context – in an "after modernist" fashion, not necessarily subscribing to skeptical postmodern readings (CAMPBELL-HUNT, 2007; TSOUKAS; HATCH, 2001; WHITTINGTON, 2004) – which impacts on the research agenda circumscribing the strategy theme, primarily being an attempt to bring together and highlight the complementarity of knowledge-bodies deemed "distant" and "incommunicable": the knowledge produced in Academia, and the knowledge from daily life of organizations (JARZABKOWSKI, 2003a; VAN DE VEN; JOHNSON, 2006; WILSON; JARZABKOWSKI, 2004).

This concern with a dialogue between theory and empirical reality derives from the Giddensian structurational ontology which constitutes one of the main theoretical foundations of 'strategy as practice' (GOLSORKHI *et al.*, 2010), which turns exclusively to the constitutive potentials of social life, discussed in the Structuration Theory (GIDDENS, 1984) according to the "[...] general human capacities and the fundamental conditions through which the course and the results of the processes and social events are generated and molded in a multiplicity of empirically discernible ways" (COHEN, 1999, p. 402, freely translated). The 'strategy as practice' perspective engages in the study of inter-subjectively shared values and belief systems, sustained by practices that draw on agents memory traces that recurrently compose institutional patterns within a 'virtual structure' idea. This so-called 'virtual structure' not only conditions individual actions – enabling its enactive scope within a community – but also constrains them – restricting them, based on existing behavioral patterns sustained by a group. This structure bridges the activities of individuals, as it not only conditions their actions but is also conditioned (reinforced or even modified) by these very activities, thus constituting a duality – the duality of structure (GIDDENS, 1984).

To structuration theory, the basic domain that expresses this recursive nature that constitutes social fabric is the duality of structure; hence, time-space organized and situated social practices "[...] are not brought into being by social actors but continually recreated by them via the very means whereby they express themselves **as** actors" (GIDDENS, 1984, p. 2, emphasis on author). It is, therefore, understood that:

> A 'practice' (*Praktik*) is a routinized type of behavior which consists of several elements, interconnected to one other: forms of bodily activities, forms of mental activities, 'things' and their use, a background knowledge in the form of understanding, know-how, states of emotion and motivational knowledge. [...] a practice represents a pattern which can be filled out by a multitude of single and often unique actions reproducing the practice [...] the practice [...] is not only understandable to the agent or the agents who carry it out, it is likewise understandable to potential observers [...] A practice is thus a routinized way in which bodies are moved, objects are handled, subjects are treated, things are described and the world is understood (RECKWITZ, 2002, p. 249-250).

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Accordingly, social practices are a heritage of traditions, norms, rules, and routines generated and repeated in daily activities, reaching a legitimate status; social praxis, in turn, are the things actually done, that is, the activities effectively carried out in labor and behavioral flows (GIDDENS, 1984; TURNER, 1994; WHITTINGTON, 2006). Social practices and the mutual knowledge of them are conceived as a series of rules and norms of conduct which are used in the reproduction of social praxis regularities, assuming a set of structural properties which – by being structured characteristics of social systems – extend over time-space, due to their institutionalized nature. It is from these concepts that 'strategy as practice' conceives strategy not only as an attribute of organizations, but also as an activity performed in people's daily life that make up these collectives, consolidating it, thus, as a social practice.

'Strategy as practice' seeks to explain how capable and instructed strategic actors **(practitioners)** constitute and reconstitute systems of shared strategic practices **(practices)** – which they also regard as resources – as instruments and tools available to assist organizations in this daily activities processes **(praxis)** that make the strategy of the organization – in constant thinking and acting throughout time-space that results of human agency (SCHATZKI, 1996; WILSON; JARZABKOWSKI, 2004). In 'strategy as practice', a multi-level approach for analyzing these three organizational empirical categories (practices/praxis/practitioners) is suggested, also considering their constant interrelations and interactions with 'extra' or 'supra-organizational' environment (including both the organizational field and the institutional field of strategy, represented by consulting firms, strategy schools, specific media, and other professionals involved in maintaining and updating it) (WHITTINGTON, 2006).

