The Role of Organizational Culture in the Transition Towards the Circular Economy – A Practical Perspective

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Abstract: In order to achieve long-lasting changes and institutionalize Circular Economy (CE), current organizational ‘business-as-usual’ cultures need to be challenged beyond technological or managerial changes. However, we identified that Organizational Culture (OC) is not considered an essential aspect to foster organizational transformations towards the CE. Thus, the aim of this paper is to analyze what role plays the OC concepts in the transition towards the CE. In order to accomplish this goal, we conducted a literature review seeking evidence that corroborates with the affirmation that OC is essential for CE transition. In addition, we conducted 13 semi-structured interviews with people from different areas from a multinational steel company located in Brazil. Our literature review showed us the role that OC plays in the transition towards the CE. We identify that OC is extremely important in supporting long-lasting changes as confirmed by the interviews. We observed that the managers were aware of the impact that the wrong culture could have in the implementation of CE strategies; however, they also affirm that the organization must work harder and develop more organizational actions in order to disseminate a circular culture throughout its entire ecosystem. We concluded that OC has a high impact in the transition journey towards the CE, and that organizations must put efforts in the change and adaptation of their culture towards one that supports CE.

Introduction

CE is a multidisciplinary field that brings together different approaches, methods and tools aiming at promoting changes to a more sustainable society (Barreiro-Gen & Lozano, 2020; Lozano et al., 2021). CE is defined as an “industrial system that is restorative and regenerative by intention and design, replacing the end-of-life concept and the use of toxic materials with the use of renewable energy, and materials that can be reused and returned to the biosphere, and aimed at replacing waste with superior design of materials, products, systems and business models” (EMF, 2014, p. 15). It is understood as an economic system that represents a paradigm change in how society relates with nature; requiring disruptive innovations in legislations, production and consumption (Prieto-Sandoval et al., 2018).

The transition towards CE is a continuous state of adaptation, breaking paradigms, reviewing actions and operations (Kjaer et al., 2018), redesigning structures and procedures (Ritzén & Sandström, 2017), and reinventing mindsets (CNI, 2018; Dufva et al., 2016). Reinventing mindsets means seeking new values to support a new culture to leverage disruptive innovations towards the CE. Creating more sustainable societies requires new mental attitudes capable of breaking paradigms and able to deal with complex, adaptive, and unpredictable behavior of ecosystems (van der Brugge & van Raak, 2007).

Thus, the CE transition efforts may be managed in the organization structure and in its business ecosystem as a whole, encompassing technical changes associated with the products, processes, business models, systems and metrics; as well in the organizational values, behaviors and competences. CE requires an environment that promotes the adoption of new technologies, encourages organizational learning and develops capabilities to overcome the barriers and resistance to change.

In order to achieve long-lasting changes and institutionalize CE, current organizational ‘business-as-usual’ cultures need to be challenged beyond technological or managerial systems changes. OC is based on values embodied in organizational norms, rules, standard procedures, and organizational goals. OC is defined as “the pattern of basic assumptions that a given group has invented, discovered, or developed in learning to cope
with its problems of external adaptation and internal integration, and that have worked well enough to be considered valid, and, therefore, to be taught to new members as the correct way to perceive, think, and feel in relation to those problems” (Schein, 1984, p. 3).

Culture is highly associated with organizational outcomes and is a root metaphor that conceptualizes what an organization is rather than what it has (Smircich, 1983). It has a fundamental role in hindering or fostering innovations, as affirmed by Schein, (1984, p. 3) OC “is the key to organizational excellence”. However, frequently OC is not considered as an important factor to foster organizational changes and transformations. Schein, (1996) affirms that we fail to comprehend that culture is the most powerful force operating in organizations to maintain the system stability. Various authors expressed the importance to understand and/or make adequate the OC to implement CE (Bashir & Verma, 2019; Bustinza et al., 2018; Isensee et al., 2020). Norms, values, visions, concepts, tools, instruments, and indicators should be checked and/or adapted in order for CE to become a paradigm in which industrial production and consumption will change in its roots (Korhonen, Nuur, et al., 2018). Despite the importance of soft aspects in the transition towards CE and all the efforts on developing the CE literature, organizational behavior is little explored (Chiappetta Jabbour et al., 2019; Korhonen, Honkasalo, et al., 2018). Thus, the aim of this paper is to analyze what role plays the OC concepts in the transition towards the CE.

