Introduction

The philosophy of Sustainable Development is intensively discussed in politics and industries but rarely transferred to the reality of business activities. One reason is that the relationship between corporate sustainability and organizational culture seems to be underestimated within the discussion about Sustainable Development. Organizational culture is an important factor in business organizations as it frames behaviors of individual members of the organization through shared norms, values and beliefs. Although the concept of organizational culture has become popular also in sustainability related literature there is little theoretical underpinning and understanding of the relationship between organizational culture, sustainability management and sustainability performance (Linnenluecke and Griffith, 2009).

The basic assumption is that ambitious corporate sustainability activities and strategies have to be embedded in the organizational culture in order to be successful. If aspects of Sustainable Development are not part of the mindset of leaders and members of the organization, corporate sustainability activities will not affect efficiently the core business and are more likely to fail (Baumgartner, 2009).

The goal of this manuscript is to gain a better understanding of the link between sustainability strategies and organizational culture. Based on previous research (Baumgartner, 2009; Baumgartner and Zielowski, 2007) the role of different types of organizational cultures and their fit with sustainable corporate strategies is discussed. Based on this a framework to analyze the relationship between different types of organizational cultures and different types of sustainability strategies is developed. This framework can be used by organizations to identify possible gaps between their culture and strategies. It is supported by the discussion of culture change processes organizations can use to reach the fit between desired strategies and their cultural conditions and finalized by the discussion of consequences for green human resource management.

This research refers to the conceptual level of sustainability theory. Korhonen (Korhonen, 2004, p. 66) elaborates two different but interrelated and interdependent levels based on the model of strategic sustainable development
(Robert, Schmidt-Bleck et al., 2002): The conceptual level of a favorable or successful outcome of planning and management toward the goal of Sustainable Development and the level of concrete and practical actions and measures; this research refers to the first level. Organizational culture and corporate sustainability strategies are analyzed to identify interrelations between them as a basis for corporate decisions. The framework can then be used at the practical level and help organizations to analyze their specific situation regarding sustainability orientation and organizational culture.

**Corporate Sustainability**

Sustainable development is defined on the macro-level of societies (World Commission on Environment and Development, 1987) and it is the process to reach the goal of sustainability, which can be characterized by four ultimate sustainability objectives defined in the framework of strategic sustainable development (FSSD) (Robèrt, Schmidt-Bleck et al., 2002, p. 199):

*Principle 1:* Eliminate our systematic contribution to systematic increases in concentrations of substances from Earth’s crust.

*Principle 2:* Eliminate our systematic contribution to systematic increases in concentrations of substances produced by society.

*Principle 3:* Eliminate our systematic contribution to the systematic physical degradation of nature through over-harvesting, introductions and other forms of modification.

*Principle 4:* Contribute as much as we can to the meeting of human needs in our society and worldwide, over and above all the substitution and dematerialization measures taken in meeting the first three objectives.

The role of business regarding Sustainable Development has usually been discussed as “responsibility” to society, whereby responsibility is defined in a narrow definition as need to eliminate negative effects of business. A broader view about responsibility asks how business can contribute to the goals of Sustainable Development and how to integrate the view on opportunities into corporate sustainability activities; in other words not only looking on efficiency but also on effectiveness, for instance Dyllick and Hockerts discuss the relationship of efficiency and effectiveness (Dyllick and Hockerts, 2002). In this case, Sustainable Development will be a source of value creation – for the company and society (Baumgartner, 2009).

Corporate or business sustainability can be defined as “the adoption of business strategies and activities that meet the needs of the enterprise and its stakeholders today while protecting, sustaining and enhancing the human and natural resources that will be needed in the future” (IISD, Deloitte&Touche et al., 1992, p. 1). Van Kleef and Roome define sustainable business management as “management of business that recognizes its foundation in social, environmental and economic systems, and focuses on management and relationships to meet the environmental, social, and economic requirements of many different stakeholders in its networks” (van Kleef and Roome, 2007, p. 44 based on
Roome, 1998). To contribute to the overall goal of Sustainable Development, corporations should also respect the FSSD principles which can be used as general guideline and vision of sustainable strategies, activities and outcomes (Baumgartner, 2010, pp. 51).