Based on the assumption that "[...] strategy [...] is not something that an organization **has** but something its members **do**" (JARZABKOWSKI; BALOGUN; SEIDL, 2007, p. 6, emphasis on author) we assume that "[...] 'Strategizing' refers to the 'doing of strategy'; that is, the construction of this flow of activity through the actions and interactions of multiple actors and the practices that they draw upon" (JARZABKOWSKI; BALOGUN; SEIDL, 2007, p. 8), complemented by the idea of seeing organizations as constructed systems of interpretations and inter-subjectively shared meanings that encompasses retrospective, present, and projective aspects – *sensemaking* –, constituting a collective being, supported by institutionalized practices always susceptible to becoming des-institutionalized (JARZABKOWSKI, 2003b) by praxis – *organizing* (WEICK, 1995).

It is also worth noticing that 'strategy as practice' defines a double agenda which opts not to privilege analytical poles of any technical or sociological aspect comprised in a given organizational strategic phenomenon; i.e., it is important to highlight the entirety of horizontal and vertical linkages between micro-, meso- and macro-levels of analysis (WHITTINGTON; JOHNSON; MELIN, 2004; WHITTINGTON, 2006):

> Strategy practice research embraces this concern: more effective strategy practitioners and more appropriate practices can contribute directly to organizational performance. However, the practice perspective does not confine itself to issues of organizational performance or advantage. The practice framework [...] highlights aspects of praxis, practitioners and practices that go beyond a purely organizational agenda (WHITTINGTON, 2006, p. 628).
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> [...] accepting strategy as a social practice involves a refusal to privilege firm performance over that of either the field as a whole or its practitioners individually (WHITTINGTON, 2004, p. 64).
>
> [...] strategy-as-practice research may explain outcomes that are consequential to the firm at all levels from the most micro-details of human behaviour to the broader institutional levels, depending upon the focus of research [...] Our central research interest focuses on explaining who strategists are, what they do and why and how that is consequential in socially accomplishing strategic activity. As such, many problems posed in existing strategy research, such as dynamic capabilities, resource-based view, knowledge-based view and strategy process theory might be illuminated by a practice-based approach to their study [...] Therefore, the field does not require 'new' theories per se, but to draw upon a range of existing theories to explore the strategy problems defined within our conceptual framework, to develop novel methods and research designs for their study [...] and to advance explanations of how strategy is accomplished using these different levels and units of analysis (JARZABKOWSKI; BALOGUN; SEIDL, 2007, p. 19).

Thus, the 'strategy as practice' perspective not only recognizes the importance of a number of other approaches (conceptually and epistemologically) distinct from its

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precepts – understanding that it is itself the result of a natural evolution of the strategy field – as it also suggests more dialogue between approaches that make up this area of studies (such as the perspectives that contends strategy purely as 'content' or as 'process'), positioning itself as an integrator, due to its 'sociological eye' which, in many ways, allows thematic complementarity in understanding human activity (WHITTINGTON, 2002a; 2007).

A strucutrational perspective on technology

The emphasis on the role of social practices is not limited to organization studies. Similarly to the 'strategy as practice' perspective, there is a structurational reading for technologies, based on the work of Giddens (1984); this perspective is called 'technologies-in-practice' (ORLIKOWSKI, 2000) and conceives a structuring model of technology to understand the sociological aspects of technology and labor, and the relationship between them and social practices, without disregarding technical aspects of the matter. Emerging in the beginning of 1990s, this reading of technology has in the work of Wanda J. Orlikowski its conception, helping to spread the applicable appeal of the structuration theory to the Social Sciences.