To achieve this goal, in the next sections we present the methodology used to develop this research, the results and discussion, and the conclusions.

Methodology
We conducted an exploratory literature review in databases and grey literature to identify previous studies that in some way brings the discussion of OC and its impact/role/function in the transition towards CE. We chose an exploratory review because CE is a new topic of research and few studies explicitly connecting CE with OC could be found. Since the scarcity of studies in this field, we conducted a single case study with 13 semi-structured interviews with managers and analysts from a multinational company in the steel and mining sector leader of steel production in Brazil. This company was chosen since they are an important company for the Brazilian economy. In addition, they are a company considered polluting by the sector in which they operate and even so they have been engaged in the journey towards CE. Figure 1 presents the interviewed and other details about the conduction of the case study.

Results & Discussion
Theoretical Findings
We observed through the literature that the transition towards CE is triggered by certain factors or events in the organizational environment or within the system itself (Geels, 2002; Savaget et al., 2019). Some studies highlighted that stakeholder, inside and outside the organization, are involved in the CE transition (Konietzko et al., 2019; Parida et al., 2019). The organizational perspective highlights the role of OC, leaders and other organizational members in CE transition (Davis & Boulet, 2016; Liu & Bai, 2014).

Building and sustaining a CE-oriented culture is particularly challenging for three reasons. First, a CE-oriented culture requires a combination of behaviors that can be risky for organization in the short-term. Second, leaders can face some resistance to change from the employees’ side. Third, CE is a system of interdependent behaviors, inside and outside the organization and requires a systemic view for its implementation. We gathered from literature some important factors for the proposition and/or maintenance of a culture oriented to CE, they are presented in Figure 2.
These characteristics influence the behavior of employees towards new management systems and, what influences organizational performance. These new management systems are implemented through the acquisition of new capabilities and the development of competences. An expressive number of companies that foster activities towards CE seek to duplicate well-succeeded business models. However, without the right mindsets it will result in unsuccessful changes. As expressed by Bonchek & Libert, (2017) we should change our mindsets before changing the actions.

Case Study Findings
Sustainability is a purpose for the company since they understand it as a way to perpetuate their business. Recently, they changed their purpose from “transforming tomorrow” to “production of more intelligent steel for a better world”. This new purpose is highly aligned with CE, due to the fact that steel is the most recyclable material in the world (around 93) and they understand this characteristic as an enabler to reuse products and co-products in a way that is good for the environment.

According to the interviewed, the concepts of material circularity were always understood by the company due to the continuous steel recycling, and creation of by-products and co-products from steel. We observed that the sustainability reports are an important tool to spread the CE concepts inside and outside the organization. They can act as a communication channel to align the top management vision with the employees’ behaviors. We also observed that sometimes there is a gap between what the top management team understands and what is put into practice by the employees. This means that in terms of CE concept there is a national and global understanding, however, in terms of practical application, CE remains restricted to recycling. Nonetheless, the interviewed affirm that in a ten years horizon, CE concepts will be more rooted and more developed than it is today due to the many initiatives that are being developed aiming to implement CE in the organization. More innovations occurred in the last 5 years around carbon reduction solutions. They make partnerships with other companies and universities to develop new innovative projects for sustainable and circular solutions. There are a lot of ongoing projects that largely demonstrate the adoption of CE within the company.

In terms of the organizational values that support the maintenance of a culture oriented for the CE, the interviewed said that sustainable development is a central value for the company. Reputation, transparency and business sustainability are values that guarantee the credibility of products and people in front of the stakeholders. Leadership, quality, health, security, and environment are also values expressed by people in the organization. However, values like innovation and creativity are not so well disseminated due to the fact that the company is still very traditional.

