The relation of food business with nature – an investigation of ecological accounts of the food industry

Dissertation zur Erlangung des akademischen Grades
Doktorin der Wirtschafts- und Sozialwissenschaften (Dr. rer. pol.)

Vorgelegt am Fachbereich Ökologische Agrarwissenschaften der
Universität Kassel, Witzenhausen

von

Janalisa Fränzi Hahne

Kassel, 7. Juli 2021

Disputation am 19. November 2021

Betreuung: Prof. Dr. Christian Herzig (Universität Kassel)

Gutachter: Prof. Dr. Christian Herzig (Universität Kassel)

Prof. Dr. Tobias Gößling (KEDGE Business School, Bordeaux)

Acknowledgements

First of all, I am thanking my supervisor Prof. Dr. Christian Herzig for his inspiring ideas concerning my PhD thesis and his encouragement to take this journey. Together with the (former) colleagues of the Faculty of Organic Agricultural Sciences at the University of Kassel you offered fruitful discussions, constructive feedback and created many happy moments throughout the last years – thank you all so much.

Secondly, I am of course grateful for the support of my family and friends. All of you helped through your motivation and most importantly your time and care (for me and my three children) during hours of writing, worries and moments of success - thanks a lot.

The relation of food business and nature – an investigation through ecological accounts of the food sector

Zusammenfassung

Unternehmen sind angehalten, freiwillig oder gesetzlich, für ihre Handlungen Rechenschaft abzulegen. Nachhaltigkeitsberichte (Engl. *sustainability reports* oder *ecological accounts*) sind ein Weg aufzuzeigen, inwiefern sich unternehmerische Entscheidungen auf die soziale und ökologische Umwelt auswirken. Der Grund für die Untersuchung solcher ecological accounts im Rahmen dieser Dissertationsschrift ist der Einfluss von Lebensmittelunternehmen auf die soziale und natürliche Umwelt. Das Forschungsziel dieser Arbeit ist die Herausarbeitung der Darstellung der Beziehung zwischen Unternehmen und Natur in Fotografien in den Nachhaltigkeitsberichten von zwei Unternehmen des konventionellen Lebensmittelsektors sowie von zwei Unternehmen aus dem ökologischen Lebensmittelsektor. Die Beziehung von Unternehmen zur Natur wird durch Umweltwerte sichtbar gemacht. Diese werden deduktiv aus der Literatur der Umweltethik abgeleitet. Mit Hilfe von Techniken aus den sogenannten *visual management studies* werden die Fotos der vier Nachhaltigkeitsberichte hinsichtlich der in ihnen dargestellten Werte analysiert. Daraus ergibt sich, dass alle vier Berichte eine Beziehung zur Natur darstellen. Diese Beziehungen werden hauptsächlich durch bestimmte Wertetype wie „Verantwortung gegenüber Land und Ressourcen" oder „intrinsische Werte von Land und Natur" dargestellt. Die Anzahl der gefundenen Werte in den Berichten ist jeweils unterschiedlich und lässt den Schluss zu, dass auf den Fotografien entweder eine starke Beziehung zur Natur (Lebensbaum und Seeberger) oder aber eine gute, aber weniger starke Beziehung zur Natur (Rapunzel und Schwartau) gezeigt wird. Eine rekonstruktive Analyse, die auch die narrativen Bestandteile der Berichte einbezieht, zeigt, dass die Fotografien allein eine andere Sprache sprechen als der gesamte Bericht.

Abstract

Companies are asked, by law or voluntarily, to account for their actions. Sustainability reports are so-called ecological accounts which show companies' actions affecting their social and natural environment. The reason for investigating ecological accounts of food companies within this PhD thesis is the impact food companies have on the natural environment. The research objectives of this thesis are about the relationship between company and nature that is depicted in photographs of the ecological accounts of four German food companies, two of them being related to the conventional food sector, two of them regarded as producing organically. The relationship between companies and nature is made visible through environmental values. These are derived deductively from environmental ethics literature. By means of techniques adopted from the visual management studies the photographs of the four sustainability reports are analysed in terms of the values they depict. As a result, all the four investigated reports show relationships with nature. These relationships are mainly constructed through certain value types such as "responsibility towards land and resources" or "intrinsic values of land and nature". The number of values found differs and leads to the conclusion of having strong relationships with nature depicted in the photographs (Lebensbaum and Seeberger) and good, but less strong relationships with nature in the cases of Rapunzel and Schwartau. A reconstructive analysis which includes the narratives of the reports as well, shows that the pictures alone tell a different language than the overall reports.

Content

Figures, Boxes and Tables

Abbreviations

acc. to	according to
ANE	attitude toward the natural environment
c.f.	confer
CSR	Corporate Social Responsibility
EA	Ecological Accounting
ed.	editor
eds.	editors
e.g.	exempli gratia (lat.), for example
EMAS	Eco Management and Audit Scheme of the European Union
et al.	et alia (lat.), and others
GRI	Global Reporting Initiative
HaN	Human and Nature
ID	identification
ibid.	ibidem (lat.), in the same place
lat.	Latin
NEP	New Ecological Paradigm
NZ	New Zealand
p.	page
pp.	pages
PhD	philosophiae doctor (lat.), Doctor of Philosophy
SEA	Social and Environmental Accounting
SDG	Sustainable Development Goals
UK	United Kingdom
VMS	Visual Management Studies

1 Introduction

Companies are asked, by law or voluntarily, to account for their actions. One instrument to prove responsibility towards the natural environment, social issues and sustainability in general is the ecological account, such as in the form of a sustainability report. Such company reports involve work conditions of employees or suppliers, economic and considerate use of resources, environmental protection or environmentally friendly management and production (Gray *et al.*, 2014). The use of depictions in company reports is a very common instrument due to its power of easy recognition (Davison, 2015). This PhD thesis informs about ecological accounting in general and the use of the visual in them in particular. The research objects are sustainability reports of four companies of the food industry. These companies are Lebensbaum and Rapunzel, which produce organic food products. The other two companies are Schwartau and Seeberger. They produce conventional food products.

The reason for investigating ecological accounts of food companies is the impact food companies have on their natural environment. Especially conventional food companies are known for their massive land use, the often non-sustainable use of resources such as soil and water. Further aspects concern the increase of chemical pesticide use in conventional farming, which harms soil, plants and animals (Young, 2020). Those companies that support organic farming or produce organic products are on the other side known for their sustainability management of production, which i.e., includes preservative handling of resources or the abstinence of pesticide use (Seufert *et al.*, 2017).

The research objective of this thesis is about the relationship between company and nature that is depicted in photographs of the ecological accounts, namely sustainability reports, of the above-mentioned companies. It is further investigated whether there are differences shown in the photographs displayed in the reports between the organic and conventional companies.

Relationships between entities, in this case food companies, and nature can be made visible through values (Cox, 1997). Environmental ethics inform about which values can be found between moral entities and nature. Making use of land ethics and land aesthetics helps to find distinct environmental values. The method used for finding these values in the photographs of the sustainability reports is derived from the so-called visual management studies (VMS). The method encompasses a visual content analysis, which is composed of three perspectives for analysing the pictures: description of the photographs, finding the values and finally a reconstructive analysis. The latter is informed by the methodological approach of hermeneutics. The first two perspectives of the analysis are about the picture analysis only. The latter is a step that also involves the text and hence the whole report. This allows for a better understanding of why certain pictures are placed in the report and whether the revealed

values in the photographs match with the companies' environmental management and perception of how they treat the environment. Furthermore, the three perspectives used in the analysis help to answer the overall research question:

How is the relationship between food business and nature constructed through ecological accounts of food companies?

During the analysis, many environmental values have been investigated in the photographs. The four reports show differences in number and type of the values. These values furthermore differ in terms of the quality they have (*e.g.*, very good quality or poor quality). Depending on such a quality of a value and how often it is displayed, the relationship of the respected company towards nature is either good or even strong. The recontextualisation of the photographs with the texts of the reports shows that some reports show a different level of relationship towards nature depending on whether it is the photograph or the text. Finally, the relationships towards nature are constructed through the overall reports. Neither the photographs alone nor the text on its own build the whole picture of how the company is related towards nature. Only reading pictures and text, hence all of them seen in a context, reveals how value-oriented a company is towards nature.

Figure 1 illustrates the procedure of this PhD thesis. The research design will be elaborated in Chapter 6.
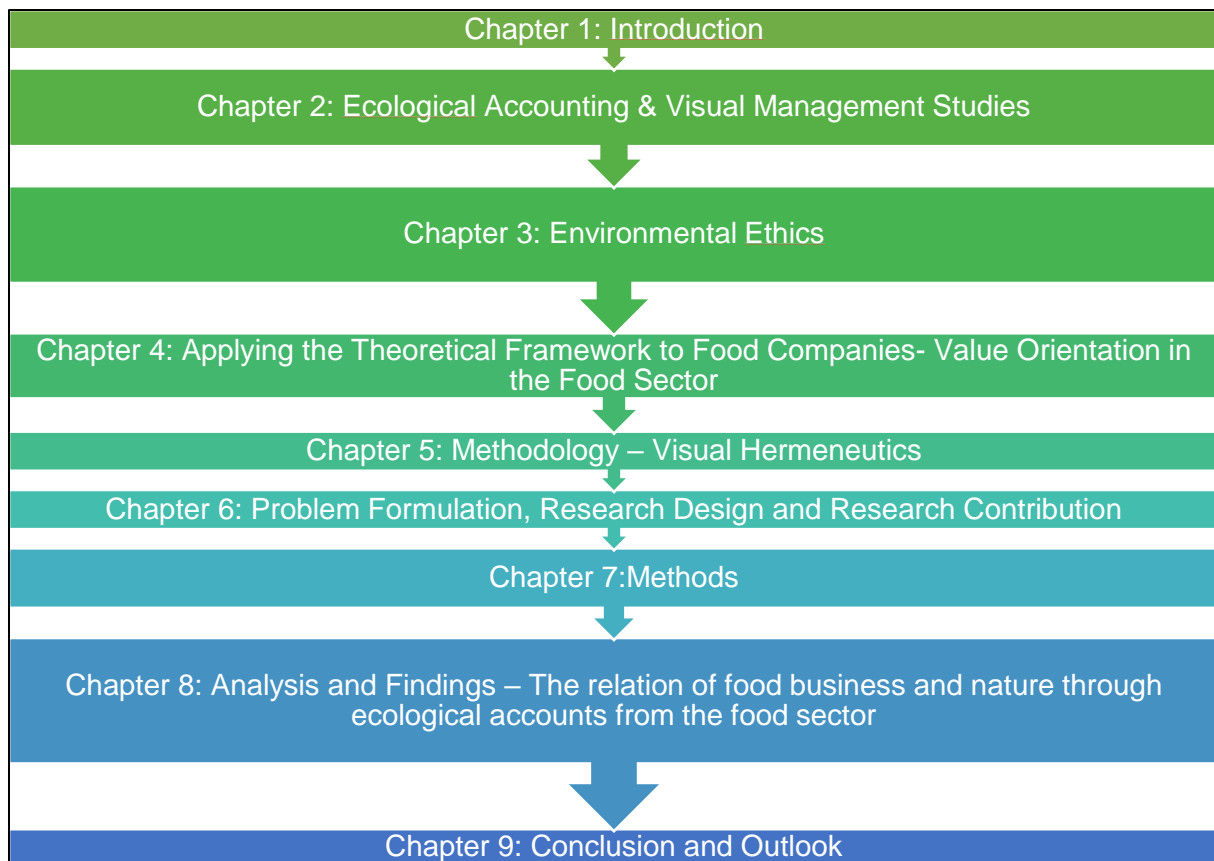
Figure 1.1: Thesis procedure.

The next chapter **(Chapter 2)** of this thesis concerns the critical accounting debate in general and the ecological accounting debate in particular. This debate will be picked up again later on in Chapter 4 and relates these debates to the food sector. As I am going to undertake a picture analysis on the base of sustainability reports, the pictures from these reports are of high importance for my research. They serve as accounts themselves within the reports, which are also considered as accounts. I will clarify this in the second chapter. In order to give a full picture of the ecological accounting debate and critical thinking in accounting, I furthermore explain how the visual management studies are linked to it and why they are needed in general and as part of this thesis.

The theoretical framework can be found in the **third chapter** (Chapter 3). It is the most comprehensive part of the three literature streams as it is the main driver for the analysis. This chapter addresses environmental ethics in general and aesthetic value and land ethics in particular. These two theories derive from environmental ethics and are crucial for the overall approach of this thesis: to find the relation between nature and food business. This relation is based on the assumption, that value orientation of companies can be an indicator for an existing relationship between the company and nature. I assume that the more value-oriented a company is, the stronger is the relationship. In order to define value orientation, the theories of land ethics and aesthetic value are used.

From these theories, value types are drawn which result in value orientation. The value orientation of food companies is discussed in the **fourth chapter** (Chapter 4). Derived from literature and the previous chapter, the current state of research of value orientation in the food sector is explained. This chapter serves as the application of the theories on food companies. As environmental ethics address the *human* – nature relationship, but not particularly the *company* – nature relationship, it is here necessary to finally assign the labels of environmental values to the food companies.

The following chapter (**Chapter 5**) concerns the methodology. This thesis is positioned into the meta-theoretical theories of hermeneutics, moreover the visual hermeneutics. They serve as instruments to understand how the interpretive approach of this thesis can be regarded ontologically, epistemologically and finally, methodologically.

The problem formulation of this PhD thesis will be addressed in the **sixth chapter** (Chapter 6). Here, the research question's intention will be explained. Related sub questions serve to answer the overall research question stepwise. All questions concern the concepts and theories from Chapter 2 and 3 and are a result of the considerations in Chapter 4. Finally, Chapter 6 concerns the research design and research contribution of this thesis.

The methods chapter (**Chapter 7**) aims to give an overview on the methods applied and on their usability for the research. Based on the investigated reports the pictures will be analysed based on a visual content analysis. This includes categorising and coding of pictures. It does not include purely statistical analysis. With the help of pictures, an interpretive approach is used which calls for a strong theoretical and methodological foundation. This step aims to firstly help organising the pictures. As VMS led to the idea of using pictures as foundation for the analysis, and as this thesis is part of an accountability research, it seems applicable to go beyond the mere understanding of what is portrayed in the pictures. So, secondly, a deep analysis of the pictures based on the mentioned theories and concepts is made. The abductive approach of first using categories (*e.g.*, value types) derived from theory, then applying them during the visual content analysis and while doing so, creating new categories and codes, is considered as a necessary and logic process in this exploratory research. Every step and perspective of how to analyse photographs and why the respective sustainability reports have been chosen, is explained in Chapter 7.

Chapter 8 concerns the analysis and constitutes the most comprehensive part of this thesis. This chapter is split up into different phases (*see* Chapter 7), which are used in order to conduct the visual content analysis. These phases equal perspectives which are used for interpreting the photographs and later recontextualise them with the overall report. The answers to the sub questions as well as the overall research question are the result of this extended analysis. The chapter ends with a discussion of the results with regard to Chapters 2-5.

Chapter 9 briefly summarises the findings of this PhD thesis and provides an outlook for further research.

2 Ecological Accounting and the Food Sector through a Visual Perspective

This chapter provides an overview on two disciplines, namely ecological accounting and visual management studies and connects them to the food sector. Together with the theoretical part (Chapter 3), the two mentioned disciplines frame this PhD thesis.

2.1 Ecological accounting and the food sector

Accounting is a practice, which provides evidence about monetary activities or responsibilities concerning a certain time period (Horngren *et al.*, 2015). There is a range of formal but also informal accounts about various kinds of activities. Businesses are mainly known for their managerial and financial accounting, the so-called conventional accounting (Gray *et al.*, 2014).

Conventional corporate accounting standards, such as managerial or financial accounting, belong to a discipline, which is highly influenced by capitalistic and positivistic views and therefore regarded as a so-called monologic approach to accounting for a company's actions (Brown, 2017). Stakeholders, such as the society at large or nature are originally not involved in corporate reporting (*cf.* Laine, 2010; Philipps and Reichart, 2000). According to Freeman (1984), both, shareholders holding a financial share in the company as well as stakeholders having a "claim" on the company, require information on the company's performance. As a result, for all those having an ethical or ecological interest in the business (stakeholders), it just seems fair to gain insights in the status of the firm's performance, which goes beyond legally required information, such as environmental issues (Sinclair, 1995). Such information can be provided in so-called ecological accounts, like sustainability reports[1].

Whereas the term stakeholders might be clear for many businesses (*see e.g.,* Freeman, 1984), there is hardly any exception, especially within the food sector, of who a stakeholder is: not only those who are directly affected by the firm's decisions are stakeholders (such as employees or suppliers), but also every human being depending on food and healthy nutrition in a sound environment, is likely to be interested in food companies' actions and hence regarded as a stakeholder. Furthermore, every kind of land use, land change, impacts on the environment or the atmosphere through agricultural production or further food processing and distribution affects planet earth and with it its living beings. In accordance with Freeman (1984), within this PhD thesis, by stakeholders those people are meant, who rely on or can affect the food sector – either from a business perspective or a pure dependency on food for everyday survival.

---

1 The terms report and account are mostly used interchangeable. However, it should be noted that even though every report can be regarded as an account, not every account comes in the form of a report.

Within the food sector,[2] there is an inevitable connection between food production and environmental exploitation such as land use with partially far-reaching results: environmental degradation, climate change, global famine, poor working conditions, and other economic, social and ecological dangers may be easily traced back to food companies or agricultural businesses (*see e.g.*, Clark and Tilman, 2017; FAO, 2014). However, what businesses from the food sector mostly provide are accounts that are typical for many international businesses: (i) conventional accounts, which tell the language of numbers and the well-being of the company itself (see *e.g.*, Abdel-Kader and Luther, 2006; Kaplan, 1984); (ii) in many cases, the considerations provided regarding environmental matters only relate to the information the company wants to disclose – information that puts the firm in a positive light or at least proves that problems become tackled, and sustainable solutions are aimed for in order to show responsibility. As Gray *et al.* (2014, p. 53) put it: "(…) the *legal* responsibility for action brings a *moral* responsibility to account which is only partially discharged by the legal responsibility to account".

Generally, accountability is "[t]he duty to provide an account or reckoning of those actions for which one is held responsible." (Gray *et al.*, 2014, p. 50). Shearer (2002, p. 543) reminds us, that "(…) giving an account is one activity in which moral agency is realized". However, the nature of accountability is more complex due to its social relationships between parties and the manifestation of that relationship in a social and moral context. This means, there is not only the duty to provide an account of actions to another party, but also the determination of norms and values in which an account is manifested (Gray *et al.*, 2014). Therefore, there is not only the dimension of being required to provide an account about financial transactions or material flows (*see* Tran & Herzig, 2020), but also a more intrinsic dimension of trust, information and responsibility expected by stakeholders. Hopwood (2009) sees reporting even as "deconstruction of images" (Hopwood, 2009, p. 437), others as pure marketing (Frankental, 2001) or as justifications and legitimacy (Scott and Lyman, 1986) or outcome documentation (Breitbarth *et al.*, 2010).

An account is a (mostly written) proof of how has been worked or acted within an institution during a certain time period[3]. Accounting then is the practice of giving an account about one

---

2 By food sector *here* the global and overall production of food on a business level is meant. Small or subsistence farmers are not included in this, only when they are part of a larger corporation of capitalistic and non- or partly sustainable businesses. Generally, the term food sector means the food production industry with its agricultural as well as further processing firms. Retailers are not included. When talking about "food business", the commercial business and the management behind the food production is meant which is also the focus here.

3 Ecological/environmental/social or managerial/financial reports are understood as the published and 'printed' outcome of a company's disclosures regarding economic, social or ecological matters. These external reports are at the same time accounts and depending on their focus either an economic, social or an ecological account. However, to *be accountable for* any undertaking it is necessary to investigate those accounts (or stories and pictures) which reveal (hidden) stories or even exemplify what is not shown.

or more activities: "(…) a duty to provide information to those who have a right to it" (Gray *et al.*, 2014, p. 7) and thus addresses those stakeholders who have an interest in this information (*cf.* Bebbington *et al.*, 2020; Miller and Power, 2013).

Criticism concerning accounting and reporting is made on too less transparency and accountability (Messner, 2009; Sinclair, 1995). This critical discussion of the accounting discipline brought forward many ideas for how to integrate stakeholder concerns or sustainability issues into the rigid structures of conventional accounting (see *e.g.*, Bebbington *et al.*, 2007 and 2007a; Cooper and Morgan, 2013; Craig, 2017; Mata *et al.*, 2018).

Ecological accounting (EA) as a subdiscipline of accounting has been developed as response to the call for new accounting tools in order to involve the natural environment including the impacts, we have on it (*cf.* Kelsall, 2020; Russel, Milne and Dey, 2017).

However, there are many and different approaches of developing ecological accounts, depending on the involvement in, the usage of those accounts or the general understanding of EA. Generally, corporate disclosures gained research interest in the 1970s, focussing on social disclosures at that time (Owen, 2014). In the early 1990s EA has emerged as a discipline focussing on environmental issues and corporate disclosures of those (*see* Owen, 2008), later in the mid-1990s corporate social responsibility (CSR) reporting as well as sustainability reporting evolved and brought about social issues included in accounting (Deegan, 2017). Gray (2002, p. 688) summarises social accounting as: "(…) to cover all forms of "accounts" which go beyond the economic and for all the different (…) labels under which it appears – social responsibility accounting, social audits, corporate social reporting, employee and employment reporting, stakeholder dialogue reporting as well as environmental accounting and reporting." This should also go for ecological accounting.

Later, Gray, Adams and Owen (2014, p. 4) understand EA as well as social accounting as serving "a number of purposes but discharge of the organisation's accountability to its stakeholders must be clearly dominant of those reasons and the basis upon which the social [or environmental] account is judged." Brown (2017) claims this as a dialogic approach as EA shall be seen as a holistic instrument (Jones, 2010), being open towards a communication with all stakeholders and furthermore including companies' impacts on nature.

One possible way to engage into dialogue with stakeholders and to prove corporate responsibility towards nature as well as to account for (positive and negative) impacts on it is to report those actions (Gray *et al.*, 2014; Herzig and Kühn, 2017). Sustainability or

environmental reporting[4] are such forms of company representation (Deegan, 2017; Gray *et al.*, 2014). Whereas financial or annual reports are mandatory for companies within most countries, non-financial reports such as sustainability reports are in some countries still not obligatory or are only mandatory for companies with a certain number of employees (*cf.* European Commission (EC), 2018). However, besides governmental regulations regarding reporting, there are also global standards, such as the United Nations Global Compact (UNGC, 2021) or the Global Reporting Initiative (GRI, 2021), which are well-known and accepted guidelines for companies to report on environmental and social issues.

Meanwhile the academic debate about EA goes beyond profound discussions such as how to integrate the environment into accounting. According to Deegan (2017), social and environmental accounting research (SEA) encompasses diverse forms of reporting styles, practices of and alternatives to accounting, attitudes of accountants or critique (*see also* Kelsall, 2020). Owen (2008) regards those critical approaches towards EA, which include radical biocentric or feminist views as polemic research, calling for a radical change in the SEA and accounting in general. In addition, SEA concerns "discussions and evaluations of applicable research methods for undertaking research into various aspects of SEA" (*ibid*, p. 88), in which aspects of this PhD thesis are covered. Furthermore, the debate about EA regards *i.e.*, its superficiality and triviality (Gray and Milne, 2015), the quality of reporting (Deegan, 2017; Gray and Milne, 2015), counter accounting (Deegan, 2017; Gray and Gray, 2011) and the usefulness of global standards (Gray and Milne, 2013). Finally, the academic debate about EA concerns issues of legitimacy (Deegan, 2017; Deegan *et al.*, 2002; Deegan and Shelly, 2014; Gray *et al.*, 2014; Owen, 2008) and accountability (Deegan, 2017). The latter is of importance for this thesis in terms of using pictures of sustainability reports as accounts for a relationship with nature and thus acknowledging these pictures as a tool to prove accountability regarding environmental values towards all stakeholders (or at least to those who read the sustainability report) (*see* Chapter 2.3).

According to Boyce (2000, p. 28), the accounting profession is misused to "downplay ecological impacts". Indeed, there is plenty of academic research regarding the usefulness and practicality of instruments, models or methods of ecological accounting[5]: full cost accounting, material flow cost accounting, sustainable value added or life cycle assessments focussing on the environment are just a few examples on how to account for impacts on the environment. Within these practices, negative impacts (externalities) are monetarised, or so-called

---

4 In the following, I am going to use ecological accounting (EA) instead of environmental or sustainability accounting. However, accounting does not necessarily mean reporting, which is why I sometimes must use environmental and sustainability reporting instead of ecological accounting.

5 *See e.g.*, Bebbington and Gray, 2001; Bebbington, Brown and Frame, 2007a; Boyce, 2000; Burritt, 2004; Deegan, 2017; Jones, 2010; Lohmann, 2009; Patten, 2015; Russel, Milne and Dey, 2017.

environmental or social values are quantified. However, from a literature perspective, there is little to no involvement of environmental values such as responsibility, respect and care for nature (*cf.* Callicott, 2006; Cameron, 2011; Sterba, 1994) within ecological accounting (*cf.* Chapter 3). This fact might be due to missing models of how to calculate such vague values like respect and care. In addition, it is easier to account for incurred costs due to damages to nature instead of accounting of what humans rightly do in terms of caring for (and not against) it[6]. Nevertheless, and in line with Jones (2010, p. 124), employees are human beings, and as such they "(…) both form and shape the environment but are also capable of observing and recording both the environment and [their] impact upon it."

Ecological accounts are a way to prove efforts done in ecologically friendly issues and by this facilitate decision-making processes (Bebbington *et al.*, 2007a). Depending on a company's attitude towards the environment, an ecological account can furthermore show the extent of achievements and failures. In that case, the account is not only meant to be the state of the art (Birkin, 2003), but also an actual evidence for how far responsibility with regard to nature is granted. A moral meaning of how to perceive and acknowledge responsibility comes to play here (Boylan, 2014). The food sector cannot be excluded from this as it permanently interacts with resources of nature. One might even claim that the majority of the food sector does not interact responsibly with nature but exploits it without feeling responsible for it and by this challenging the global population increase and hunger problem (Godfray *et al.*, 2010). It needs more ecological driven managers to move towards a balance of economic, social and environmentally friendly produces of natural ingredients. Accountability can then be regarded as the evidence that responsibility is taken seriously and even proved through ecological accounts, so that every interested person can observe the company's actions and impacts (Birkin, 2003).

According to Russel *et al.* (2017) ecology is still hardly acknowledged in ecological accounting. In line with Gray (2019) I follow the idea of ecological accounting as a tool to warn concerning our present behaviour and to guide towards future possibilities of business-making and treatment of the natural environment. This thought will be picked up again in Chapter 8.8.

The food industry has a great interest in publishing non-financial reports in order to lower the negative impressions it is exposed to, and to persuade people in their environmental efforts made. The key word here is transparency, which is inherently connected to accountability. In fact, Dibell *et al.*'s (2015) research shows that the stronger the organisation's social consciousness, the more innovative and thus competitive advantageous companies are. To provide information within a sustainability report or any other form of non-financial publication

---

6 This concept is known as environmental abatement costs (*see e.g.*, Färe *et al.*, 2016; Millimet, 2003; Liu and Sumaila, 2010).

is such an act of proving its own social but also environmental consciousness. According to Jones (2010, p. 129) "[c]onventional accounting is not designed to and, consequently, does not capture human beings' impact upon the natural environment". The quantification mechanisms of conventional accounting as well as technical practices do not comply with unforeseen impacts on the environment (or society) (Jones, 2010; Maunders and Burritt, 1991).

Within EA there are approaches, which use values as base for ecological accounting (*see* Kelsall, 2020; Lanka, Kadharoo and Böhm, 2017; Milne, 1991). However, so-called ecological values are monetarised within those approaches. I claim that ecological accounting only functions on the base of proper ecological values. Therefore, companies need to reveal such values in order to be accountable for their ecological impacts. Those companies who claim themselves to be engaged in sustainability, social and environmental responsibility, or eco-friendliness, mostly publish reports in which they present their actions in favour for society and environment. Taken these reports into consideration means to use these reports as accounts. In the following, these ecological accounts will be investigated regarding their value orientation towards nature. As I have argued before, only due to revealed ecological values this orientation can be defined. My expectation is to find (hidden) values in the pictures of food companies' reports that exemplify value orientation towards nature.

2.2 Visual management studies and their relation to accounting

The visual management studies (VMS) are a rather new research stream compared to accounting. They encompass different disciplines, such as communication, reporting, accounting, organisational studies and management at large. Generally, the VMS describe a collection of research methods and academic discussions, which help to describe, interpret and use the visual depictions within managerial or organisational studies.

The very appellation of VMS goes back to the visual researchers Emma Bell and Jane Davison (2013), who together with organisational aesthetics researcher Samantha Warren (2005, 2008) contribute largely to as what regards the visual research in management studies. In their publication, Bell and Davison (2013) discuss how the visual research has finally began to inform organisational studies and which techniques follow from that trend. They find that together with the growing awareness of corporate reporting as a strong communication tool towards company stakeholders, also the VMS grow because visual items are more and more in use within company reports. Besides aesthetics within organisations, such as office designs or how employees view their organisations, also corporate reporting and images within reports became the main interest within the VMS (Warren, 2005). This fact has been researched as well as the fact that "[t]he viewer has a creative role in producing the meaning of a visual image"

(Davison 2010, p. 170), which brought about different techniques to better understand the visual in reporting and accounting and organisational studies at large.

The techniques of which the VMS researchers make use encompass a range of considerable methods from the social sciences: discourse analyses (*cf.* Rose, 2012) visual content analyses (*cf.* Rose, 2012; Philipps, 2012), scorecards (*cf.* Benschop and Meihuizen, 2002; Kuasirikun, 2011) or photo-interviews (Harper, 2002). Other methods, sometimes less easy to comprehend on, concern various interpretation methods for the visual: with the method of understanding the "individual or collective habitus" of a picture, Ralf Bohnsack (2008, p. 20) adopts the iconology understanding of Erwin Panofsky (1955), the iconic interpretation of Max Imdahl (1994) as well as the documentary method of Mannheim (Bohnsack, 2008). Others rely on Max Imdahl's (1994) combination of an analysis of both, text and the visual, such as in Stefan Müller-Doohm's (1997) structural hermeneutic interpretation (*cf.* Philipps, 2012).

Müller-Doohm's research concerns photographs from advertisements, which are interpreted as data influenced by the cultural system. According to Müller-Doohm (1990a, 1990b, 1993, 1997) the semantic of such photographs is a surface structure that needs to be interpreted through reconstruction (*cf.* Astheimer, 2008). By means of different "readings" (*Lesarten*) the understanding of photographs can be verified or corrected. They are firstly associations and secondly, they provide a context which helps us to comprehend on the interpretation process (Astheimer, 2008).

Imdahl's understanding of iconics and Panofsky's iconology are ways of interpreting art works. They both try to make sense of paintings through iconology and iconography. The iconic interpretation by Imdahl (1994) concerns the meaning of a picture ("Bildsinn") through understanding the specific meaning of it by means of composition, projection and choreography of the respective picture (Przyborski, 2018). The so-called iconology-iconography-model by Panofsky aims at reaching the correct understanding of a picture. This process consists of three steps, namely voriconographic, iconographic, and iconologic interpretation, which are regarded as layers of meaning (Przyborski, 2018). The first layer (voriconography) is about objects and facts known from personal experience, such as seeing people dining (instead of recognising "the last supper"). The second layer (iconography) concerns the contextual understanding, such as knowledge about history. The last layer (iconology) is about the nature of the picture, which includes the "synthetic intuition" or the gathering of documents to get all the relevant knowledge to interpret the pictures, such as emotions, eras or comparisons with other pictures at that time (Przyborski, 2018). Most researchers often rely on those methods, which originally were developed for researching narrative data, such as Mayring's summarising content analysis (2004), applied by Philipps (2012) or Michel Foucault's discourse analysis, adapted by Rose (2012).

