

Leaders of Organisational Communities of Practice: Their characteristics, activities, and fit with their communities

Abstract

By balancing the needs for autonomy and control, leaders of organisational communities of practice (OCoPs) play a central role in their effectiveness. This study aims to identify different OCoP leader profiles and analyse possible contingencies with various OCoP types. Using a qualitative methodology on a sample of 16 OCoPs from nine international organisations, an inductive analysis was undertaken by using Gioia *et al.*'s (2013) data structures model. Results reveal three distinct OCoP leader profiles, labelled "centripetal", "centrifugal" and "balanced". A comparison of different OCoP types reveals a fit between centripetal OCoP leaders and operational exploitation OCoPs, centrifugal OCoP leaders and strategic exploration OCoPs, and, finally, balanced OCoP leaders and hybrid OCoPs. These results enrich previous research on OCoP types, by identifying a "hybrid" combination of the two, proposing a novel framework of different OCoP leader profiles and highlighting a new contingency perspective on the relationships between OCoP leader profiles and OCoP types.

Keywords: Organisational community of practice; leader profiles; OCoP types.

1. Introduction

Communities of practice (CoPs) are self-organised structures in which organisational knowledge is created, stored, and transferred (Lee et al. 2015, Roberts, 2006). They promote collaboration amongst organisational members, foster cross-organisational knowledge sharing, problem solving, and knowledge creation (Choi et al., 2020), support intra-organisational transfers of best practices (Wenger et al., 2002), and generate new ideas for products and services by engaging individuals from different organisational units in knowledge-centred activities (Wenger & Snyder, 2000). While CoPs were originally considered fully informal and self-organised structures (Lave & Wenger, 1991), more recent studies suggest that organisations increasingly seek to guide them towards following a specific strategic logic (e.g., Dupouët & Barlatier, 2011; Frank et al., 2017; Yamklin & Igel, 2012). These types of intentionally company-created CoPs are termed "sponsored CoPs" (Lee et al., 2015), "managed CoPs" (Probst & Borzillo, 2008), "piloted CoPs" (Bootz, 2015), or "organisational CoPs" (OCoPs) (Kirkman et al., 2011, 2013). Research on OCoP typologies (e.g., Bootz, 2015; Dupouët & Barlatier, 2011) highlights differences between "exploitation-oriented" and "exploration-oriented" OCoPs, which pursue different objectives and are characterized by unique sets of processes and challenges.

OCoPs are different from teams. Teams are specifically recruited for and held together by task interdependencies, and membership can be recombined when other tasks are set (Kirkman et al., 2013). Conversely, OCoP members self-select to join and are intrinsically motivated by the OCoP's ongoing "learning value" (Cordery & Wenzel, 2017) i.e., to create and share knowledge and to develop members' individual expertise. Hence, OCoPs may have advantages over teams in terms of sustaining ongoing and informal knowledge flows for strategically relevant exploration and exploitation activities.

OCoPs are steered by a (or several) leader(s) (Kirkman et al., 2011). The OCoP leader plays a central role for the effectiveness of an OCoP by facilitating the internal functioning of the OCoP (Bardon & Borzillo, 2016; McDermott & Archibald, 2010) and establishing links between the OCoP and the organisation, including the OCoP's sponsor (Dupouët & Barlatier, 2011), thereby ensuring that the OCoP remains aligned with the organisation's strategic objectives in terms of its knowledge exploitation or exploration activities. Despite the OCoP leader playing a central role in the OCoP's functioning and sustained effectiveness (Kirkman et al., 2011, 2013), extant research has not, thus far, investigated the OCoP leader profiles for the relevant OCoP type.

In line with the contingency perspective on leadership (Yukl, 2013), OCoP leaders' effectiveness should be a result of the fit between leader behaviours and situational requirements. This implies that an effective leader of an exploitation-oriented OCoP may have a different profile of competencies and skills to an effective leader of an exploration-oriented OCoP. Importantly, and central to this study, choosing the 'right' or 'wrong' profile for a leader of an OCoP could contribute to the overall success or failure of the OCoP, depending on its typology. By embracing a contingency logic and anchoring our investigation in the distinction between exploitation-oriented and exploration-oriented OCoPs, our research question is: "Are there OCoP leader behaviours or OCoP leadership profiles that are uniquely suited to specific types of OCoPs and that result in OCoP effectiveness?"

