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# Institutional pressures for the adoption of Organizational Virtual Social Networks

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# R43. Institutional pressures for the adoption of Organizational Virtual Social Networks

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## *Abstract*

Organizational virtual social networks (OVSN) are virtual spaces developed in organizations that promote collaboration and interaction of people, allowing the creation of new manners of work. They include specific objectives and themes due to their nature. OVSN enable collaboration, communication, knowledge construction and dissemination related to their objectives. Considering the potential benefits mentioned, our study discussed how organizational pressures influence the adoption of OVSN. Institutional Theory was the theoretical foundation of the study. The case study realized was supported by participant observation, interviews and secondary data analysis. Mimetic, normative and coercive pressures allowed us to understand the motivators and inhibitors that influence the participation in OVSN. Results revealed the importance of volunteer participation, the significance of actors' role when defining actions and systematic work, with the OVSN mediating individual interests and objectives of the organization. Organizational support and resources used to support the activities are other important aspects that influence OVSN adoption. In turn, top managers' influence, mandatory participation, the role of coordinators and virtual meetings configure inhibitors to the adoption of OVSN.

## *Keywords*

Social Networks; Organizations; Institutionalization; Pressures; Motivators; Inhibitors.

## 1. Introduction

Organizational virtual social networks (OVSN) are virtual spaces that enable people collaboration and interaction in organizations (Chou, 2010). According to Kallinikos (2006, p.87), "organizational networks may be defined as governance mechanisms that occasionally challenge, and other times complement, both the bounded and the hierarchical constitution of formal organizations". These networks include specific topics in their discussions, more or less aligned with strategies and actions of the organizations (Tsai, 2001). Organizational networks are more deterministic in their activities, and present some degree of formalization through the assignment of action roles and objectives (Franco, 2011). OVSN alter the communication between the actors and the interpersonal relationship development, enabling knowledge construction and dissemination (Aalbers & Dolfsma, 2014). These authors understand that the knowledge generated among network participants has more value when there is social infrastructure of support and knowledge dissemination in the organization.

OVSN favor non-hierarchical relationships and volunteer membership (Aral; Dellarocas & Godes, 2013). These networks potentially develop more horizontal oriented work processes and less vertical structures, contributing to organizational management innovation (Rosenbaum & Shachaf, 2010; Chou, 2010). According to Aalbers & Dorfsma (2014), studies on intra-organizational networks reveal that the degree to which members of the organization are integrated in interpersonal networks affects the degree of organizational innovation.

In this context, our research proposes a discussion of how institutional pressures, based on a macro and micro context (Currie & Swanson, 2009), influence the adoption of OVSN (Wang; Clay, 2010). Thus, we adopted Institutional Theory (InsT) as our conceptual foundation (Orlikowski & Barley, 2001; Hsu; Lin & Wang, 2014), in order to analyze the interplay between technology and the organizational context. This approach has been frequently used in the IT context (Currie & Swanson, 2009), but only few studies investigated OVSN with the institutional lens. Our literature review (EBSCO and PROQUEST databases) found only three researches that studied OVSN based on InsT (Hercheui, 2010; Gençer & Oba, 2011; Bharati; Zhang & Chaudhury, 2014). Furthermore, a previous study concerning OVSN, based on Structuration Theory, was realized by Bobsin & Hoppen (2015), and these authors concluded that this theory offered only a limited analytic support concerning the adoption process of OVSN.

Our research comprises a case study at a higher education institution which was founded eight years ago and is distributed in 10 campuses in different cities. Data collection was based on participant observation as well as interviews with the members of the network and central administration. Data from documents, reports and e-mails was also submitted to content analysis. In the remainder of this paper we present the conceptual foundations, the research method and the results – organizational pressures and elements that motivate or inhibit the adoption of OVSN. Finally, we discuss the contributions to organizations and to further studies.

## 2. Conceptual Foundations

Our main conceptual foundations are the constituents of an OVSN, the institutional pressures during the adoption process of organizational nets, and motivators and inhibitors that influence the engagement of members in OVSN.