One very important name in the visual research is Roland Barthes (*see e.g.*, 2000, 1982, 1977a, 1977b, 1977c, 1977d, 1977e, 1967), who is an example and basis for many works by *e.g.*, Jane Davison (*see e.g.*, 2015, 2014, 2011, 2009, 2008). Barthes' interest lies in the interpretation of photography and its semiotics in a cultural setting (Emmison *et al.,* 2000). He stands for a strict relation between the visual and the verbal: "in every society various techniques are developed intended to fix the floating chain of signifieds in such a way as to counter the terror of uncertain sign; the linguistic message is one of these techniques" (Barthes, 1977b). Barthes is furthermore known for his distinction of denotation and connotation and his dichotomy of studium and punctum. He developed a theory of photography and aesthetics. His influence on narratives was as big as on the visual, which can be seen in the way he described the binary opposition of language: "For Barthes, denotation is a primary level of literal meaning, whereas connotation is a secondary level involving suggestions, implications, inferences, associations and symbols. There is a range of analogical reproductions of reality – drawings, paintings, cinema, theatre – where it is easily grasped that straightforward denotation is accompanied by coded connotations" (Davison, 2011, p. 251). Barthes "gives primacy to the interpretative acts of the viewer over that of the creator, and it discerns two opposing impulses at work in photographs: the studium, or realm of rational codes, and the punctum, or personal and indefinable element" (Davison, 2011, p. 251).

In line with Barthes, Stuart Hall (1997,1973; Hall *et al.*, 1980) argues that photographs (with a focus on newspaper photographs) should be decoded in terms of denotation and connotation. This leads to "precise, literal, unambiguous" (Hall, 1973, p. 226) codes (denotation) and "open-ended" codes (connotation) (*ibid*) (Emmison, *et al.*, 2000). The expressive codes and the content on photographs, derived from connotation, need to be interpreted by means of "common-sense knowledge" (Emmison, *et al.*, 2000, p. 48). This process "(…) involve[s] knowledge about our society, the meaning of its symbols and the codes that govern face, body and posture." (*ibid*). This is in line with Panofsky's contextual knowledge. In addition, Hall (1991, pp. 1512-153) admits that while analysing photographs from earlier times it is "(…) impossible, to recapture the earlier meaning (…) as [they] are essentially multi-accentual in meaning." Only due to care and large samples, Hall ensures to understand the meaning behind the selected photographs (Emmison, *et al.*, 2000).

Very famous concerning the investigation of existing photographic material is Erving Goffman and his "Gender Advertisements" (1979). In his work, Goffman uses a quantitative content analysis – although not directly referred to as such – in order to cope with the 500 pictures of gender representations in advertisements. By using categories, he interprets the photographs and compares them according to the categories and further findings (Emmison *et al.,* 2000), which could be regarded as an abductive approach in the end, with influences of a qualitative interpretation process (*cf.* Chapter 7).

Most approaches in the VMS use the visual as data and as such have a legitimate claim on images in reports as objects of investigation because "(…) photograph or graph in an annual report [are] a source of information about the people and organizational communities that produce and consume them. From this perspective, the visual world becomes another "text" to be read giving clues about the cultures that produce it" (Warren 2005, p. 861).

Concerning the visual in accounting Samantha Warren remarks that accountability "[…] can be seen to be, by nature, about "making visible" so stakeholders can "see" for themselves the hidden operations of the corporation. Thus, for [her], accounting and accountability is inextricably bound up with processes of visualisation, the visual and ways of seeing." (Warren 2005, p. 862). In the following, I am going to combine Warren's view about the visual in accounting with my understanding of pictures as accounts.

2.3 Pictures as accounts

Within this thesis visual items are used as accounts for actions or rather as accounts for what they present.

Accounts can also be seen as justifications. Scott and Lyman (1968, p. 220) claim that: "[j]ustifications are accounts in which one accepts responsibility for the act in question, but denies the pejorative quality associated with it." The very term responsibility is essential here, since as soon as one accounts for an undertaking, one is held responsible or accountable for it. But not always embraces what we account for the whole range of effects of our actions. So, what is intended to prove with the account is *e.g.*, a justification, or it is an effect of interpretation by the reader or viewer (Scott and Lyman, 1986).

In conventional as well as ecological accounting, a lot of information is not only put into texts, but also into pictures. It is hence of interest to investigate how responsibility is laid upon ecological accounts, moreover, how it is expressed through depictions within ecological reports by the food sector. The relation of the food business and nature, which is used or even misused by food businesses is hereby the question of responsibility. The reports provided by food businesses will be interpreted in order to find the rationale behind environmental responsibility and to reveal the relation of food business and nature.

Using photographs from ecological accounts (in this case sustainability reports) means to use these photographs as given accounts for a company's actions or responsibilities. What is represented in the pictures can be taken as an account for all the actions shown in the respective picture. As such and at the very moment of analysing the picture, it is no marketing

tool[7] at all, it is a given representative of the company and can be treated as an item the company provides us to make sense of its actions. We can use that item to better understand a company (and this, indeed, is part of marketing), but furthermore we can use that item as a granted account – what we get in a report is what we see. In other words: "[w]e are the stories we tell" (Shearer, 2002, p. 545) or show. In the very sense of ecological accounting, pictures from sustainability reports show us what a company sees in and understands of sustainability. As a researcher I am in the position to deconstruct the pictures and question the accountability behind those pictures. The visual therefore plays a major role in my approach to ecological accounting.

Within *e.g.*, financial accounting, there are strict rules of how to produce an account in order to be comparable to other accounts or companies. In this case, a particular language is used which can be read by only those who are instructed in it (accountants). Outsiders who do not obtain the knowledge of reading financial or managerial accounts cannot fully conclude on what is going on within the company or they interpret the way culture (through norms or values) teaches them (Scott and Lyman, 1986). But accounts do not always require a certain language to be understandable. There are accounts which are more free to interpret (and perhaps less easy to recognise) such as visual depictions or personal experience. Accounts can tell stories and by this they are produces of narration, depiction, or experience (Gray *et al.*, 2014). It is these accounts which play a major role within this thesis, especially when it comes to examining the relation of food business and nature expressed through ecological reports of food businesses.

---

7 In the following, the term marketing will not be used anymore in order to prevent confusion between marketing and accountability. I am aware of the fine line between both realms, however, my research focuses on accountability and therefore does not need to deal with marketing as the latter concerns different issues and does not pursue the idea of understanding the meaning behind pictures in the sense of accountability and the VMS.

3 Theoretical Framework

The aim of this chapter is to provide an overview on the selected theories in relation to this PhD thesis. Therefore, it is not only important to understand these theories, namely aesthetic value and land ethics, but to also make a connection between those ethics and the empirical investigations. This is, to find differences in the depictions of companies in their sustainability reports and thus to find a difference in value orientation, indicators which define value orientation are needed. These indicators shall be derived from aesthetic values and land ethics. As the food sector relies on land and its resources and because of the sector's impacts on land use changes it seems useful to dig into theories from environmental ethics. A guiding thread for the following elaborations shall be the relationship of humans with nature.

3.1 An introduction to ethics in general

The following chapter aims to explain environmental ethics in relation to my research objective. However, the scope of ethics is broad and several terms origin in other forms of ethics. Therefore, the chapter begins with a general introduction to ethics, moral decision-making and rights-based ethics as well as virtue ethics. A literature review on environmental ethics, in particular on values with regard to nature, will frame the thesis on a theoretical basis. The body of literature is collected on the base of relations of environmental thinking and ethic arguing. The main body thus includes writings from authors who call themselves environmental philosophers, ecologists or environmental ethicists. There has been an increase of environmental discussions in the 1960s with a peak in the 1990s. This is one reason for also choosing seemingly "outdated" literature. However, this literature holds true for today's considerations as well. Whereas this chapter (Chapter 3) is based on writings published under the domain of environmental ethics, the related chapters regarding the nature – food business relations also include business ethics as well as critical accounting literature.

It must be noted that there is no intention to give full opinions regarding environmental ethics and values from each known author in their research domains. As the aim of this chapter is to give an overview of these fields and to path a way towards the relationship of humans and nature (and later food businesses and nature), there is no structured or weighted listing of authors and their opinions. Instead, references are made to many authors, but to those being specialists in land ethics and aesthetics in particular.

Before digging deeper into particular streams of ethics, an introduction to ethics in general and ethical thinking shall be provided. Ethics derive from normative judgements and can be divided into value judgments as well as moral jugdements (Kernohan, 2012). This contrasts to norms of reasoning and their division into logic and norms of justification. That is, on the one hand,

moral judgements and value judgements derive from our moral understanding of judging about a certain situation. This is when, for instance, an individual decides about right or wrong when a dog gets punished after biting a kid. Norms of reasoning, on the other hand, are based on our rational understanding of a situation, such as punishing a dog for biting a child is right because children are more worthy than animals. A moral judgement would not be rational and therefore rather decides upon the situation because the dog might have felt anxiety over the child's attacks with a stick (Kernohan, 2012). Figure 3.1 illustrates the differences between norms of reasoning and ethical judgments.
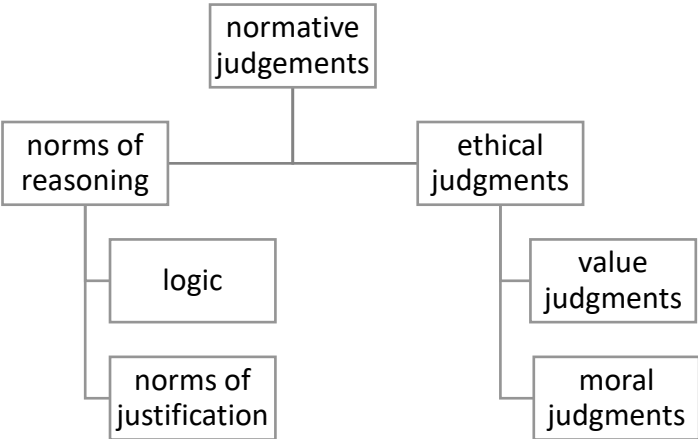
Figure 3.1: Normative judgements (adopted from Kernohan, 2012, p.6).

Normative judgements origin from one of the three branches of ethics. These are normative, descriptive and metaethics (*see* Figure 4.1; Schmidtz and Willott, 2002). Normative ethics are about exploring the right actions to take. So, instead of describing an action or belief (descriptive ethics)[8] or understanding the meaning of an action and its judgments about it (metaethics), one seeks to find the right way of acting. In normative ethics there is a constant search for a correct path, which includes arguments and persuasion of others, once the right path has been discovered. The final aim is to reach agreement among people to take action (Kernohan, 2012).

Ethical judgments are moral and value-oriented decisions, which Kernohan (2012) visualises as such (*see* Figure 3.2):

---

8 *See* more on ethics in Schmidtz and Willott, 2002.
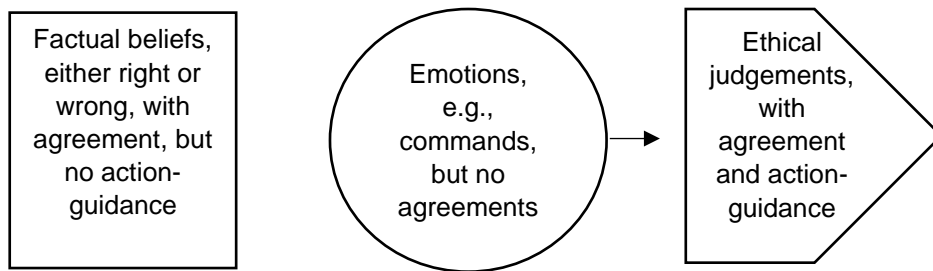
Figure 3.2: From beliefs, via emotions towards ethical judgements (adopted from Kernohan, 2012, p. 19).

If someone only believes in an action's power and its positive impacts, there is no agreement on it and no action gets into force. Only, when passion leads to ideas, announcements or even commands, a direction for action is paved (*see* the arrow in Figure 3.2). Yet, having someone commanding an action does not mean having an agreement about the rightness or wrongness of that action. It needs agreement in order to be action-guiding and to judge ethically correct or at least with acknowledged, common ethical judgements (Figure 3.2).

Deontology and Teleology

When acting according to the approach of *deontology* one follows rules, principles or duties. This moral guideline will lead to an action that is either right or wrong according to the principles. Taking the example with the dog, the animal would be punished since dogs must not bite people. So, it would be right to punish the dog. This is a rational decision, but also a moral judgment in accordance with deontological principles (Figure 3.3 and 3.4).

Another approach to follow moral decisions is consequentialism, also known as *teleology*. It is about understanding the consequences an action has. Instead of relying on rules and right or wrong it is the impact an action has which leads one to decide on how to proceed, the good or bad. In the case of the dog, it would be good to tell the kid to stop beating the dog with a stick to calm down the dog. The consequence of punishing the dog would be that it might become more afraid of children and thus become even more aggressive. Consequentialists are rational in their judgments and foresee the impacts their actions have (*see* Figures 3.3 and 3.4).

Figure 3.3 shows different approaches to ethics. In general, there are four factors that make up these approaches. Agent, action, consequence and recipient are the key factors of understanding the importance of a moral decision. Depending on the ethical approach the focus regarding the factors differs. The different ethical theories that frame these approaches (Figure 3.4) will be explained in the following.
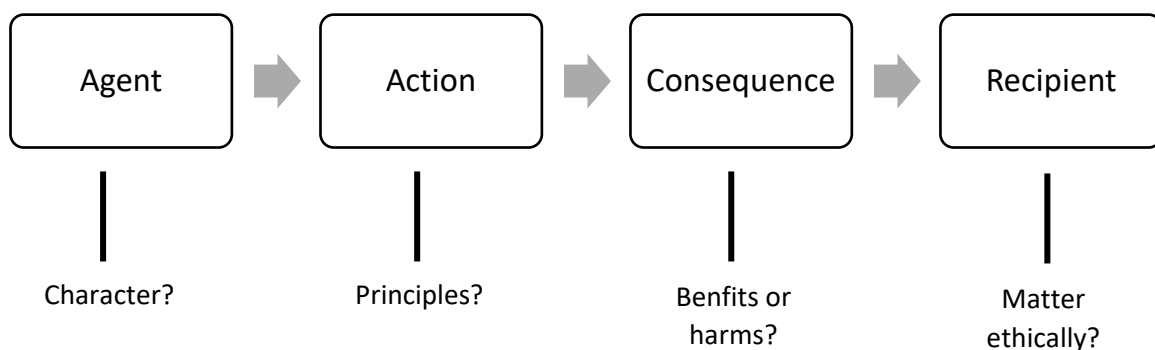
Figure 3.3: Approaches to ethics (adopted from Kernohan, 2012, p. 7).

Consequentialist approaches cover three main streams, namely ethical egoism, subjective and objective consequentialism. They further divide into hedonistic and preference satisfaction, utilitarianism (subjective) or common good, teleological and dispositional objective approaches (Kernohan, 2012). These divisions will not play a role in the following.
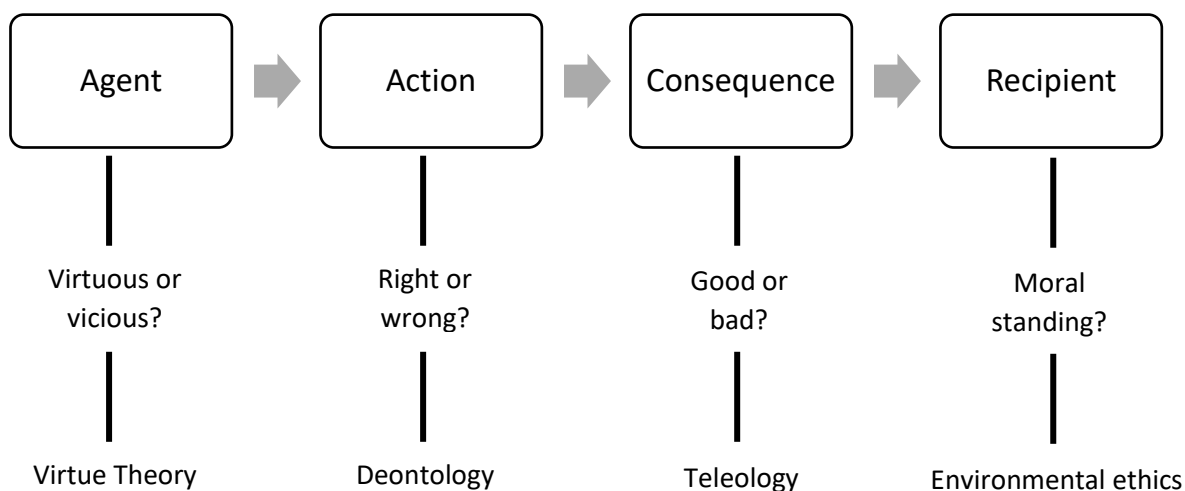
Figure 3.4: Ethical theories (adopted from Kernohan, 2012, p. 7).

One of the deontological approaches in ethics is the justice-based theory. Justice-based theories are about fairness in respect to all recipients by the agent. In order to treat every recipient just, they need to be considered as moral agents first. There should not be any unfair treatments, such as burdens to one entity, but benefits to another (Kernohan, 2012). The justice-based theory is based on a deontological approach since rules are followed which tell the agent to treat moral entities fair and just. Other deontological based theories are the divine-command theory or the rights-based theory. Whereas the latter theory concerns the moral rights of ethical considerable entities and obey orders the agent has to follow in respect to the

recipients, the divine-command theory is about God's orders and the agent's duty to follow God's commands (Kernohan, 2012).

Rights-Based Ethical Theory

Rights-based theory is based on the deontological assumption that some actions have to be undertaken regardless of their consequences. Rights have to be respected and followed, otherwise an action has been immorally prosecuted (Kernohan, 2012). Kernohan (2012, p. 84) emphasises that the rights-based approach is "(…) deontological because one person's moral right implies another person's moral duty", whereas "(…) the duties of a moral agent are to respect the moral rights of all morally considerable recipients" (Kernohan, 2012, p. 85). Examples for such rights and duties are property rights and animal rights (*see e.g.*, Ehrenfeld, 1972; Singer, 1974). Rights are linked to duties in as much as who owes someone a favour has the duty to fulfil that favour. In return, the other person has the right to receive that favour (Kernohan, 2012). Gewirth (2002) differentiates further between positive and negative rights. According to him positive rights "(…) entail duties to help the right-holders to have the objects of her rights (…)" (*ibid*, p. 119). Negative rights are those which "(…) entail duties to refrain from interfering with the right-holder's having the objects of his rights (…)" (*ibid*). Gewirth's reason for this differentiation is that he sees humans as universalistically mutual. This is, humans obtain rights against each other. Mutual sharing of benefits is possible as well the sharing of duties, which Gewirth calls *burdens*. This kind of interest conflict, he also sees in environmental ethics. He names two generations, which are (1) humanists and (2) naturalists. The latter generation understands that nature has a value in itself, whereas the first generation, humanists, emphasises the interest of humans in nature for own purposes (Gewirth, 2002).

Virtue Ethics

These ethics primarily ask for the moral agent as the first instance before action, consequences and the recipient will be considered (Kernohan, 2012). Within virtue ethics, the focus is on the agent and it is his character that decides upon the impacts of an action for the recipient (see Figure 3.3). The agent is either virtuos or vicious. Without consideration of right or wrong of an action, the agent's position definitely leads to an action with consequences for the recipient. It is his virtues which will lead him to undertake an action being either harmful or benefitting (see Figure 3.3; Kernohan, 2012). Already Aristotle claimed two kinds of virtues, namely moral virtues and intellectual virtues. The latter derives from one's intellectual understanding of how to act morally right or good. Moral virtues, however, include traits such as self-control, courage or compassion. In order to set the right moral virtue, one needs to find the "(…) mean between two extremes" (Teays, 2014, p. 81). The moral agent in virtue ethics is a good person and

hence possesses a good character. This character constitutes of a flourishing behaviour. To be such a flourishing and happy person, one needs to have virtues (Kernohan, 2012).

3.2 Environmental ethics

Within environmental ethics the focus is not on the agent but on the recipient. Such a recipient could be an ecosystem. If people decide on land use changes, in these ethics they also have to consider the impacts for the ecosystem. Nature conservationists often deal with these morals and have to convince opponents that ecosystems matter ethically (*see* Figure 3.4). The big question in ethics in general, and most relevant in environmental ethics is which entity has a moral standing and is thus morally considerable (Kernohan, 2012). "An entity has moral standing if we must consider it or its interests for its own sake when we are making an ethical judgment. We call an entity morally considerable if the entity has moral standing" (Kernohan, 2012, p. 8). In this regard virtues, duties and consequences play a role. If, and only if, we consider an entity for its own sake then we act in the name of the entity, *e.g.*, a species. However, there are many entities to be considered, starting with oneself. The philosophical attitude for simply having the own self-interest in mind is called *self-egocentrism*. The less self-interest in ethical concerns one has, the more entities will be included into moral considerations. Kernohan (2012) speaks of different circles which encompass the entities (Figure 3.5).
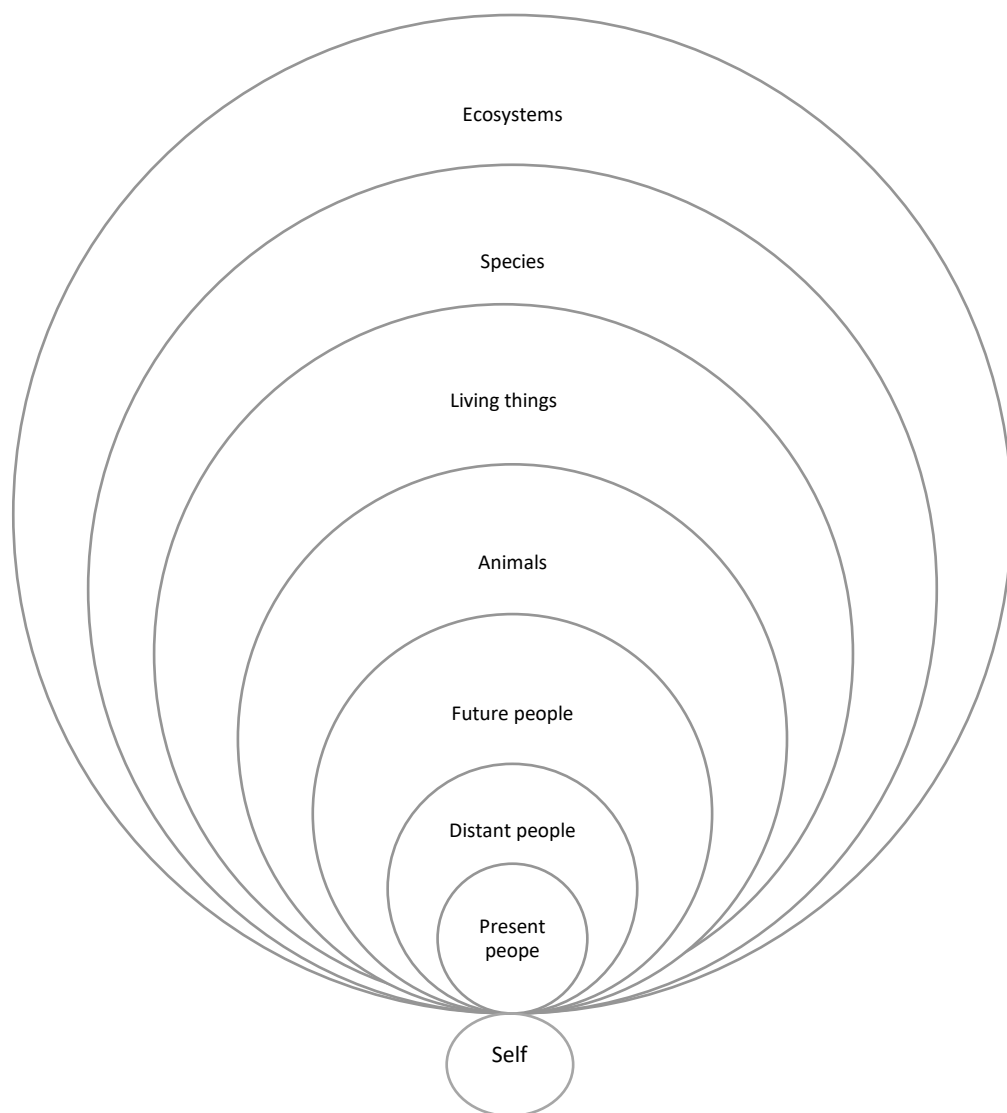
Figure 3.5: Circles of ethical concern (adopted from Kernohan, 2012, p. 9).

The circles start with the "Self" and move on to "Present", "Distant" and "Future people", which can be included in one's decisions. After them "Animals", "Living things" and "Species" will be considered. Finally, "Ecosystems" are included in someone's understanding of affected entities by certain activities. An example of who considers ecosystems and acts without any self-interest is brought by Kernohan (2012, p. 8): someone drains wetland because she thinks it is beautiful to watch the flowers blossom and to observe the birds and insects fly around. Does she conserve land for its own sake? No, she does not. She has a self-interest in the beauty of the ecosystem, but not in the functioning of it. If she were draining the wetland due to the eco-systems conversation and functioning, then she had acted beyond her self-interest and only for the ecosystem's own sake. The moral standing of the ecosystem would mean to include it in decisions and thus conserve it.

When making decisions and including one-self or people in considerations about consequences, this view is *anthropocentric*. The human-centred view allows humans to have the highest moral standing. The opposite of this view is *non-anthropocentric*. Here, every other entity is also included in moral decisions so that animals or even ecosystems become morally considerable. Further differentiations are ecocentric, biocentric and zoocentric views which are specific moral attitudes towards certain entities, namely ecosystems, living things and animals. When ecosystems and species are included in moral considerations, then the view is furthermore holistic, instead of individualistic (Figure 3.6; Kernohan, 2012; for more *see below*).
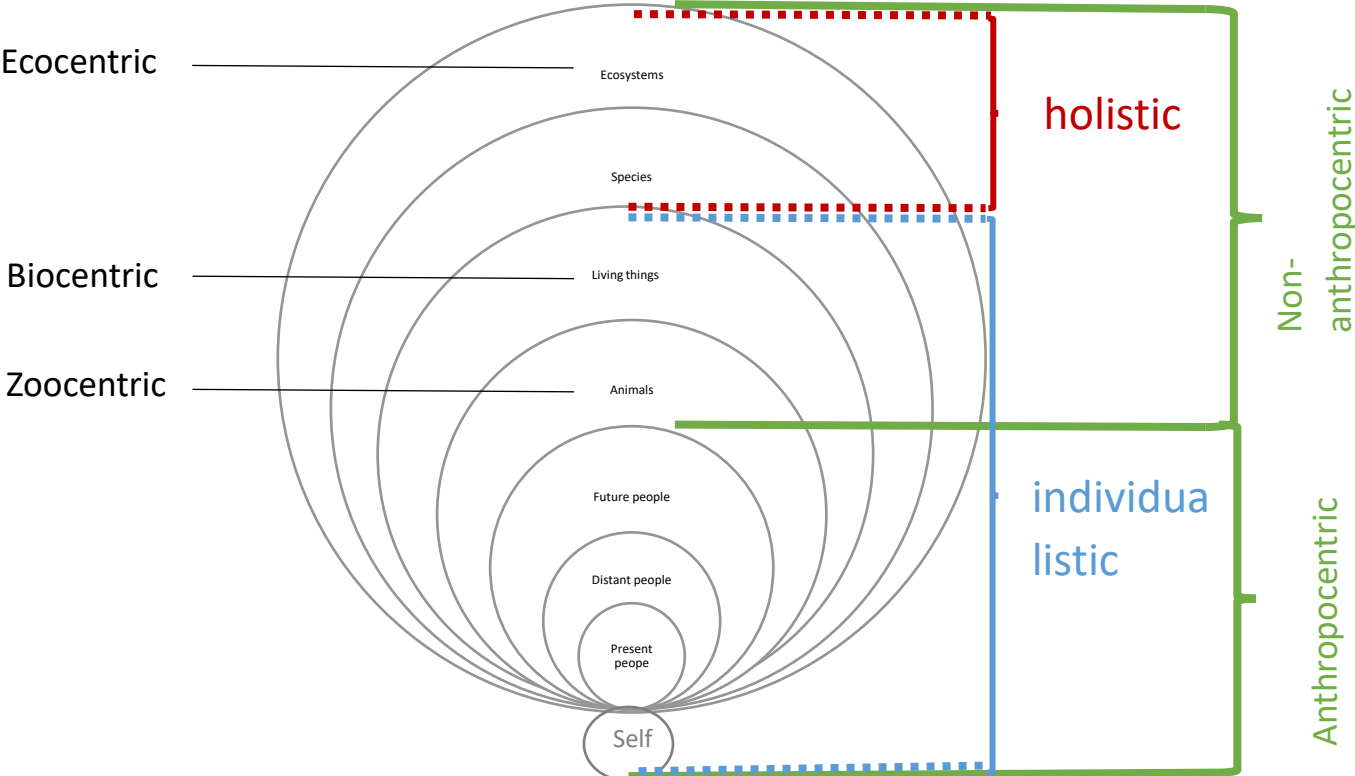
Figure 3.6: Ethical views on moral entities (acc. to Kernohan, 2012).

Environmental ethics encompass many disciplines and cross-disciplines. Among them are philosophy, ecology, psychology and arts.

Here, the focus shall be on land ethics and aesthetics as particular viewpoints on how to value nature. To give a full picture on these views, an overview of the different attitudes towards nature will be given. It follows a description of values towards nature from an ethical standpoint. These values have their origin in the explained attitudes and different representatives will be mentioned. The values play a major role in deriving food businesses' value orientation and in the later applied methods. It is therefore necessary that the author of this thesis positions

herself into one of the ethical attitudes towards nature, namely anthropocentric or non-anthropocentric. This positioning will follow at the end of the chapter and will be picked up again in the following chapters.

Ethical Attitudes Towards Nature[9]

There are several views one can have on nature and humans' relationship with nature. Since the valuing of nature depends on how one sees nature in general, the following paragraphs serve to provide an overview on the different attitudes, which exist towards nature in environmental ethics. Attitudes are rather prescriptive and situational (Grube *et al.*, 1994), they can either contradict each other or can be combined, depending on a person's view on nature and its ethics. It is thought that attitudes derive from values (Grube *et al.*, 1994), whereas attitudes lead to a certain behaviour and "(…) measure the degree to which a person is for, or against, performing the behaviour" (Maybery *et al.*, 2005, p. 62; Ajzen and Fishbein, 1980; Chaiken and Stangor, 1987). The following paragraphs thus describe attitudes towards nature.

Anthropocentric attitude

During the Enlightenment, man was to be seen at the centre of the universe or at least "(…) at the absolute, objective centre of everything" (Midgley, 1994, p. 104). Philosophers such as Kant, Marx and Freud saw nature as an object to be handled by man's will (Midgley, 1994). Along with technological change, humans drifted even more away more from nature and sensed it as external force, over which they can reign. The pleasure about great technological achievements made man feel powerful (Midgley, 1994). Until today, this view has not changed in many minds.

The core of anthropocentrism used to be teleologic assumptions in that man is the centre of nature and the ultimate end of a hierarchy. All life is deemed to be cosmic power. Due to scientific progress this view also changed since science proved many assumptions on man's role in universe different. The power of humans through research and technology let nature become an object of investigation (Midgley, 1994). Midgley (1994, p. 111) suggests, that also nowadays anthropocentrism could also be called "exclusive humanism" or "human chauvinism" or even "narrowness of sympathy".