For a comprehensive corporate sustainability strategy, it is necessary to consider all sustainability dimensions, their impacts and their interrelations (Baumgartner and Ebner, 2010). Different sustainability strategies can be distinguished which are based on a continuum from reactive strategies to offensive and proactive strategies (Hardtke and Prehn, 2001; Schaltegger and Dyllick, 2002; Baumgartner, 2009; Baumgartner and Ebner, 2010):

- Introverted – risk mitigation strategy: Focus on legal and other external standards concerning environmental and social aspects in order to avoid risks for the company
- Extroverted – legitimating strategy: Focus on external relationships, license to operate
- Conservative – efficiency strategy: Focus on eco-efficiency and cleaner production
- Visionary – holistic sustainability strategy: Focus on sustainability issues within all business activities; competitive advantages are derived from differentiation and innovation, offering customers and stakeholders’ unique advantages

In an offensive way an extroverted strategy can be transformative. A transformative strategy interacts with the market and tries to change market conditions actively. This strategy aims to create new market opportunities in the light of Sustainable Development, including elements of the conservative and visionary strategy (Baumgartner and Ebner, 2010).

Visionary strategies occur in two different forms: in a conventional way and in a systemic way. Conventional visionary strategies are based on market opportunities in an opportunistic manner. As long as sustainability issues lead to market advantages, they are part of the strategic management of conventional visionary oriented companies. So the focus is outside-in, inputs for the strategy formulation are derived from the market perspective. Systemic visionary strategies combine this view with an inside-out perspective, the marked based view is supplemented with a resource based view and Sustainable Development is deep-seated in the normative level of the company (Baumgartner and Ebner, 2010).

**Organizational culture**

The concept of organizational culture evolved over the last decades. Common assumptions, shared values and norms, same understanding of symbols, same ways of interpretation and rules of communication serve as social adhesives in

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1 Based on Baumgartner, 2009
human organizations (Schein, 1997, p. 70). All these phenomena are subsumed in the concept of organizational culture.²

Organizational culture is a broadly used construct in management science, but there is no consensus about its definition. Hofstede (Hofstede, 2001, p. 393) describes organizational culture as holistic, historically influenced, related to anthropological concepts, socially constructed, soft and relatively stable. Organizational cultures result from a learning process of interaction with its internal and external environment. Certain actions and procedures that have been successful in the past build up the basis of commonly accepted behaviors. Organizational culture brings sense, orientation and stabilization into a complex and dynamic world. Its elements are transferred by a process of socialization (telling stories, observing rituals,...) and are not learned consciously (Schreyögg, 1991, p. 1526).

Within organizational theory scholars used the culture concept as a metaphor to study organizations as forums in which meanings are constructed and expressed through social interactions. As it became part of the vocabulary of management thinking, more and more researchers began to employ culture as a variable rather than as “root metaphor”; something an “organization had” versus something “it was”. Starting in the 1950ies, culture became a mechanism with which to achieve managerial effectiveness and control. During these stages of development, a large number of definitions have been proposed for the concept of culture (Wilson, 2001). The culture of a group evolves and changes over time as a result of changes in various influencing factors like business environment, leadership, management practices and formal socialization processes as well as informal socialization processes (Schein in Wilson, 2001).

The question arises to whether changes in an organization’s culture can be managed. There is a significant debate between researchers on this issue. Some see culture as critical component by which an organization can be influenced (Wilson, 2001; Tichy, 1983; Deal and Kennedy, 1982; Schein, 1997). Others question whether organizational culture is indeed manageable because of the existence of subcultures (Smircich, 1983) or question if everything what is named as culture and related to culture is really culture and not better related to strategic directions and structures (Bryman, 1984).