OVSN, as defined by Chou (2010), are virtual spaces that enable people collaboration and interaction in organizations. The most important constituents of OVSN are objectives, roles, interactions, operations, ICT tools, and articulating elements which are aggregated dynamically (Bobsin & Hoppen, 2015). When adopted by organizations, these networks potentially improve horizontally oriented collective work processes and foster organizational innovation (Rosenbaum & Schachaf, 2010; Aalbers & Dorfsma, 2014). As OVSN include organizational objectives and expectations of the participants (Bobsin & Hoppen, 2015), the study of institutional pressures seems to be a promising approach.

The field of technology adoption is broad and has been addressed by studies based on acceptance models (Gangwar; Date & Raoot, 2014) and on approaches about culture, social and institutional influences (Hsu, Lin & Wang, 2014; Rizzuto; Schwarz & Schwarz, 2014). Literature suggests that

the nature of the tasks performed, of technology functionalities and of sociability are factors that may influence the adoption of OSVN (Lin et al, 2007; Peng & Woodlock, 2009).

According to Orlikowski & Barley (2001) and Mignerat & Rivard (2009), InsT supports researchers in the apprehension of the influence of institutions, such as standards, beliefs and shared assumptions, when researching the adoption of sociotechnical objects as OVSN. Institutional pressures may be of mimetic, normative or coercive nature (DiMaggio & Powell, 1983; Heikillä, 2013).

Mimetic pressures are related to the uncertainty of the context, indicating symbolic, cognitive and cultural aspects of the organizational environment (DiMaggio & Powell, 1983) and of the organization itself (regarding micro institutional pressures). This cultural-cognitive dimension focus on representations and meanings shared in the social context and reinforce the common beliefs of actors (Scott, 2008; Hsu; Lin & Wang, 2014). These elements may also influence the motivation of actors to be part of OVSN (Zhu & Chang, 2014).

Normative pressures cover rules that introduce a prescriptive and obligatory dimension, influencing behaviors and values (DiMaggio & Powell, 1983). These pressures include norms and values that determinate what is appropriate for the social actions (Scott, 2008). Normative pressures comprise ways to achieve goals or objectives and presuppose convergence between ideas, beliefs and goals (Hsu; Lin & Wang, 2014). This kind of pressures may constrain social behavior or enable actions, giving responsibilities and defining functions (Scott, 2014). As OVSN are also based on volunteer participation, this pressure requires attention to avoid inhibition during the adoption process.

Coercive or regulatory pressures involve behavior regulation through formal and informal pressures, rules and standards (DiMaggio & Powell, 1983). These pressures comprehend coercion mechanisms that influence actions in conformity with sanctions. Constraining and enabling behavior, these rules result in sanctions, increase power or give benefits to actors (Scott, 2014). These pressures highlight politics and strategies that influence technology adoption (Hsu; Lin & Wang, 2014).

Studying social networks, Deng & Tavares (2013) found that the roles of actors and the rules of the groups influence actors' participation in networks. They emphasized the role of coordinators, showing that their level of participation influences actors' motivation. These authors also found that when network members define the rules of the group, their participation and sense of group belonging (or sense of "ownership") is affected positively. In addition to operational rules and standards, OVSN often present collective goals. The commitment with these results may influence the participation of the actors in groups (Johnson; Faraj & Kudaravalli, 2014).

Deng & Tavares (2013) argued that motivators and inhibitors refer to elements that influence actors' engagement in a network. More specifically, Lin & Lu (2010) associate the motivation for continued intention to use social networks. According to Hallikainen (2015), the elements valued as motivators are tools used to achieve certain goals, tools related to the association with certain social groups and tools related to the desire to acquire knowledge. As the OVSN we studied are

organizational, we analyzed the motivators and inhibitors institutionally, complemented by individual aspects.

## 3. Research Methodology

This study is based on a case study in a higher education institution that is still under consolidation. The research comprised a time span of five years. The organization studied was founded 8 years ago and is implemented in 10 campuses in Southern Brazil. It has approximately 10,000 students, 800 teachers, 600 administrative staff, 60 undergraduate courses, and 10 graduate courses. We chose this organization because it valorizes the OVSN, which are called internally as Forums. These Forums align courses by knowledge area and are considered spaces used for communication, interaction and knowledge creation and diffusion in order to improve the undergraduate programs of the institution.