To address the research gap, participants in 16 OCoPs in nine international organisations were interviewed. We then conducted an inductive analysis using Gioia et al.'s (2013) data structures model. Our results enrich previous research on the distinction between "exploration-oriented" and "exploitation-oriented" OCoPs, by elaborating a "hybrid" combination. Results also reveal three distinct OCoP leader profiles. Finally, they suggest that OCoP leader profiles are contingent upon the nature of the OCoP. We present a literature review, methodology, findings, discussion, and limits to the findings.

2. Theory

2.1 The challenge of balancing autonomy and control in OCoPs

As originally understood, CoPs are self-organised and resistant to supervision (Wenger & Snyder, 2000). In recent years, however, there has been a proliferation of organisations seeking to steer these communities, e.g., British Petroleum (Frank et al., 2017), Hewlett-Packard (Kohlbacher & Mukai, 2007), Schneider Electric (Haas et al., 2021), Suez (Dupouët & Barlatier, 2011), and Oracle (Probst & Borzillo, 2007). Aljuweiber (2016) provided a literature review focused on CoPs as knowledge management initiatives implemented in companies from different industries (e.g., oil, insurance, computer, manufacturing).

While “steering” communities of practice implies “steering self-organisation”, seemingly an oxymoron, the dimensions of self-organisation and control can be balanced through the key roles of the leader (Bardon & Borzillo, 2016). Therefore, one of the OCoP leader’s main duties is to maintain autonomy and facilitate coordination inside the OCoP. To this end, the leader must ensure the smooth flow of knowledge by encouraging members to reify their experiences and best practices (Wenger et al., 2002). Moreover, the leader needs to connect community members with each other (Lesser & Everest, 2001), strengthen relationships of trust (Josserand, 2004), and preserve collective momentum.

OCoP leaders also need to maintain some control over the OCoP’s activities (McDermott & Archibald, 2010). This stems from needing to align the OCoP’s activities with the organisation’s strategic objectives. Here, a key person the leader needs to connect with is the OCoP’s sponsor (Bootz, 2015). The sponsor is generally a senior leader, who ensures that the OCoP has the necessary resources to operate. In return, he/she can define and/or validate its objectives, thus making sure that the community’s activity is aligned with that of the organisation (Dupouët & Barlatier, 2011). However, the trade-off between self-organisation

and control raises a question as to whether an OCoP can have objectives imposed on it (e.g., McDermott & Archibald, 2010) or not (e.g., Josserand, 2004), implying that a balance must be found (Bardon & Borzillo, 2016). This balance should create a safe space for members to express their ideas more freely than in formal work units (Probst & Borzillo, 2007) and replace opportunistic behaviours with cooperative mechanisms between peers (McDermott & Archibald, 2010). OCoPs are social structures that clearly differ from traditional hierarchical structures such as project teams and working groups (Cohendet et al., 2004; Kirkman et al., 2011) in terms of tasks, missions, membership, leadership, or structure (Wenger & Snyder, 2000). In this context, the leader is responsible for maintaining strong ties with the sponsor to ensure that the OCoP is properly resourced and that its activities are aligned with organisational objectives, preserving this balance between self-organisation and control.

2.2. Contingencies between OCoP leader profiles and OCoP characteristics

Studies emphasise the importance of the OCoP leader (e.g., Probst & Borzillo, 2008; McDermott & Archibald, 2010), and the impact of his/her behaviours on OCoP effectiveness (Kirkman et al., 2011, 2013). Research (e.g. Bootz, 2015; Kaminska & Borzillo, 2016; McDermott & Archibald, 2010) also elaborates on the importance of the OCoP leader's role in creating trust between members; understanding the diversity of members' knowledge to combine it effectively and proliferating knowledge and results of activities within and beyond the OCoP.

Research on OCoP typologies (Probst and Borzillo, 2007; Dupouët and Barlatier, 2011) revealed a distinction between exploration-oriented and exploitation-oriented OCoPs. Building on this research, Bootz (2015) distinguished between “strategic exploration” OCoPs and “operational exploitation” OCoPs and conjectured that there may be a corresponding leadership profile for each OCoP type. However, the question of what behaviours and competencies OCoP

leaders may need to meet the particular challenges of exploitation vs. exploration has yet to be investigated empirically. What is missing is a study to determine if there is a specific OCoP leader profile best suited to each OCoP type.