Under a structurational understanding, technologies *per se* cannot be configured as social practice on their own; "[...] rather, their use ends up both conditioning and being conditioned by social practices arising and/or existing in a given organizational reality" (ADAMOGLU DE OLIVEIRA; SEGATTO, 2009, p. 34, freely translated). This emergence or reinforcement of social practices consists, in turn, in existing virtual structures in the minds of individuals, being inter-subjectively sustained, according to the recurrent aspect of their manifestation. As Orlikowski (2000, p. 405) points out, given the fact that a structurational perspective is "[...] is inherently dynamic and grounded in ongoing human action, it indeed has the potential to explain emergence and change in technologies and use", thus, sustaining an ontological aspect, a heuristic device, and also a sense of reality.

For Orlikowski (1992), technology incorporates much as it is a mediating instance of different rules and resources that form organizational structure, taking in account two basic premises: there is recursivity in this notion of technology; and technology has an interpretive and interactive flexibility, limited to the time-space context in which it is inserted:

> Technology is the product of human action, while it also assumes structural properties. That is, technology is physically constructed by actors working in a given social context, and technology is socially

constructed by actors through the different meanings they attach to it and the various features they emphasize and use. However, it is also the case that once developed and deployed, technology tends to become reified and institutionalized, losing its connection with the human agents that constructed it or gave it meaning, and it appears to be part of the objective, structural properties of the organization. Agency and structure are not independent. It is the ongoing action of human agents in habitually drawing on a technology that objectifies and institutionalizes it. Thus, if agents changed the technology-physically or interpretively-every time they used it, it would not assume the stability and taken-for-grantedness that is necessary for institutionalization (ORLIKOWSKI, 1992, p. 406).

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The combination of these two core assumptions focuses, in turn, in the construction of the concept of **duality of technology,** making reference to Giddens' (1984) duality of structure. In this way, (i) the recursive character between the structural properties of a virtual structure (the set of meanings attributed to a specific technology), (ii) the affordances, (iii) the norms, (iv) the interpretive schemes accessible to a specific technology (enabling and limiting the way the actors can make use of it), and (v) the human agency – constituting social practices by conditioned and/or expanded forms of using a technology – basically contemplates the very dimensions found in the duality of structure (or even in socio-constructive recursive contentions of the strategizing process): there are knowledgeable users of technology (similar to the practitioners of strategy) (GIDDENS, 1984) performing actions as they access and apprehend institutionalized practices while using a technology (theoretically related to strategic practices), so that they can enact such usage throughout the workflow of daily activities (praxis). According to Orlikowski (1992, p. 409):

The structurational model of technology comprises the following components: (i) human agents-technology designers, users, and decision-makers, (ii) technology-material artifacts mediating task execution in the workplace; and (iii) institutional properties of organizations, including organizational dimensions such as structural arrangements, business strategies, ideology, culture, control mechanisms, standard operating procedures, division of labor, expertise, communication patterns, as well as environmental pressures such as government regulation, competitive forces, vendor strategies, professional norms, state of knowledge about technology, and socio-economic conditions.

This structural model of technology takes into account: (1) technology as product (result) of human action – resultant of its use based on the apprehension of usage practices; (2) technology as media (mediator) of human action – conditioning human agency to social praxis, reinforcing or altering usage practices; (3) the institutional conditions of interacting with a technology – constituted by the structural and institutional properties of organizational contexts that are accessible and appro-

priable from the agents' knowledgeability and stocks of knowledge, resources, and the norms inter-subjectively shared in that practitioners' community; (4) and the institutional consequences of interacting with a technology – technology (both as a media and as a result) finally reinforces or modifies the very institutional structures of meaning, domination, and legitimacy of an organization.