Information was collected by observing participants in three out of the six OVSN created in the organization, named Engineering and Mathematical Sciences, Teacher Education, and Applied Social Sciences. Interviews with network members and with central administration members and documents were also used. Data collection occurred from June 2010 to December 2011, and from January 2014 until now. To date, we have observed 16 face-to-face meetings of networks and we have interviewed 46 individuals. We have also evaluated several e-mails, reports, regulatory documents, meeting agendas and reports.

Data was codified based on actions, interactions and observations recorded, and on the collection of participants' perceptions. This data was systematized and subjected to a content analysis using NVivo 10® software. The content analysis was initially structured based on the network structure constituents discussed by Bobsin & Hoppen (2015), in particular the roles played by actors, and the rules that guide the network operations, practices, resources and objectives. The analysis was also based on the mimetic, normative and coercive pressures (DiMaggio & Powell, 1983), resulting from the macro and micro institutional environments.

## 4. Results

This study is part of a larger research about OVSN (Bobsin & Hoppen, 2015). It discusses how institutional pressures influence the adoption of OVSN and analyzes elements that motivate or inhibit individual participation, influencing the adoption of OSVN. Table 1 presents a synthesis of the institutional pressures observed during the OVSN development process.

| Types of Institutional Pressures | Network Constituents | | | |
|---|---|---|---|---|
| | Rules and Regulations | Practice | Resources | Goals |
| **Mimetic:** Representations and meanings shared by the organization and OSVNs. Include symbolic, cognitive and cultural aspects. | Voluntary participation of members. | Senior managers experienced academic forums in other institutions. Participatory management as organizational culture | | |
| **Normative:** Rules that introduce a prescriptive and | Legal deadlines to formalize academic regulations. Networks organized by knowledge area. | | | Results related with the goals and agenda defined by the group. |

| | | | | |
|---|---|---|---|---|
| obligatory dimension concerning the organization and OVSNs. | Profile of the network coordinators. Mandatory participa-tion for degree program coordinators and voluntary participation of the other members. | | | Institutionalization of network results for all organization. |
| **Coercive:** Formal and informal pressures that involve behavior regulation, including rules and standards mainly concerning OVSNs. | Network coordinator chosen by the group. Meeting agenda and dynamics defined by the group. Network participants are members of same organization and knowledge area. | Influence of senior management in network thematic and actions. Face-to-face meetings with free discussion. Virtual interactions. Deliberative and decision-making processes. Coordinator and actor roles in the network and during the meetings. | Organizational support: human resources, financial resources. Support team for the Forums. Methodological and technological resources to support activities and organization. | Organizational objectives with OSVN: integration and innovation; participatory development of institutional norms. Thematic meetings and agenda used as a group link. Alignment of organizational, group and individual goals. |

**Table 1** – Institutional pressures during the OVSN development process
Source: Based on DiMaggio& Powell (1983); Bobsin & Hoppen (2015), and research data.

**Mimetic pressures** are based on representations and meanings shared by an organization with its external context and, more restrictively, shared by OSVN within the organization. In the first context we observed that some of the managers of the organization had previously experienced participation in academic forums in other higher education organizations. These experiences guided their actions when supporting the development of the organizational nets. Concerning OVSN, mimetic pressures show that the actors participate when they observe practices such as the learning generated in other organizational networks. The development of participative management practices, revealed through projects, regulations and stated in the strategic plan of the organization, fashioned a volunteer participation organizational culture. This aspect was an important motivator for network adoption. Mimetic pressures allowed us to observe that volunteer actions of members of the organization (they were invited to participate based on their interests) was highlighted as a motivator to participate in these groups. The value given to face-to-face meetings, which were configured as open spaces for discussion, corroborates this. However, mimetic pressures also showed that changes concerning the management of the organization could configure inhibitors of network participation. New managers and different plans and actions involved new views and new goals for OVSN.

Rules that introduce a prescriptive and obligatory dimension were analyzed as **normative pressures**. They concern the entire organization and the OVSNs. The organization started its academic activities just three years before the OSVN were created. The organization faced a process of institutional consolidation and deadlines concerning the formalization of academic regulations and rules that constituted an external pressure from the trustee of federal public universities, with consequences related to the activities of the network. Networks had been organized by knowledge area, the profile of network coordinators (to be chosen among program coordinators) and a mandatory participation for degree program coordinators had been regulated with the purpose to easy the institutionalization process of norms and knowledge produced by OVSN and also to increase the interest of voluntary participation of members. Normative pressures revealed other aspects that influenced OVSN adoption, such as (1) an organizational agenda of meetings, and (2) the work dynamic adopted. These norms influenced the outcome produced by

OVSN, constituting motivators for the participation influenced by collectively defined actions. The institutionalization of many network outcomes, which had been adopted and voted by the university council, represented an important aspect that influenced network participation.