Concerning nature, the anthropocentric view is about the conservation of nature for ourselves (Davison, 2013). This is, we do value nature, but for reasons which *e.g.*, please our senses about a landscape's beauty. Anthropocentric views about nature will

---

9 This chapters aims to provide a wide range of ethical attitudes towards nature. This list is not intended to be exhaustive. Rather, it seeks to give an overview of the most relevant concepts, terms and views in environmental ethics literature.

always include nature in moral considerations, but only in the name of humans' pleasure. Hence, moral considerations particularly address human entities and their moral utility and nature's utility for the humans (Figure 3.6). Generally, anthropocentric values "(…) are motivated and justified by appealing to human interests and concerns" (Cox, 1997, p. 175). Aesthetic reasons lead to the conservation of nature, but not the species themselves. In anthropocentrism, species and other non-human living creatures do not have a moral standing and thus will only become considered in human decisions when humans see their own living standard as endangered (Kernohan, 2012). Concluding on this, Boylan (2014, p. 115) states that "[t]he anthropocentric argument bases moral value on nature's utility to humans. It sees nature as an entity or a toll (albeit an important one) that humans utilise for their advantage and welfare." Contrasting with non-anthropocentrism (*see below*), Schmidtz and Willott (2002, p. xix) put it: "Instead, anthropocentrism is a theory about which objects have moral standing. In particular, it is the theory that nonhumans do not belong in that category." Representatives of environmental ethicists with an anthropocentric view are Daily (1999) and Fisher *et al.* (2008).

Non-anthropocentric and biocentric attitude

As opponent to anthropocentrism, this view is about the conservation of nature due to moral duties but for nature's own good. Human pleasure does not serve as reason for nature conservation, but the understanding of animals, species or ecosystems as natural livings or systems that have to be valued for their own sake (Kernohan, 2012). Cox (1997, p. 175) states that these biocentric values "(…) are motivated and justified by appeal to the interests of the biotic community". Although this attitude is non-anthropocentric, it shall not be confused with a holistic view on the natural environment. Biocentric values are those that inhere in natural objects, such as living beings except animals (*see* Figure 3.6). It is therefore necessary to clarify whether there is a clear all-encompassing approach towards nature or a rather simple inclusion of living beings without any recognition of ecosystems. Representatives of the latter are *e.g.*, McCaughly (2006) and Soulé (1985).

Important to note is the systematic view of non-anthropocentrists. Those who favour a biocentric view in the context of holism (see below) do not advocate for individuals. Aldo Leopold (1966) or Holmes Rolston (1988) both stand for the preservation of species and ecosystems and thus whole systems such as the environment. The two representatives of biocentric holism see the environment as a system of inter- and intraconnected species and eco-systems which are more worthy to protect than individual entities within that system (Schmidtz and Willott, 2002).

Holistic attitude

As above mentioned, a view on nature is holistic when not only humans and animals, but also species and ecosystems are included within considerations (*see* Figure 3.6). Nature is rather understood as a system of inter– and intralinkages, which need to be conserved. A holistic view in environmental ethics is thus always non-anthropocentric (Kernohan, 2012).

Non-holistic attitude

Non-holistic, also known as individualistic attitudes, tend to see moral entities as separate units without interlinkages to other entities. This does not mean, that a non-holistic view only looks at one entity at a time. It is a narrow view of nature and its entities, which do exist dependent on each other but are not viewed as "one" nature, but individualist circles of consideration without the circles of "Species" or "Ecosystem" (*see* Figure 3.6). Something that clearly differentiates the non-holistic view from the holistic one is that only living things and those alive entities that are considered as sentient can be considered. This excludes all species that are undefined in their feelings. Both, anthropocentrists and non-anthropocentrists can obtain the non-holistic view (Kernohan, 2012).

Deontological attitude

For deontologists "[w]hat has moral status is not allowed to be harmed for the greater good to others." (Davidson, 2013, p. 172). This claim includes a principle that *e.g.*, enforces one to only consider a certain moral entity but not the others. Following this principle, the moral standing that a moral entity has leads to the prohibition to consider any other entity. The deontologic views hence follow a rule, even though it could mean to decide upon other entities. But by following that rule, deontologists do the right thing. Callicott (1980) and Leopold (1949) represent the deontological view.

Teleological attitude

The teleologic or consequentialist attitude (*see e.g.*, Taylor, 1986) refers to the consequences an action can have for the recipient. Hence, a holistic consequentialist includes an ecosystem in his decisions and acts according to benefits or harms an activity can have for the ecosystem.

Moral obligations and duties

Boylan (2014) speaks of "duties to future generations" (p. 115) when referring to anthropocentric justification towards nature. Considering future people in one's moral

obligations is as difficult as complying to obligations of distant people (Kernohan, 2012). Therefore, it very much matters to whom and what we have obligations and whether we have a duty to them to fulfil or not.

Generally, distinctions are made between indirect and direct duties. An indirect duty can only exist toward a non-human entity. That means, agent A has a duty towards an entity, that agent B possesses (Kernohan, 2012). This could be walking B's dog. It is not a direct duty towards the dog because B owns the dog. Furthermore, A owes the duty to B, although the key entity is the dog. A direct duty would be if agent A owns the dog and thus has the direct duty to walk the own dog. Again, the direct duty exists towards a non-human entity, not a human. Rolston (1991) says about environmental ethics, that these are non-anthropocentric and that they have "(…) to evaluate nature, both wild nature and the nature that mixes with culture, and to judge duty thereby" (1991, p. 135).

For deontologists, such as land aesthetics' representative Holmes Rolston (1988) the example would be related to nature and that following the duty to conserve the beauty of nature means to directly serve nature. The rule at the same time means to exclude humans such as future generations in these considerations.

Consequentialists would also look at the recipient, in this case nature. Preserving its beauty would then be done in the name of nature, if, and only if, nature benefits from the activities.

Moral obligations and duties go along with intrinsic and instrumental value, which will be discussed below.

Justifications

Justifications are crucial in ethical reasoning. There is no value, attitude or philosophical argument without a clear justification of how and why to undertake actions that concern the, here, natural environment. In his writings about "Anthropocentric versus Biocentric Justifications", Boylan (2014a) differentiates between three types of justifications, namely anthropocentric, biocentric and "middle" justifications. Regarding the first type he mentions the duty to future generations and their livelihood. O'Neill (1997) in this regard states "(…) all types of moral reasoning are anthropocentric because moral demands are made on agents" (in: Boylan, 2014a, p. 116). Boylan (2014a, p. 116) contrasts this view with the view of a deep ecologist: "(…) environment possesses a locus of real value" and by this clarifies that anthropocentric justifications are strictly applied to humans and that these have greatest value and dominate over nature.

The second type of justifications is about biocentric justifications. The proponents of this type demand to value species and ecosystems intrinsically "(…) because they carry a strength" (Boylan, 2014a, p. 116).

The last type of justifications is "searching the middle", which basically calls for a moderate understanding of justifications between anthropocentric and biocentric views. This type does not explicitly include one or none moral entity, but tends to be more anthropocentric then biocentric as it follows the principle of human preservation (Boylan, 2014a).

Philosophical views towards Nature

This part concerns those theories and views which directly address nature from a philosophical perspective. Whereas the previous attitudes derive from environmental ethics and environmental values, the following paragraphs represent environmental theories or philosophies. Signifying for one of these theories means to exclude the other theories. Regarding the previously mentioned attitudes it has been possible to consolidate more than one attitude in one's personal view. Here, there is no combination of theories in someone's attitude toward nature possible because each theory describes a position with its own views on nature and with explicit values to which one can live up.

Deep ecology

Inspired by Naess (1983), Sessions (1984) and Regan (1981), the deep ecological movement demands the duty to care for nature, but also to care about undertaking necessary steps to prevent life in disorder (Naess, 1997). "Ecological knowledge and the lifestyle of the ecological fieldworker have *suggested, inspired, and fortified* the perspectives of the Deep Ecology Movement." (Naess, 1983, p. 45). The deep ecology's tenet is normative (Naess, 1983). The holistic approach furthermore demands clear non-anthropocentric attitudes, which deny any moral disregard of entities, with a focus on all non-human entities. Deep ecologists tend to see humans and the non-human environment as a whole so that "(…) their relationship will become more harmonious" (Kernohan, 2012, p. 203). Most readers of Aldo Leopold's (1949) land ethics will classify his writings as deep ecology or radical environmentalism[10].

---

10 Budolfson (2014) however, argues that it depends on the interpretation of his words whether he should be regarded as deep ecologist or maybe also as an "enlightened anthropocentrist". Budolfson bases his argument on the following sentence of Leopold (1949): "Land use is correct when it properly balances economic, ethical, and aesthetic values." (in: Budolsfon, 2014, p. 445).

Shallow ecology

The shallow ecology differs from deep ecology in many parts, but particularly it is the objective that "(…) health and affluence of people in the developed countries" (Naess, 1983, p. 42) shall be enhanced. What links this view to ecology is the overall goal of combating resource depletion and pollution. All activities of shallow ecologists are guided by this overall aim. However, it is an anthropocentric view and gives much emphasis on peoples' well-being (Naess, 1983; John Pass-more [*see* Sterba, 1994]).

Biocentrism

As previously mentioned, biocentrism attributes all living beings a moral standing. Two well-known biocentrists are Gary Varner (2012) and Paul Taylor (1986). Both claim that living beings have to be considered in moral decisions and that living beings have to some extent a moral standing as well. However, the two biocentrists differ in their understandings of what moral standings of living beings actually mean. Taylor ("respect for nature") stands for a species egalitarianism, which is the opinion that simply being alive is enough reason to have moral standing. In contrast, Varner claims that all living beings command at least some respect, but not to equal shares. He thus obtains an individualist view (Kernohan, 2012; Schmidtz and Willott, 2002).

Ecocentrism

This philosophy extends the biocentric view and includes species and ecosystems (*see* Figure 3.6). The holistic approach allows for a view on ecology in as much as whole systems are valued and not seen as separate entities. Through that systemic view the natural environmental becomes valued as such and is not divided into biological parts. Kernohan (2012, p. 179) notes that in an ecocentrist view, "(l)ocal ecosystems, or the whole planetary ecosystem, must be more than the sum of their parts in order to support the idea of basing an ethic on their moral standing".

Social ecology

Social ecology is mainly advocated by Murray Bookchin (1988), who contrasts this view with deep ecology. Being highly critical regarding deep ecology, Bookchin gives indications for why social ecology is a more useful theory to apply to ecology. His main argument is about social involvement of humans at all times. So, even when considering nature, it is a social behaviour of people and therefore always in favour of humans or at least from a human standpoint. Bookchin (1988) gives an example which is about humanity's biggest enemies: AIDS. Deep ecologists stand for the conservation of *all* living beings, species and ecosystems. That means, also viruses which threaten

the human species have to be conserved, as humans are only part of the natural system, but not worthier protecting. Bookchin (1998, p. 132) therefore poses the following question: "One wonders what to do about the AIDS virus if a vaccine or therapy should threaten its "survival"? All in all, Bookchin (1988, 2014) calls for a social ecological thinking which accepts the evolution of human beings and their need for food and technological evolvement. He furthermore calls for "[u]nity in diversity (…) [because it] is not only the determinant of an ecosystem's stability; it is the source of an ecosystem's fecundity, of its innovativeness, of its evolutionary potential to create newer, still more complex life-forms and biotic interrelationships (…)" (Bookchin, 2014, p. 51). This goes along without "supernatureing" it and at the same time "enchanting" the human mind and spirit (Bookchin, 1988, p. 136).

Eco-feminism

Women approach the environment differently than men (Cooper, 1992). For centuries it was in women's responsibility to care for children, elderly and for food and plants. Caring for them is normal or even natural. Applying those ethics of care to environmental ethics seems logic since "[a]n environmental ethic of care emphasizes the attachments people make to animals and the land" (Kernohan, 2012, p. 192). Merchant (1990) argues that women value nature differently than men through their actions they undertake to preserve it. This is in line with Warren (1990, p. 68), who explains that "[b]y making visible the interconnections among the dominations of women and nature, ecofeminism shows that both are feminist issues and that explicit acknowledgement of both is vital to any responsible environmental ethic." All in all, what differs eco-feminism from other duty-based or goal-based approaches is the emphasis of relationships between humans and nature (Teays, 2014).

3.3 Further concepts of values towards nature

In his field research on land ethics among indigenous people in Malaysia, Choy (2014, p. 434) found that it is the "(…) cultural and ethical orientation toward nature that has enabled the indigenous communities to protect the ecological integrity of their forest landscapes (…)". The ethical posture of these people leads to a value orientation of nature that is intrinsically and inherently granted. The holistic view on nature has been passed on from one generation to another and allows for balanced resource use in the regions of the local communities (Choy, 2014).

The findings by Choy (2014) show that a holistic and balanced relation between humans and nature is granted through the values a society links to nature. These values are derived through the moral attitude of humans. Values then establish through the ethical reasoning and the actual behavior. According to Starik and Kanashiro (2013, p. 20 in acc. with Joyner and Paine, 2002) values are generally "(…) deeply held beliefs, assumptions, and desires that are often the bases for voluntary (as opposed to involuntary) human actions".

According to Schwartz (1992, p. 21), value is defined as "(…) a desirable transsituational goal varying in importance which serves as a guiding principle in the life of a person or other social entity." I extend this definition by adding that also non-social entities, such as animals or living beings could be guided by values. I admit, however, that this is difficult to prove. Thus, I reject Allport's (1963, p. 454) definition which states that "[a] value is a belief upon which a man acts by preference." De Groot and Steg (2008, p. 331) further explain that "[v]alues serve as a guiding principle for selection or evaluating behavior, people or events […] ordered in a system of value priorities." This matters in terms of food businesses which are guided through principles. The more they value the environment, the higher is the priority on the environment.

The following values towards nature are derived from environmental ethics literature. "Determining attitudes and values is important as they determine how we interpret and react to various situations and more importantly provide insight into the determinants of our behaviour" (Maybery et al., 2005, p. 62; Baron and Byrne, 1984). Therefore, theories and attitudes of representatives of environmental ethics and ecology are added in order to give a wide range of concepts and values.

Ecosystem services

Ecosystem services are "(…) the benefits of nature to households, communities, and economies" (Boyd and Banzhaf, 2007, p. 616, see also Constanza, 2006; Constanza *et al.*, 1997; Fisher *et al.*, 2008). Ecosystem services are a concept which inheres social direct and indirect values through ecosystems. In fact, this approach is purely anthropocentric as ecosystem accounts are done by humans, from a human perspective and moreover, *for* humans (Gee and Burkhard, 2010). For instance, benefits such as harvests through pollinations and biodiversity fostering or drinking water provision through aquifers are measurable (Boyd and Banzhaf, 2007). Nature, thus, inheres values which are partly beneficial to humans, and often essential for human survival (Davidson, 2013). Some of those values are also considered as cultural services (*e.g.*, recreation, education; *see* Chan *et al.*, 2012) and non-use values (*e.g.*, philanthropic values or altruism; *see* TEEB, 2018 and 2010; Constanza, 2006). Another concept which addresses ecosystems and biodiversity is the concept of "Total Economic Value" (*see* Chan *et al.*, 2012; Dasgupta, 2021; MEA, 2005;

Pascual *et al.*, 2010; TEEB, 2018). It not only includes several values regarding nature, but also provides a concept for assessing ecological values for national accounting systems (Dasgupta, 2021).

Ecosystem services are a concept since the 1980s which aims to integrate ecological values into internal and external management accounting systems (Abson *et al.*, 2014; Boyd and Banzhan, 2007).

In the following there will be no focus on ecosystem services as such. However, it is important to note that literature on ecosystem services highlights all the values which these services bring along (*see e.g.*, Chan *et al.*, 2012; Davidson, 2013). Below most of them will be explained as they matter in the course of this thesis.

Nature's instrumental value

"Something is instrumentally valuable because it ultimately brings about something that is intrinsically valuable or valuable for its own sake" (Kernohan, 2012, p. 12). Kernohan gives a simple example for his explanation: A 100$ bill is not valuable for its own sake (hence, it does not have intrinsic value) as long as it is regarded as a small, dirty paper. But when buying something with that money that gives us pleasure, then the dollar note has got intrinsic value. As a paper as such it has (if at all) instrumental value. Thus, objects possess instrumental value when they are valuable to "some other end" (Callicott, 2006, p. 36).

As long as objects have instrumental values, they are good. That is a typical anthropocentric perspective. It holds true for those who believe that nature is worthy to conserve because it helps us to keep being healthy and to enjoy the aesthetic appearance of wild flowers and bees. This also means that nature turned into an intrinsic value. Since anthropocentrists do not believe in intrinsic values of nature, they only see the instrumental value of nature or any other kind of object (Benson, 2008; Callicott, 2006; Kernohan, 2012).

Anthropocentrists do care for nature, however, only to the extent it affects themselves. If humans gain benefits from nature conservation, they will continue caring. But as soon as any actions interfere human's livelihood, anthropocentrists will consider actions that harm nature in the name on humans' well-being. Joy and a healthy lifestyle through nature are regarded as instrumental values. Intrinsic values like beauty or serenity are not considered or only as long as humans have a definite benefit from it (Kernohan, 2012). Hence, when the construction of beehives in front of a spring hinders people from collecting spring water, even though bee extinction would be mitigated, then

people have the instrumental value of the spring in mind, not the intrinsic value of bee hives.

Related to instrumental values are utilitarian values (Cox, 1997). An example of utilitarian value is human well-being. Well-being is a definite end and has utility values which demand an anthropocentric view in order to be discovered. The utility of objects is an anthropocentric concept.

Nature's existence value

There are varying definitions in literature regarding the concept of existence value. Generally, the concept is about the mere existence of *e.g.*, nature. For some this means satisfaction from the simple thought of nature's existence (Krutilla, 1976). This satisfaction can be further aroused through altruism towards biodiversity (Pascual *et al.*, 2010; Turner, 1999; Turner *et al.*, 2003) or through considerations of future generations and nature (Davidson, 2013; Randall, 1986). Since the mere existence of nature cannot be measured as such, people's willingness to pay is conceived as a measurement for the existence value (Davidson, 2013). Consequently, there are debates which concern the fact whether the existence or the knowledge about nature's existence matter in terms of valuing it (Davidson, 2013; Milgrom, 1993; Randall and Stoll, 1983).

Nature's intrinsic value

The debate about nature's intrinsic value is long and many philosophers, ethicists or ecologists have argued for or against this value[11]. It generally constitutes of our ability to value things: "(…) with respect to some of the things we value intrinsically, such as animals and plants, our valuing them depends simply in our ability to discover the value that they actually have based on their qualities, whereas for other things that we value intrinsically, such as our aesthetic experiences and the objects that provided us with those experiences, the value that these things have depends significantly on the way we are constituted." (Sterba, 1994, p. 171). Talking about anthropocentric views here, Sterba (1994) refers to ways of valuing which do not allow for questioning the intrinsic value natural goods have: "Even if it could be established that human beings have greater intrinsic value, we would still have to recognize that nonhuman nature has intrinsic value as well" (Sterba, 1994, p. 170). Sterba further states that in line with Paul Taylor, Eugene Hargrove "(…) assumes that to intrinsically value a creature is to

---

11 *See e.g.*, Bowles, 2008; Dewey and Tufts, 1932; Goodpaster, 1978; Kosoy and Corbora, 2010; McCaughly, 2006; Rolston, 1991; Rønnow-Rasmussen and Zimmermann, 2005; Taylor, 1986; 2005; Thompson, 1990; Zimmermann, 2010.

recognize a negative duty not to destroy or harm that creature and a positive duty to protect it from being destroyed or harmed by others." (Sterba, 1994, p. 172).

Referring to above's paragraph on instrumental values, the difference is that objects possessing intrinsic values are valuable to its own end (Callicott, 2006). Again, there is the gap between anthropocentrists who prefer instrumental values for living beings (except themselves), and non-anthropocentrists who strongly insist on nature's intrinsic value as such. Cox (1997) argues that objects may always possess intrinsic values, no matter if known or not and while not depending on the existence of instrumental values. An object has "value in and of itself", Cox (1997, p. 147) claims. In return, an object with instrumental value might exist without having intrinsic value. Cox (1997) furthermore suggests, that it is always humans *deciding* on values, not discovering them which is the reason why also intrinsic values to him are anthropocentric. Now, Rolston (1988) would not agree with this view on intrinsic values of objects. He rather suggests that humans do not decide on intrinsic values at all since intrinsic values exist independently from their recognition by humans.

Another kind of intrinsic value is kinship value. Sentiments and ties towards ancestors and their land bring forward motives for indigenous people to care for the land. This behaviour is based on intrinsic, and moreover kinship values. Especially local indigenous people follow ethical codes which stipulate certain environmental behaviour. Codes and behaviour are intrinsic motives of respect for the at the same time present, past and future generations. Kinship helps to remind local communities to live based on these values (Choy, 2014).

Nature's extrinsic value

Holmes Rolston (1991) states that "[v]alue can only be extrinsic to nature, never intrinsic to it" (1991, p. 149). The reason for this statement is his belief, that value always relates to the "valuing subject's creativity" and the world in which value becomes created. A "(…) person meets a valueless world, or even a valuable one – one able to be valued but one that before the human bridging of valuableness contains only possibilities and not any actual value." (Rolston, 1991, p. 149). Rolston (1994), in line with Protagoras further states that it is humans who value and measure. Even though, a value exists on an object, it is humans who give it its extrinsic value.

In comparison with intrinsic value, there is an *ex post* indication of the value, expressed by humans (Rolston, 1994). In his writings, Rolston (1994) continues with the valuing by animals, who, in his opinion, do value other living beings. They express this through

caring for each other. It is thus questionable whether only humans can express extrinsic value, or whether also animals are able to do so.

Roger Crisp (1994) mentions welfarism as environmental value and suggests utilitarianism as its most common example: "According to its adherents, what makes a world valuable is the welfare accruing to the beings that inhabit it and nothing else" (Crisp, 1994, p. 81). Although Crisp addresses nature's intrinsic beauty with his account, welfare and utilitarianism should be regarded as extrinsic values to nature. The reason for this lies in the subjective view of humans who in the end decide about a value's (or here: a landscape's beauty) utility of welfare.

Nature's inherent value

Choy (2014) argues that the aesthetic beauty of nature is an intrinsic value (in comparison to instrumental values). His argument, however, reveals that those qualities which are perceived by humans without direct use (non-use values or noneconomic values), are actually *inherent* and thus "(…) independent of (…) economic and instrumental values to humans" (Choy, 2014, p. 433).

Most environmental philosophers use the term *intrinsic* to indicate the value of objects on their own. However, some (Callicott, 1989; Colwell, 1989; Taylor, 1997; 1984) explicitly call objects which are - apart from humans' acknowledgement – existing and valuable, as inherent valuable. The intrinsic value is hence a more anthropocentric view on physical objects. The inherent value is something that is inherently given, no matter if in animals (*see* Verhoog, 1992) or in social behaviour (*see* Choy, 2014).

Explicit and implicit values

Many so far mentioned environmental philosophers do not differentiate between explicit and implicit values, but between instrumental and intrinsic value. An exception is Baird Callicott (2006) who finds it important to make sure the differences between these values and to prove their obviousness. He thus explains that those values which are obviously instrumental (a car) are explicit values and those values which are intrinsic (a child to his parents) could be considered as implicit values (Callicott, 2006). He further argues that an employee could be valued both, intrinsically and instrumentally (*ibid.*).

Objective and subjective values

Another value concept is the concept of objective valuing. Again, it is an anthropocentric view, which holds that any human can understand the value of an object. Of course,

the person needs to be morally sensitive (Cox, 1997). "Objective values are values upon which consensus can be reached through ideal, rational, human discussion" (Cox, 1997, p. 174). Thompson (1995, p. 292) in line with Hargrove (1989) argues that the ability to perceive aesthetic values "(…) depends crucially on the objectivity of our value claims. (…) ethical obligations fails unless there are objective grounds – grounds that rational, sensitive people can accept – for thinking that something has value".

In contrast, subjective valuing is influenced through a person's opinion. This opinion cannot be changed through rational discussion (*see e.g.*, Callicott, 1989; Rolston, 1982 and 1988).

Chapter 3.3 on values towards nature could have also been entitled "*human* values towards nature". The reason for this is simply that, it is us, humans, deciding on how to value nature (Cox, 1997; Schmidtz and Willott, 2002), even though the value might turn out as intrinsic (Rolston, 1994). Onora O'Neill (Boylan, 2014, p. 116) in fact states that "(…) all types of moral reasoning are anthropocentric because moral demands are made on agents" and these agents are human. Even though it is arguable whether humans are deciding on nature's, land's or resources' values or not, within the value orientation of businesses it matters to a wide degree which attitude towards nature is expressed. The previously elaborated attitudes towards nature give evidence for how businesses deal with nature and land. As agricultural businesses need land to cultivate food, and as the food processing industry relies on those products, land ethics and aesthetics should be on businesses minds. At least pictures from their CSR and sustainability reports tell that nature takes a wide part in their operations (*see* Chapter 8).

3.4 Aesthetics and land ethics

The former attitudes and especially the theories of aesthetics and land ethics should have an influence on humans' value orientation. This section introduces the two theories, starting with aesthetic value, also known as land aesthetics. The application of these theories to the food sector is part of the following chapters.

Within environmental ethics it is especially land ethics that influence ecologists and humanists at the same time. Aldo Leopold, being the most popular representative among the land ethicists, represents a philosophy that strives for nature's intrinsic values. However, most philosophers argue in favour of nature's instrumental or functional values. This, of course, has strong impacts on how humans care for the natural environment.

Within aesthetics there is a stronger connection between beauty and landscape and how humans portray landscape due to aesthetical reasons. However, both streams depend on and contemplate each other (Varandas, 2015), as can be read below.

The following two sub-chapters will encounter these streams and shall bring about a reasoning for how the relationship between humans and nature can be explored: through aesthetic value and land ethics.

Aesthetic value / land aesthetics

There is a wide range of literature about the aesthetic aspects of nature. These include nature's intrinsic, instrumental or any other value types (Carlson, 1976, 2010; Cox, 1997; De Groot and Steg, 1997). In general, understanding the aesthetics of nature means to appreciate nature's aesthetic values and hence, appreciating "nature as nature" (Budd, 2002, p. 1). Such an appreciation requires the ability to value aesthetically, which relates to aesthetic experience, both practical and intellectual (*cf.* Dewey, 1981). Moreover, aesthetic experience is about communication and how we learn from other peoples' opinions, agreeing to them or not, and by this contribute to aesthetic judgement (Brady, 2006). Aesthetic judgements are often seen as subjective and therefore lack scientific significance. Nevertheless, there are several supporters of so called objective environmental values (*e.g.*, Brady, 2003; Carlson, 2000; Goldman, 1995). Objectivity is necessary in order to scientifically treat environmental aesthetics as valuable and significant (*cf.* Brady, 2006). Our aesthetic experience with nature helps us to build a relationship with it (Rolston, 2002). This leads to the possibility of seeing a need to protect it, hence to morally judge about nature's values (Leopold, 1949). "(…) for Callicott, the land ethic is critically and explicitly associated with aesthetics" (Fahy, 2012, p.53).

Aesthetics are generally about art and the appreciation of artworks. Many philosophers have discussed in depth the possibilities of aesthetic value of art. Among them are Immanuel Kant, or Holmes Rolston. Although they represent certain streams of philosophy, they also eminently discuss *how* the aesthetic value of artworks can be assessed. These conceptions are the base for the following chapters. The mentioned great thinkers of aesthetics will be part of it as well as their young followers (*e.g.*, Saito or Carlson) with a focus on land aesthetics.

James Shelley (2013) discusses aesthetic theory regarding judgment theory and in line with Kant (1987). Shelley (2013, p. 247) explains that "(…) so long as we keep in mind that aesthetic values just are those values we aesthetically judge, aesthetic pleasures just are those pleasures by which we aesthetically judge, and the aesthetic attitude just is that attitude we assume in aesthetically judging (…). A theory that regards judging beauty as a matter of inference from rules is a theory that regards beauty as something other than an aesthetic value". In the following, the same shall hold true for the aesthetics of nature.

Every time we decide on the aesthetical value of an object, may it be art or nature, we judge on its aesthetics. Judgement theory is thus relevant when discussing aesthetical values.

Rationalist theory claims the beauty of an object to be beautiful through reasoning to be beautiful (Shelley, 2013). This would then mean to have an instrumental value of the object, as its beauty strives us in a positive way. A clear end needs to be given to have instrumental values. Stecker (1997, 2010) explains that valuing happens due to the experience it holds. If we value objects for certain ends, such as a pleasing look, we do not value them for their own sake and thus they have instrumental value (Kieran, 2013).

Brady (2006) claims that aesthetic needs are always less worth than our basic human needs, such as food and shelter. She contrasts individual aesthetics with public impressions and by this draws a line between subjective preferences, which lead to a weak voice of aesthetic value in public, and aesthetic judgment developed in a public context. She poses a very demanding question, that is: *"How will valuing based in aesthetic experience motivate care and respect towards environments with which we have not developed relationships?"* (Brady, 2006, p. 281). In the following this question will be investigated, not fully answered, but yet, taken as a frame for positioning various authors.

Aesthetic value is here understood as the aesthetical valuing of land and nature. As landscape aesthetics derive from the picturesque epoch (*see* below), the inclusion of nature shall also cover multidimensional aspects of nature and humans and not just a two-dimensional physiographic space relation (Ryan, 2011). The valuing of it depends on the viewer and the context. Benson (2008) claims that land as such has a non-instrumental value. Rural landscape, however, has functional components, which may be linked to aesthetic values, but are to be excluded from the pure, intrinsic value of land. Benson admits that there are inseparable relations between agricultural functions (*e.g.*, a mill) and the surrounding environment. Nevertheless, it depends on the spectator whether the rural land can be regarded as aesthetically valuable or not. Benson (2008) differentiates between four different varieties of non-instrumental interest in landscape. The first is the scientist such as a geographer or ecologist who is only interested in understanding nature as such without any intention to exploit resources. The second interest type would be a historian who has an interest "(…) in the landscape as the product and record of human activity in the past" (Benson, 2008, p. 228). The next variety would be a person who is connected to the land through history such as family members, natives or shared interest with particular group members. The fourth and last type of interest is represented by those who feel at home in that place due to family or living circumstances. All four kinds have different reasons for valuing landscape, but they all do value it for aesthetical purposes because of their understanding of it and interest into it (Benson, 2008). Benson goes on and argues that the actual experience of a landscape leads to the valuation of it. So, knowing about its historical significance does not necessarily lead to valuing it aesthetically, but experiencing it by walking through it combined with a guide who points out

historical or biological singularities, would enhance one's appreciation of the land's aesthetics (*ibid.*).

Aesthetic values can only be perceived through those who are willing to do so. It is thus important to include moral into considerations (Carlson, 2010). A crucial point is made by Carlson (2010). He states that for environmental aesthetics there should be a moral, but at the same time an objective appreciation of nature. According to him and other authors (*see also* Callicott, 2008 or Hargrove, 1979), nature's protection and conservation can only be achieved through its aesthetic appreciation. Carlson proves this by rejecting contemporary environmentalism's view of traditional aesthetics of nature (Carlson, 2010). There are five requirements of environmentalists (1. anthropocentric, 2. scenery-obsessed, 3. superficial and trivial, 4. subjective, 5. morally vacuous), which Carlson substitutes through the following five requirements of aesthetic appreciation of nature: "1. Acentric, 2. Environment-focused, 3. Serious, 4. Objective, 5. Morally engaged" (Carlson, 2010, p. 297).