It is precisely because the structural properties emerging from the use of technology imply conditioning and composition of both interactions and the activities of individuals engaged in them, that there is a representation of these structural properties of technology in the recurrence of social practices, thus incurring the expression "technologies-in-practice", that is, technologies enacted in the recurrence of social practices:

> Together, the notions of emergent structure and enactment afford a practice-based extension to existing structurational models of technology. This practice lens posits humans as constituting structures in their recurrent use of technology. Through their regularized engagement with a particular technology (and some or all of its inscribed properties) in particular ways in particular conditions, users repeatedly enact a set of rules and resources which structures their ongoing interactions with that technology. Users' interaction with a technology is thus recursive – in their recurrent practices, users shape the technology structure that shapes their use. Technology structures are thus not external or independent of human agency; they are not "out there", embodied in technologies simply waiting to be appropriated. Rather they are virtual, emerging from people's repeated and situated interaction with particular technologies. These enacted structures of technology use, which I term **technologies-in-practice**, are the sets of rules and resources that are (re)constituted in people's recurrent engagement with the technologies at hand (ORLIKOWSKI, 2000, p. 407, emphasis on author).

We notice that there is clear evidence of technologies' materiality in the sense they also compose an inter-objectively shared reality – being knowledgeability inextricably entangled with technical mediations that technologies provide to human agency –, at the same time that, from its use, there are meanings inter-subjectively constructed and shared, equally molding agents' knowledgeability (LATOUR, 1994; 1996; ORLIKOWSKI, 2006; ORLIKOWSKI; SCOTT, 2008).

'Technologies-in-practice' and Strategizing: A Mutual Dependency

In its broad categorization of the forms of strategic practices in organizations, Jarzabkowski (2005, p. 8-9) defines that:

> First, there are the 'rational' administrative practices that typically serve the purpose of organizing and coordinating strategy, such as planning mechanisms, budgets, forecasts, control systems, perfor-

mance indicators and targets. Strategy as a practice is littered with such rational practices. [...] Second, there are those 'discursive' practices that provide linguistic, cognitive and symbolic resources for interacting about strategy. This is a broad umbrella to cover a range of practices, of which two main types of interrelated practices stand out: the discourse of strategy and the strategy tools and techniques that provide an everyday language for this discourse. [...] Increasingly, research shows that strategy is mediated by the language that strategists use, with this language in part created by the academic concepts, tools and techniques that populate strategy classes, textbooks and popular media. [...] Finally, there are those practices that create opportunities for and organize the interaction between practitioners in doing strategy, such as meetings, workshops and away days. [...] Such practices are referred to as 'episodes' that serve as micro variation and selection mechanisms, provoking change or reinforcing stability in strategy. Individually any single episode may be more or less consequential, but as typical occurrences within the organization they have powerful effects in the stabilizing and change of organizational activity.

Hence, the analysis of these three types of strategic practices – administrative, discursive, and episodic – not merely sets a descriptive analysis, but focuses in "[...] practices-in-use, practices as mediators of the interaction between practitioners in shaping the practice of strategy" (JARZABKOWSKI, 2005, p. 9).

By applying her structurational model of technology in the analysis of a survey conducted in 1988 on the use of information technology (IT) in a multinational software consulting firm called Beta Corporation, Orlikowski (1992) showed how the concept of duality of technology allowed a more dialectical understanding of the interactions between technology and organizations, encompassing (i) the limits and the opportunities of human choice, (ii) the capacity of actors to become agents as they engaged in the use of technology, (iii) the development of its own technology from usage, and (iv) its effects on Beta's organizational structure. The IT, in that case, was a tool to increase productivity called "CASE – Computer-Aided Software Engineering", which was acquired and gradually integrated to Beta's consultants standard operations.

Along the analysis, Orlikowski (1992) stresses that the implementation and adaptive development process of this particular IT tool in that company ended up influenced as well as being influenced by methodological practices of Beta's supporting systems in development at that time, which derived – to a substantial degree – from stocks of institutionalized knowledge, interpretive schemes, and a whole body of rules and resources that supported the standard activities of the consultants involved in the utilization of this IT tool. Particularly, by making direct allusion to the strategic practices of that company, and considering its time-space sustained and inter-subjectively shared character, the author pointed out that:

In the case of Beta, unreflective use of the productivity tools is a very effective way of controlling the cognitions and actions of consultants. Beta's commitment to using a standardized development approach can be seen as an aspect of firm ideology as well as strategy. Tools are clearly not only instrumental (structuring the production process) they are also normative, as they mediate a shared reality within Beta, producing uniformity and predictability in thought and behavior (ORLIKOWSKI, 1992, p. 418).