We emphasize that aspects such as the profile of the group and the network coordinator as well as the different roles of the actors in the network and in the meetings can be considered as motivators or inhibitors of network participation influencing the engagement of actors.

**Coercive pressures** are related to behavior regulation, rules and standards. On this basis, we observed actions of top management influencing the network thematic and actions, which in turn influenced an important feature of these groups: the freedom of choice when prioritizing actions. The organizational nature of coercive pressures revealed some aspects that influence the OVSN adoption such as (1) group autonomy to define collectively its coordinator, an action that results from the participatory management culture of the organization; (2) institutional support through human and financial resources to support the network activities and (3) organizational objectives for the network that involved organizational integration (the organization is implemented in 10 campuses) and innovation (approaches to education concerning different degree programs on different campuses). Actors mentioned that they felt motivated to participate in the Forums because they perceived them as participatory spaces structured to discuss organizational problems and elaborate rules. This happened because the face-to-face meetings could be characterized as environments of free discussions. These periodic face-to-face meetings also strengthened the ties built by the group, and the network coordinator has an important role when supporting and motivating interactions. His or her leadership influenced the behavior of members and also network participation. The existence of a team supporting network activities and the institutionalization of many results from the networks were perceived as rewards for the effort of OVSN participants. In the other hand, the demand of top management concerning the development of more virtual meetings was perceived as an inhibitor, reducing free discussions, interrupting regular activities on the work place and causing interaction and communication restrictions due to technical problems resulting from the poor quality of the telecommunication net.

We found that the organizational allocation process of human resources that support OVSN and of financial resources is a significant coercive pressure. In turn, methodological and technological resources selected by the group were highlighted as motivators and inhibitors. The network allows to access different types of resources and the groups try to balance the resources distribution between different areas of the organization. We observed that these elements motivated and facilitated interactions as well as the development of activities. However, we also observed that when actors faced difficulties to use the technological tools, when they failed to interact through these artifacts or when they do not felt comfortable to use such tools for interaction, these elements could inhibit participation.

Coercive pressures also allowed us to highlight other elements linked to OVSN, such as the fact that the networks articulate their participants through the areas of knowledge of their degree programs and courses, and through the themes of the meetings and agendas. Face-to-face interactions, based on collective discussions and on the development of participatory decision-making processes, constituted aspects that motivated the actors to participate in the Forums as

well. The group participants indicated that their motivation was reinforced by the idea that their individual goals were aligned with organizational and network goals.

Based on these discussions, Table 2 shows a synthesis of the motivators and inhibitors of network adoption observed in the three networks studied. These synthetic results revealed that there are many different reasons why people join OSVN and show the behavior we analyzed, which refer to organizational guidelines and rules and to network specificities.

| Institutional Pressures | Motivators | Inhibitors |
|---|---|---|
| Mimetic | Voluntary participation of members.<br>Senior managers experienced academic forums in other institutions.<br>Participatory management as organizational culture. | |
| Normative | Legal deadlines to formalize academic regulations.<br>Networks organized by knowledge area.<br>Profile of networks coordinators.<br>Voluntary participation.<br>Results related with goals and agenda defined by the group.<br>Institutionalization of network results for all organization. | Mandatory participation for degree program coordinators. |
| Coercive | Network coordinator chosen by the group.<br>Meeting agenda and dynamics defined by the group.<br>Network participants are members of same organization and knowledge area.<br>Face-to-face meetings with free discussion.<br>Virtual interactions.<br>Deliberative and decision-making processes.<br>Coordinator and actor roles in the network and in the meetings.<br>Organizational support: human resources, financial resources.<br>Support team for the Forums. Methodological and technological resources to support activities and organization.<br>Organizational objectives with OSVN: integration and innovation; participatory development of institutional norms.<br>Thematic meetings and agenda used as a group link.<br>Alignment of organizational, group and individual goals. | Influence of senior management in network thematic and actions.<br>Virtual meetings.<br>Organizational support: human resources, financial resources |

**Table 2** – Motivating and inhibiting elements of OVSN adoption
Source: Based on DiMaggio& Powell (1983); Bobsin & Hoppen (2015); and research data.