Through these substitutions of traditional aesthetics of environmentalism, a modern form of environmentalism could adopt nature's intrinsic value and could especially "(…) take () into account nature as a whole (…)" (Godlovitch, 1994, p. 16). Carlson's suggestion of removing old-fashioned views on nature leads to a holistic approach, which steps back from both, the picturesque and formalist theory.

These approaches derive from the 18th and 20th century and influenced artists in their view on and of nature. Realist portraits of nature showed the exact copy of what has been seen by the painter. However, it is the painter's subjective feeling of how nature looks like. Having this knowledge in mind, the painter draws a picture how the spectator shall view nature (Carlson, 2010). The picturesque epoch treated nature as a cultural lust garden and hence the yielded paintings very much showed a scene to aesthetically enjoy: "Indeed, the term 'picturesque' literally means 'picture-like' and thus the idea of the picturesque gave rise to a mode of aesthetic appreciation in which nature is experienced as if divided into a set of scenes – into blocks of scenery" (Carlson, 2010, p. 291).

In contrast, the formalist era very much focused on nature's forms, lines and colours. According to Bell (1913, p. 30) nature's beauty can only be perceived when "(…) we bring with us nothing but a sense of form and colour." (Carroll, 2013, p. 89) summarises formalism as follows: "(…) *if* something possesses significant form, then it is an artwork." Hence, as nature possesses forms such as lines, curves and dots, nature has to be considered as art. When nature is considered as art, then it inheres an aesthetic value and needs to be regarded as an aesthetic good of value and rarity (Crisp, 1994). But formalists distinguish between art and nature and thus respond: "(…) *x* is an artwork if and only if *x* is primarily designed in order to possess and to exhibit significant form" (Carroll, 2013, p. 91).

However, since every object has a form, formalists only consider *significant* forms as relevant to artworks (Carroll, 2013). Even though a definition of what makes a form significant is not given, the formalists emphasise that art is "(…) uniquely concerned with displaying significant forms" (Carroll, 2013, p. 90), which other forms of expression are not, such as political speeches or logical theorems (Carroll, 2013).

The early developments of environmental aesthetics in the second half of the 20th century were very much influenced through the picturesque, the disinterestedness[12] and the formalism. The latter still has influence on environmental planners or landscape planning since forms are the origin of developing landscapes from a planner's point of view (Carlson, 2013). In order to overcome the strict differentiation of art aesthetics and environmental aesthetics, Arnold Berleant proposes the aesthetics of engagement, which not only encompass nature and art, but the world as a whole (Berleant, 1992, 1997, 2005). According to Berleant there should not be any subject/object distance between the object and the appreciator, but a multisensory immersion of both subject and object (Carlson, 2013). Other authors, such as Carroll (1993) or Godlovitch (1994) also emphasise the importance of sensory experience with nature through which nature's beauty can be better understood and appreciated (Brady, 1998, 2003).

According to Goldman (1995) and Zangwill (2001) "(…) beauty is a purely evaluative aesthetic property, and so identical to aesthetic value" (De Clercq, 2013, p. 301). Mothersill (1984, p. 347), however, claims that "[a]ny individual is beautiful if and only if it is such as to be a cause of pleasure in virtue of its aesthetic properties." Beauty thus depends "(…) on the relation between beauty and pleasure" (De Clercq, 2013, p. 301). In this regard, the aesthetic value is instrumental. However, Carlson's (2010) requirements on environmentalism's change demand a non-anthropocentric approach in order to be able to aesthetically value the landscape. According to him, it does not need humans to value land aesthetically from a human point of view. Hence, it does not need any definition of beauty because if pleasure is related to beauty, then a clear end is given and thus its valuing depends on instrumental values. It appears as if a decoupling of beauty and pleasure is needed.

Thus, the following question comes to my mind: *But how can nature then be appreciated and protected when there is no unifying aesthetic concept of what makes nature beautiful and hence precious and worth protecting?* It is indeed possible to answer this question, as can be read below. However, the answer highly depends on how nature is viewed, such as holistically or as only instrumentally or functional valuable.

---

12 The disinterestness is related to formalism as response to understanding how to value fine arts. The weak form of disinterestness also concerns a missing interest in nature and culture (*see e.g.*, Berleant, 1991, 1992; Dutton, 1994 for further information).

Carlson (2013) calls for serious aesthetic appreciation of the natural world, "(…) rather than trivial (…) guided by knowledge and understanding" (Carlson, 2013, p. 490) and by this means to include scientific cognitivism in environmental aesthetics[13], which helps "to appreciate nature 'on its own terms' [Saito, 1998] (…) as it is characterised by science" (Carlson, 2010, p. 304). Scientific knowledge shall give a foundation for objective judgements. Even though a fully objective valuing is not granted, it at least gives more objectivism to the aesthetic valuing compared to arousal or other sudden emotions (Carlson, 2010). Leopold (1966), famous for his land ethic writings, forces ecological knowledge to become mandatory to foster sensibility to nature which then leads to a fusion of aesthetics, ethics and knowledge. His argument is that only through ecological knowledge, "(…) the multi-sensorial totality of sounds, textures, flavours, odours and colours" can be experienced (Varandas, 2015, p. 214), which is in line with Berleant's aesthetics of engagement (whereas these are rather non-cognitive approaches to aesthetics; *see* below).

The scientific cognitivism has indeed practical inputs for planners and also impacts on the so-called positive aesthetics. Positive aesthetics are defended by philosophers such as Rolston (1988), Hargrove (1989) or Carlson (2006). They believe that nature, untouched or unspoiled, has positive aesthetic qualities (Carlson, 2013).

Within contemporary environmental aesthetics also non-cognitive approaches are known. They are about emotional responses and states, which people have when experiencing nature (Carlson, 2010). Carlson (2010, p. 301) emphasises that the non-cognitive is not about pure emotions, but about "(…) something other than a cognitive component [as] the central feature of aesthetic appreciation of nature". Carroll (1993) for instance, advocates the arousal model. This model holds that by being open to nature, we might feel nature as such and through this find a legitimate way of aesthetically valuing it (Carlson, 2010). Berleant's aesthetics of engagement fall also under the category of non-cognitive approaches to aesthetics.

Brady (2014) stands for a strong version of the acquaintance principle (also known as experiential thesis). This principle is about the first-hand experience one has with objects and based on this first impression one is able to make aesthetic judgements (Brady, 2014). With regard to climate change's impacts on landscape aesthetics, Brady calls for the practicing of appreciative virtue. By this, she means to not only see beauty or ugliness but also 'morally complex issues' that are linked to everything that is (Brady, 2014). This is a call for nature's intrinsic values. At the same time, Brady calls for scientific knowledge about the complex issues and interlinkages of nature, which cannot be judged without any knowledge.

---

13 Leopold, 1966; Callicott, 2008; Rolston, 1995, 2002; Saito, 1998 are among the representatives of the cognitive approach in aesthetics.

Callicott (1987) advocates an enhanced taste for nature and natural sensibility. According to him visual-sense encounters give way for an experience of various life forms, sounds and odours. They all go beyond mere knowledge about certain biological phenomena (Callicott, 1983; Varandas, 2015).

Callicott (1989) further acknowledges relationships as a driver for aesthetic valuing. He claims a more holistic view on aesthetics, decoupled from romantic sceneries towards relationships closer to home because "(…) we would have a deeper appreciation and a more aesthetic response to the bog near our house or a flat Midwestern field" (Fahy, 2012, p. 57). In this sense, not understanding the own region and its natural endowments, means to have no grounds for valuing the landscape aesthetically. Callicott (1989, in: Fahy, 2012, p. 58) hence calls for a "(…) community and ecological relations [in order to] necessitate a much more holistic aesthetic, one that recontextualizes the beautiful within the local experiences of a broader ecosystem." Callicott bases aesthetic appreciation of nature on knowledge and "(…) understanding of these relations (…)" such as "(…) interactions of species within an ecosystem (…)" and "what is absent as much as what is present" (Fahy, 2012, p. 58). Very much alike is Dewey (1989). He also suggests to value the environment through the development of a relation to it. However, in contrast to Callicott, Dewey does not base this relation on the knowledge about biology, but on the experience about environment. Nevertheless, Dewey admits that the mere understanding of the world is part of a process of aesthetic appreciation. The more experience is created, the more valuable is the understanding about the world: "(…) knowledge must itself inspire awe and appreciation, or lead to more aesthetically unified experiences in order to be valued" (Fahy, 2012, p. 61). Another difference between the two authors is about the subjective or non-subjective experience. Whereas Callicott stands for a subjective and first-person view on nature, Dewey advocates neither a subjective, nor a first-person view. Rather, Dewey claims a lived experience of and in nature. According to him, it is nature's resources and their relations that make up experience. Thus, there is no objectivism, nor subjectivism in experiencing nature because nature's interrelations are experience itself (Dewy, 1981; Fahy, 2012).

Coming back to the question of how to derive beauty of nature without any unifying aesthetic concept. There is also the concept of culture and aesthetics. Sterba (1994, p. 171) declares: "(…) if we were constituted differently, what we value aesthetically would be different as well." The cultural influence, as well as the individual background of each person, leads to a different comprehension and appreciation of landscape. The aesthetic appreciation can only be addressed when referring to moral reflections or personal experience that tell us to value landscape aesthetically. Especially, since beauty is very abstract in its very sense (De Clercq,

2013), an experience of how objects can become valued aesthetically needs a personal experience (Stecker, 2010) of beauty. Kant (1987) calls for four moments, which are "(…) required for calling an object beautiful" (Crawford, 2013, 46): "1. Quantity, 2. Quality, 3. Relation, 4. Modality" (ibid.).

The four moments make up Kant's "Analytic of the Beauty" (1987). Kant seeks for subjective universality of beauty, but at the same acknowledges different opinions about beauty (regarding moment 1). The moment Quality is about a claimed disinterest in pleasure. Even though this seems to be a call for objectivism, it is rather subjective free contemplation of an object's beauty (Crawford, 2013). The next moment, Relation, clarifies an object's intrinsic beauty: "Beauty is the form of the persuasiveness of an object, insofar as it is perceived in it without representation of an end." (Crawford, 2013, p. 49). Kant's last moment in the analytic of the beauty considers modality and addresses the necessity of pleasure as "exemplary, subjective and conditioned" (Crawford, 2013, p. 50).   In virtue with his analytic of the beauty and his judgements of taste, Kant (1987) raises the question how synthetic a priori judgements were possible. His answer rather concerns a mind's interplay with imagination and understanding than a base for judgment: "(…) the pleasure in the beautiful must be based on 'cognition in general', which is described as the harmony of the cognitive faculties (imagination and understanding) in free play – that is, not determined by concepts." (Crawford, 2013, p. 50).

Kant differentiates between many types of beauty. With regard to nature, he describes natural beauty as "[w]hen nature appears beautiful, it is as if it were designed for our reflective powers of judgement. The beautiful in nature gives us an indication that natural laws and our mental powers are in harmony, a harmony which is necessary if we are to create a moral world: a kingdom of end." (Crawford, 2013, p. 53). Before, Kant has been declaring beauty as intrinsic value to objects to be perceived universally beautiful. Now, the moral world has an end. According to Kieran (2013) and Stecker (2010) this would mean to see an instrumental value in the beauty of objects. The mere pleasure of objects through its beauty is thus instrumental (Stecker, 1997, 2010), the judgement of beauty should be, according to Kant (1987), universal (with some constraints regarding subjective opinions of observers; also known as *sensus communis*) and independent of interest (moment 2). Deriving from this, the judgement about the beauty of objects influences the aesthetic value of them.

So, apart from a relation between beauty and pleasure, there is also a relation of beauty and judgements (De Clercq, 2013). Objects can be judged beautiful even though they are not beautiful or others do not find them beautiful. This is called the response-dependent property: "(…) a property that things have in virtue of our responses (*e.g.,* judgements) in 'ideal circumstances'" (De Clercq, 2013, p. 305).   This definition gives room for objectivism and subjectivism at the same time. Stolnitz (1998) speaks of an 'aesthetic attitude' one needs to

adopt in order to perceive an object aesthetically. According to him an aesthetic judgement depends only on the context the valuing subject is situated in (Ryan, 1998).

Carlson (2000, p. 9) suggests: "To aesthetically appreciate the natural world, we do not need to actually make it, as we make words of art; nor do we need to conceptualize it in artistic categories." Instead, Carlson claims that nature and its living beings have some kind of internal agency which is connected to "a web of ecological relationships" (Ryan, 1998, p. 228) which makes nature aesthetically valuable. The intrinsic value is again touched upon by Carlson (2000, 2010).

Indeed, it is mostly the practical attributes of natural objects that make them appreciable. In contrast to modern Western art with its primary function of generating aesthetic experience (Saito, 2010). The traditional aesthetic attitude theory, however, says that an object or tool should be aesthetically valued without any considerations of functionality. Even though, Parson and Carlson (2009) argue that tools can be functional and aesthetic at the same time, it is questionable if an instrumental value (with function) can stand alone when it comes to nature conservation. Destroying nature because no function is observed for human purposes, would be morally wrong. But acknowledging nature's beauty is a reason for leaving it untouched – at least in the environmentalists' eyes. Haapala (2005) claims that environmental aesthetics in general and environmental objects in particular shall be ordinary present things in our life because: "Their all-too-familiar presence in our lives tends to make their aesthetic impact invisible on the radar that has been calibrated to capture standout experience." (Saito, 2010, p. 377). A more vivid and obvious appreciation of nature's objects would also enhance a lively discourse on environmental aesthetics (Saito, 2010).

Ecological learning indeed seems to be crucial for the linkage of land aesthetics with nature conservation. Greenbaum (2005) calls this process 'nature connoisseurship', which is "(…) a refinement of taste connected with judgements of intrinsic worth." (Greenbaum, 2005, p. 390). He argues that only by tacitly knowing the 'code' of biological or geological taxonomies and other ecological vocabulary, one is able to perceive environmental values. In this regard Greenbaum mentions Hargrove's (1989) quasi-aesthetic category of the 'interesting'. This is, what ecologists find interesting, they also appreciate and thus conserve it. The same goes for aesthetic reasons, which one might find pleasing and thus conservable (Greenbaum, 2005). Nature connoisseurship is a social process through which people learn to appreciate nature scientifically and artistically. Greenbaum (2005) sees a system of formal and disinterest classifications as important for this kind of cultivation, whereby terms such as pretty or useful are incidental or even irrelevant to him. This addresses partly intrinsic values of nature's aesthetics, but also manifested views on nature through social learning processes.

Rolston (2002) links nature conservation directly with the aesthetic experience of it. Moreover, he believes in values, established independent from humans and as objective creation. According to him, objective values are "carried by nature" and are just discovered by humans (Rolston, 1982), but not learned through socialisation like Greenbaum (2005) suggests. Rolston (1982) differentiates between three types of value qualities. Primary qualities are external stimuli which make up the secondary qualities, such as colour or flavour. Tertiary qualities are those "(…) which address something already there, regardless of human presence" (Varandas, 2015, p. 215). Rolston obviously calls for the intrinsic value of beauty, which nature inheres and denies that any art theory about beauty can be applied to nature's aesthetics (Vandaras, 2015). However, he sets up a conception of natural aesthetics which includes three complementary and determining vectors:

1. "(…) the aesthetic perception of a natural object is based upon its 'non-aesthetic' properties (…)",

2. "(…) the experience of natural beauty takes place in the human being, as its privileged interpreter (…)",

3. "(…) the beauty of nature is relational, since it results from a subjective translation of something external, which stimulates an aesthetic response." (Vandaras, 2015, p. 217).

With these conceptions, nature can be judged aesthetically and its intrinsic values, even though subjectively, can be assessed by individuals.

Writing about land and nature aesthetics is not only about intrinsic and instrumental value. It is also about disillusions. Cheryl Foster (1992) addresses aesthetic disillusions in her research. Aesthetic disillusions are created through false impressions. In line with Carlson (1976), Foster uses the example of a life-sized plastic tree, which appears real to humans. Foster discusses various possibilities of how people react when they get to know that the tree is artificial and hereby differentiates between a thin or thick sense for beauty (Foster, 1992). For instance, when somebody encounters that the tree does not change during seasons, the person might feel disgust (thick sense of beauty). Another possibility would be to feel pleasurably curiosity about the plastic tree (thin sense of beauty). It is also possible that the person does not have any feelings at all about the discovering of the artificial tree (neither thin nor thick). The last option Foster discusses, is about the person's feeling of guiltiness because she is interested in the tree but thinks one ought not like an artificial tree (thin sense of beauty but thick sense denied) (Foster, 1992). Disappointment, frustration, curiosity and disillusion are among the reactions of people when their knowledge about natural objects changes. Regarding disillusionment, it is important to mention, that one only feels disillusioned (and hence disappointed) when before having had the feeling of *being in nature* (Foster, 1992). In that

case, feeling nature at the same time means appreciating its objects (here, the tree) and valuing the tree aesthetically as it is part of the whole. This is a proof for a rather intrinsic value of nature's attributes and aesthetics, than for an instrumental value and given ends.

What is aesthetically enjoyable on the one hand, can be an ecological disaster on the other hand (*e.g.,* green lawn). On the opposite, an ecological desirable state can be achieved through the installation of windmills, even though this means landscape destruction to some (Saito, 2010). People appreciate beautiful objects on the first sight, such as the green lawn. Nevertheless, there is no functionality given in green lawn except for its aesthetics. A windmill does have functions, namely renewable climate friendly energy. *Its instrumental value might be understood by some, but is it aesthetically valuable?*

The Arcadian myth is about the stories or poems about past impressions. Benson (2008) explains that changes in land cultivation and agricultural methods led to a widespread recognition and reinforcement that landscape has changed and used to be natural before, hence rural and idyllic. Also, rural life is cultivated life. But latest land transformations and technological progresses led to a different appraisal of land changes. "The aesthetic character of the landscape is a causal consequence of the land's having been formed for particular purposes" (Benson, 2008, p. 226).

Instead of speaking about instrumental values of rural landscapes, Benson (2008) speaks of a functional approach, which rural land has. This approach inheres qualities, which are available for aesthetic valuing (Benson, 2008). This, according to Benson (2008, p. 228), is a non-user's approach because "[a]n aesthetic interest in the practical aspect of a landscape is not a practical interest. The user is, strictly as such, not interested in the aesthetic qualities of the landscape at all. The aesthetically engaged non-user is interested in the utilitarian features as bearers of the aesthetic qualities that she values." These practical reasons are indeed instrumental. The aesthetic reasons, however, Benson (2008) claims, are non-instrumental. He states that having an interest in the land from aesthetic reasons is to value it for its beauty, but not for any end. This, he emphasises, goes also for rural land, which appears beautiful because some sites have been cultivated (Benson, 2000).

The next section is going to introduce *land ethics.* As many aspects from this section has been touching upon the concept of land ethics, the focus will be on the relationship between humans and land or nature.

Land ethics

The most influencing writings on land ethics probably come from Aldo Leopold (1949). In his writings on the beauty of landscape and ecological community he describes the importance of valuing land through the following: "A thing is right when it tends to preserve the integrity, stability and beauty of the biotic community" (1966, p. 262) and also touches upon aesthetics in this regard. Indeed, Leopold is one of the main contributors to both, land ethics and aesthetics. In his "Sand County Almanac", Leopold (1966) dedicates a whole chapter to the land ethics, but none to land aesthetics as such. He rather spreads his ideas about the latter throughout his work, which is probably the reason why his land ethics got more attention during the last decades than his aesthetics (Callicott, 1983). Indeed, "(…) the land aesthetic and the land ethic are complementary. They are equally the value implications of evolutionary and ecological theory and together they represent a coherent environmental axiology." (Callicott, 1983, p. 354.). According to Leopold (1966) both eventually lead to nature's conservation.

This Chapter, however, shall address and explore land ethics as a moral discipline of how to address nature – from a human perspective (anthropocentric) or more holistically or even from nature's view (ecocentric/biocentric).

Varandas (2015, p. 215) argues, that according to Leopold (1966) land ethics derive from the aesthetic value of land: "One needs logical clarity about ecosystem processes, including those of living and dying in the wetland community, and this emancipates natural aesthetics from the usual categories that shape the appreciation of a work of art. This ensures that a land aesthetic is the right complement to an appropriate land ethic, now more enlightened about the processes that merit conservation." The former section on aesthetic value shall thus serve as a base for the following explanations of land ethics.

Also, Rolston (2008, 1997) and Callicott (2008) declare land ethics to derive from aesthetics. Rolston (2008, p. 325) states in line with Hargrove: "(…) the ultimate historical foundations of nature preservation are aesthetic." He argues that through evolution values become created, but are recognised through humans who value aesthetically (Vandaras, 2015).

"Nature is a fountain of life, and the whole fountain – not just the life that issues from it – is of value. Nature is genesis, Genesis." (Rolston, 1988, p. 197). Rolston sees environmental values as biogenic, not as anthropocentric, since nature brings about life, not the other way around (Varandas, 2015). This it, Rolston claims an objective value of nature. At the same time Rolston (1994) acknowledges that humans subjectively value their environment and hence do not see the objective value in nature as such. The author almost insists on both, instrumental and intrinsic value which humans are able to recognise and by this very much differs from the

opinion of other authors such as Carlson (2010) or Callicott (1989) who advocate nature's pure intrinsic value (Rolston, 1994).

In the previous section of aesthetics, the relationship of nature and humans has already been touched upon. Rolston (1994) finds this relation important and argues that value is only found "(…) in a relation to an appreciating mind" (Rolston, 1994, p. 13) but not in the object itself. The valuing therefore always depends on a subject's view because "[o]nly the humans are valuing agents" (Norton, 1991, p. 251). Accordingly, Rolston (1994) poses the question if intrinsic value then is discovered or conferred. The example he uses is as follows: an object *n* might be valuable and this means that *H* has an interest in *n*, but at the same time it does not mean that "*n* satisfies H's desires" (Rolston, 1994, p. 14), which would be an ultimate end of desire in regard to instrumental values. Obviously, there is an interest in *n* as an object but no desire in *n* for personal satisfaction. As a conclusion Rolston draws that there are no values as long as there is no consciousness about it (Rolston, 1994).

I argue that Rolston (1994) is right about the fact, that in the end humans value objects once they have realised their existence (*see also* Schmidtz and Willott, 2002). I also understand that humans see an instrumental value in an object as soon as they realise that the object inheres a functional value that is to the good of humans (in return: *Do useless functions then mean less value?*). Nevertheless, to me also functional values are intrinsic, and it does not matter if humans have recognised that function and hence valued it or not. To me it does not need humans to judge about objects to make their value obvious. I rather tend to believe that value is created only through nature, but not through humans since without nature there is no creation at all (Rolston, 1988). In my opinion the human evaluation is then just an expression of how much the object is worth, which again presumes an already existing value which is just to be perceived by the humans.

I raised the question, whether apparently useless functions (in the eyes of humans) are less valuable than others. Rolston (1994) has a holistic answer to this when referring to the Earth system. He argues that dirt, which seems useless to most humans, has a value for the Earth system. Yet, he does not consider the Earth system as a whole when referring for instance to animals or species (Rolston, 1994). This fact is confusing since he acknowledges that instrumental and intrinsic values are interlinked. He further describes so-called systemic values as key to all other values. This is, he does see the intrinsic value of ecosystems, but rather names it systemic, as it is a whole system of values which depend on each other (Rolston, 1994).

When discussing land ethics one shall not only think about ethical judgments, but also about normative reasoning (*see* Figure 3.1). Indeed, land ethics also address legal affairs which come along with property rights and the question if natural values are public

(Sienkiewicz, 2006). Aldo Leopold's (1966) attempt and success to conserve land arises from land acts in the United States (Laubach, 2014) which aimed to privatise and cultivate rural landscapes for reasons of agricultural production (Turner *et al.*, 2014). There is no intention here to discuss about land and sand grabbing or other highly debatable techniques by (corrupt) governments, but it seems appropriate to include property rights in terms of environmental values.

Sienkiewicz (2006, p. 91) addressed the question of *"who owns the environment?"*. To develop a framework to approach the question, he concerns the potential trustees of environmental values as well as the duties these potential trustees have. In his opinion, "(…) intact ecological systems are a public value and public right" (*ibid.*, p. 93) because he acknowledges that functioning ecological systems are to the benefit of humans who are part of the system. He calls for an efficient system for natural values accounting. In this regard, he also mentions punitive damages and adequate policies which govern the problem of natural values and their wrongful misuse. So, obviously Sienkiewicz sees a relation between public welfare and ecological commons and calls this a dependent relation (*ibid.*, p. 96). Value then is created through the recognition of this dependency though humans.

He describes scarcity as one factor, that makes people realising the value of objects and in this regard, he states in line with Leopold (1949): "Leopold argues that natural values, despite their neglect, are commodities and must be valued as such if they are to be conserved" (Siekienwicz, 2006, p. 102). The intrinsic values possessed by environmental objects are granted and "(…) independent of whether that value is harnessed, extracted, or used to one's advantage." (Sienkiewicz, 2006, p. 101). Included in these values are what Leopold calls intergenerational values. These values purport that no generation is allowed to deprive natural values from future generations. This is in line with the Kyoto Protocol's (UNFCCC, 1998) notion about sustainable development and that the present as well as future generations shall be well off in terms of economic, social and ecological matters. Yet, land ethics are not on the agenda when it comes to the discussion of sustainability.

Accepting other generations' rights about values includes a debate about existence and utility values, which are discussed at large by Callicott and Rolston (Sienkiewicz, 2006). In order to differentiate the two types of values, one simply needs to ask "What is *x* good for?" and "What is *x*'s own good?" Rolston (1994) extends the questions and includes humans by asking "for what is Susan good?" and "What is the good of Susan?" The latter question addresses attributes such as being kind and honest, the first question addresses Susan's abilities such as carpentry or cooking (Siekienwicz, 2006, p. 102). Susan's inherent or intrinsic values (attributes) are the same values which belong to animals, species or any ecological system. It is therefore important to acknowledge that just because a utility value is obvious to us (*e.g.,*

the beauty of landscape and its clean and fresh air), it has more to offer, namely existence values (*e.g.,* an intact biological system and hence a resilient environment).

A land ethic to Sienkiewicz (2006, p. 114), must be established in a holistic sense and is about "(…) quit thinking about decent land use as solely an economic problem". The reason for his statement is that natural values "will always lose" against economic criteria which are less difficult to comprehend. However, economic criteria are man-made and cannot cope with a holistic view on land ethics. As a result, Sienkiewicz (2006) proposes punitive damage policies in order to warn those who damage nature and to prevent damages from future generations. These policies further suggest a public natural value accounting method which includes decision-makers from the public and private sectors[14].

Crucial for this thesis is the relation between humans and nature, in particular the relation of the food industry with nature. Roe (2010) describes a relational ethics that occurs through sentience from humans for non-human objects, but also sees relations between the human and the non-human. She uses the example of a meat burger to exemplify how we build up a relation between something non-human and moreover, something with a "(…) multisensory taste to work affectively to resist the discourse of unhealthy eating despite personal self-reflection on what one should and should not eat" (Roe, 2010, p. 261). Even though, the burger has been produced through "killing, cutting-up and processing of an animal's body" (*ibid.*, p. 263), we do not relate this while eating and enjoying the burger (of course, some do). The reason for this affection is made by the environment and through how we perceive the world, also through "society-forming activity" (*ibid.*). Affective ethics help to build a positive relation to the non-human entity. The affected and the affecting body together create an ethic through their relation. According to Roe (2010) there is no ethic established just due to the human or non-human practice, but through the affection or relation of both. The most important question Roe rises is where sentience comes from.

Latour (2005) further asked why this question matters. To answer this question, Roe (2010) uses three dimensions which constitute the relation of humans with a burger: The process of matter, the human practices and materialities. They together "co-generate the burger" (*ibid.*, p. p. 263). This co-generation emerges through human practices in livestock keeping and meat production (process of matter), through the materialities which become created through the production. Finally, the social environment makes us being affected from the affecting burger through sentience we feel. The relation to the burger is manifested (Roe, 2010). This relationship could be developed to any other kind of non-human entity, such as natural objects or land. Indeed, this question matters when considering environmental pollution and a possible

---

14 *See e.g.*, Badura *et al.,* 2017, Meya *et al.*, 2020.

missing relation between nature and humans. Conceivably environmental pollution could be reduced if the relation between humans and nature was stronger or even existing at all.

Shaw (1997, p. 56) asks "[w]hy admit something as intangible as "the land" into the moral community?" and whether giving a voice or veto would change anything. His answer is in line with Leopold's understanding of a harmonious living between non-human and human entities. Since humans rely on land's resources, there should be "(…) "respect" for biotic communities and community members, but, at the same time, we can alter, manage, and use the land (natural systems, ecosystems) as a resource" (Shaw, 1997, p. 58). Now, the ultimate reason to respect nature and to not abuse it, is that intrinsic values are hidden in every part of nature, including humans. Shaw (1997, p. 59) argues that "[i]ntrinsic value is attributed to things that participate in the dynamic relationships characteristic of a biotic community". It would be arrogant and unanticipated of humans to not respect those biotic communities and the interdependencies of ecosystems because in the end humans rely on land and with it all the biotic communities and ecosystems.

Duties are another topic related to ethics. With regard to land ethics and land policies, not only politicians but society in general develop an ethic through their perceptions of values and duties. The duties they claim to have towards nature, are then represented in their policies (Greiner, 2014; Ferkany and Whyte, 2012). This is crucial concerning how nature becomes viewed. Clearly this holds true for anthropocentric views. However, non-anthropocentric views are rather trying to find value in land as such (Shaw, 1997) which many ecologists and philosophers try to uncover (*see e.g.*, Leopold,1949; Rolston, 1988).

3.5 Value orientation – conclusion from previous findings and personal statement by the author of this thesis

Derived from the previous findings one can conclude that value orientation towards nature depends on a personal attitude as well as on experience with nature in relation to consequences. This requires so-called environmental literacy (Golley, 1998). In the 1980s, industries began to overthink their practices and engaged in environmental issues, such as environmental or sustainability management and CSR reporting (Gray *et al.*, 2014). The food sector relies on various resources from the natural environment and also uses wide areas of land for the cultivation of crops, fruits, vegetables and other products such as oils or herbs (Gebhard *et al.*, 2015). Regarding the food industries' value orientation towards nature, the key question is how land is valued by this industry. Shaw (2001, p. 53) sums up that "[i]nstrumentally, land is a vessel for the production of food and other natural resources. Intrinsically, it is valuable in itself, and if land was more widely conceptualized intrinsically, mention of the word *land* would be reason enough to preserve its integrity and natural

capacity." According to Shaw (2001), economic purposes of businesses, and in particular those of food businesses, shall be slowed down by society in order to overthink their impacts on the environment.

In the following, companies which see intrinsic values in nature and land shall be considered as being more value oriented towards nature than those who only see an instrumental value in nature and land. This will be proved in Chapter 8. Chapter 6 will help to identify this thesis' research contribution and the concerning research question and subquestions respectively.

Before I begin with the next chapter and dig into value orientation, I would like to bring forward my personal understanding of ethical attitudes and values towards nature.

Roger Crisp (1994) stated that there do not exist agent-relative values, but agent-relative reasons for behaving in a certain way. That is, even though we act according to values, we do so by deciding that it is good to act like that due to a reason. An example would be to help an elderly woman to cross the street. The personal and moral values behind this act are justified through my thought that I do not want to be told that not helping the lady would be wrong. I have good *reasons* to help her. But I do not have *values* to help her.

Why do I state this?