To conduct their systems development work, functional consultants appropriate tools to execute their development work [...].Their appropriation of the tools is influenced by Beta's institutional context and their socialization into it [...]. In using the tools, the functional consultants' action and perceptions of reality (of their work, of the tools, of themselves and their clients) are mediated (facilitated and constrained) by the interpretive schemes, norms, and resources embedded in the productivity tools [...]. Executing systems development work through the tools typically reaffirms Beta's institutional properties, as expressed in its structures of signification, domination, and legitimation [...]. Occasionally however, the functional consultants may deviate in their appropriation of the tools [...], by choosing to disregard or modify their interaction with the tools. This action undermines the interpretive schemes, norms, and resources embedded in the tools, and, if sufficiently vigorous and sustained, may transform Beta's institutional properties by altering aspects of the structures of domination, signification, or legitimation [...] This may trigger a change in management strategy, so that managers may authorize technical consultants to modify the tools [...]. This would change the form or functioning of the tools [...], but once deployed, tools would again become institutionalized and serve to condition the work of the functional consultants [...], while also reproducing Beta's institutional system [...]. This dialectical cycle of relations and interactions between consultants, Beta's institutional properties, and the technology will continue over time, for as long as the productivity tools remain a component in Beta's operating strategy (ORLIKOWSKI, 1992, p. 420).

The methodological practices applied to systems development represented, in that case, the social practices sustained by that users' community, for a specific use of IT (the "CASE"), so that the enabling and constraining condition from both the interaction with the technology and its interpretive flexibility – in the duality composed an instrument for everyday practice of the individuals who used it in the execution of their tasks –, focused directly on the very practices that sustained the organizational strategy in its usual thinking and acting ways (WILSON; JARZABKOWSKI, 2004). Such methodological practices were evidenced to clearly influence Beta Corporation's strategy and its performance, as much as operated as control systems, thus associating themselves with the administrative 'rational' strategical practices underlined by Jarzabkowski (2005).

Another empirical findings from applying the structurational model of technology is given by Schultze and Orlikowski (2004), as they explored the implications of 'auto-usable' information technology (IT) (Internet-based, self-service technology) in a company operating in the health insurance sector called "WebGA". Analyses relied on WebGA's work activities of its (i) clients and the (ii) company's sales representati-

ves, together with the interpersonal relationships established between these two groups. The purpose of that research was to show how phenomena at the macro level – such as inter-organizational relationships – are created and recreated by means of actions taken by members of these organizations at a micro level. In their findings, the recurrent use of this IT platform by the group of clients led to more difficulties for sales representatives to build and maintain interpersonal relationships with the consumers, also changing the nature and the quality of the information shared by users, in addition to compromising the ability of sales representatives in giving consultancy to consumers, due to the reduction of the frequency of the interactions between these two groups, after adopting and institutionalizing the practice of using this IT platform by its consumers.

The following excerpt portrays how such changes had direct repercussion in the strategic practices of the organization:

> We found that the introduction and use of a network technology that was designed to deliver service through impersonal interactions had important implications for the embedded relationships comprising a firm's service strategy. Because network relations are enacted through the work practices and interactions of customers and providers, the use of the self-serve technology by customers led to arm's-length relations at the firm level. For a firm relying on embedded relationships and social capital to generate revenue, such an enactment raised serious challenges for the viability of its business model. These challenges and unintended consequences are likely to emerge whenever firms deploy IT without considering the microlevel practices and social interactions that enact their macrolevel business strategies and network relations (SCHULTZE; ORLIKOWSKI, 2004, p. 105).