3. Methodology

3.1 Sample

Data were collected in a European knowledge management consortium of 30 multinational organisations. Nine organisations from various industries agreed to participate: Bearing Point (consulting), Daimler (automotive systems), Siemens (automotive systems), Evonik (chemicals), IBM (electronics), Oracle (software), the United Nations (intergovernmental sector), SwissRe (reinsurance) and the International Labour Office (intergovernmental sector). These organisations are similar in terms of their structure and culture, operating at a multinational level and having multiple layers of authority. Due to their size and geographical spread of activities, one of their key challenges is creating a knowledge management culture that ensures knowledge sharing and best practice transfer processes are effective. These organisations also face similar challenges in that they have OCoPs spread over numerous geographical areas (i.e., Europe, Middle East, Africa, and North America) and face difficulties in ensuring the smooth transfer, and joint creation, of knowledge.

To align with the focus of this study, a “purposeful sampling” approach (Patton, 2002) was used. Specifically, we relied on a “criterion sampling approach”, which involves studying “all cases that meet some predetermined criterion of importance” (Patton, 2002: 238). The criteria for inclusion were Wenger’s (1998) five characteristics of communities of practice, that members: 1) build relationships through *mutual engagement*, 2) connect via a *joint enterprise*, 3) produce a *shared repertoire* of resources, 4) engage in *imagination*, i.e., construct *images* of

their roles in the community and, 5) engage in community practice by *aligning* themselves with the community context. This ensured that the investigated social structures were OCoPs and not hierarchical structures (Kirkman et al., 2011). From the 27 communities initially proposed, 11 lacked all five identified characteristics, leaving a final sample of 16 OCoPs, which all agreed to participate in the research.

We established contacts with the leader, the sponsor and various members of each participating OCoP. A consent form was signed between the consortium, the researchers, and the participants, specifying that participants' details would be kept confidential while the names of the participating organisations could be revealed.

3.2 Data collection

Data collection was based on individual interviews. To ensure comparability between the OCoPs and to obtain sufficient information, participants were invited to elaborate on the characteristics of the OCoP and its leader. The respondents included leaders, key members and, sometimes, OCoP sponsors. These types of respondents are likely to have the most experience with OCoPs (Wenger *et al.*, 2002). The interest was in individual perspectives from different internal actors (including OCoP members, leaders, and sponsors) (Guba & Lincoln, 1989), hence the choice of individual interviews where personal perspectives could be surfaced, as opposed to focus groups, where peer pressure may have introduced an unwanted degree of conformity (Golden, 1992). Data were collected from between six and eight informants in each of the 16 communities, resulting in a total of 92 respondents. Each interview lasted 90 to 120 minutes and was recorded and transcribed.

3.3 Data analysis

The inductive and interpretative data structures methodology by Gioia *et al.* (2013) was applied. Our analysis thus consisted of several stages. We started with the *verbal data* collected from respondents in the OCoPs to identify “*first-order concepts*”. These were grouped into categories to develop “*second-order concepts*”. Holistic “*dimensions*” were established based on the overlaps and interconnections between “*second-order concepts*”. Finally, the categories that emerged from the case analysis allowed us to *label* the OCoP types and the leader profiles. Two examples of our data structures are provided in Appendices 1 and 2. The coding was cross validated with that of a scientific collaborator who was unaware of the original coding scheme; minor discrepancies were resolved through discussion.

4. Findings

Our data analysis yielded findings on different OCoP types, different OCoP leader profiles, and contingencies between the two. Our key findings are outlined in the following sections.

4.1 Evidence for different OCoP types

The OCoPs in our sample mapped to three different types which align with existing typologies in the literature. Six OCoPs fell into the “operational exploitation” type, whereas four OCoPs were associated with the “strategic exploration” type. Six additional OCoPs featured a hybrid profile combining elements of both.