From a positivistic point of view, culture is a variable which can be managed within organizations, from a constructivist point of view reality is subjective “constructed” through individuals and their social interaction (Bieker, 2005). In the constructivist view culture cannot be managed, only social interactions which construct the organizational culture can be influenced. The constructivist perspective corresponds to Schein’s view on culture, although he sounds positivistic when he describes cultural change.

² It is important to keep corporate culture strictly apart from similar looking concepts like corporate identity, organizational climate or the national culture (Scholz, 1987).
Organizational culture and corporate sustainability: relationship, framework and change processes

In contrary to other approaches, which focus on the general discussion of organizational culture and sustainability (for instance Linnenluecke and Griffith, 2009), the framework developed in this paper seeks to identify in detail the relationship between sustainability strategies and culture. The discussion is based on the constructivist perspective of organizational culture. Three main elements can be distinguished:

1. The general grounding resp. foundation of corporate sustainability strategies in the levels of organizational culture based on the model of Schein (Schein, 1997, see Figure 1). This allows understanding the anatomy of an individual organization culture.

2. In addition to the cultural levels the model from Goffee and Jones is used to distinguish different types of organizational cultures; this model is based on the dimensions of sociability and solidarity (Goffee and Jones, 2003, see Figure 2).

3. As organizational culture is a dynamic phenomenon, possibilities to influence the culture are discussed based on the model of Hatch (Hatch, 1993, see Figure 3). General cultural change processes are identified.

These three steps together enhance our understanding of the relations between levels, strategies, types and change options of organizational culture related to corporate sustainability strategies. Organizations can analyze their fit between strategies and culture and develop ways to fit a possible gap between them.

Element 1 – corporate sustainability strategies and levels of organizational culture (Baumgartner, 2009)

According to Schein culture can be analyzed at three different levels; the term level refers to the degree of which the cultural phenomenon is visible to the observer (see Figure 1).

These levels range from the very tangible overt manifestations that one can see and feel to the deeply embedded, unconscious basic assumptions that Schein defines as the essence of culture. In between are various espoused values, norms, and rules of behavior that members of the culture use as way of depicting the culture to themselves and others (Schein, 1997, p. 16).
Schein’s model is used to explore the relationship with corporate sustainability strategies discussed previously. The question is, whether there is any relation between the cultural level and the strategy types. For this analysis, each level is described in more detail: the level of artifacts is represented through structures and processes, the level of values through strategies, goals and philosophies and the level of basic assumptions through views, cogitations and emotions (see Table 1). Based on the presented typology of sustainability strategies it is qualitatively analyzed if or if not each level of organizational culture is affected, for example it is assessed if the conservative strategy requires certain basic assumptions or not (Baumgartner, 2009).

Introverted strategies require no foundation of sustainability aspects in the level of basic assumptions, the strategy can be implemented without any specific view or cogitation or emotion about sustainable development. Strategies and goals reflect external pressure to reduce risk and to reach legal compliance. Artifacts like compliance oriented management systems are not necessary, but can occur. Extroverted strategies are characterized through external communication, instruments like environmental or sustainability reports are used; for this, usually internal structures are necessary. Corresponding strategies and goals occur on the level of espoused values. On the level of basic assumptions no foundation is required for the conventional extroverted strategy type, stakeholder communication and integration is possible without special views or emotions. In case of transformative extroverted strategies it seems not possible to influence external stakeholders without a positive view about sustainability, so the level of basic assumptions is affected. Conservative strategies need a foundation in the level of values: as there are production processes in focus, values should reflect the efficient and effective use of resources and the minimization of waste and emissions. These aspects must be part of the corporate philosophy, which should
correspond with views that are open to efficiency and effectiveness, e.g. that are economic-rationale, in the basic assumptions, too (Baumgartner, 2009).