The direct connection of our reasoning for "good" and moral behaviour with values is unmissable. Through culture or our nurture, we have been told what is right or what is wrong. The crucial point here is that we were told what is *morally* right or wrong. At the same time humans are able to value (Rolston, 1994) and hence, they should be able to decide what is valuable and what is not. This means, we value things no matter if it is considered to be right or wrong. Again, we decide if we value something because we have a reason to do so. This thinking then is independent from our knowledge and learned experience about right or wrong moral behaviour.

However, in line with Windelband (1921), Norton (1991, p. 251) explains that "[v]aluing always occurs from the viewpoint of a conscious valuer (…) [because] [o]nly the humans are valuing agents." I argue that humans can therefore not exclusively judge in a holistic, non-anthropocentric view. Humans always decide due to reasons and include themselves in any decision, albeit a decision in favour for nature: "Value (…) is never found in the object itself as a property. It consists in a relation to an appreciating mind (…)" (Windelband, 1921, p. 215). Thus, the object (in this case nature or parts of nature) would be valued, *e.g.*, conserved, because the human mind makes up a relationship between that part of nature and himself. Even though there might not be any direct relationship such as a good harvest, there is always a thought behind why nature must be conserved since it is a subjective view and decision (Rolston, 1994). Callicott (1984, 1986) furthermore clarifies that being able to value such as

humans are, is an anthropogenic ability, which is not necessarily linked to anthropocentric views.

My idea of non-anthropocentric attitudes towards nature includes a holistic view, which bases values on all aesthetic and non-aesthetic desires that humans can believe are needed for nature to be conserved, to stay resilient and thus be recoverable from any human intervention. In my opinion, there is no need to have instrumental values and advantages from nature for the sake of valuing it. However, there is indeed the need to give clear indications of natural values in order to account for nature's values (see Chapter 2.1).

Valuing nature to me means to give it way for evolvement in any direction. Certainly, there should not be any incidents where humans need to refuge from nature as such. But on the other side, humans should stop polluting and emitting in order to reduce global greenhouse gases, global warming and environmental degradation. The reason for such behaviour should lie in nature's intrinsic value. However, I admit that nature's intrinsic value often becomes visible in its objects, such as warm sunshine, and with it comes an instrumental value. Here, not the human wellbeing is favoured, but the object itself. This value is pure and without selfish or ulterior motive (Rolston, 1994).

Stating my non-anthropocentric attitude, I do not purely represent ecocentric views on nature. I rather position myself into social ecology (*see* Chapter 3.2).

In the following, my position in non-anthropocentrism and social ecology (Bookchin, 1988) and my holistic approach in viewing nature will influence my research in as much as it affects the following chapters, especially the analysis part. The interpretive approach of my empirical research includes my subjective view on the world, or rather nature. It is therefore hardly possible to not involve my moral position at this point. However, I surely try to be as objective as possible in my investigations and therefore acknowledge different views which I do not get in touch with through literature (*see* Chapter 7). While researching, I might change my view on nature which is a possible outcome of the continuous learning process within hermeneutics (*cf.* Chapter 5). I am aiming for an objective investigation within my research. The reason for mentioning my research bias is the thematic area of ethics, which ultimately leads to moral reasoning, which I hereby stated.

4 Applying the Theoretical Framework to Food Companies - Value Orientation in the Food Sector

This chapter frames current approaches towards the understanding of value orientation in the food sector. I intend to provide further insights into value orientation in the food sector in the Analysis Chapter (Chapter 8). As will be shown below there is hardly any kind of research existing which investigates value orientation from a visual perspective. So, on the one hand this chapter can be treated as the applied version of the explained theories from the previous chapter (Chapter 3). On the other hand, this chapter serves as an introduction to the research design (Chapter 6) and the methods chapter (Chapter 7). Chapter 4.2 is thus conceptualised as a research paradigm (Friedman, 2014). Finally, Chapter 4.3 will put the food sector into the ecological accounting debate.

4.1 Value orientation in the food sector

In fact, there is not much literature on environmental attitudes among businesses, especially not on value orientations in the food sector[15]. It has been expected to find most information in business ethics literature. However, this literature mainly addresses managerial values as well as organisational values such as personal value orientation or profit maximisation (*see e.g.*, Weber, 2015; Klemm Verbos and Miller, 2015). This, in most cases does not include value orientation towards nature (*see* Fryxell and Lo, 2003; Roxas and Coetzer, 2012 as one of the rare exceptions). With respect to marketing and management research, there is indeed a load of literature concerning costumer values or strategic value management. Regarding the food industry, this is the current state of the art, whereas value chain approaches are of common interest among food business researchers (*see e.g.*, Grunert *et al.*, 2005; Macharia *et al.*, 2013).

---

15 Value orientation regarding the food sector and nature is indeed scarcely addressed in research. *E.g.*, Lea and Worsley (2006) address values in the food industry. However, they have an overall approach of finding market orientation value of process and product quality. Others, such as Traill and Meulenberg (2002) and Maybery *et al.* (2005) concern innovation values and so-called conservation values of farmers, but they do not dig into environmental orientation of food businesses.

Box 4.1: Possible value types that influence value orientation of firms.

It turned out that environmental ethics literature is coping with the questions of value orientation and values in nature to a far wider extent than business ethics (*see* Chapter 3). Recently, business ethics literature started to look at the organisational consciousness (*see e.g.*, Dibrell *et al.*, 2015; Pandey and Gupta, 2008) which also, but not exclusively involves environmental values. Pruzan (2001) even suggests that talking about consciousness on an organisational level is rather metaphorical than literal. As environmental conscious organisations care for values (Pruzan, 2001), it is assumed that these organisations could be considered as value oriented towards the environment. This assumption allows for the inclusion of the literature stream of organisational consciousness, even though this partly touches upon environmental psychology and not only covers business and environmental ethics literature.

The combination of literature of environmental ethics with business ethics and few literature of environmental psychology seems thus useful as foundation for the data generation for the first chapters (Chapters 3-6).

Within this thesis, value orientation, I claim, is an indicator for an existing relationship between any moral entity (humans, society, institutions, industries) and nature. According to Hansla *et al.* (2008, p. 2), "[v]alue orientations are defined as clusters of compatible values or value types." I assume that the more distinctive the value orientation of a food company towards nature is, the stronger is the relationship between the food company and nature. Hence, value orientation needs to be defined as all the value types that make up this relation. Thus, various types are needed which are in line with business values and environmental ethics (see Box 4.1). The values are derived from literature (see Chapter 3) and will be further developed as part of this chapter.

Within ethics, the relationship of humans and nature has long been discussed (*see e.g.*, Schmidtz and Willott, 2002). Important here is that "humans" are not necessarily individuals. Therefore, I argue, it should be possible to replace "humans" with "companies". This is in line

with Jones (2010, p. 131): "All organisations comprise human beings who, although nominally adhering to specific organisational objectives such as profit making are also simultaneously citizens, parents and members of a wider community" (Ostapski and Isaacs, 1992). Based on this argument, I follow that it should be possible to reveal a relationship between food companies and nature through the abovementioned value types (*see* Box 4.1). To substantiate my allegation that "humans" in this regard could be replaced with "companies", I am going to pick up my previously mooted questions (*see* Chapter 3) and will continuously answer them. This, in the end, shall give a comprehensive picture of the relationship between nature and food companies, even though the theories originally concern "humans" instead of "companies".

Several studies suggest and prove that owner-managers with a positive attitude toward the natural environment (ANE) also have an interest in environmental management and respective actions in favour for the environment.[16] Dibrell *et al.* (2011) argue that those businesses possessing a strong ANE also foster environmental management to a larger extent (Roxas and Coetzer, 2012). Barr (2007) and Stone *et al.* (2004) further prove that positive efforts in favour of nature are more successful when strongly advertised by the top-management.

Fryxell and Lo (2003) suggest that managerial behaviour (and thus the business attitude) in relation to the natural environment is highly influenced through environmental knowledge. Kaplan (2000) and De Young (2000) state that personal interest and even intrinsic satisfaction are consequences of pro-environmental behaviour.

Referring to the previous Chapter 3.4, Brady (2006, p. 281) posed the following question:

"How will valuing based in aesthetic experience motivate care and respect towards environments with which we have not developed relationships?"

Regarding businesses, literature shows that it is not enough as an employee or manager to find nature beautiful, but to know about values derived from the environment (Barr, 2007; Stone *et al.*, 2004). Furthermore, consciousness regarding environmental values is important to foster pro-environmental behaviour (Pandey and Gupta, 2008).

Interestingly, business ethics literature hardly covers environmental values from an organisational point of view. Instead, the most common types of values investigated are those related to markets, the social or the spiritual (Pandey and Gupta, 2008; Sharma, 2006). Such organisational values are mostly linked to the consciousness of organisations. Wilber's (2002) quadrants of reality often serve as a base for understanding society's and institutions' dimensions of consciousness.

---

16 *See e.g.*, Banerjee, 2002; Milfont and Duckitt, 2004; Quinn, 1997; Rutherford *et al.*, 2000; Stern, 2000.

Based on Wilber's (2002) quadrant, Pandey and Gupta (2008) developed another quadrant, which divides an organisation into four sections which express the organisations' objectives.

	Subjective	Objective
Atomistic view of firm	Organisational identity and reputation	Profitability, market share
Integrative view of firm	Collective and intrinsic human development	Systems development
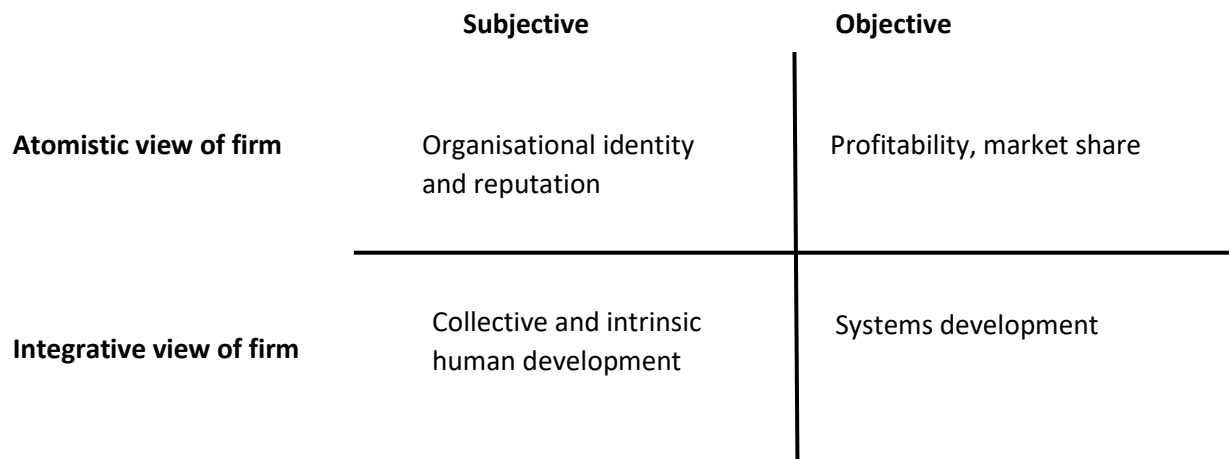
Figure 4.1: Organisational objectives (adopted from Pandey and Gupta, 2008, p. 892, based on Wilber (2002)).

According to Figure 4.1, an organisation can view itself as a separate entity or as part of a market system (atomistic view). Another view would be to be part of a larger system, such as an ecosystem (integrative view). Together the four quadrants constitute an organisation's reality (Pandey and Gupta, 2008). However, though the author's mention the integration of other systems, social or ecological, in the subjective – integrative view of a firm, they do not exclusively address the ecological sphere. There is no evidence for a relation of nature and the firm within the understanding of Wilber's organisational reality and Pandey and Gupta's (2008) organisational consciousness. In fact, proponents of stakeholder theory call for the integration of the stakeholder "natural environment" into a firm's understanding of who to concern as stakeholders (Laine, 2010; Starik, 1995; Stead and Stead, 1996). This is proof for a needed debate on the nature – company relations.

Nevertheless, applying their quadrant to this thesis seems useful as certain value types are indeed addressed. I will draw on one of their consciousness dimensions, namely the spiritual conscious organisation. Whereas the other two dimensions, market and social consciousness, concern either the atomistic firm only (market) or internal firm relations (social), the third dimension of the spiritual concerns all four quadrants. In particular the inclusion of *ethics of care* seems useful here (*see* Pandey and Gupta, 2008, Table 1, p. 895).

Although the term 'spiritual' goes beyond an explicit ethical value, as it embraces many values at the same time, it is nevertheless of applicability in the following. Mitroff and Denton (1999) speak of a collective awareness of existence in regard to the spiritual organisation. Giving a

meaning to a firm's activities such as caring for the own, the market and others outside the firm is what spiritual organisations represent (Emmons, 2000, Pandey and Gupta, 2008; Zohar and Marshall, 2000). "Caring has to be viewed as a species activity that includes everything that we do to maintain, contain and repair our "world" so that we can live in it as well as possible (…) It eventually creates a complex life of sustaining web" (Pandey and Gupta, 2008, p. 894). Furthermore, as Pandey and Gupta (2008, p. 894) explain: "A spiritually conscious organization is the one engaged in meaningful work in whatever area it is operating. Management decisions are inspired by an awareness of the organization being embedded in its social and natural environment." So, only in the context of the spiritual dimension the natural environment is consciously mentioned.

This is misleading, however, because companies do aim for profitability as well (2nd quadrant in Figure 4.1) and therefore do not exclusively concern the natural environment. They rather aim for a relationship with society at large (Wakhlu, 2000) and therefore see nature as part of that system.

The relationship of businesses and nature is not explicitly cared of through spiritual consciousness of organisations. This is because the organisation sees instrumental values in the natural environment, such as land and its resources. Even though, efforts to avoid polluting and resource exploitation are undertaken by many different organisations there is still the need for land and natural resources on which these organisations rely for their businesses to run operations. Food and agri businesses are such organisations. Their organisational consciousness could be well associated with one or even all of the four quadrants (see Figure 4.1).

Some companies can be connected to so-called anthroposophic attitudes (Heisterkamp, 2009). These companies produce in harmony with nature and consider themselves as pionieers in sustainable business making and production. Those companies which dedicate themselves to an anthroposophic behaviour agree to a philosophy that is deeply rooted in ethics of human wisdom, spirituality and social cooperation. Even though there is a deep connection to environmental sustainability, the main task of anthroposophic companies is to live up to a human centred business ethic (Heisterkamp, 2009). Hence, for this thesis anthroposophic companies are not treated differently from those who have other anthropocentric views on nature. There is a clear anthropocentric attitude to be found in companies such as Alnatura or Voelkel but no explicitly intrinsic value orientation towards nature. However, with regard to value orientation towards nature, anthroposophical companies could be considered as being on the highest level of value orientation towards nature (*see* Chapter 6.1).

Generally, many global industries use natural resources for their productions. The problems related to human activities and nature's disadvantages are long known (Stern *et al.*, 1992). Understanding that there is a linkage between industrial production and environmental degradation is hence crucial for limiting harmful actions.

Aldo Leopold (1949) asserts that due to a lack of love and missing respect for land, people tend to abuse land and its resources. The food and agricultural sector often becomes claimed as the biggest contributor to resource waste and exploitation right up to land grabbing practices (Lea and Worsley, 2006). According to Leopold (1949, p. 209) the ending of such behaviour[17] would require "(…) obligations over and above self-interest (…)", which then results in limited freedom. Choy (2014, p. 435) in this regard calls for "(…) a moral or ethical standing to the natural environment (…)" as one of the aspects of sustainable development.

At this point it is crucial for companies to acknowledge that nature's beauty and other aesthetic aspects of the environment are highly influenced through every production related to land and its resources: "The processes and products of organizations contribute significantly to environmental issues, particularly those of manufacturing firms and primary goods producers" (Bansal and Kistruck, 2006, p. 167). The latter matters especially for the agri and food industry. As a primary good producer, the agri industry does not only rely on land, natural resources and space, it also consumes those factors and by this damages the environment to a large degree. Of course, there are also techniques for *e.g.*, growing or planting which help degenerating the soil, but evidence is that the agri industry harms the environment (Baldwin, 2015).

"The attitude we think it appropriate to take toward living things depends on how we conceive of them and of our relationship to them. What moral significance the natural world has for us depends on the way we look at the whole system of nature and our role in it (…)" (Taylor, 1986, p. 152). Moreover, food companies must understand their role in that system. I assert, that only a holistic approach can help companies to comprehend on the many interlinkages it has with nature. In order to "*conceive our relationship to living things*" (*ibid.*) (and species as well as ecosystems), a foundation of aesthetic values must be given. This is, what only can be consciously conceived can be transformed into business relevant values. I argue, that aesthetic values are easy to perceive and thus easy to comprehend on. For food businesses it should be possible to set up value types, such as intact nature, wilderness, biodiversity, species and ecosystem conservation as well as resilience[18]. These factors could enhance the understanding of nature's preciousness. In fact, even though most businesses "only" see the instrumental values in nature, living up to the suggested values, at least paths a

---

17 Not referring to the food sector as such, but to land use in general.

18 See e.g., Rodin (2014).

way towards environmental thinking (De Young, 2000). Varandas (2015, p. 210) explains that "(…) natural aesthetic appreciation is a powerful way of modelling our ethical relation with the natural world."

Its instrumental value might be understood by some, but is it aesthetically valuable? This question has been posed in Chapter 3.4.

The problem is that due to the anthropocentric attitude of companies[19] "(…) our aesthetic tastes are often not in line with our ecological interests" (Varandas, 2015, p. 210), which is the reason for Varandas to emphasise natural aesthetics as a way to better understand the relation of humans with nature.

Food companies need to be able to understand that they are part of a system in which they operate – basically nature and its resources. In this regard, Leopold (1966) argues "[w]hen we see land as a community to which we belong, we may begin to use it with love and respect." (In: Varandas, 2015, p. 211). It is crucial for food companies to be able to realise this community and feel as being part of it, instead of dominating it. Again, I argue that companies that realise values in nature, are consequently more value oriented towards nature. Hence, these companies sustain a relationship with nature (*see* Table 8.5.2).

Much is said about social consciousness of companies (Dibrell *et al.*, 2015; Pandey and Gupta, 2008). The more companies feel responsible for social matters, the more willing they are to engage into constructive problem solving with social participants (Cameron, 2011).

The treatment of nature by businesses can be made visible through responsibility efforts (Gray *et al.*, 2014). Cameron (2011), though not directly relating his concerns to nature, argues that only through responsible leadership there is the intention to be and to do anything good. Cameron (2011) further relates this kind of leadership to virtuousness. In his opinion, this contrasts the ethical approach of fulfilling duties and complying with rules, as "(…) virtuousness represents a universal and stable standard of the good" (Cameron, 2011, p. 27; Cameron, 2006). This, I argue, could be transferred to the relation of businesses with nature as well (*see* Box 4.2 below). However, I admit, that responsibility is far from being obvious, even though it has been reported about it. Nature's beauty is obvious (yet depending on the eyes of the beholder). Thus, all values should be derived from the moment of understanding nature's beauty and its richness in resources. This statement connects well with the next question, posed in Chapter 3.4:

---

19 Not to confused with anthropo*sophical* attitudes of companies.

But how can nature be appreciated and protected when there is no unifying aesthetic concept of what makes nature beautiful and hence precious and worth protecting?

Whenever there is appreciation of parts of nature, no matter if intrinsic or instrumental, there is also the possibility to *not* appreciate it aesthetically and hence to build no immediate relationship to it.

Niebuhr (1970) finds that only through relationships, value can be created. These relationships exist between beings and are basis for any kind of value that does not destroy that relationship. According to him, there is no difference between instrumental or intrinsic values. Furthermore, there is no such value at all except the value we create when being with others, which he describes as "there is no self-relatedness apart from other-relatedness" (1970, p. 105). This value needs to be *good* since all *bad* value is nothing we would bring in connection with our friends or relationship-holders in general. The evil, in Niebuhr's mind, destroys a relationship, whereas the good keeps it up. This is why Scoville (1995) rather speaks of internal relations, which then explains why there do not have to be intrinsic values.

Understanding the relation between humans, their food businesses and nature is firstly about interpretations of nature. It indeed matters how people see nature when trying to examine their relation to it. Secondly, the attitudes towards nature (*see* Chapter 3) matter because these help to understand human actions in nature (Scoville, 1995). Niebuhr (1970) emphasises the impact of the attitudes trust and distrust. Both attitudes have an impact on how humans regard nature, how they treat it and how they create an (un)conscious relationship with it.

4.2 Research Paradigm

In the following, I am going to explain how I constitute a frame, which extracts values from land ethics and aesthetics and relates it the food sector. Kuhn (1966, 2000) and Patton (1990) describe such a frame as a research paradigm which are the underlying assumptions, which serve as an interpretive framework for the developed research (Friedman, 2014).

Cox (1997, p. 178) indicates how the importance to appreciate and protect nature can be emphasised: "Our conception of the good human life essentially involves our living within a flourishing natural environment, in which case our decision to preserve and enhance elements of the nonhuman world is justified by reference to the enhancement of human life which is expected to result. According to Thompson [1990], therefore, the ultimate justification for our environmental values appeals to enlightened self-interest. The relation toward nature which this self-interest entails is instrumental. We value nature *for* its contribution to human welfare."

Transferred to the food sector, food companies must see a clear instrumental value in natural resources and thus in nature. Moreover, these values are utilitarian. The ultimate question then is:

Can the food sector value nature decoupled from its resources or is there no possibility for the sector to intrinsically value its aesthetics as well as its being as such?

This question matters because it clearly differentiates the utilitarian approach of most food companies in contrast to those companies which claim to produce in harmony with nature (more inconsiderately expressed as *sustainable* or *organic*). Especially those companies which produce organic food are expected to do so and are possibly able to cope with an environmental ethics approach rather than a utilitarian way.

Cox (1997) states that there are qualities which make up the value of relations. These qualities can be friendship, respect among people or between people and nature. Further qualities would be romantic love, hatred or even exploitative or oppressive behaviour. It is worthy discussing the option to find such qualities in the relationship between nature and food businesses. Considering the many options there are (*e.g.*, being oppressive towards nature, being respectful, being equalised and thus rather instrumental), the challenge is to reduce these options to those which fit for every food company (not just these under investigation).

Relational environmental ethics (Cox, 1997) are thus the baseline for investigating these options. These embrace all these environmental ethics, which address the relationship between humans and nature, such as land ethics and aesthetics. As previously explained, the term "human" is interchangeable with "company".

Regarding the relationship a company has with nature, there is evidence from environmental ethics that values matter in order to reveal and keep up this relationship. According to Schmidtz and Willott (2002) we start creating a relationship to an object once we begin to value it (unless it already exists).

Related to the food industry this means, if the agri industry knows about fruitable land but does not know how to use it, it might see value in it, but cannot build a relation to it. Obviously, there is the opportunity to find intrinsic values in land. But when this value or any other qualities (*cf.* Cox, 1997) are not acknowledged by a company, a relation cannot be built (Schmidtz and Willott, 2002). Hence, there also seems no reason for the company to conserve that piece of land out of respect for the inherent intrinsic values. Once the agri industry understands how useful fruitful land for its crop production is, it starts to create a relationship to the land and uses it because land becomes valued. The acknowledged value then is instrumental and thus utilised for the purposes of the company, without consideration of impacts for other living beings, unless ecological or organic cultivation is undertaken in harmony with nature. The

quality of the relationship is morally wrong or bad when it shows oppressive or exploitative behaviour (*see* Box 4.2; Cox, 1997). However, the quality of relationship might be of a good moral when the instrumental values are treated with respect and care. This is, as long as there are value types found which acknowledge the instrumental value of land or nature but are shown through codes which are about respect or love (such as people praising the crops they harvest), the quality of the relationship is good instead of bad.

Relationship of food company and nature = strong when value orientation of company is strong, too.

➤ **Qualities** define the level of the relationship between nature and food company (acc. to Cox, 1997; Schmidtz and Willott, 2002), *here*: Qualities are a result of the value orientation of food companies.

   o Respect for land and nature (*e.g.*, nature conservation) ⎤ Good
   o Love   ⎦ qualities
   o Oppressive behaviour ⎤ Bad
   o Exploitative behaviour ⎦ qualities

Value orientation = "(…) clusters of compatible values or value types" (Hansla *et al.* 2008, p. 2)

➤ **Value types**, which influence and indicate the value orientation:

   o Aesthetics (acc. to Carlson, 2010)
      ▪ Acknowledgement of nature's beauty and therefore its instrumental values (recreation) and intrinsic values (beauty, preciousness…)
   o Harmony between human and nature/land (acc. to Leopold, 1999)
      ▪ Responsibility towards nature (acc. to Cameron, 2011)
   o Land ethics (acc. to Rolston, 1988)
      ▪ Acknowledgement of land's intrinsic value (additional to acknowledging its instrumental values)

Box 4.1: Relationship of food companies and nature as well as affected value types.

Box 4.2 is a summary of the previous findings from literature of mainly environmental ethics and business ethics. The relationship of food companies and nature is influenced through the qualities of that relationship. Surely, this relationship is one-sided. This is, the derived qualities are those from the company perspective, not of nature's perspective as this is obviously not possible to reveal. I argue that the stronger the value orientation towards nature, the stronger is the relationship of food companies and nature. Hence, value orientation or rather the value types are the used indicators for finding this relationship. Value types, which influence value orientations are mainly those of harmony, responsibility or intrinsic as well as instrumental values which can be found in the land ethics and aesthetics literature (Chapter 3). The more values are found (*see* Figure 4.2), which make up the value orientation of a food company, the stronger will be the relationship with nature and hence, the quality of that relationship constitutes of love or respect towards nature. Morally speaking, a company that fosters a strong value orientation will bring forward many value types influencing that value orientation and thus result in a *good* quality of love or respect towards land. In return, finding no factors indicating value orientation result in a *bad* quality such as exploitative behaviour[20]. Figure 4.2 illustrates the differences between a strong value orientation of companies towards nature (and thus a strong relationship with nature) and a weak value orientation towards nature (hence, a weak relationship with nature).

---

20 Obviously, exploitative behavior shows the acknowledgment of nature as obtaining instrumental value and thus, indeed, valuing it. Nevertheless, within this thesis building bad qualities with nature are regarded as having no relationship with it at all. This means for a company to be non-value-oriented towards nature (instead simply economically value-oriented) (*cf.* Figure 4.2).
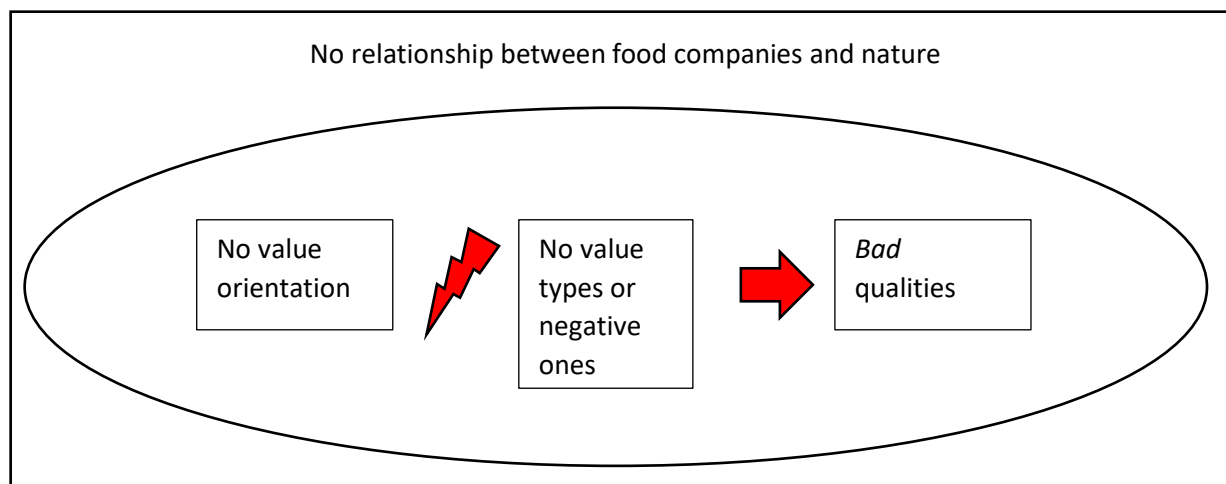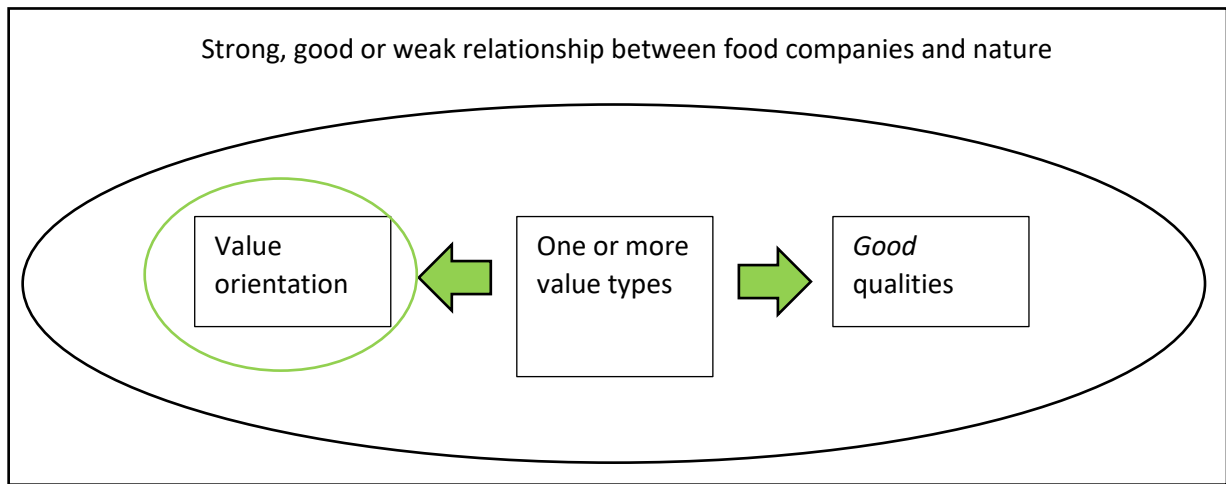
Figure 4.2: Strong, good and weak or non relationships of food companies with nature. Derived from Chapters 3 and 4.

According to Figure 4.2 a strong value orientation by a food company towards nature can only occur when at least one value type, which indicates the value orientation, exists. The more factors are found (during the visual content analysis), the better is the value orientation and hence, the stronger is the depicted relationship between the company and nature. This also means that there are good qualities in the relationship depicted. In return, when there is no value type indicating value orientation towards nature, there is no value orientation present and hence the relationship towards nature is not existing. This inheres bad qualities since bad qualities are indicating that the relationship with nature builds *e.g.,* upon oppressive behaviour[21].

The above-mentioned paragraphs serve as assumptions about what a value-oriented company needs to reveal in any way. That might be through visual or written or oral statements. However, it is expected, that there are different ways of disclosure, presentation and interpretation. Hence, just because the content analysis reveals many value types, one cannot immediately state that there for sure is value orientation expressed by the top-management or by employees or any stakeholders of the respective company.

Box 4.1 does not intend to be exhaustive in its revelation of values or qualities. It illustrates a summary of the connections between the relationship of food companies and nature as well as value orientation with its value types and the qualities of the relationship.

The following Box 4.2 shows from the literature derived value types that define value orientation for this thesis. I am well aware that this list could have been provided through a more profound and thoroughly process, such as a qualitative content analysis. However, as this listing acts as a research paradigm (Friedman, 2014) and just as a base for the further investigations (*see* Chapter 7), it seems reasonable to put most effort into the visual analysis (*see* Chapter 8). From those delimitations it follows that I do not intend to correlate types of value orientation with attitudes or philosophies in environmental ethics[22]. As my explained philosophies (*see* Chapter 4.1) derive from environmental, but not business ethics, I assume that correlations would indicate various and confusing connections. Moreover, as most of the found values are derived from literature and not from methods such as NEP-scale[23] or HaN-Scale[24], the below listed types could be well placed into biocentric attitudes.