4.1.1 Operational exploitation OCoPs

Our data highlight substantial homogeneity between the Evonik-1, IBM-1, Oracle-1, Oracle-2, Siemens-1 and UN-1 OCoPs¹. Our data structure (Appendix 1) underscores that these OCoPs

¹ For the sake of simplicity, we refer to the OCoPs by their codes (cf. Appendix 3).

undertook “activities aimed at improving operational processes via the sharing of best practices and extensive knowledge” (second-order dimension). As the leader of Oracle-2-OCoP relates, “A constant quest for operational excellence is required to achieve the most efficient processes.” This objective is met by exchanging best practices. As the leader of Siemens-1-OCoP asserts, “I lead the community by connecting members to one another according to the type of expertise they need. This way, I ensure that best practices are exchanged.” The knowledge flowing inside these communities relates to operational activities and does not involve exploration. As one member of Oracle-2-OCoP argues, “Community members learn by sharing ready-to-use knowledge.” These OCoPs can, therefore, be categorised as being geared towards operational exploitation. The majority of these OCoPs were created by internal experts and are closed to outsiders, as a leader of Oracle-1-OCoP states, “We focus on expertise we have within the community rather than on what’s going on outside the community.”

4.1.2 Strategic exploration OCoPs

Homogeneity was also revealed in the SwissRe, UN-2, ILO and Siemens-2 OCoPs. These were characterised by “activities aimed at the exploration of radically new approaches, concepts and knowledge” (second-order dimension) and, thus, belong to the “strategic exploration” category. The leader of UN-2-OCoP explains that “we struggle to find radically new practices to lead projects in more effective ways.” The goal of this knowledge exploration is to develop creativity and radical innovation. The leader of Siemens-2-OCoP describes this move away from the dominant culture, “The topics discussed require out-of-the-box thinking that would never have been possible in our formal departments.” Exploration also entails a capacity to absorb knowledge from outside the organisation. As mentioned by a member of ILO-OCoP, “We’re open to absorb knowledge from outside our organisation. We opened the frontiers of our community.”

4.1.3 Hybrid OCoPs

Analysis of the remaining six OCoPs revealed a hybrid approach, combining exploration and exploitation. For instance, Siemens-3, Evonik-2, IBM-2 and Oracle-3 OCoPs focus on “activities to create new solutions through the recombination of knowledge” (second-order dimension). They focus on “incremental” innovations that enable the production of new solutions for customers. According to the leader of IBM-2-OCOP, “The purpose was for consultants to meet and reflect on better ways to deliver engineering solutions.” A member of Siemens-3-OCOP says that “Our network is a place where you find an ongoing process of step-by-step and constructive learning. This learning is useful because it seeds the innovation that is driven by what clients need.” This goal is not reached by exploring radically new knowledge but by reconfiguring and recombining different types of existing knowledge, as emphasised by the leader of IBM-2-OCOP, “a learning process happens each time we assist each other in [re]combining existing technical solutions to new and improved solutions.” Similarly, the leader of Oracle-3-OCOP explains, “Our CoP isn’t about inventing completely new databases. We fiddle with existing database technologies to make them perform even better.”

Two additional OCoPs (BearingPoint-OCOP and Daimler-OCOP) have even inscribed their simultaneous focus on exploration and exploitation in their objectives. The leader of BearingPoint-OCOP states that their activity is to, “Create, improve and develop solutions that help governments exchange information, provide services and transact with citizens, businesses and other arms of the government.” Similarly, the leader of Daimler-OCOP explains that their purpose is to, “Create and improve knowledge on components, sub-systems and power electronics in automotive systems.” These OCoPs’ capacity for ambidexterity is summed up by the leader of BearingPoint-OCOP, who highlights the simultaneity of exploration and exploitation activities, “We look for new ideas and recycle existing ones to deliver better e-government solutions.”

4.2 OCoP leader profiles

Our analysis revealed three OCoP leader profiles that we labelled “centripetal”, “centrifugal” and “balanced” OCoP leaders. These labels indicate the predominant direction of the impetus given by the leader. For the centripetal leader, the main energy is directed inward, towards community members and the focus is on exchange of existing best practices. The centrifugal leader directs most of the energy outwards, thereby stimulating creativity and innovation at the cross-section of the OCoP and the wider organisation. Lastly, the balanced OCoP leader focuses on finding the appropriate equilibrium between centripetal and centrifugal forces acting on the OCoP.