Table 1: Relationship between corporate sustainability strategies and levels of organizational culture (Baumgartner, 2009)

<table>
<thead>
<tr>
<th>Corporate Sustainability Strategy</th>
<th>introverted</th>
<th>extroverted</th>
<th>conservative</th>
<th>visionary</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Artifacts</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>▪ structures</td>
<td>x</td>
<td>++</td>
<td>+</td>
<td>++</td>
</tr>
<tr>
<td>▪ processes</td>
<td>x</td>
<td>x</td>
<td>+</td>
<td>++</td>
</tr>
<tr>
<td><strong>Values</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>▪ Strategies</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>++</td>
</tr>
<tr>
<td>▪ Goals</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>++</td>
</tr>
<tr>
<td>▪ Philosophies</td>
<td>x</td>
<td>x</td>
<td>+</td>
<td>++</td>
</tr>
<tr>
<td><strong>Basic Assumptions</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>▪ Views</td>
<td>x</td>
<td>+</td>
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<td>++</td>
</tr>
<tr>
<td>▪ Cogitations</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>++</td>
</tr>
<tr>
<td>▪ Emotions</td>
<td>x</td>
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</tbody>
</table>

Visionary strategies are embedded in all cultural levels, they show different sustainability related artifacts which are based in strategies, goals and philosophies on the level of values which have to be based on basic assumptions. On the level of basic assumptions views and cogitations have to be positive related to the idea of Sustainable Development, in case of systemic visionary strategies additionally emotions within basic assumptions are important (Baumgartner, 2009).

**Element 2 – typologies of organizational cultures**
General typologies of organizational cultures based on the dimensions of sociability and solidarity are used as second evaluation criteria. While Schein’s model show how deep grounded a certain aspect is in the culture, Goffee and Jones model (see Figure 2) show how strong and integrated cultures are.
Figure 2: Typologies of organizational cultures (Goffee and Jones, 2003, p. 21)

Sociability is the amount of friendliness and (informal) social interaction among members of the organization. If sociability is high members are more like friends than just colleagues. They tend to spend a lot of time in face-to-face communication, sharing ideas, and sustain a high level of unarticulated reciprocity.

Solidarity measures how members of the organization are pursuing shared objectives, regardless of personal ties. Here a joint sense of purpose is characteristic. Even if members don't know each other, a sense of high solidarity will bring them together to act as one. Therefore solidarity is also an indicator for the strength and uniformity of a culture, whereas sociability is measuring the informal congruence of an organization.

These two dimensions reveal four types of organizational culture (see Figure 2):

- Networked Culture
- Communal Culture
- Fragmented Culture
- Mercenary Culture

These different types of cultures have an influence on the perception of the relevance of sustainability aspects and the possibilities to influence the culture. In case of high solidarity any sustainability related activities have to be linked to the overall corporate performance, this is connected with a higher need in measuring sustainability performance. High sociability is correlated with a higher relevance of more "soft", i.e. less measurable sustainability aspects. This model is used to analyze the corporate sustainability strategies discussed previously regarding the relevance of sustainability aspects.
Element 3 – Cultural change processes

Based on the evaluation of a culture with the models of Schein and of Goffee/Jones it is possible to identify the congruence between cultural preconditions (i.e. required foundation and relevance of sustainability aspects) and corporate sustainability strategies. If there is a gap between culture and strategies, either strategies has to be adjusted to fit with the cultural conditions or culture change processes have to be initiated (Kekäle, 1998; Baumgartner, 2010, pp. 109). The former is known as cultural adaptation (least-resistance route), the later as cultural change route (Kekäle, 1998).

The complexity is that organizational culture is not a variable which can be managed within organizations, but is subjectively “constructed” through individuals and their social interaction. To understand the dynamics of organizational culture, the model of Hatch (Hatch, 1993) is illustrative (see Figure 3).

This model provides the dynamic view on Schein’s three level concept of organizational culture (Hatch, 1993, pp. 660). The processes of manifestation, realization, symbolization and interpretation serve as translators between assumptions, values, artifacts and symbols.