---

21 See footnote 20.

22 For further information regarding correlations of environmental values, behaviour and orientations see De Groot and Steg, 2008; De Groot *et al.,* 2011; Dunlap *et al.*, 2000; Hansla *et al.*, 2008; Schwartz, 1992; Hansla *et al.*, 2008.

23 New Environmental Paradigm (*see* Dunlap and Van Liere, 1978).

24 Human and Nature (see De Groot *et al.*, 2011).

However, as value types, which speak for value orientation towards nature, need to include nature-related thoughts or behaviour, there is no way to not include these views on nature. In addition, as negative values regarding nature (*e.g.,* mastery over nature, *see* De Groot *et al.,* 2011) cannot account for value orientation towards nature, it would not make any sense to include other than so-called biocentric values in the following value types. Hence, in order to conduct a visual content analysis that indicates value types of value orientations, I stick to the following value types derived from my literature review, being well aware that this list is preliminary and could be extended later on through an abductive approach while conducting the analysis (*see* Figure 6.1):

Value types, which influence the value orientation:

- o Land ethics (in general acc. to Leopold, 1981, 1999 and Rolston, 1991, 1997, 1999)
    - ▪ Acknowledging land's instrumental value (acc. to *e.g.*, Benson, 2008; Callicott, 2006 (*cf.* Fahy, 2012)
    - ▪ Acknowledging land's intrinsic value (acc. to *e.g.*, Sterba, 1994; Taylor, 1997, 1986)
    - ▪ Harmony between human and nature/land (acc. to Leopold, 1981, 1999)
        - • Responsibility towards nature (acc. to Cameron, 2011)
        - • Holism (Callicott, 2006)
        - • "Respecting the Earth: harmony with other species" (acc. to De Groot and Steg, 2008)
        - • "unity with nature: fitting into nature" (acc. to De Groot and Steg, 2008)
    - ▪ No resource exploitation (acc. to Cox, 1997; De Groot and Steg, 2008)
    - ▪ Protecting and preserving the environment (acc. to De Groot and Steg, 2008)
    - ▪ Worship of landscape (acc. to Boylan, 2001)

- o Aesthetics (in general acc. to Carlson, 1997, 2010)
    - ▪ Acknowledging nature's beauty and therefore its instrumental values (recreation) and intrinsic values (beauty, preciousness)
    - ▪ No exploitation (Cox, 1997), so that intact nature or wilderness becomes visibly destroyed
    - ▪ No pollution (De Groot and Steg, 1997)

Box 4.3: Value types that influence the value orientation of food companies. Extended version, derived from Chapters 3 and 4.

Box 4.3 will be applied in the Analysis Chapter (Chapter 8). Chapter 7 will explain how the value types will be used and how this is going to help finding the relationship between food companies and nature.

In the previous chapter (Chapter 3.4) I argue the following:

"I rather tend to believe that value is created only through nature, but not through humans since without nature there is no creation at all (Rolston, 1988). In my opinion the human evaluation is then just an expression of how much the object is worth, which again presumes an already existing value which is just to be perceived by the humans."[25].

My intention, however, is not to give units to the values derived from the picture analysis. I am neither arrogant nor capable of placing monetary units to the values derived since they are generally vague and result from an interpretive approach of analysing literature and (later) pictures. Hence, the intention is to reveal those values from pictures, not to measure their economic or any other metric value.

Why do I need to set up a research paradigm and define value types?

Shrivastrava (1995) speaks of the need of shifting paradigms in order to change organisational approaches, which eventually put nature at the centre of stakeholder management. Within my research I investigate how companies depict value orientations towards nature. Therefore, I am going to conduct a picture analysis, moreover a visual content analysis (Rose, 2012). In order to do so, I have to make sure what kinds of values I am looking for. Surely, there will be more values to come during the categorisation and coding process (*see* Chapter 7). My approach is two-fold (1-2) and comprises of four possible results (1a-b, 2a-b):

(1a) Value orientation found:

   If I am successful in retrieving values from the pictures, I can state that there is an existing value orientation towards nature by the company, at least depicted in the report.

(1b) Value orientation failure:

   If I do not find any values, I can state that there is no obvious value orientation towards nature seen in the pictures from the report.

(2a) Relationship of food company and nature "good qualities":

   In case of (1a), I can state there is evidence from pictures, that an existing value orientation towards nature means a strong relationship between the food company and nature, with *good* qualities.

---

25 Cited from p. 48.

(2b) Relationship of food company and nature "bad qualities":

In case of (2b), it can be stated that value orientation is found through the picture analysis but with a weak relationship due to bad qualities.

The way I investigate the pictures in the company reports calls for the abovementioned research paradigm because it is a new approach of placing companies into a biocentric view instead of anthropocentric views, which are normally found in management and organisational theories (Shrivastrava, 1995).

4.3 Current state of research – EA and the food sector

One year before the beginning of this thesis the initiative of Ecological Accounts of the St. Andrews University (UK) and the University of Canterbury (NZ) called for progressive academic actions and changes in how to approach ecological accounting[26]. New ideas about how to address ecological matters in the accounting discipline were of interest and concerns about the classy accounting procedures became raised.

Ecological accounting is a discipline which origins from conventional management accounting (Burritt, 2004). It is an inhered critique on managerial accounting as ecological accounting seeks to embrace a whole system of interlinkages of the company's doing with nature and thus also include that there is a point of saturation: "Accountancy is familiar with the categories of 'more' and 'less' but doesn't know that of enough" (Gorz, 1989, p. 112 in Gray *et al.*, 2014). The critique on conventional accounting and the call for more precise accounts of ecological matters go back to the 1990s (Hines, 1992; Hopwood, 2009). Ecological accounting goes along with reporting and since then many countries set up regulations for companies to report on social and environmental matters and not just financial figures, the number of companies publishing CSR, sustainability and environmental reports has been growing (*see e.g.*, Brown *et al.*, 2009). This also holds true for the food sector (Hartmann, 2011).

Within this thesis, ecological reports are hence considered as ecological accounts and even though there is no guarantee that ecological accounts show the point of "enough", such as "enough resource wastage" or "enough turn over", there is at least the opportunity to reveal more than just financial numbers. In fact, Hopwood (2009, p. 438) claims that "(…) rather than seeing reporting as ever being likely to emerge as an adequate approach to corporate transparency in the environmental sphere, we should instead focus on a multitude of ways of enhancing the informational context of corporate activities." According to Hopwood it is not enough to publish reports in order to cope with environmental pollution due to industrial

---

26 http://arts.st-andrews.ac.uk/ecological-accounts/.

production. The reason for his statement is the risk of losing information due to the limited reporting styles that exist and that do not encourage companies to reveal more than requested by the government (Hopwood, 2009).

The reporting styles of food companies have been investigated to a large extent (*see e.g.*, Maloni and Brown, 2006; Hartman, 2011; Kong, 2012; Tsang, 1988). But none of these investigations have looked at reports with regard to the relationship of food companies and nature. Especially, they have not been investigated in terms of pictures. This, in return does not surprise, concerning that visual management studies are a relatively new domain and calls for more engagement in the visual have just recently been getting louder (*see e.g.*, Bell and Davison, 2013; Davison, 2015; Warren, 2005).

The agri and food sector clearly is one of those industries, which contribute to the global warming, the greenhouse effect and other climate change triggering factors as well as biodiversity-losses (Baldwin, 2015). According to Jones (2010, p. 131) organisations "(…) can be seen as accountable for natural assets which they own (*e.g.*, habitats) and for any actions which impinge upon the environment (*e.g.*, such as the use of natural resources or pollution (Willis and Goodfellow, 1991))."

Certainly, also food companies publish reports on their environmental efforts and undertakings. However, as they are aware of their environmental impacts, they tend to publish what sounds less harmful (BASIC, 2014). This thesis then contributes to the question of how ecological accounts of food companies are constructed and if there are differences in value orientation and between conventional and organic food companies.

This chapter intended to summarise what value orientation towards nature means and how food companies can be included in an investigation of it. The applied theories of Chapter 3, namely aesthetic value and land ethics are reflected in the explained value types, which indicate value orientation. Combined with further literature with regard to business values and the food sector, a comprehensive picture on environmental value orientation of food companies has been displayed. This picture serves as base for a distinctive understanding of the relationship of food companies with nature.

The next chapter (Chapter 5) will elaborate on how this PhD Thesis is methodologically framed. Chapter 6 is going to explain the research questions as well as the contribution of this investigation to the fields of accounting and reporting as well as visual management studies.

5 Methodology – Visual Hermeneutics

This Chapter positions my thesis into the meta-theoretical perspective of hermeneutics and visual hermeneutics in particular. As the visual hermeneutics are a rather new discipline (and often referred to as hermeneutics *and the visual* instead of a particular stream in the hermeneutic thinking), I will firstly explain hermeneutics in general and secondly combine these with the visual aspects of our lifeworld and how to use hermeneutics as a meta-theoretical tool for interpreting pictures.

5.1 Hermeneutics

Originally, hermeneutics have been about "decod[ing] the original meaning of the words by skillful procedues" (Gadamer, 1986) and concerned humans sciences such as philology and theology (Lueger and Hoffmeyer-Zlotnik, 1994). Hermeneutics are "(…) oriented toward an ideal of cognition based on understanding and interpretation" (Lueger and Hoffmeyer-Zlotnik, 1994, p. 294) of what we see, feel, believe, experience, read, know, remember or do. Whereas Schleiermacher (*cf.* Gadamer, 1986) includes living speech as part of the cognition process, Dilthey (1981) focusses on the written word ("Everything is text" (Lueger and Hoffmeyer-Zlotnik, 1994, p. 294)) and tries to raise the hermeneutics to an acknowledged method of document understanding (Lueger and Hoffmeyer-Zlotnik, 1994). Heidegger (*cf.* Gadamer, 1986) leverages the hermeneutics to a meta-physical level and by this gives way towards hermeneutics as a theory of science. Gadamer (1986) sees the hermeneutic process as a "pre-structure of understanding" (Lueger and Hoffmeyer-Zlotnik, 1994, p. 295) and a "real experience, that is, an encounter with something that asserts itself-as truth" (Gadamer 1986, p.493, in: Lueger and Hoffmeyer-Zlotnik, 1994, p. 295).

Another important name concerning hermeneutics is Oevermann (1993, 1991; Overmann *et al.*, 1979). He developed the objective hermeneutics, which include so-called "rules of interpretation" (Lueger and Hoffmeyer-Zlotnik, 1994, p. 300) for the fine analysis of texts. Oevermann additionally suggests the use of a sequential analysis of interpretation for individual cases of social entities, such as families, documented in texts. This method requires the setting of the frame of the "interpretive perspective" (*ibid.*).

All in all, hermeneutics are about our reflection of what we know and understand. Within hermeneutics there are two central questions, which are (1) what is understanding? and (2) how do we understand? Hence, a theoretical as well as a methodological question (Kurt, 2004). In order to interpret reality, there is the need to understand both, the interpretation of actions as well as the understanding of the actions of interpretation (Hitzler *et al.*, 1999). According to Kurt (2004), who – in line with the previously mentioned authors - positions his view into the

understanding of ordinary life, there are no concrete answers to these questions. Within social science, hermeneutics are about acknowledging open questions and being open for new perspectives and problems (Kurt, 2004; *cf.* Berger *et al.*, 1972). In order to reflect empirical findings and scientific research, it is necessary to understand the rules behind interpretation (Hitzler et al., 1999). This is exactly what picture interpretation is about. The visual hermeneutics concern all aspects of how we understand the visual.

The hermeneutic circle (*see* Figure 5.1; *cf.* Kurt, 2004) is key to understanding hermeneutics and how we understand the lifeworld. According to Gadamer (1972) by means of pre-knowledge we can put a text (or a picture) into context. This helps us to understand its structure. That means, the previous existing horizon of the reader or viewer of text or picture gets expanded through new perceptions while reading. When reading the text again, we understand it better and at the same time, the pre-knowledge horizon becomes expanded again. There is always a pre-knowledge that guides us in the way we understand and hence, there is no way to avoid the hermeneutic circle (*see* Figure 5.1). The interpreter of the written or depicted gains more and more insights into what the author or painter wants to express – a fusion of horizons (Gadamer, 1972). Other descriptions of the hermeneutic circle are about arguing from the parts to the general (Bolten, 1985). Stierle (1985) adds the structure component to the circle and by this contributes to the methodological application of hermeneutics.
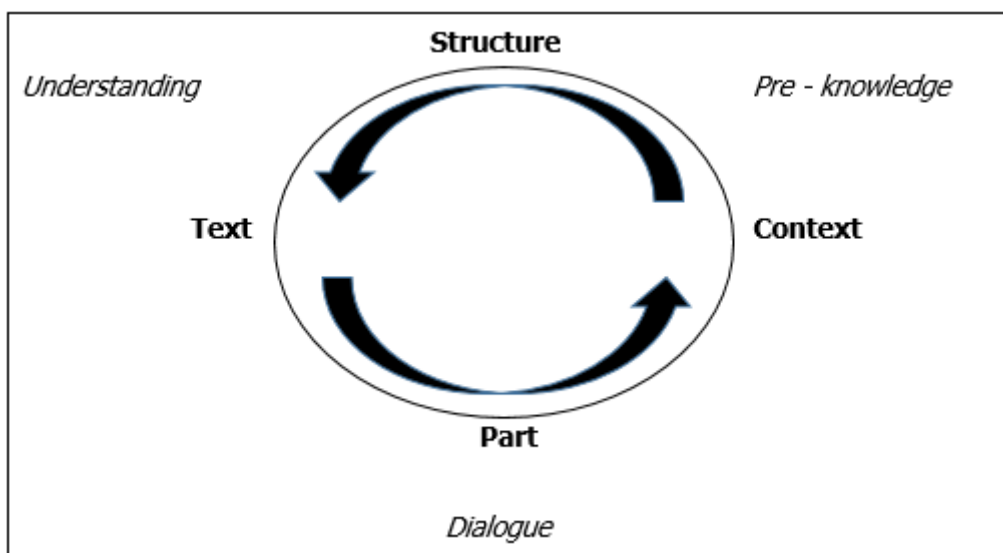

Figure 5.1: The hermeneutic circle (own depiction based on Gadamer (1972), Heidegger, Stierle (1985) and Bolten (1985)).

5.2 Hermeneutics and the visual

There is only few literature regarding the visual and hermeneutics although pictures are a perfect example for how we interpret or misinterpret. Indeed, there are attempts of formulating "new visual hermeneutics" (Kath *et al.,* 2015), however there are no "former visual hermeneutics" neither. Still, hermeneutics concern interpretation and the visual requires interpretation. Hence, visual hermeneutics are all around at any time (maybe not consciously reflected).

The context of a picture matters. Whenever we look at a picture we bring pre-knowledge with us that tells us how to view a picture, what to look at, what to leave aside and how to interpret it. Berger *et al.* (1972, p. 9) put it: "We never look at just one thing; we are always looking at the relation between things and ourselves." All this knowledge, consciously used or not, guides us in a way that leaves no room for a non-contextual interpretation. However, the actual production process is often not known to us (*e.g.*, who took the picture? What was the intention of the photographer or painter?). In other cases, we do not know exactly about the picture's historical context and how this influenced the production process (*e.g.*, a photograph taken in a war scene, fake or real?). In terms of corporate reporting, the context of the represented pictures is clear to the extent, that we always know that a picture is part of that report. In order to completely understand the picture, it needs as many perspectives as possible to reach a "holistic view" (Bekkers and Moody, 2014). Such perspectives reveal the whole context of the picture: What kind of visualisation (*e.g.*, picture in a company report), who produced it, who placed it in the report and with which intention? This knowledge requires the perspectives of background or historical knowledge, production processes, reporting expertise and finally the ability to interpret the picture (which in turn requires knowledge about visual analyses). Hence, several applied perspectives help to understand the context at best.

According to Müller (2012), interpreting pictures means to understand a picture's boundaries and its relation to other pictures. Müller's approach of systematically interpreting pictures according to context, sequence and contrasts and thereby comparing pictures differs from my approach. My aim is not to compare every picture but rather to use the content of them to make statements concerning the environmental values they depict (which is necessary to understand the depicted relation towards nature by the respective food company). However, Müller's concern that interpreting a picture without context or the remaining pictures (in my case: from the sustainability report), supports my methodological approach of first seeing the picture and describing it without too much knowledge about the report (*see* Chapters 6 and 7) and later interpreting what is seen and how this relates to the context (*see* Chapter 8, in particular Chapter 8.6). Acknowledging "(…) the subjective and contextual nature of images (…)"

(Bekkers and Moody, 2014, p. 145 acc. to Crary, 1992; Sturken and Cartwright, 2001) is a necessary pre-condition for this.

In order to follow the hermeneutic circle, this PhD thesis pursues the approach of (1) understanding the pictures' content in the selected sustainability reports, (2) finding environmental values within the pictures (whereas finding none is also an option) to make statements concerning the depicted relation of food companies and nature and (3) putting into context with the written text in the reports so that (4) the relationship between food businesses and nature can be (possibly) revealed and explained at best.

During the recontextualising step the pictures of the reports (step (3)) will begin to "(…) illustrate[] the sentence[s]" (Berger, 1972, p. 28) surrounding it. According to Berger (1972) images used to explain circumstances become part of the arguments made. In my case, they are part of the argument that pictures are accounts and as such account for what they depict – the relationship of food business and nature. The investigated photographs in my thesis are hence part of my argumentation and no longer individual, independent depictions. They become understood through explanation, theory and background information and by this inform themselves about what the company understands by sustainability and nature. By no means, visual hermeneutics come without constructivist thinking. Soeffner (1999) describes the social world as constructed through understanding, while moving from previous experiences to new ones. Therefore, understanding photographs does not only require understanding the image representation in the sense of the producer of the image, furthermore it requires the interpretation of the iconic of the image (what it actually shows) and finally understanding the reception of it by others (Müller-Doohm, 1997). The last step also requires the understanding of the social world of those watching the image and closes the loop (the *hermeneutic circle*) as the "holistic view" becomes visible.

Uniqueness (as opposite to reproduction) means authenticity and therefore beauty (acc. to Berger, 1972), which makes pictures valuable. Masses and reproductions thus stand for the boring, ordinary, non-specific and non-valuable. Pictures as accounts of companies' responsibilities (or other duties) are hence only valuable when they represent the uniqueness of the company as well as the company's authenticity, transparency and accountability. Moreover, the pictures in company reports *make* the company transparent and accountable: the pictures contribute to an understanding of what the company stands for or how the company wants to be seen in the eyes of its stakeholders. It requires a hermeneutic approach for the researcher in order to fully comprehend the different aspects or roles that are embedded and melted into the photographs of company reports. Thus, I am going to use three different perspectives to understand the pictures at best:

(1)   Description of pictures (my own perspective)

(2)   Theoretical perspective (land ethics, aesthetics)

(3)   Reconstructive perspective (visual hermeneutics)

The following chapters (Chapter 6 and 7) will elaborate on my methodological procedures.

6 Problem Formulation, Research Design and Research Contribution

The previous chapters constitute of theoretical frameworks (Chapter 3) and a related chapter summarising possible environmental values in the food sector (Chapter 4). The fifth Chapter is about hermeneutics and the visual. All the chapters are of relevance for this PhD thesis and - as the names already indicate – *frame* the thesis in terms of content and possible research contributions.

The first part of this chapter concerns the research question and the sub questions. The reason for addressing the questions will be explained as well as how they are going to be answered. The second part of this chapter considers the research design and the research contribution of this thesis.

6.1 Problem formulation

As has been indicated in the first chapters (see Chapter 4) there is a lack of investigations regarding ecological accounts in the food sector, especially with regard to pictures. Bell and Davison (2013) and Styhre (2010) claim that the visual is not enough explored in management studies and management literature. In addition, critical management and accounting studies claim that corporate reports are either not enough investigated in terms of credibility or cannot yet be considered as proofs for accountability (*see e.g.*, Bayou *et al.*, 2011; Shearer, 2002; Tregigda *et al.*, 2012). I am going to address these problems by making use of picture analyses of environmental reports from food companies (as accounts for ecological considerations).

And yet, there is the problem of a huge industry that harms nature. Not only the conventional food industry affects nature and people through emissions, land use or pesticides (Baldwin, 2015; BASIC, 2014) also the organic food industry is involved in harmful practices (Stolze *et al.*, 2000), especially when only complying with weak legislation and surveillance due to cost intensive labelling and controlling (Dabbert *et al.*, 2014). I regard the environmental or sustainability reports of food companies as accounts for actions with regard to the environment. Hence, I assume that the pictures placed in those reports inhere at least some relation towards nature. As reporting in general is a tool for informing stakeholders about the company's financial performance and possibly about social as well as environmental commitment, and shareholders and stakeholders need this information in order to be able to trust the company (Gray *et al.*, 2014), all revelations should provide a correct and comprehensive picture of the company's well-being (*cf.* Warren, 2005). Corporate reports from the sectors are thus expected to reveal insights about environmental values, the company's value orientation towards nature and finally a certain relationship with nature.

This research aims at revealing the relationship of the food business and nature. Photographs of food companies' sustainability reports are the base for finding that relationship. Value orientation types, derived from environmental ethics theories serve as indicators of an existing or non-existing[27] relationship of food companies and nature. The relationship of food companies towards nature is categorised into strong or weak relations, depending on either good or bad qualities, which represent the relationship.

As nature is constantly affected by the food industry's impacts, such as resource use, ground water pollution or soil degradation, it is estimated that any of these relationships with nature should be depicted in the companies' reports. Also, because this relationship is only one-sided, the dependence on nature could possibly play a role in the reports and the pictures.

For this PhD thesis the overall research question is:

How is the relationship between food business and nature constructed through ecological accounts of food companies?

Different sub questions accrue from the previous findings. They all serve to answer the overall research question.

De Groot and Steg (2008, p. 331) argue that "(…) values play a significant role in explaining specific beliefs and behaviour and can therefore be used as predictors for various variables such as attitudes and behavioural intentions" (see also Stern, 2000; Stern and Dietz, 1994). I further argue that, related to companies and based on values, it is possible to draw value orientations of companies towards nature. Hence, the first question will be:

1. *If the investigated reports display environmental values, what values are reflected in the images displayed?*

A visual content analysis will be conducted in order to retrieve information regarding the values. Especially, Rose's (2012) three sites of a photography will play a role (see Chapter 7) as this technique allows for precise interpretation of images with, I argue, least problems of researcher bias and subjectivity.

Assuming there will be a strong relationship between a food company and nature when there is value orientation towards nature found in the reports, the next sub-question is:

---

27 Further shades could be strong, medium, or weak.

2. *Are there different qualities of a food business – nature relationship?*

The visual analysis will reveal insights about the companies' value orientation.

Part of this thesis is furthermore to reveal differences among the reports, in particular to find evidence for distinctions in terms of value revelation between reports from conventional and organic food companies:

3. *Are there differences in type and representation of environmental values in corporate reports between conventional and organic food companies?*

The subquestions will be answered alongside the discussion of the analysis (Chapter 8).

All investigations regarding the questions lead to the following presumptions:

1. If the pictures from the reports do show value orientation towards nature, the pictures can account as ecological accounts themselves.

2. The stronger the value orientation towards nature, the stronger is the relationship of food companies and nature and a *good* relationship quality can be found. The same holds true for the opposite.

Box 6.1: Presumptions for the analysis.

6.2 Research design

Four reports, whereas two of the reports are from organic food companies and the other two of conventional food companies, will be investigated. The criteria for analysing them is based on three main characteristics (*see* Chapter 7 for criteria):

- reports clearly indicate aspects such as environment, sustainability or ecological responsibility

- reports include photographs

- reports are written in English or German.

In general, the latest versions[28] will be taken and shall not be older than 8 years for reasons of comparability.

The method used in this research is the following. Figure 6.1 illustrates the research design.

A *visual content analysis* on value orientation (deductive approach; categories derived from Theoretical Framework (Chapter 3) and on other values (as outcome of abductive approach

---

28 While writing this PhD thesis, the selected companies have been publishing later versions of their sustainability reports. However, due to comparability reasons and the progress of the thesis, the reports have not been switched.

during coding process): Here, Rose's (2012) three sites of a picture will be used so that not only my personal research perspective will conclude on findings (*see* Chapter 7). The coding is first of all a short quantitative approach (*cf.* Kuasirikun, 2011). Nevertheless, due to the explorative character of this thesis, qualitative aspects such as subjective impressions and interpretations of the pictures are included as well and make up the most comprehensive part.

The visual content analysis contributes to the understanding of the pictures' meanings and moreover, allows for a comparison between reports of organic and conventional food companies.

The next step, the analysis of the *construction of the relationship of food business with nature,* involves the actual understanding of the relationship between the companies and nature. As pictures are the base for this construction, it is crucial to deeply analyse them with the help of environmental ethics literature. The analysis contributes to the understanding of pictures as accounts of responsibility.
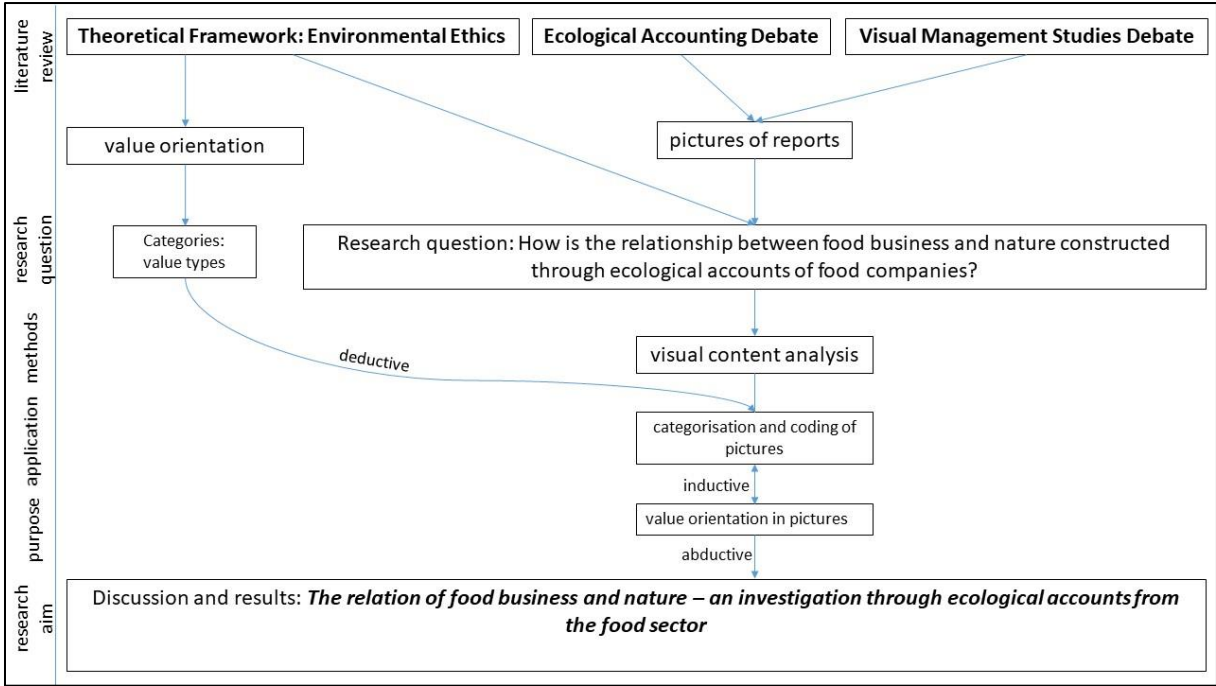

Figure 6.1: Research design.

From a meta-theoretical perspective, this thesis is grounded in visual hermeneutics (*see* Chapter 5). Epistemologically this means that everything we understand about the relationship between food companies and nature is based on our overall understanding of that relation and in addition of the pictures. We know through learning, experiencing and perception. This way of interpreting the pictures allows for many results. Thus, a critical reflection on the results must be done in the end of the thesis. Hermeneutics as the study of how we understand, influences my process of picture interpretation and understanding of the results.

Ontologically speaking a picture, then, is the result of our understanding and only through our understanding of it as a picture we understand it as a picture. The relationship of nature and food company hence depends on that picture understanding and how we interpret it.

On a methodological sphere, the relationship will be analysed but is also existent through the visual analyses.

The research undertaken within this PhD thesis is based on an exploratory research design. This is, as pictures of sustainability reports of the food sector with regard to a nature relationship have not been investigated yet, there is a lack of research and thus data which makes other types of research, such as historical or longitudinal, insufficient at this point. Tregigda *et al.* (2012) indeed call for more interpretive and qualitative approaches in the arena of reporting. Exploratory research is about those approaches and will thus contribute to finding insights into the food business – nature relationship. This is also in line with the meta-theoretical positioning of this thesis into hermeneutics (Creswell, 2014).

But while exploratory research designs are often remaining on the surface of findings in order to prospect gaps for future research, this PhD thesis, of course, also aims at going deeper into the food business – nature relationship and picture analyses. In order to tackle research bias and method weaknesses, the discussion of the results is going to be the most comprehensive part of this thesis, tightly linked to ecological accounting, the visual management studies, environmental ethics and finally, visual hermeneutics.

6.3 Research contribution

In critical accounting literature, often the issues of sustainability and responsibility are raised (Gray *et al.*, 2014). Especially in ecological accounting literature, the debate about nature and our impacts of ordinary life or industrial production and overconsumption become addressed (Milne, 1991; Morgan, 1988). Even though regulations exist which explain requirements of content for such reports, there is no standard of how to write sustainability reports and what to reveal. It is no wonder then, that some denote such reports and the related marketing as greenwashing (Frankental, 2001). Gray (2019) and Russel *et al.* (2017) agree that ecology is hardly respected in most ecological accounts.

My thesis concerns those aspects that are not directly addressed at in ecological accounts. Moreover, it concerns the critical ecological accounting debate as well as the debate about land use and moral actions among stakeholders of the global agri- and food industry. Therefore, environmental ethics play a pivotal role in this research. Derived from aesthetic value and land ethic literature, criteria that indicate value orientation will be derived. Environmental ethics are hence the theoretical lens through which this research is looked at.

As the food sector is relying on natural resources (*e.g.*, land as such), it changes (among others) land's appearance and beauty. These changes and other values towards nature could be possibly displayed in the pictures of the reports. It is estimated that the more values are displayed, the more value oriented towards nature the company is. An organic food company offers a rather strong relationship with nature then.

Visual management studies (VMS) are another and the last stream of literature, which influences this thesis. In fact, the research contribution of this thesis lies in the missing investigations of ecological and sustainability reports from the sector with respect to nature. There has been a great deal of investigations of gender issues and pictures in general in the VMS literature[29], but none so far has addressed the food sector with a special focus on the relationship with nature. Moreover, depictions in company reports tell how the visual acts as a trigger for revealing insights about a company which influences stakeholder behaviour (*cf.*, Havemo, 2018).

The concepts of ecological accounting and visual management studies have been reviewed in Chapter 2. The theoretical framework constitutes as an additional chapter (Chapter 3) as it concerns another discipline and as it is base for the following research (*see* Chapter 4).

Many food companies publish reports, which concern the environment and sustainability. Notwithstanding that these companies have a responsibility towards nature and not just a "taking without giving – attitude" these companies often act differently when it comes to real actions. In their reports, however, they often claim to be responsible and sustainable. How does this relate? And what exactly is revealed in the pictures of the reports? This thesis is going to give answers to these questions.