4.2.1 The centripetal OCoP leader

Evonik-1, IBM-1, Oracle-1, Oracle-2, Siemens-1, Evonik-2, and UN-1 OCoPs are led by centripetal leaders. Second-order categories that arose from our analyses of these OCoPs revealed three key constructs: *technical competence*, *social recognition*, and *sensitivity to peer recognition*.

Technical competence to evaluate the members

These OCoPs’ leaders have a strong command of the technical aspects of the activity. The leader of Oracle-2-OCoP explains, “I steer our community because I’m the subject matter expert. When members have a technical question, I’m the first person they contact.” This technical expertise allows the leader to control and evaluate members on the substance of the activity. For example, the leader of UN-1-OCoP describes his role in defining the group’s objectives and links it to his expertise, “I set the objectives, since I know most about our community’s topic.” This evaluation of members’ activities is also revealed by the leader of

Siemens-1-OCoP, “I make sure the practices they share are appropriate to optimize projects’ performance.”

Social recognition

Centripetal leaders enjoy social legitimacy among OCoP members. One member of UN-1-OCoP describes his attitude towards the community leader, “I respect him as he’s truly an expert.” This social legitimacy is also based on the trust that is placed in the leader’s skills and drives participants’ commitment to the community, as underlined by a member of Siemens-1-OCoP, “The engine of our network is our leader, who is the best guy you can get for that job. Because I trust his expertise, I actively participate in the community.” A member of Siemens-1-OCoP underlines the “guide” function of the leader, stating that, “Without his expertise and support, it would be hard to grasp the often highly technical solutions.”

Sensitivity to peer recognition

The centripetal leader’s main motivations are a combination of altruism and personal interest. On the one hand, they involve helping members to improve their skills by providing technical support. The leader of Siemens-1-OCoP, for example, says, “I lead the community by connecting members to one another according to the expertise they need.” On the other hand, it is about being recognised as an expert within the company. As the leader of Oracle-2-OCoP reveals, “I get credit in my formal job for what I do, but in the database community I get so much respect from others, because I’m that knowledgeable guy that everyone goes to when they have a problem.”

4.2.2 The centrifugal OCoP leader

SwissRe, UN-2, ILO, Siemens-2, and Siemens-3 OCoPs are steered by centrifugal leaders. Our analysis revealed two second-order categories: *intra-organisational collaboration skills and ability to stimulate innovation and creativity*.

Intra-organisational collaboration skills

To foster creativity, centrifugal leaders facilitate exchanges between heterogeneous experts, thereby encouraging a confrontation between fragmented and contrasting knowledge. According to the leader of Siemens-3-OCoP, “brainstorming and creative thinking are required to build unconventional practices. It’s a collective process that draws upon all kinds of knowledge.” The leader of Siemens-2-OCoP supports the importance of this type of synergy to bring out creativity, “by joining our minds, we’ll create improved systems.” This search for heterogeneity involves integrating external knowledge, as attested by a member of ILO-OCoP, “We’re open to absorb knowledge from outside our organisation. We opened the frontiers of our community.” In addition to bringing together heterogeneous experts, centrifugal leaders must be in control of the networks of experts and internal knowledge. A member of Siemens-3-OCoP states that, “if I don’t know something, I ask the coordinator [leader]. He’s good at the ‘who knows what’ thing. That’s a creativity booster!”

Ability to stimulate innovation and creativity

Centrifugal leaders focus on identifying new approaches, methods, and ideas. The leader of Siemens-3-OCoP explains, “We search for fresh ideas that circumvent existing practices. We build knowledge from scratch and invent new ways of doing things.” Thus, the leader seeks to foster OCoP members’ creativity as much as possible. A member of Siemens-3-OCoP comments on the OCoP’s leader, “He’s taking us to new horizons, like if we’re trying to invent new stuff all the time.” This aspect of creativity is also found in SwissRe-OCoP when the leader expresses that, “You get people together and squeeze the best ideas out of their heads. You shake and stir them until you get something completely new.” To encourage innovation and circumvent bureaucracy, the leader’s position is at odds with the dominant culture. As the leader of Siemens-2-OCoP attests, “we explore new directions that aren’t always in line with the way management perceives operational processes.”