![Figure 3: Dynamics of organizational culture (Hatch, 1993, p. 660)](image)

The process of realization and symbolization are central for cultural adaptation, for cultural change all processes are relevant (Baumgartner, 2010, p. 118). The dimensions of degree, diffusion and depth of cultural change resp. adaptation are additional aspects in organizational cultural change processes (Harris and Crane, 2002).
Figure 4 gives an overview about the elements of the developed framework which serves the purpose to analyze the relation between organizational culture and corporate sustainability.

Figure 4: Framework to analyze the relation between organizational culture and corporate sustainability

Applying the framework
The application of the framework is discussed using the hypothetical example of an industrial corporation. This corporation is a company in the basic materials sector with headquarters in Austria and production sites in Poland and China. The starting point in applying the framework is to analyze the organizational culture. According to Schein (Schein, 1997) interviews are used to identify artifacts, values and assumptions representing the organizational culture. These interviews are carried out in the headquarter and in operations with persons from different hierarchical levels and departments. The goal is to identify if and how sustainability issues are reflected in the organizational culture. The interviews revealed several sustainability related artifacts (for instance environmental management systems according to ISO 14001, safety policy, or sustainability report) and sustainability related values like environmental protection, safety, reputation or compliance (beside overall values like profitability). Sustainable development is not seen as value itself but as helpful to achieve economic success. Basic assumptions are not directly accessible, but can be identified by discussing inconsistencies among values, actins and artifacts. In this case a
strong orientation on facts and figures is a deep grounded assumption within this organization.
As final step within element 1 the identified artifacts, values and assumptions are compared with the corporate sustainability strategy according to table 1. The company follows not a clear defined sustainability strategy, elements of a conservative strategy like a focus on production efficiency and on reducing emissions can be found together with elements of an extroverted strategy like stakeholder communication. The identified values and assumptions are in line with the actual sustainability-related strategic activities of the corporation; however, if the sustainability activities are combined to a formal and stringent sustainability strategy the fit with the organizational culture is of interest. Therefore also element 2, the typology of the culture is taken into account. To identify the type a questionnaire was used asking the dimensions of sociability (to the degree of communication and connection displayed by individuals in the organization) and solidarity (individual orientation towards the tasks and goals of the organization). Based on the questionnaire a mercenary type of culture could be identified. Mercenary cultures are characterized by a clear focus on goals and achievements with a low level social interaction and informal communication between individuals.
Element 3 combines the results in order to give advice if and how a cultural adaptation or a cultural change is necessary to implement a certain sustainability strategy. The company has at the moment the choice to go forward with their sustainability activities or to combine the existing elements of a conservative and an extroverted strategy to a visionary strategy. This would mean to integrate sustainability issues within all corporate activities and to use them as genuine factor for the corporate strategy (option 1). The other possibility is to focus on the existing sustainability activities (option 2). Regarding option 1 the existing foundation of sustainability in the three levels of organizational culture is not sufficient; especially a deeper foundation of positive views, cogitations and emotions about sustainable development is absolute necessary. This means all processes of cultural change, i.e. manifestation, realization, symbolization and interpretation are necessary for a successful change towards a sustainability-oriented organizational culture. In case of option 2 adaptations of the culture are sufficient, so the focus can be on the processes of realization and symbolization. The mercenary type of the culture of the case company is relevant for both options; any sustainability activity and strategy has to focused on measureable facts, the connection to economic and financial goals has to be made transparent.

Conclusion and outlook
The main goal of this paper is to provide a deeper understanding of the relation between industrial sustainability management, especially sustainability strategies, and organizational culture. Based on previous work of analyzing corporate sustainability strategies (Baumgartner, 2007; Baumgartner, 2009) the focus is extended to the question if and how organizational cultures can be identified and
influenced. Therefore in addition to the model of Schein used in Baumgartner, 2009 also the typology of organization cultures using the model of Goffee and Jones as well as the dynamics of organizational culture using the model of Hatch are used. Future research is necessary to further test this conceptual approach empirically and to develop guidelines for the use of this framework in business practice.

References