Moreover, the research contribution of this PhD thesis is diverse and affects different disciplines:

(1) *There are multiple reasons for digging into research regarding food companies' relationship towards nature.*

Evidence is that the food sector affects the natural environment negatively (*see e.g.*, Ballingall and Winchester, 2010; Gebhard *et al.*, 2015; Karlson, 2014). Attempts to change this are known (*see e.g.*, Hemphill, 2013; Rigby and Cáceres, 2001). However, as has been shown in Chapter 4.1, there is hardly any literature investigating the relationship of food companies with nature[30], even though the food industry deploys nature day by day.

---

29 *See e.g.*, Anderson and Imperia, 1992; Duff, 2011; Kuasirikun, 2011.

30 Most literature regarding nature and social entities concerns society at large. *E.g.*, Goodman and Redclifft, 1991; Murdoch, 1994 and Murdoch *et al.*, 2000 demand a controversy regarding the food sector and ecology. However, they speak in the name of society, not in the name of food companies.

There is no evidence for a relation of nature and the firm within the understanding of Wilber's organisational reality and Pandey and Gupta's (2008) organisational consciousness. In fact, proponents of stakeholder theory call for the integration of the stakeholder "natural environment" into a firm's understanding of who to concern as stakeholders (Laine, 2010; Starik, 1995; Stead and Stead, 1996). This is proof for a needed debate on the nature – company relation and is in line with Leopold's (1981) claim to actively engage into an investigation of "(…) man's relation to land (…)" (Leopold, 1981, p. 28).

Though Stanton and Stanton (2002) bring forward a new approach to investigating annual reports, they do not include an environmental perspective. Their focus is on perspectives such as marketing, political economy, accountability and legitimacy which they use in order to analyse the reports. This calls for a need to look at reports from an environmental perspective. Or as Jones (2010, p. 132) put it: "As the present situation appears to put the planet in jeopardy, there is a need for a new relationship between industry and the environment." With my investigation of ecological accounts, I not only reveal how this relationship is presented within these accounts but also develop a way of how to approach the relationship as well as how to build up a relationship through accounts.

(2) *There are even many more reasons for using a picture analysis in order to find this relationship.*

Seel (1997) explains that a unique appreciation of nature is only possible through nature aesthetics and our acknowledgement of these aesthetics. Nowadays it is common to visualise ideas, claims or agendas in order to draw attention. People are used to moving as well as steady pictures as additional triggers for understanding the written (Denzin, 1991). Moreover, there is a call for researching the visual (Pink, 2001; Rose, 2007) and for treating pictures as serious data and "(…) legitimate objects of inquiry (…)" (Bell and Davison, 2013, p. 170). Especially since research on the visual is claimed to reveal insights of areas which have not been investigated fully, yet (Bell and Davison, 2013). There is a growing interest in understanding what impacts pictures have. Impression management as the overall understanding of impacts of the visual on people, influences various disciplines such as marketing research (Schroeder, 2002), branding (Davison, 2009) and reporting (Bernardi *et al.*, 2002).

In order to better understand the relationship of nature and food companies it is hence useful to investigate pictures as unspoken revelations of nature perception.

(3) Finally, there are plenty of reasons which call for a critical contention of accountability of food businesses and their corporate reports.

Corporate reporting sometimes becomes claimed as a marketing tool (Droge *et al.*, 1990; Frankenthal, 2001; Heisterkamp, 2009) with no or little truth (Bayou *et al.*, 2011). The food industry has a strong interest in having a good reputation and therefore publishes corporate reports, which show a seemingly good attitude towards life, people and nature. This seems obvious since the food sector is directly related with cultivated land and natural resources. Even more astonishing then is the fact, that the relationship depicted in corporate reports has not been investigated, yet. In addition, companies have an interest in gaining knowledge about visualisation techniques which are part of the creation of reports (*cf.* Freundlieb *et al.*, 2014). As this thesis reveals insights into visualisation within reports, the contribution to business communication is clearly given.

The use of a visual content analysis (based on Rose's (2012) idea of analysing the three sites of production, image and audience) is going to contribute to the development of visual management studies.

Summarising, in line with the three mentioned explanations above for why research on the relation of nature and the food sector is needed, this PhD thesis seeks to involve accounting and visual management literature as well as environmental ethics to reveal how the food business – nature relationship is depicted in sustainability reports from the food sector. It also intends to reveal whether there are differences regarding visualisation of value orientation towards nature between conventional and organic food companies or not.

7 Methods

In line with Chapter 6.2 (Research Design), this chapter explains at length how I proceed methodologically within my PhD thesis.

7.1 The visual content analysis

As can be read in Figure 6.1, this thesis consists of three literature streams or debates (environmental ethics, ecological accounting and visual management studies). The environmental ethics literature suggests how environmental values contribute to a human – nature relation and the conservation of nature. In addition, this literature informs about how certain value types lead to value orientation towards nature and a relationship between humans and nature. The debates on EA and VMS suggest to critically investigating pictures of company reports and the role of pictures as accounts.

Pruzan (2001, p. 272) argues that "(…) values etc., although referred to as "corporate", are *accepted* rather than *shared*; they are labels which are communicated to employees and other stakeholders via a top-down process rather than the result of a participative process based on stakeholder dialogue." This calls, I argue, for an investigation of business communication, in particular the investigation of reporting styles. In line with Pruzan (2001), stakeholders accept what has been said – or written down in a report – rather than discuss about values. Within this thesis pictures from sustainability report are of interest. Hence, this is an approach to overcome written statements and lax interpretations in order to dig into research concerning sensorial analysis (*see e.g.*, Corbett, 2006; Martin, 2002). However, I do not intend to dig deeply into sensory research or psychology of perception (*e.g.*, Boyle, 2013). Instead, my aim is to follow up on reporting research, in particular visual management studies (*cf.* Chapter 2.2; Bell and Davison, 2013; Davison, 2014; Preston *et al.*, 1996; Warren, 2005). By this, I contribute to the call for more critical investigations of pictures in company reports and combine this research with value orientations of food companies towards nature[31].

In many of her articles Jane Davison (2014, 2011, 2009. 2008, 2007) focuses on Roland Barthes' (1982a) rhetorics of images. She uses rhetorics as analytical tools for investigating images within annual reports. Through lingustistics and Barthes' studium of denotation and

---

31 Within this thesis and in line with the land ethics I follow a broad understanding of nature. It means the basic natural environment. This includes, both the pure natural and untouched landscape as well as cultural landscape, which is obviously influenced by mankind. However, as I want to understand the relationship between food businesses (a human institution) with nature, I assume that the food businesses' understanding of nature concerns the cultural landscape, as it is from there where the natural resources for the food products come from.

connotation (*see* Chapter 2.2), she has got tools at hand which help her to analyse parts of the pictures, kind of a lens through which she looks at the pictures.

Now, interestingly, even though there is more and more literature on accounting and visual communication, there are not many authors who use a certain technique for analysing the pictures. Most authors rely on Barthes, but he does not give a precise methodology at hand. Rather, he suggests a structured way of how to look at pictures. Yet, the results of a Barthesian analysis depend on the interpreter's views.

Consequently, such a method, I claim, is of rather weak validation. If only one person interprets images using only a few "lenses" as analytical tools or as (weak) interpretation guidelines, no universal statement can be made about these results. As a solution, I stick to Gillian Rose's (2012) analytical tools of interpreting pictures[32]. Rose (2012) suggests to use the three sites and modalities of a picture:

The three sites of a picture ask for:
- Context of **production**: (Who produced the picture in what context? *E.g.*: Is it a snapshot? Was it a long production process?)
- Image and its **effect**: (What kind of image is it? What does it show? Again: What is the context (other than content)? *E.g.*: Is it an art work or a realistic photograph? What era is shown?)
- Reception of **audience**: (What could the audience think about it?).

The three modalities of a picture ask for:
- **Technical** modality: How is the visual data created or transmitted (What kind of camera has been used? When was the picture taken?)
- **Composition** modality: How is the data embedded in a genre or related to other visual data? (What is the context of the picture? What else do we see? Shall we see anything in particular? Where is the focus laid upon?)
- **Social** modality: What about the wider social context? (Can we see it in a wider social context? Which year/era is shown? What political circumstances are shown? Whereabout is the picture taken?)

This way of analysing images helps to stay as objective as possible since all three sides of a picture are addressed and used as lenses (I prefer the term perspective), not just the "researcher's lens". Hence, making use of this technique seems reasonable and excludes most of the research biases as the one interpreting. However, since I do not know about how the photographs have been developed and selected I am going to focus on the site of the image

---

32 *See* also Easterby-Smith *et al.* (2015).

and its effect, which also includes the answers to the questions of the compositional and social modalities (*see* Rose, 2012).

Indeed photo-interviews are an option to gain more insights about companies' intentions about why they place a picture in a report. However, such interviews might distort the results in terms of bias. Most companies are aware about the impact photographs have and which image they want to disclose. Such a bias is also misleading in terms of the environmental values. The companies might interpret values and the photographs of their own reports in a very subjective way. Finally, some companies engage third-party agencies to write companies reports. Their views are mainly economically driven and hence of weak usage.

In my case, I am going to use these following sites as perspectives (or lenses) on the photographs: (1) the overall abstract perspective of what is presented (the image and its effect as the site of the picture), which I conduct through a visual content analysis. In line with Rose (2012) I stick to the very first impressions I gain during this phase of the analysis. This includes rough descriptions according to my description outline (*see* below, Chapter 7.1, selected Photographs). (2) The perspective of environmental values, which embrace value orientation (*see* Chapter 3) and (3), I use the perspective of visual hermeneutics, informed by Müller (2012), Müller-Doohm (1997) and Bekkers and Moody (2014) as well as Gadamer (1986) (as the compositional and social modalities constitute the reconstructive process):

(1) Description of pictures (my own perspective): see Chapter 8.2 for results.
(2) Theoretical perspective (land ethics, aesthetics): see Chapter 8.2 for results.
(3) Reconstructive perspective (visual hermeneutics): see Chapter 8.6 for results.

In addition to her three sites and modalities of a picture, Rose (2012) proposes a six-step guideline which helps to investigate pictures:

1. Familiarisation: getting sense of an image, noting down first impressions or questions
2. Exploration: reflection on how an image is created on the three sites
3. Framing: first attempt to interpret the meaning of the data with regard to the research question, noting down further observations
4. Micro-analysis: examining details that appear relevant, their contribution to overall meaning, patterns that emerge
5. Re-contextualisation: critical examination of the "agency" of image (what does it do with producer or audience?), completion with background information
6. Interpretation: all notes prepared in steps 1-5 to be reviewed with regard to the research questions.

As can be seen in Chapter 8, I conduct my visual content analysis by making use of parts of these steps, though in a different order and not always called with the same terms in order not to confuse the reader with the many different aspects of the methods and the content itself.

Like many other visual investigations, also my research intends to find the rationale behind the (selected) pictures. But despite other visual research I do not only want to find "the symbols and signs" (Philipps, 2012, p. 8), and not at all I can ensure "how these are perceived by their creators and their audience" (*ibid.*), given the many stakeholders companies have (as the audience) and possibly many creators company reports have. But I am going to deeply analyse how value orientation is depicted, if at all, in the respected pictures. Moreover, I am going to analyse and understand how these pictures, through the depicted value orientation, create a relationship between food business and nature and what this means for reporting and the food industry.

Although Rose (2012) suggests using an already appropriate and detailed six-step-guideline for pictures interpretation, which includes the examination of the three sites and modalities of a picture, I am going to include another and slightly different approach as well. My methodological approach is in line with Kuasirikun's (2011) design to analyse pictures in company reports. Her research is based on Hunter's (2008) methodology. Hunter's idea about a visual content analysis is to manage the many representations of tourism brochures. It is hence a quantitative approach, aiming to cope with the huge amount of data. Hunter nevertheless goes beyond a "(…) content analysis by revealing not only what representations are categorically or typologically; [towards] critical analysis to more deeply explore meaning, being and identity (…)" (Hunter, 2008, p. 358). The quantitative approach is combined with an interpretation and critical analysis of the representations. Drawing on this idea, Kuasirikun (2011) develops a methodological framework, which combines contemporary photography theory with Habermas' theory of communicative interaction. After a quantitative content analysis, she uses different perspectives, which allow her to look at the photographs of Thai companies from different angles to reveal the many possible social realities behind the pictures. I follow this idea by using first a quantitative, kind of "superficial" analysis of all photographs in the selected sustainability reports of food companies. For this, I use the above-mentioned perspectives, which are about the description of the image and later the categorisation and coding process.

While analysing the pictures I do not look into the text. Some reports do have subtitles for their photographs; however, I exclude these texts as well as the remaining texts and titles (context suspension). To ensure that I do not interpret the photographs and at the same time read the text, titles or have the company's profile in mind, I cut out every photograph with the usage of

a snip-tool[33] and started the analysis of the photographs weeks later. In the end, the narratives of the reports will be included in order to provide an additional context. This process rather acts as reconstruction of the findings in the context of the respective report, not as a recursive method (*cf.* Müller, 2012).

The coding process is based on the land ethics and aesthetics from Chapter 3. These theories inform about value types, which are used in order to later understand the relationship of food business and nature. Therefore, the value types build the categories (*see* Table 7.1) and are hence developed deductively. The codes are developed while analysing the photographs, which is then an inductive approach (*see* Table 7.1). There might be new categories found along the analysis process. In the end, Table 7.1 provides an exhaustive listing of all categories and codes found in the photographs of the sample reports.

One could argue that my approach is a quantitative content analysis, such as Bell's (2001) "content analysis of visual images" (van Leeuwen and Jewitt, 2001). However, compared to Bell's aspiration of "(…) an empirical (observational) and objective procedure for quantifying (...) representations (…)" (Bell, 2001, p. 13), I aim at filtering out (*cf.* Mayring, 2004) the relevant aspects of the respective photographs to interpret later deeply those in order to make a point concerning the construction of the relationship between food business and nature.

After the visual content analysis, the construction of the food business - nature relation takes place. Chapter 6 explains how a relationship can be investigated. According to Cox (1997), a relationship is based on values (or value types). The more value types are found, the better the relationship is and a good quality level of that relationship can be manifested. The value types are (as previously mentioned) based on land ethics and aesthetics. Food companies which reveal a good quality level of their relationship towards nature thus show a high value orientation, which is based on Hansla *et al.*'s (2008) understanding that clusters of compatible value types make up value orientation. The investigation of value orientation of the selected food companies and the understanding of the relationship of the food companies with nature will be the base for the construction of the relationship between food business and nature through ecological accounts (sustainability reports) of food companies. The analysis of that construction is an interpretative approach, based on the visual content analysis (as a structuring step), but in accordance and in continuous reflection with the perspectives mentioned above.

---

33 This was possible as every report is online available. It was not possible to detach the photographs from the report regarding their ID (the photo IDs a-d refer to the reports; *see* Annex). In order to recontextualise in the end, I needed to have a reference (ID) to find the respective photograph in the report.
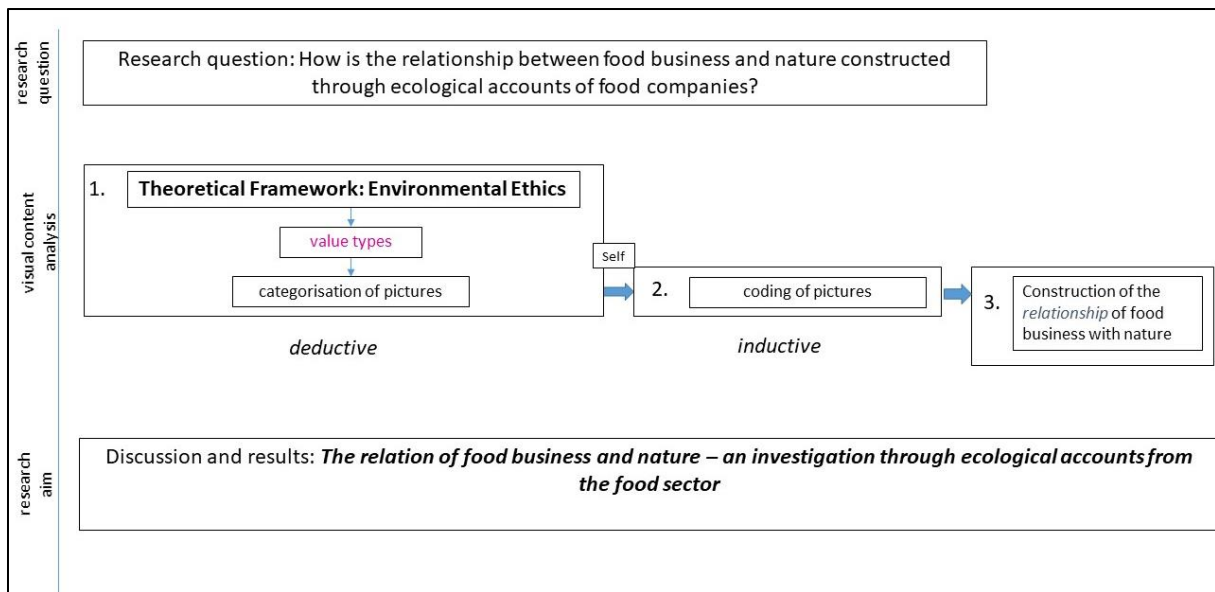
Figure 7.1: Visual content analysis.

Category development

Depending on the literature stream within environmental ethics, the categories for the visual content analysis are land ethics (category 1) or land aesthetics (category 2). The value types (*see* Chapter 4, Box, 4.2) constitute the subcategories for the visual analysis. An example: The value type "harmony between human and nature/land" belongs to subcategory 1.3 (*see* Table 7.1).

#	Literature Category	Value type category #	Value type category	References / the authors' understanding
1	Land Ethics	1.1	Acknowledging land's instrumental value	Benson, 2008; Callicott, 1983, 2006 (*cf.* Fahy, 2012)
		1.2	Acknowledging land's intrinsic value	Sterba, 1994; Taylor, 1997, 1986
		1.3	Harmony between human and nature/land	Leopold, 1981, 1999
		1.3.1	Responsibility towards nature	Cameron, 2011
		1.3.2	Holism	Callicott, 2006 (*cf.* Fahy, 2012, p. 57)
		1.3.3	Respecting the Earth: harmony with other species	De Groot and Steg, 2008
		1.3.4	Unity with nature: fitting into nature	De Groot and Steg, 2008
		1.4	No resource exploitation	Cox, 1997; De Groot and Steg, 2008
		1.5	Protecting and preserving the environment	De Groot and Steg, 2008
		1.6	Worship of landscape	Boylan, 2001

2	Land Aesthetics	2.1	Acknowledging nature's beauty and therefore its instrumental values (recreation)	Carlson, 1997, 2010
		2.2	Acknowledging nature's beauty and therefore its intrinsic values (beauty, preciousness)	Carlson, 1997, 2010
		2.3	No exploitation	Cox, 1997
		2.4	No pollution	De Groot and Steg, 1997

Table 7.1: Categories, value types (subcategories) and references for visual content analysis.

Code development

Codes derive from the visual content analysis and are found inductively. There is the possibility of finding several codes in one photograph because they fit the same category (*e.g.,* a person holding crops which is the code for both, "responsibility towards nature/natural resources" and "acknowledging land's instrumental value") (*see* Table 8.1 in Chapter 8).

Reconstructive analysis

The last step of the visual analysis concerns the reconstruction of the investigated material, which is about the recontextualisation. This is, by means of reading the text of the reports, the visual will be put into the context of the report and the respective company. By this, the results of the previous steps might be impacted in terms of findings concerning the company's business strategy or other findings such as subtitles explaining the pictures (an aspect which has been suspended before). The reconstructive analysis is based on my third perspective – the hermeneutic perspective (*see* Chapter 5). By this I do not only involve the text of the company reports but also reflect my own position as a researcher within the disciplines of critical accounting and reporting, within the research field of organic agricultural sciences and the food industry and with (finally) the full knowledge about the report. The hermeneutic circle (Gadamer, 1986) in this step becomes part of my overall research approach and helps to understand the whole picture – the construction of the relationship of food business and nature in company reports of the food sector.

This part of the visual content analysis is partly based on Müller-Dhoom's (1997) structural hermeneutic interpretation (*see* Chapter 5.2). Müller-Dhoom, however, follows a different structure while analysing pictures. I share his idea of using picture description (my first perspective) and reconstruction (my third perspective) as complementary components[34]. There will not be any deep interpretation and final understanding without those two.

---

34 This does not involve any narrative analyses such as a discourse or semantic analysis (*see e.g.*, Gredel, 2017 or Preyer, 2001).

When encountering pictures and finding types of value orientation, there is no chance to not be biased while researching. In fact, as I am aware of many companies' strategic profiles, I know about their general attitudes towards nature. So, there might the possibility that I interpret values in a report from a so-called value-oriented company, which actually do not exist.

Moreover, as mentioned above, I am the only researcher deeply analysing the photographs and indeed, this might be questioned as being subjective, biased, one-sided. Nevertheless, I pursue to be as transparent as possible in my analysis (a reason for this admittedly quite long Chapter 7) so that the reader can replicate my analysis process.

Nonetheless, one could claim that I am biased because I am intentionally searching for the values and will thus find them to have results. In order to avoid such a tautology, I am going to analyse the pictures according to the three perspectives while at the same time sticking to Mayring's (2004, p. 269) structuring content analysis. Originally developed for textual analysis, this method helps to "(…) filter out particular aspects of the material [based on my findings from the theoretical framework] and to make a cross-section of the material under ordering criteria [the mentioned value types] that are strictly determined in advance, or to assess the material according to particular criteria". This is suitable because "[…] it will result in a coding guide that makes the task of structuring very precise" (*ibid.*). So, my research is kind of a content analysis within a content analysis. Firstly, the theoretical framework (namely, land ethics and aesthetics) will be analysed according to the idea of finding categories for the visual content analysis. This is, the relevant authors (*see* Table 7.1 below) will be read and re-read and eventually end in several categories and subcategories, which constitute the value types. Secondly, the actual visual content analysis will bring forward the relevant codes for understanding how the value types become depicted in the photographs of company reports. This is obviously a subjective process of myself as the investigating researcher. Even though it is informed by theory, it is at the same time an inductive category and coding formation (Mayring, 2004):

(1) Deductive approach: using all those pictures which are derived from the previously set categories (through theory derived from Chapter 3).

(2) Inductive approach: enlarging sample to those extra categories (value types) and codes found during the analysis.

7.2 Data selection

Chapters 1-5 indicate my research background. After conducting the visual content analysis, I end with a listing of pictures from the four selected reports (two from the conventional food sector / two from the organic food sector). The listing constitutes of environmental values and acts as an overview. The actual analysis of every picture shall demonstrate how the relation between food business and nature is depicted and how this is connected to environmental values and eventually to accounting and reporting (*see* Chapter 8).

Criteria for report and photograph selection

In total four company reports of the food sector have been selected. The decision to use an obviously small amount of only four reports is made due to the many pictures the reports provide and the approach to later critically examine every picture in detail. The usage of more reports would lead to too many pictures for examination, which would have called for a quantitative content analysis. My approach, however, calls for a qualitative content analysis, with a focus on the interpretation and critical investigation of the pictures to provide a detailed understanding about the construction of the relation of food business and nature through company reports.

(1) Selected companies:
- **food producer** (no retailer)
- **German context** (even though internationally traded products): headquarter and production (if possible).
- **product range > 2 different products** (*e.g.,* jam and cereals) as a bigger product range promises more pictures
- produced products affect different **natural resources** (through usage)
- **< 1000 employees**

(2) Selected reports:
- sustainability reports from **2015-2018**
- **(coloured) photographs** available: > 20 per report
- **German reports** as this means less cultural differences in disclosure between the reports. It is assumed, that as a native German I have a different view on German reports than on foreign reports or German reports translated into English. The latter even inhere possibilities of misinterpretations due to wrong translations.
- **Own report** (not made by *e.g.,* parent company)
- possibly under GRI guideline

(3) Selected photographs:

- **clearly definable** as a photograph
- need a **frame**, which makes it distinguishable and definable from the remaining page (not any placed items such as products when there is no frame)
- background photographs (sky, landscape *etc*) are included as long as they are clearly framed such as a full page or half a page
- front page included, even though there is a different type of frame (less exact)
- one picture can include several codes
- in order to identify a value type / environmental values, a **natural product must be identifiable** (not a packaged one) or the natural environment in form of animals, plants, sky *etc* must be identifiable
- if a person is definable as *e.g.,* a female, she is declared as "woman", if the person cannot be categorised clearly as *e.g.,* female, she is announced as "person"[35]

(4) Exclusion criteria

- No reports from animal related production businesses (both, the meat industry and the milk industry are too less differentiated in terms of product range)
- Too few pictures in the reports (< 20)
- No photographs within a photograph
- No screenshots
- Photographs with packaged products are excluded as the processed products do not show any relation with nature in these photographs.

Final selection of reports

Finally, I end up with the following sustainability reports by: Lebensbaum and Rapunzel (both from the organic food sector) as well as Schwartau and Seeberger (both from the conventional food sector). It should be noted, that none of these companies represent the organic or conventional food sectors. However, the companies represent different products and their reports provide enough pictures to have a solid base for investigating and comparing.

---

35 I understand there are chances of misinterpreting the sex of a person by applying commonly used gender characteristics. However, for reasons of better readability and common understanding, I stick to the gender differences "woman" and "man" where possible.

	Lebensbaum	Rapunzel	Schwartau	Seeberger
Employees[36]	Ca. 200	Ca. 400	Ca. 850	Ca. 850
Revenue	60 Mio € (2017)	185 Mio € (2016)	300 Mio € (2016)	Ca. 300 Mio € (2017)
Products	coffee, spices, tea	bread spread, chocolate, coffee, spices, tea	cereal bars, desert sauces, jam	coffee, dried fruits, nuts
Number of photographs in report	144	136	27	42
Number of page in report	218	100	41	56
Reporting period	2016	2013-17	2017	2016-17
Reporting standard	GRI	own	GRI	GRI

Table 7.2: Selected sustainability reports.

Description of the photographs

The description of the photographs (step 1) helps to sort out those photographs which are not useful for the second step of my analysis (step 2, theoretical perspective). Hence, those photographs that do not include any item that connects with nature will be excluded (*e.g.,* photographs of heads of people who wear business clothing with a white background). They are marked with a star*. For the third step (step 3, reconstructive perspective), however, those excluded photographs will be taken up again as they tell more about the depicted relation towards nature in the reports.

For the description (perspective 1), I analyse the following issues, which is partly adopted from Müller-Dohm (1997):

1. What is depicted (*e.g.*, landscape or machinery): in the front, in the middle, in the background (if distinguishable)

2. Coloured photograph (with fading colours or not) or black-and-white photograph

---

36 According to company profiles 2021.

3. Photograph taken from which angle (from above, below, angular perspective, same height like photographer / straightforward / eye contact with photographer/viewer, steep or flat angle)

4. Shape of photograph (rectangular, round shaped, squared)

5. Size of photograph compared to rest of page (*e.g.*, full page, half, third, quarter, twelfth part or even smaller)

6. Possibly text or graphical items placed on top of photograph (background photograph or not).

Due to better readability, only the first photographs include the full descriptions such as "photograph taken from above". Later, the descriptions decrease in length: *e.g.*, "from above". Some descriptions are more detailed and lengthier than others. This is due to the fact, that (1) some photographs entail more information than others and (2) they have a better solution, and more can be recognised.

The following chapter (Chapter 8) is going to make use of the explained methods during the analysis.

8 Analysis and Findings – The Relation of Food Business and Nature through Ecological Accounts of the Food Sector

This chapter analyses the relationship of the food business with nature. The analysis consists of eight Chapters. Chapter 8.1 gives an introduction on how to construct the relation of food business and nature through ecological accounts from the food sector. The second Chapter (8.2) provides the findings from the visual content analysis of the reports from the organic food businesses, namely Lebensbaum and Rapunzel. Likewise, Chapter 8.3 informs about the results of the visual analysis concerning the reports by Schwartau and Seeberg as the conventional firms. Chapter 8.4 is going to provide the findings regarding general outcomes. Chapters 8.5-8.7 answer the subquestions and the overall research question. Finally, Chapter 8.8 provides a discussion of the findings with regard to Chapters 2-5.

8.1 Introduction to analysis

Due to copyright constraints, I will not show every analysed photograph within this thesis. Therefore, I am going to describe every photograph and will only show the most relevant photographs for demonstration and comprehension purposes. In the annex (*see* page 178), there is a listing of where to find the analysed sustainability reports. They are available online. In the following, every photograph will be labelled with a photo ID:

- Lebensbaum: A
- Rapunzel: B
- Schwartau: C
- Seeberger: D

As indicated in Chapter 7 (Methods*, see* in particular 7.1) different perspectives have been used in order to conduct the visual content analysis. Table 7.2 provides the overview concerning the different categories and subcategories which constitute the analysed value types. The following Table 8.1 adds the dimensions of codes and comments on those for identifying the value types in the sustainability reports of Lebensbaum, Rapunzel, Schwartau and Seeberger.

Value type category #	Value type category	Code #	Code	Explanations of / Differentiations between Codes
1.1	Acknowledging land's instrumental value	I.I	People praising crops	*e.g.,* presenting them proudly
		I.II	People dealing with crops or resources	*e.g.*, people harvesting, processing
		I.III	Built areas	green space gives way for constructing buildings
		I.IV	Natural food products	the products may be processed, however their natural origin must be clearly recognisable, no new texture (such as jam out of strawberry); *e.g.*, roasted coffee beans
1.2	Acknowledging land's intrinsic value	II	Beauty of nature or natural products	*e.g.*, beauty of nature (with company building or not) Same like 2.2 just from the land ethic's perspective
1.3	Harmony between human and nature/land	III		General: concerns all photos which fit into categories 1.3.1 – 1.3.4 As opposed to conflicts (see Brady *et al.*, 2018)
1.3.1	Responsibility towards nature	III.I	Hands holding fruit, nut, plant, soil	No hands processing or harvesting (as this is a needed process when using resources as instrumental values); hands must touch the product (not in a bowl) as this means to have a close relation to the product/nature
1.3.2	Holism	III.II	Building or people surrounded by or next to plants	People and their cultural products as the "broader ecological community"
1.3.3	Respecting the Earth: harmony with other species	III.III	People caressing plants or animals	Meant is the harmony between humans and plants or humans and animals
1.3.4	Unity with nature: fitting into nature	III.IV	People within crops, landscape, field, wilderness	If person holds a plant, there is a distance between hand and plant, hence no unity (this requires *e.g.*, standing within crops, not beside); no harvesting meant (as this often requires being in-between crops without feeling the unity with nature)
		III.IV	Building surrounded by plants	
1.4	No resource exploitation	I.IV		

1.5	Protecting and preserving the environment	I.V	Caring people or auxiliaries	*e.g.*, people picking litter; wide mowed fields framed by blossoming plants; insect hotel
1.6	Worship of landscape	I.VI	Expressively praising landscape	*e.g.*, people caressing crops, grass, trees
2.1	Acknowledging nature's beauty and therefore its instrumental values (recreation, the beauty of food)	II.I	People in natural landscape	Needs to show people who are enjoying themselves, relaxing, playing, eating, making music; no work task to be shown; the natural landscape must capture most of the picture Recreation in nature is not the same like recreation outside. A lawn doesn't make nature, especially not when the company building is represented as well. Recreation means to not do anything else but enjoying nature (as a benefit towards humans health and therefore its instrumental value)
		II.Ia	Natural food products	Food products, placed on *e.g.*, a table, untouched, showing natural beauty and at the same time have an instrumental value as they serve as food.
2.2	Acknowledging nature's beauty and therefore its intrinsic values (beauty, preciousness)	II.II	Pure nature/landscape (no company)	Here, a person holding soil or crops is not meant as they represent resources needed for the production process (instrumental values)
2.3	No exploitation	II.III		
2.4	No pollution	II.IV	People picking up litter	There is hardly any way to depict "no pollution". Instead, picking up litter shows how people combat pollution. Indeed, this does not necessarily mean that the companies avoid polluting. However, by depicting people (maybe their own employees), they show that they promote pollution avoidance

Table 8.1: Value types (subcategories), codes and explanations of codes for visual content analysis.