4.2.3 The balanced OCoP leader

BearingPoint, Daimler, IBM-2, and Oracle-3 OCoPs are steered by leaders with a balanced profile. Our analysis revealed two second-order categories: *innovation and creativity* and *technical and social legitimacy*. While the former corresponds to the characteristics of the centrifugal leader, the latter is associated with the centripetal leader.

Innovation and creativity – Evidence for centrifugal elements

Balanced OCoP leaders foster creativity through the emergence of and experimentation with new ideas. A member of Daimler-OCoP explains, “Our leader puts together pieces of everyone’s knowledge and compiles them into new ideas to build better-performing engines.” The leader of BearingPoint-OCoP corroborates this, “On the one hand, we improve existing solutions; on the other hand, we experiment with new ideas.” Balanced leaders are particularly aware of the organisation’s innovation and strategy policies and have detailed knowledge of the customer structure, as demonstrated by the leader of Oracle-3-OCoP, “I know what they [customers] expect... this helps me set the overall scope and direction our community has to follow if we want to impact innovation.”

Technical and social legitimacy - Evidence for centripetal elements

The leaders of these four OCoPs also enjoy genuine technical and social legitimacy, derived from being experts in a given domain. The leader of BearingPoint-OCoP states, “My responsibility is to help the others [CoP-members] with every proven practice I can give them.” This dual dimension adds value to steering this type of OCoP. It allows balanced leaders to gain trust from the experts in the community, which increases their involvement. The leader of IBM-2-OCoP argues that, “I see it as rewarding for me to connect people to one another because it means... if they let me connect them... that they trust me” This is seconded by a member of the OCoP, who says, “I trust his skills because he knows what he’s talking about and because he’s good at making us talk about the things we know.”

4.3 Fit between OCoP types and OCoP leader profiles

A cross-tabulation of the identified OCoP types and OCoP leader profiles (Appendix 3) revealed interesting parallels. In operational exploitation OCoPs, the dominant leader profile is centripetal. Conversely, strategic exploration OCoPs are dominated by centrifugal leaders. Finally, hybrid OCoPs are largely aligned with balanced leader profiles. These parallels prompted a closer look at our data to understand contingencies between OCoP types and leader profiles.

4.3.1 Fit between leader and OCoP type in “operational exploitation” OCoPs

Evonik-1, IBM-1, Oracle-1, Oracle-2, Siemens-1, and UN-1 OCoPs, are geared towards “operational exploitation” and led by centripetal OCoP leaders. In these communities, the leader relies on his/her status as an expert allowing him/her to define the community’s objectives. As stated by the leader of Oracle-1-OCOP, “thanks to my expertise, I set our objectives.” This is echoed by a member of Oracle-1-OCOP, “He’s the expert... we trust him to select the right technical objectives for building better methods.”

The fit argument for “operational exploitation” OCoP rests, therefore, on the leader’s high level of expertise which is perfectly aligned with the emphasis on control in this OCoP type. Operational exploitation OCoPs focus on efficiency and optimal knowledge flow within the community. They are generally closed towards the outside environment. Therefore, a centripetal leader, who is an expert, knows where best practices reside in the organisation, is capable of effectively defining the OCoP’s objectives, and is best suited for maintaining a high level of control over the OCoP’s activities.

4.3.2 Fit between leader and OCoP type in “strategic exploration” OCoPs

SwissRe, UN-2, ILO, and Siemens-2 OCoPs, are all geared towards “strategic exploration” and have centrifugal leaders. Within these OCoPs, control is distributed among OCoPs members,

who have great autonomy in deciding which topics to explore. In this regard, a member of SwissRe-OCoP says, “We have a system of shared leadership in our community.” Similarly, a member of Siemens-2-OCoP states, “Our community is self-guided rather than being actively steered by one leader only.” Despite this emphasis on autonomy, exchanges within the community and with the outside world need to be facilitated and require general support by the organisation. As a member of Siemens-2-OCoP explains, “management pays for travel expenses if members participate in conferences. It also provides contacts to external experts and financing for our workshops that are usually led by the leader or other influential members.”