Our results point to some important aspects that support the adoption of OVSN through institutional pressures that motivate or inhibit individual participation.

Respondents mentioned the importance of horizontality in interactions between different hierarchical levels, reinforcing the idea of network. They were also motivated by the fact that the network objectives are defined collectively, and they showed to be more engaged in action when they participate at this definition.

Additionally, the organization valorizes participatory management and the OVSN was an important instrument to sustain this organizational trait, still under construction, that evidenced an issue of motivation. Participatory management was established through face-to-face meetings with free discussions. During these meetings we observed a strong relationship between motivation and network relationship features such as collective definitions and the alignment between individual and collective interests. Thus, these features point to the importance of network participants identifying themselves with the actions developed in these spaces.

As we studied organizational networks, institutional support proved to be something prized that influences the entrance of actors in OVSN. More specifically, this support was verified through resources or institutionalization outcomes. This was reinforced by an important OVSN

characteristic: the free participation of its members. If the network purpose and the group profile are not aligned with individual interests, these aspects may inhibit the participation of individuals. The same occurs with the hierarchical position of the coordinator, which may not reflect the group expectations and may influence network participation.

Analyzing network adoption inhibitors, we found that they resulted from aspects that made them lose their horizontality, interfering with the group freedom. This was observed in situations where the network suffered direct interference from the management of the organization on the agenda of the group and/or on the mandatory participation of degree program coordinators, not always well accepted by themselves or by their peers.

As mentioned, the role of coordinators was highlighted as an element that serves to stimulate the participants. However, when the actions and the performance of a coordinator were not consistent with the network purposes, he or she may inhibit the participation of the other actors of an OVSN.

## 5. Conclusions and Implications

Results revealed that the institutionalization of OSVN assumes that these nets are built as a collective environment of idea generation, joint projects and, somehow, organizational innovation. To support this, we explored some institutional pressures that influence the network adoption and its legitimation by the entire organization – volunteer participation, members' participation on the definition of the objectives of the OVSN, objectives of the organization, support of the organization, and the moderating role of OVSN to integrate organizational and participants' objectives.

The institutional pressures pointed to elements that motivate people to engage in these collective spaces in order to contribute to the construction of organizational knowledge. The importance of the identification of the actors with the networks they are participating and the strengthening of their obligations when they felt themselves part of the decision-making process reinforced the objectives of the group, the definition of actions and their completion.

The pressures also pointed to some important aspects of OVSN adoption such as the importance given to these spaces by the organization through the proposition of objectives and actions and through the participation of senior management in the group interactions. Institutionalization was revealed by the support given to face-to-face network meetings, by providing the resources needed by each Forum to perform its actions, and even by valorizing the results obtained in each network through the institutionalization of their actions to the organization. But results also showed that interferences of organizational management in these spaces, due to changes on routines or on persons, could be strong inhibitors to the participation of actors. Some of these groups faced difficulties to continue their activities.

Our study focused on building a network approach that encompasses the institutionalization process of these structures in an intra-organizational multi-campus environment. The study analyzed elements that strengthen the individual participation and that consolidate the adoption of network structures. We consider these findings based on individual social behavior and on the guidelines of the entire institutionalization process as the main academic contributions of the research. Organizational commitment was evidenced as the understanding of elements that

strengthen the OVSN in organizations such as institutional support through the available resources and the appreciation of space.

We investigated a university - a higher education organization - that has its own structural and management features. As a consequence, some of the results presented here are particularly suitable to this type of institution and not to others. Furthermore, as the process of institutionalization of OVSN is not finalized yet, results discussed in this paper could change, which means that our study requires further data collection and analysis.

As implications of this study, we point out that we have observed the significant emphasis of network participants on face-to-face meetings. This reveals that virtuality and the reasons why the IT support has not been used more intensively require further inquiry. We also highlighted the importance of studies to discuss the institutionalization approach and the legitimation process of OVSN. But we consider that is necessary to observe the motivators and inhibitors here discussed using other theoretical elements, such as motivational theories. Furthermore, it seems important to us to expand studies to other organizational realities in order to verify and develop the issues observed.

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