The aforementioned "challenges and unintended consequences" in the excerpt above relate to the changes in strategic practices that WebGA held from the moment they opted for complementary strategies which combined the use of this online IT platform with the support of interpersonal relationships between their sales representatives and the company's clients, alongside with the construction of its agents' social capital. In their conclusion, the authors suggest that the duality of technology expressed by the social construction of practices based on the use of a given technology (the so-called 'self-use' of the company's service package by its clients, whom independently accessed the IT platform) has a direct impact both in strategy and in the analyzed organizational structure, due to activity changes in the praxis of both (i) the company's sales representatives and (ii) the consumers of their services and their agents by modifying their previously existing practices and supported by these two distinct but related groups of actors. Once again, we can relate such findings to the three groups of strategic practices highlighted by Jarzabkowski (2005): the rational-administrative – due to the economic and financial impact such a change to praxis had

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on the company's strategy – the discursive – by the change in nature of the communication and interaction among consumers of the WebGA's service packages and the way that it was customarily offered them – and the episodic – by the change in the daily praxis of sales representatives and agents of the insurance company, which had to change the nature of their interaction practices seeking an outlet for self-sufficiency of consumers, who no longer needed intermediaries for the acquisition of WebGa's service packages.

From the non-mutually exclusive distinction drawn by Jarzabkowski (2005) of what the strategic practices of an organization are, and associating with research corollaries from Orlikowski (1992) and Schultze and Orlikowski (2004), we can envision a mutual dependence for the production and reproduction of strategic practices from using the existing technological tools in an organizational reality, making technologies mediators of strategy praxis to practitioners endowed to enact and/or alter social practices that sustain an organizational strategy; while the use of these technological tools derives from meaning, domination, and legitimacy of the organization's structural properties, they also appropriate, enhance and/or modify the strategic thinking and acting of organizations' practitioners – that bridges 'technologies-in-practice' and 'strategy as practice' perspectives.

Concluding Remarks

Once technologies use constitutes a sustained social practice in organizations (ORLIKOWSKI, 1992; 2000), we believe the theoretical linkage here developed sheds light on the existing relation between formation, implementation, and consolidation of strategic practice, and its communication and dissemination through the use of technologies already existing in organizations. Such use mainly supports operational praxis in achieving strategic goals (the praxis of strategic practice), given the mediating and instrumental nature of technologies (for example: Information and Communication Technologies – ICTs – in general), while needing to have a guideline for its use: a strategic guideline.

Besides, we believe the theoretical rapprochement between the 'strategy as practice' (WHITTINGTON, 2006; 2007) and 'technologies-in-practice' (ORLIKOWSKI, 2000) perspectives helps emphasizing the role of social practices in understanding organizational routines and strategic activities relevant to both perspectives, as well as it could give more solid comprehension on the strategic place of technology in strategy results and firm performance. Ontologically speaking, a better understanding on the role of the available technologies in economic fields, and those traditio-

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nally adopted by organizations could draw attention of its managers to the relevance of investing in acquiring and/or developing technologies and proper training for its users, considering the elected strategic goals.

Clearly, the benchmark exercise here displayed to articulate theoretic links to the examples of empirical findings highlighting the relationship between technology use and strategic practice is not exhaustive. Therefore, suggestions for empirical research to carry forward this connections and show these relations in other cultural-cognitive contexts – like the Brazilian organizational reality and the field of strategy in Brazil – can be outlined as research problems inspired by Whittington (2002b; 2004), Whittington, Pettigrew and Thomas (2002d) and Jarzabkowski (2005), respecting obviously the methodological multi-level and multi-method specificities that practice theories bring together (BALOGUN; HUFF; JOHNSON, 2003; CAMPBELL-HUNT, 2007; DE LA VILLE; MOUNOUD, 2003; JARZABKOWSKI; BALOGUN; SEIDL, 2007; JARZABKOWSKI; MATTHIESEN, 2007; POZZEBON; PINSONNEAULT, 2005; TSOUKAS; HATCH, 2001).

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