Therefore, the fit argument for “strategic exploration” OCoPs is based on the strong emphasis on autonomy in combination with the fact that the interface between the OCoP and the organisation needs to be managed. Centrifugal leaders, instead of focusing on control, implement a context that fosters members’ creativity. A member of UN-2-OCoP confirms, “Assigning objectives contradicts our community’s sense of spontaneity and free flow of ideas.” A member of SwissRe-OCoP echoes this, “No one measures the outcome of our activities...it would just destroy our creativity.” However, the centrifugal leader’s ability to bring together heterogeneous experts can act as an innovation booster. Moreover, knowledge of intraorganisational networks, which is characteristic for this OCoP leader, helps facilitate interface-type issues between the OCoP and the organisation.

4.3.3 Fit between leader and OCoP type in “hybrid” OCoPs

Hybrid OCoPs are largely dominated by “balanced” OCoP leaders. These include IBM-2, Oracle-3, BearingPoint, and Daimler OCoPs, which involve activities that require striking a balance between knowledge exploration and exploitation. What distinguishes them from “operational exploitation” and “strategic exploration” OCoPs is the active involvement of a sponsor who funds the OCoP’s activities and defines its objectives. We found two exceptions

to this "fit", Siemens-3-OCoP ("hybrid" type) led by a centrifugal leader and Evonik-2-OCoP ("hybrid" type) conducted by a leader whose style resembled a "centripetal" profile.

The involvement of an active sponsor is described by the leader of Oracle-3-OCoP, "Our CoP is supervised by a sponsor who participates in setting objectives the CoP must achieve." A member of BearingPoint-OCoP explains, "Our sponsor makes sure we improve existing solutions to impact clients' satisfaction." The OCoP then seeks to translate these objectives in an operational manner while maintaining a form of creativity. A member of IBM-2-OCoP explains, "The sponsor sets targets, but we're free to reconfigure [components] as we want...as long as the end-prototypes are improved versions of the previous ones". Similarly, a member of Daimler-OCoP describes, "Our sponsor sets goals for our network. We must design better-performing power systems. As members, we then discuss technical combinations to reach this goal."

The fit argument for hybrid OCoPs is anchored in the challenges that the sponsor's strong involvement creates for the OCoP leader. Hybrid OCoPs involve a form of activity we characterise as "focused creativity": OCoP members' creativity and innovative capabilities are essential to meet the focused corporate objectives. A member of Oracle-3-OCoP recounts, "We're expected to try out new displays...but we can't only try them out, because management's expectation is that we deliver solutions that can be sold to clients."

A balanced leader is ideally suited to striking this equilibrium of forces. Being aware of the organisation's innovation policies and having detailed customer knowledge enables him/her to grasp the corporate-level objectives introduced by the sponsor. Conversely, the balanced leader's technical expertise and social legitimacy allows for a translation of these objectives into a form of control that does not stifle the members' creativity. This results in a flexible management approach around general objectives fostering innovation and creativity. The OCoP's objectives are rarely quantified. As the leader of Daimler-OCoP describes, "The person

at C-level I report to [the CoP-sponsor] had a precise target for the CoP. It was to create three to five better systems we can market every year. But I can't push them [CoP-members] too hard to achieve something too narrow, because...it discourages their creativity" adding, "But you still need to give members a target, but don't be too narrow. Because if you give them no target their participation goes down." The necessity of striking a balance between self-organisation and control is summarised by the leader of BearingPoint OCoP, "The sponsor and myself, we're able to manage the tension there is between our leadership and the autonomy we give away to members when we steer our community. I've noticed that if we try to lead them [CoP-members] too much and give them fixed goals, they're not as interested in being innovative and creative. The other side of the coin is that if you don't lead them at all, and the goals you give them are too vague, they can become a bit inactive."

5. Discussion

Our findings enrich research on OCoPs in several ways:

First, our results go beyond Bootz's (2015) dichotomous characterisation of OCoPs, whereby OCoPs are either focused on knowledge exploitation (i.e. operational exploitation OCoPs), or on knowledge exploration (i.e. strategic exploration OCoPs) by adding more granularity to a description of a third, hybrid type of OCoP. We show that "hybrid" OCoPs feature objectives that are simultaneously focused on exploration and exploitation, implying they are ambidextrous (Gibson & Birkinshaw, 2004; Gupta et al., 2006) insofar as they combine an incentive to be creative (exploration) with a requirement to perform (exploitation).