The organization has several actions for the creation of programs for the development of CE and sustainability. One program seeks continuous improvement and was structured for the areas to rethink their activities in order to implement sustainability. The goal is that this program has no end and becomes rooted in culture. Thus, there is continuous monitoring in order to understand how the values communicated by the top management have been deployed by the leadership and how it arrives at the employees. According to the interviewed, culture is made through time, attitudes and materialized in actions. And in the case of a culture oriented to CE, it has been materialized through projects...
being developed and implemented and through team engagement and co-creation of solutions. The company pursues some attitudes and behaviors that guide them in the path towards CE. They have weekly internal meetings for the presentation and evaluation of issues and resources regarding the development of CE projects. The company has defined some desired behaviors essential for the development of their new purpose, which are: openness, collaboration, empowerment, focus on the customer, and humility. Therefore, the company knows that there are beliefs that need to be worked on to create these behaviors, and these beliefs are: “the opinion of the other has value”, “we as a team are stronger than my individual opinion”, “if I work through the customer experience I can generate work that is more interesting for my employees as well”, “believe that employees are able to take ownership of their roles and regardless of hierarchy can have their contributions”.

Behind all this is the relationship of trust that must be the basis for generating the behaviors of the new culture. The company believes that when CE is communicated, collaboration is addressed in its broad sense: “company does not end in itself”. Thus, to create a viable business that impacts the ecosystem in a positive way, the company needs to look beyond its walls.

Leadership is essential for the transition towards CE. The top management has this role highlighted through the attitude of exemplarity, that is, the example comes from top to bottom. The leaders must transmit the CE values to the employees, who in turn deploy these values in behavior in the work and social environment in which they live; and for the other stakeholders that are part of the company. The top management has as its main role the allocation of resources and goals to make very clear the importance of CE for the entire organization.

Leadership has a fundamental role to demonstrate that CE is not just in paper, but a proposal for changing culture through the definition of goals, resources and internal strategies. Leaders have a great deal of power to make people behave according to what they see in leadership. The leadership’s discourse must be aligned with the practice. If the leader does not treat CE as a priority and demonstrate this to the employees, it is unlikely that they will engage in developing actions towards CE.

Everyone in the company is trained in the basics of sustainability. All environmental projects and investments that are developed are communicated. The operational areas have specific goals to be fulfilled in relation to the master plans for each area. In this master plan, the areas have goals and what needs to be done to achieve this environmental goal. In order to share the CE values and incorporate behaviors aligned to CE concepts the company develops capabilities around innovation, R&D and partnership across sectors. The company makes connections to develop and share new knowledge. When creating bonds and partnerships, it is possible to identify opportunities and this is the path towards CE. The company always seeks to improve, to be at least at the same level as the competitors. They always seek the excellence of products and people. However, as in any change process, they identify gaps either in the skills or in the idea of proposing the necessary resources (financial, skills, competences).

The interviewed believe that the company still has a way to go in the transition journey towards CE. Today, they are a very successful company, but they know the successes that have brought them here are not necessarily the ones that will guarantee their position in the future. That is why the study of OC is so important. Around the transition towards CE, the company has already evolved, but to remain the first in steel, it has to evolve more. Concepts of CE and sustainability are rooted in the company, but it is still difficult to propose radical changes as they are a very traditional industry.

Conclusions

We observed that OC is essential for supporting long-lasting changes towards CE. This was confirmed by the literature findings and by the interviewed answers. We observed that the managers in the participant organization are aware of the impact that the wrong culture could have in the implementation of CE strategies; however, they also affirm that the organization must work harder and develop more organizational actions in order to disseminate a circular culture throughout its entire ecosystem.

We concluded that OC highly impacts the transition journey towards the CE, and that organizations must put efforts in the change and adaptation of their culture towards one that supports CE.
We conducted a single and deep case study, what could be seen as a limitation of this study. As future research we recommend the conduction of multiple case studies with other organizations, in different stages of maturity levels towards CE, and from different sectors. This probably will result in a more systemic view about the role of OC in the implementation of CE by companies.

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