Second, our findings uncover three distinct OCoP leader profiles (i.e., centripetal, centrifugal, balanced) which differ regarding how they emphasise control vs. autonomy considerations.

Third, our results demonstrate that different OCoP types and different OCoP leader profiles are contingent upon each other (Appendix 4) and possess specific types of steering mechanisms adapted to the OCoP's unique challenges. The evidence for contingencies between OCoP types and OCoP leader profiles is our most significant contribution. We show that operational exploitation OCoPs are best managed by centripetal leaders whose strong expertise and social recognition favour control over the OCoP in combination with closure towards the environment. Strategic exploration OCoPs are best steered by centrifugal leaders who stimulate creativity and innovation and bring together heterogeneous experts favouring creativity and innovation. Centrifugal leaders support the focus of strategic exploration OCoPs by simultaneously strengthening the autonomy of OCoP members and fostering openness towards relevant intra-organisational networks. Lastly, hybrid OCoPs are best steered by balanced leaders. Their combination of technical expertise, legitimacy and innovation orientation make them uniquely suited to balancing the countervailing forces of control and autonomy, thereby supporting ambidexterity in the OCoP.

Fourth, our findings enrich Lave & Wenger's (1991) model of Situated Learning at the level of Legitimate Peripheral Participation (LPP), adding significant granularity as to what characteristics are required for an OCoP member to move from the periphery to the core of the community in order to be "legitimised" as a leader acting at very core of the OCoP. It takes different characteristics for leaders to be legitimised depending on whether they are leading an operational excellence OCoP, a strategic exploration OCoP or a hybrid OCoP. The characteristics for legitimacy are contingent on the knowledge processes within the OCoP: operational exploitation OCoPs leaders must simultaneously demonstrate technical competence to evaluate the members, social recognition, and sensitivity to peer recognition; strategic exploration OCoPs leaders must demonstrate intra-organisational collaboration skills and an

ability to stimulate innovation and creativity; balanced OCoP leaders must show innovation and creativity capabilities, coupled with technical and social legitimacy.

Fifth, because of these characteristics, our findings are in line with literature on control mechanisms which OCoP leaders apply in their attempt to balance control and autonomy. Control has been broadly defined as “any mechanism that managers use to direct attention, motivate, and encourage organizational members to act in desired ways to meet an organization’s objectives” (Long, Burton, & Cardinal, 2002: 198). Turner & Makhija (2006) distinguish between *process*, *outcome*, and *clan* controls claiming a firm’s mode of control affects how knowledge is acquired, transferred, and used. Process controls specify the appropriate behaviours in which individuals must engage, outcome controls define specific task outputs, and clan controls are socialisation mechanisms that facilitate shared values and beliefs. They associate outcome controls with exploratory search for new knowledge, process controls with transferring already existing knowledge, and clan controls with the sharing of more tacit and diverse knowledge. Our study provides some empirical support for the theoretical propositions advanced in their study but at the sublevel of the organisation and thanks to OCoP leaders. For example, strong process control in operational excellence OCoPs enabled the effective sharing of existing and highly codifiable knowledge, while the important role played both by outcome control and by clan control in strategic exploration and hybrid OCoPs allowed for sharing more tacit and diverse knowledge.

6. Limitations and suggestions for future research

By interviewing the most experienced individuals in OCoPs (i.e., members, leaders, sponsors), our data collection took into account divergent viewpoints. However, the exclusive reliance on interviews is limited regarding objectivity and social desirability. A longitudinal approach using

observations would have limited these biases but did not seem feasible for analysing 16 OCoPs in parallel. Our results are also limited by biases associated with the selected case studies which fall within the realm of multinational organisations.

For future research, therefore, we recommend relying on longitudinal approaches including participant observation, to gain a better understanding of steering issues from the point of view of their internal dynamics and in closer proximity to what the actors are experiencing. This may also facilitate establishing linkages with the literature on OCoPs' life cycles (Gongla & Rizzuto, 2001; Wenger *et al.*, 2002), i.e., to examine whether OCoPs can evolve from one type to another or from one type of steering mechanism to another. Finally, extending the sample from multinationals to a broader spectrum of organisations in terms of size and geographic scope would enhance the generalisability of results.

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