Chapters 8.2 and 8.3 hence provide the results concerning the (1) description of pictures (my own perspective) and (2) theoretical perspective (value types). The tables concerning the image itself can be found in the Annex. I started with the description (Perspective 1) for all reports (*see* Tables A8.1a-d) before I filled in Tables A8.2a-d (Perspective 2). The reason for this is the continuous learning experience through previous conducted visual research (*cf.* the hermeneutic circle) which influences how I approach the next company reports.

8.2 Findings from accounts of organic food businesses

This Chapter provides the findings regarding what Lebensbaum and Rapunzel depict in their sustainability reports (perspective 1) and which value types are found (perspective 2).

Findings Lebensbaum

In the following, the photographs in Lebensbaum's sustainability reports will be analysed. Table A8.1a provides the results concerning the photo descriptions.

(1a) Description of photographs (my own perspective): Lebensbaum (indicated by A)

The full descriptions of the photographs included in the sustainability report by Lebensbaum can be found in the Annex (Table A8.1a). In total, 143 photographs are placed within this report. During the description step, 82 photographs have been excluded, as they do not provide any connection with nature (*cf.* Chapter 7.2). There has not been any spontaneous or intuitive finding of the relationship between company and nature. Hence, there will be no value type found and an inclusion of theses photographs would be useless for conducting step 2 of the analysis.

The remaining 61 photographs contain the following five **categories of depictions** and additional ones which are called "other":

	photographs
Cultural / natural landscape (*e.g.*, animals, fields, grasses, forests, mountains, plants, sky, water):	22
People in landscape (*e.g.*, cyclists on lawns, people harvesting)	15
Planted areas next to building (*e.g.*, company building with bushes next to parking ground)	13
Natural food products (*e.g.*, coffee beans, grains, seeds; even though partly processed; not packaged)	2
People with natural food products (*e.g.*, hands holding seeds)	7
Other (*e.g.*, hay or barn)	2

All of these 61 photographs are coloured photographs, with the exception of one photograph (A39 on p. 60), whereas the 82 excluded photographs contain 22 photographs which are black-and-white.

The **angles** of the 61 photographs include:

From above	13
From below	8
Straightforward	27
Slightly from above	5
Slightly from below	4
Eye-contact	2
Eye-contact, from below	2

The 61 photographs are of the following **shapes**:

Rectangular	18
Round-shaped	40
Squared	3

The **sizes** of the 61 photographs are:

Half of page	3
Third of page	4
Quarter of page	3
Sixth part of page	6
Eighth part of page	2
Twelfth part of page	10
Less than twelfth part of page but bigger than the next category	29
Generally small	4

Background photographs with writings or logos on top: 1.

Photographs with included graphics but other than background photographs: 5.

The codes (*see* Table 8.1) have been mainly discovered during step 1 of the analysis. This might be surprising, as it needs further interpretation, hence step 2, to understand the image as a code for a certain value type. However, while looking at the photographs and describing them, the different images, such as hands holding beans, have been immediately connected to the code of responsibility. All these observations have been noted down and later (during step 2 of the analysis) further interpreted as the codes standing for value types. It is a mixture of the familiarisation step and the framing step by Rose's (2012) six-step-guideline, which is mainly about first impressions and immediate associations (*see* Chapter 7). Certainly, my first impressions are influenced by my overall knowledge about how value types such as responsibility or respecting the earth might look like in a sustainability report by a food company. But using, not denying this knowledge is in line with the hermeneutic circle (*see* Chapter 5) and enlarges my methodological and analytical approach. All of the existing knowledge and the results of the analysis step 1 and 2 will be used in Chapter 8.6 to conduct the recontextualisation.

(2a) Theoretical perspective (land ethics, aesthetics): Lebensbaum

The full interpretations[37] of the photographs included in the sustainability report by Lebensbaum can be found in the Annex (Table A8.2a).

The following **value type categories** and **codes** have been discovered:

Value type category	Number of value types found	Code	Number of codes found
1.1 Acknowledging land's instrumental value	23	I.I People praising crops	1
		I.II People dealing with crops or resources	14
		I.III Built areas	1
		I.IV Natural food products	7
1.2 Acknowledging land's intrinsic value	23	II Beauty of nature or natural products	23

---

37 In accordance with analysis step 2.

1.3 Harmony between human and nature/land	26	III	
1.3.1 Responsibility towards nature	**6**	III.I Hands holding fruit, nut, plant, soil	**6**
1.3.2 Holism	**11**	III.II Building or people surrounded by or next to plants	**11**
1.3.3 Respecting the Earth: harmony with other species	**2**	III.III People caressing plants or animals	**2**
1.3.4 Unity with nature: fitting into nature	**13**	III.IV People within crops, landscape, field, wilderness III.V Building surrounded by plants	**8** **5**
1.4 No resource exploitation	**0**	I.IV	
1.5 Protecting and preserving the environment	**1**	I.V Caring people or well treated landscape	**1**
1.6 Worship of landscape	**0**	I.VI Expressively praising landscape	
2.1 Acknowledging nature's beauty and therefore its instrumental values (recreation, the beauty of food)	**3**	II.I People in natural landscape II.Ia Natural food products	**0** **3**
2.2 Acknowledging nature's beauty and therefore its intrinsic values (beauty, preciousness)	**18**	II.II Pure nature/landscape (no company)	**18**
2.3 No exploitation	**0**	II.III	
2.4 No pollution	**0**	II.IV People picking up litter	
Total number	**100**		**100**

Table 8.2a: Total numbers of value types and codes found in sustainability report by Lebensbaum.

Specific findings Lebensbaum during analysis step 2 (theoretical perspective)

This part is going to reflect on the findings during step 2 of the analysis and consequently concerns the photographs only. Some of the findings will be further elaborated during step 3 (Chapter 8.6).

Concerning the shapes, sizes and angles of the photographs or of which they are taken, the report by Lebensbaum is very diverse. Many photographs are round-shaped. This leads to a quite childly impression of the report and looks less professional. Also, many pictures are very small. Most pictures are taken straightforwardly as if to be on the same height with the objects or subjects displayed. Landscapes or buildings are also often taken from above and far away, which gives an overall impression of the landscape or building but shows less detail. Those photographs which are colourful and bigger are more striking. The black-and-white photographs are not very obvious. The report by Lebensbaum is a comparably long one (*cf.* Schwartau's report has got less pages and photographs). It is colourful, contains many photographs, drawings and texts. The many different shapes of the images are also striking. Apart from the round-shaped photographs, some are rectangular. Many photographs are small, some large and a few cover whole pages. Most of the photographs are easy to distinguish from text or drawings as they have a frame. In addition, the different types of representation are eye-catching as there are not only photographs but also drawings included. They sometimes seem to be complementary (*cf.* A27), as if to explain a photograph with a drawing. Other images seem even contrarywise (*cf.* A4 and A5), such as black-and-white photographs with colourful drawings aside.

One of those photographs which is partly covered by a drawing, is A110 (on p. 132 in the report). Here, a cultural or natural landscape is shown, which has got drawings placed at the bottom. In a way, nature becomes underlined by even more nature, in terms of a frog and reed. In any case, the drawing does not add any value type category to the photograph (and finally to the report).

The front page of Lebensbaum's sustainability report shows a tropical landscape. There are just 13 more photographs in this report which are immediately interpreted as tropical, or at least as non-European landscape. Compared to the high number of overall photographs, it is striking that the German based company uses a photograph on its front page that is obviously not a local landscape. Also, employees, company buildings or products by Lebensbaum could have been possible cover pictures. The company obviously wants to stress the original location of where many of the products or ingredients for them come from. Chapter 8.6 is going to interpret this thought further.

Interestingly, in some photographs there are switching value type categories. *E.g.,* A57 (p. 85): Here, the value type category 1.1 is about the natural food product. It is shown as a product during a production process, which is an instrumental value based on the literature stream of land ethics, a usable food product for processing and consumption. At the same time, the value type category 1.2 fits as well, as the intrinsic value of beauty is shown (even though behind glass). The focus is on the beans, not the instruments around it. Whereas by the literature stream of aesthetics, only the instrumental value matters, not the intrinsic value. This is, the aesthetics literature sees an instrumental value in the beauty, *here* the presentation of food and the enjoyment of it.

As mentioned above (*see* (1a)), the codes have been discovered during step 1 and have been allocated to value types during step 2 of the analysis. Through the deep interpretation in step 2, hardly any new codes came across. An exception goes for photographs A59 (p.86) and A62 (p. 87). Here we find a second category of description (natural food product) and hence also more value types, but no new or different ones. Step 3 will deliver more insights and prove this through reading the text.

Findings Rapunzel

In the following, the photographs in Rapunzel's sustainability reports will be analysed.

(1b) Description of photographs (my own perspective): Rapunzel (indicated by B)

The full descriptions of the photographs included in the sustainability report by Rapunzel can be found in the Annex (Table A8.1b).

In total, 138 photographs are placed within the sustainability report by Rapunzel. Of these, 78 do not show any linkage with nature, landscape or natural products. Hence, 60 photographs are further analysed.

The remaining 60 photographs mainly contain the following **categories of depictions**:

	photographs
Cultural / natural landscape (*e.g.*, animals, flowers, water fall)	7
People in landscape (*e.g.*, people harvesting)	24
People, planted areas next to building (*e.g.*, people sitting on stone with company building and trees in background)	8
Planted areas next to building (*e.g.*, company building with bushes next to parking ground)	3

People with natural food products (*e.g.*, hands holding seeds)	22
People with animals	1
Plants and food products	1

Photographs B72, B73, B74, B76, B77 and B138 are categorised into two different categories of depictions (*see* Table A8.1b). All these 60 photographs are coloured photographs. The same goes for the excluded 78 photographs.

The **angles** of the 60 photographs include:

From above	8
From below	2
Slightly from above	1
Slightly from below	4
Eye-contact	13
Eye-contact, slightly from below	4
Eye-contact, from below	3
Eye-contact, straightforward	1
Straightforward	24

The 60 photographs are of the following **shapes** or of a full-page size (which would equalise with a rectangular shape):

Rectangular	7
Rectangular with some curves	18
Round-shaped	22
Squared	5

The **sizes** of the 60 photographs are:

Full page	7
Two thirds of page	2
Third of page	18
Fifth of page	1

Sixth part of page	2
Tenth part of page	1
Less than twelfth part of page but bigger than the next category	7
Generally small	22

There is one background photograph included which has another photograph placed on top. In addition, there are five photographs with included graphics.

(2b) Theoretical perspective (land ethics, aesthetics): Rapunzel

The full interpretations[38] of the photographs included in the sustainability report by Rapunzel can be found in the Annex (Table A8.2b).

The following **value type categories** and **codes** have been discovered39:

Value type category	Number of value types found	Code	Number of codes found
1.1 Acknowledging land's instrumental value	**34**	I.I People praising crops	**7**
		I.II People dealing with crops or resources	**24**
		I.III Built areas	**0**
		I.IV Natural food products	**3**
1.2 Acknowledging land's intrinsic value	**6**	II Beauty of nature or natural products	**6**
1.3 Harmony between human and nature/land	33	III	
1.3.1 Responsibility towards nature	**10**	III.I Hands holding fruit, nut, plant, soil	**10**
1.3.2 Holism	**12**	III.II Building or people surrounded by or next to plants	**12**

---

38 In accordance with analysis step 2.

1.3.3 Respecting the Earth: harmony with other species	**1**	III.III People caressing plants or animals	**1**
1.3.4 Unity with nature: fitting into nature	**10**	III.IV People within crops, landscape, field, wilderness	**7**
		III.V Building surrounded by plants	**3**
1.4 No resource exploitation	**0**	I.IV	
1.5 Protecting and preserving the environment	**0**	I.V Caring people	**0**
1.6 Worship of landscape	**0**	I.VI Expressively praising landscape	
2.1 Acknowledging nature's beauty and therefore its instrumental values (recreation, the beauty of food)	**5**	II.I People in natural landscape	**4**
		II.Ia Natural food products	**1**
2.2 Acknowledging nature's beauty and therefore its intrinsic values (beauty, preciousness)	**4**	II.II Pure nature/landscape (no company)	**4**
2.3 No exploitation	**0**	II.III	
2.4 No pollution	**0**	II.IV People picking up litter	
Total number	**82**		**82**

Table 8.2b: Total numbers of value types and codes found in sustainability report by Rapunzel.

Specific findings Rapunzel

Rapunzel shows many unusually shaped photographs, which are rectangular but with curves. Additionally, there are many round-shaped pictures. Those photographs are striking due to their shape but also due to their sizes. Some photographs cover whole pages or even double pages. The many big pictures (18 are a third of a page) are eye-catching, which is furthermore emphasised through the bright colours, which goes for every photograph throughout the report. Most pictures are taken straightforward or with eye-contact. The reader of the report thus gets very easily in touch with the people displayed. By just looking at the photographs and excluding the text, the text does not seem very important as the photographs are that big and colourful

and the text is often small. A photograph like B19 (on p. 19 in the report) is hence eye-catching as it is rectangular with bright colours and just placed on a white background. Nevertheless, it does not come to the fore because of the two cut persons, layered on top of it. Indeed, B19 is the only rectangular photograph in the report which does not have any drawing-like lines included. Because of those additional lines around many rectangular photographs, those seem less striking. They fit better into the overall scheme of natural shapes, such as curves and waves.

Another striking fact is that many people on the photographs directly look into the camera from a direct angle, neither from above or below. This goes for farm workers and (assumingly) employees of Rapunzel. Where people, such as farmers, do not look into the camera and hence do not smile, the photograph automatically represents doubtable values. *E.g.*, B35 (p. 25): The person looks to the right and hence looks less proud of the crops next to him. Whereas people smiling into the camera, *e.g.*, B32 (p.25), seem to own the crops and care for them to the point of praising it.

B52 (p.31) and B53* (p. 31) seem to be very important for Rapunzel, they are big and very striking in terms of their bright colours, the green colour is dominant. Also, in terms of sustainability reporting these photographs are important as they show two important value type categories: the acknowledgment of land's instrumental value, namely the provision of food, and in addition the responsibility by farmers or employees of the company who care for the resources which later become processed. The image of hands holding resources as the common-known image of sustainability is obviously used in this report, striking on pages 46-51. Accounting for sustainable management of resources is here clearly demonstrated by photographs and needs almost no text to understand this immediately.

Some pictures are excluded in this analysis step, even though natural products (such as nuts on p. 52 or products on pp. 78-79) are shown. However, those photographs show the inside of rooms, such as a food laboratory and the hands do not directly touch products, which are rather treated as scientific objects and become investigated by means of chemical and technological procedures.

Many photographs show the company buildings which (in opposite to Lebensbaum) stand for the values of the company itself. The bright shining yellow buildings or the yellow (Rapunzel) tower are representatives of the company, the employees or entrepreneurs. In the photograph on p. 56 (B83) the focus is on the company building. Still, the natural landscape (although culturally influenced which can be seen in the houses and agricultural fields surrounding the company building) as well as the sky capture most of the picture's space. Like on page 31, the unity with the natural environment is shown as part of the company's nature – fitting into nature

due to natural ingredients which become processed and due to the rural location, the company chooses to produce. The location is historically influenced by the company's beginning as a Bavarian local family-owned small food business. Close relations with suppliers and consumers have been some of the most important factors for the firm to grow their business in the countryside. This picture shows how the company is embedded in this countryside with all its aspects of green trees, open spaces and wide areas of pastures and forests. The photovoltaic installation on the roof of the company building shows how the company addresses itself towards energy production for its productions. Producing energy by using solar power (photovoltaic) the engagement in climate change mitigation to avoid using fossil fuels, emitting harmful pollutants and by using what is naturally given. Again, this is a proof for Rapunzel's usage of nature's instrumental values and at the same time unity with nature as the company tries to avoid exploiting resources (fossil fuels) and to fit into nature rather than being apart from it. There is no distance between the company building and the natural environment as can be seen in urban areas with condensed spaces and skyscrapers to overcome space issues. Instead, here we see a building that is only three to four levels high, not (from what is observable when seeing this picture) much higher than other houses, but definitely not higher than most of the surrounding trees – the building fits into nature, it is part of it.

Many of the photographs are not that easy to relate to a value type compared to the analysed sustainability report by Lebensbaum. The first photographs (*see e.g.,* B3, B4, B15) are debatable regarding their value types, nevertheless the value types fit according to their categorisation (*see* Table 8.1). The following chapter will elaborate on Table 8.2b in order to clarify the interpretations of the photographs.

Those photographs in the sustainability report by Rapunzel which do not show crops, but people like farmers are mostly taken outside buildings and always show plants. This also goes for photographs which are not further analysed due to the reasons in Chapter 7. *E.g.*, the photographs on p. 27 (B43-B46) or B78* (p. 51), B122* (p. 83) show plants or trees in the background, however, these photographs seem to have them included accidently (in contrast to the report by Seeberger). Generally, it is striking that many photographs are taken outside with sunny weather.

8.3 Findings from accounts of conventional food businesses

This Chapter provides the findings regarding what Schwartau and Seeberger depict in their sustainability reports (perspective 1) and which value types are found (perspective 2).

Findings Schwartau

In the following, the photographs in Schwartau's sustainability reports will be analysed.

(1c) Description of photographs (my own perspective): Schwartau (indicated by C)

The full descriptions of the photographs included in the sustainability report by Schwartau can be found in the Annex (Table A8.1c).

In total, 27 photographs are placed within the sustainability report by Schwartau. Of these, 15 do not show any linkage with nature, landscape or natural products. Hence, 12 photographs are further analysed.

The remaining 12 photographs mainly contain the following **categories of depictions**:

	photographs
Cultural / natural landscape (*e.g.*, insects)	2
People in landscape (*e.g.*, people harvesting)	1
People, planted areas next to building (*e.g.*, people with company building and trees in background)	1
Natural food products (*e.g.*, strawberries)	3
People with natural food products (*e.g.*, hands holding strawberries)	4
Natural resource and food product (*e.g.*, water drops at jar)	1

All of these 12 photographs are coloured photographs. The same goes for the excluded 15 photographs.

The **angles** of the 12 photographs include:

From above	5
Straightforward	6
Slightly from below	1

The 12 photographs are of the following **shapes** or of a full-page size (which would equalise with a rectangular shape):

Rectangular	7
Squared	1

The **sizes** of the 12 photographs are:

Full page	5
Two thirds	1
Half of page	1
Third of page	3
Sixth part of page	1
Eighth part of page	1

Ten of the 12 included photographs have included writings placed at the top, in the middle or at the bottom of them. However, these photographs do not count as background photographs as the focus is laid upon the photographs and not on the writings or logos.

(2c) Theoretical perspective (land ethics, aesthetics): Schwartau

The full interpretations[40] of the photographs included in the sustainability report by Schwartau can be found in the Annex (Table A8.2c).

The following **value type categories** and **codes** have been discovered:

Value type category	Number of value types found	Code	Number of codes found
1.1 Acknowledging land's instrumental value	8	I.I People praising crops	0
		I.II People dealing with crops or resources	3
		I.III Built areas	0
		I.IV Natural food products	5
1.2	7	II Beauty of nature or natural products	7

---

40 In accordance with analysis step 2.

Acknowledging land's intrinsic value			
1.3 Harmony between human and nature/land	2	III	
1.3.1 Responsibility towards nature	1	III.I Hands holding fruit, nut, plant, soil	1
1.3.2 Holism	1	III.II Building or people surrounded by or next to plants	1
1.3.3 Respecting the Earth: harmony with other species	0	III.III People caressing plants or animals	0
1.3.4 Unity with nature: fitting into nature	0	III.IV People within crops, landscape, field, wilderness III.V Building surrounded by plants	0 0
1.4 No resource exploitation	0	I.IV	
1.5 Protecting and preserving the environment	1	I.V Caring people or auxiliaries	1
1.6 Worship of landscape	0	I.VI Expressively praising landscape	
2.1 Acknowledging nature's beauty and therefore its instrumental values (recreation, the beauty of food)	5	II.I People in natural landscape II.Ia Natural food products	0 5
2.2 Acknowledging nature's beauty and therefore its intrinsic values (beauty, preciousness)	1	II.II Pure nature/landscape (no company)	1
2.3 No exploitation	0	II.III	
2.4 No pollution	0	II.IV People picking up litter	
Total number	**24**		**24**

Table 8.2c: Total numbers of value types and codes found in sustainability report by Schwartau.

Specific findings Schwartau

Concerning Schwartau, the photographs look more professional and less childish than those ones in the reports by both, Lebensbaum and Rapunzel. Schwartau uses the effect of either very close portraits of fruits with bright colours or making use of contrasting colours, such as a dark background and very shiny red strawberries. The photographs look more arranged and less like snapshots during harvests or work in general. The many big photographs do not differ in terms of angle (mainly straightforward or from above) or shape (mainly rectangular). The sustainability report by Schwartau is strikingly short compared to reports A and B by Lebensbaum and Rapunzel. The included photographs are dominated by red strawberries or pink raspberries. The fruits are kind of praised by the company in the photographs. In total, there are not many photographs that are further interesting or eye-catching. As a result of the very few photographs analysed in total, there are only 24times value types discovered.

Findings Seeberger

In the following, the photographs by Seeberger's sustainability reports will be analysed.

(1d) Description of photographs (my own perspective): Seeberger (indicated by D)

The full descriptions of the photographs included in the sustainability report by Seeberger can be found in the Annex (Table A8.1d). In total, 43 photographs are placed within the sustainability report by Seeberger. Of these, 18 do not show any linkage with nature, landscape or natural products. Hence, 25 photographs are further analysed.

The remaining 25 photographs mainly contain the following **categories of depictions**:

	photographs
Cultural / natural landscape (*e.g.*, insects or trees)	4
People in landscape (*e.g.*, people with trees in background)	16
Natural food products (*e.g.*, berries, nuts)	4
People with natural food products (*e.g.*, hands holding strawberries)	1

All of these 25 photographs are coloured photographs. The same goes for the excluded 18 photographs.

The **angles** of the 25 photographs include:

From above	3
Eye-contact	12
Eye-contact from below	1
Straightforward	9

The 25 photographs are of the following **shapes**:

Rectangular	1
Round-shaped	24

The **sizes** of the 25 photographs are:

Sixth part of page	3
Twelfth part of page	2
Less than twelfth part of page but bigger than the next category	5
Generally small	15

One of the 25 included photographs has a graphic placed on top of it. It is hence regarded as a background photograph.

(2d) Theoretical perspective (land ethics, aesthetics): Seeberger

Value type category	Number of value types found	Code	Number of codes found
1.1 Acknowledging land's instrumental value	7	I.I People praising crops	0
		I.II People dealing with crops or resources	2
		I.III Built areas	0
		I.IV Natural food products	5
1.2	7	II Beauty of nature or natural products	7

Acknowledging land's intrinsic value			
1.3 Harmony between human and nature/land	16	III	
1.3.1 Responsibility towards nature	0	III.I Hands holding fruit, nut, plant, soil	0
1.3.2 Holism	14	III.II Building or people surrounded by or next to plants	14
1.3.3 Respecting the Earth: harmony with other species	0	III.III People caressing plants or animals	0
1.3.4 Unity with nature: fitting into nature	2	III.IV People within crops, landscape, field, wilderness III.V Building surrounded by plants	2 0
1.4 No resource exploitation	0	I.IV	0
1.5 Protecting and preserving the environment	0	I.V Caring people or auxiliaries	0
1.6 Worship of landscape	0	I.VI Expressively praising landscape	0
2.1 Acknowledging nature's beauty and therefore its instrumental values (recreation, the beauty of food)	4	II.I People in natural landscape II.Ia Natural food products	4 0
2.2 Acknowledging nature's beauty and therefore its intrinsic values (beauty, preciousness)	3	II.II Pure nature/landscape (no company)	3
2.3 No exploitation	0	II.III	
2.4 No pollution	0	II.IV People picking up litter	0
Total number	37		37

Table 8.2d: Total numbers of value types and codes found in sustainability report by Seeberger.

Specific findings Seeberger

There are more photographs included in the report by Seeberger than by Schwartau, however it is nevertheless quite short compared to the reports by Lebensbaum and Rapunzel.

The report by Seeberger shows mainly round-shaped photographs with eye-contact or taken straightforward. As the many texts are very small and rectangular-like, the round-shaped photographs seem to break up the linear and straight appeal of the report. It looks very professional, which is due to the images themselves on the photographs: often these are portraits, which are arranged and not taken as a snapshot. The high number of small photographs leads to the impression, that pictures are less important to the company and that they shall not distract from the text.

As mentioned before, there are many photographs included which are small and round-shaped, where employees or employers are seen (judged on their business dress) with trees or bushes and lawn in background. The photographs are taken outside as if to show the reader that the company is connected to nature (photographs D1-D3 (pp. 3,5,8), D7 (p. 15), D20 (p. 31), D23 (p. 35), D27 (p. 37), D34 (p. 46), D36 (p. 48), D43 (p. 54)). In contrast, there are less photographs which show natural products or people touching plants (except for D4 (p. 12), D8 (p. 24), D9 (p. 26), D10* (p. 26), D12 (p. 27), D13 (p. 27)). There are only two photographs that show pure nature or landscape (D14 (p. 27) and D18 (p. 30)).

The dominating colour in the photographs is green. This goes for the many small pictures with smiling employees as well as those photographs that show nature, landscape or natural food products such as nuts or berries. The seven small and round-shaped photographs of the employees or employers as well as one big round-shaped photograph and a rectangular one are striking as they are arranged as if to show that the company and its employees have a strong connection towards nature. In contrast, the other analysed reports show employees in different setting, such as outside or inside the company building, during activities and often in motion.

A picture like D39 is often excluded in the four analysed reports (such as B78* (p. 51), D11* (p. 26)). In the report by Seeberger D39 is very big and therefore striking. The building in which people are sitting and clapping their hands, does not seem to have walls, instead one can clearly see the trees next to the building. The connection to nature is obvious.

8.4 General findings and their discussion

There are several general findings which will be summed up and discussed in this Chapter. They concern the perspectives (1) and (2) of the analysis (*cf.* Chapter 7.1).

The first finding concerns the **categories of depictions**. In case of *Lebensbaum* there are five different categories and one that is called "other" due to categorisation problems. Especially the category "cultural / natural landscape" is found in the photographs (22 photographs), followed by "people in landscape" (15) and "planted areas next to building" (13). The number of the categories shows how important the illustration of landscape is for Lebensbaum. The comparably long report (212 pages) with its 143 photographs shows in 50 photographs linkages with nature or at least cultural landscape. The remaining eleven (included) photographs show mainly natural food products, whereas the excluded photographs are about people (presumingly managers or employees, such as A2*-A5*) and machinery (such as A31*) or production steps (such as A17*) where no direct connection with nature can be found. The report by Lebensbaum is the only one which has got 22 black-and-white photographs included.

As of what concerns *Rapunzel*, there are seven categories of depictions, but the focus is on people rather than on nature or landscape only. This is, the categories "people in landscape (24 photographs) and "people with natural food products" (22) can be found quite often compared to the categories "people, planted areas next to building" (8), "Cultural / natural landscape" (7) and "planted areas next to building" (3). The remaining categories concern "people with animals" (1) and "plants and food products" (1). The excluded photographs in the sustainability report by Rapunzel are also about people (such as B2*, B14*, B67*).

Also, the report by *Schwartau* has a focus on the people with six photographs in total which show people instead of landscape. This can be seen in the number of photographs in the categories "people with natural food products" (4 photographs), "people in landscape" (1) and "people, planted areas next to building" (1). Indeed, the number of photographs is small. However, in relation to the total number of 27 photographs, there is a clear focus on people, followed by "natural food products" (3), "natural resource and food product" (1) and finally "cultural / natural landscape" (2). The excluded photographs by Schwartau show also mainly people such as during work (such as C7*) or while posing for camera (such as C6*). The photographs which do not show any people at all (or just fingers, such as C1) are very colourful, mostly big (full page such as C1, C2, C5 or half page such as C14) and thus they are very eye-catching as if to highlight the freshness, pureness and beauty of the fruits Schwartau uses for its production.

The photographs by *Seeberger* are less colourful; the main colours are green and brown. There are only four categories of depictions, which also mainly concern people: "people in

landscape" (16 photographs) and "people with natural food products" (1). The other categories are "natural food products" (4) and "cultural / natural landscape" (4). Surprisingly, Rapunzel's report has got only three more photographs in the category "cultural / natural landscape". Seeberger's focus is clearly on people (again, presumingly managers or employees) positioned in cultural landscape. The connection to nature is created, does not seem natural as the photographs show arranged settings because the people are directly looking into camera while standing next to a tree or in front of bushes and wearing business suits (such as D1-D3). The excluded photographs show mainly people during production processes (such as D5* or D10*).

The next findings concern the **angles, shapes and sizes** of the photographs. Regarding *Lebensbaum* most photographs are taken straightforward (27 photographs), many from above (13) or slightly from above (5). Only four photographs show eye-contact. The reason for the few photographs with eye-contact compared to straightforward is that most photographs showing people are excluded as there is no connection with nature seen. There are many round-shaped photographs in the report by Lebensbaum and most of them are very small.

In contrast, *Rapunzel* shows almost as many photographs with eye-contact (21) in its report as pictures with the angle straightforward (24). Many photographs are round-shaped, or rectangular with curves and very big. The pictures are striking due to their sizes and shapes. The latter remind on institutions like Waldorf schools or Weleda products which represent anthroposophical values[41]. Obviously, Rapunzel wants to show its anthroposophical attitude towards business activities. It can be seen immediately (at least by those who are aware of this attitude) without reading the text. The recontextualisation (Chapter 8.6) will prove whether this observation is right or not.

Concerning the sustainability report by *Schwartau*, the angles and shapes of the photographs are less striking. They are mainly taken from above (5) or straightforward (6) and rectangular (7), which is a typical reporting style and looks simple and professional. The sizes of the photographs, however, are very striking because many of them are very big: five photographs are of a full-page size, four photographs are a third of a page, half of it or two thirds of a page. Considering that only twelve photographs show a connection with nature or natural elements, it seems that the big photographs shall compensate the small number of photographs in general (27 in total) in the report by Schwartau. The colourful and hence eye-catching pictures hide the fact that there are only few photographs in general that show a connection with nature.

---

41 *Cf.* Heisterkamp (2009).

The question arises whether the relationship is strong enough to show it or not. It will be debated below (*see* Chapters 8.6 and 8.8).

The sustainability report by *Seeberger* shows photographs taken mainly from a direct angle, such as eye-contact (12) or straightforward (9). The reason for the high number of eye-contacts is the high number of portraits, assumingly the management and employees of the company. The green background, which can be seen in almost every photograph is eye-catching. The connection to nature is professionally arranged. Except one photograph (assumingly the managers), all the photographs are round-shaped, mainly small. Some are big and show activities of employees. The photographs by Seeberger are generally less striking than the ones in the other analysed reports. One reason for this are the colours, which are mainly green, brownish or dark. Another reason is the shape because the round shapes seem boring as they are mainly small and some activities in the photographs are not easy to recognise immediately (*cf.* D13 and D15).

The next findings concern the **categories of the value types** (*see* Tables 8.2a-8.2d) and the **codes for the value types**. Starting with the report by *Lebensbaum* (*see* Table 8.2a), the total number of 100 value types suggests a strong relationship with nature. Especially the value type categories 1.1 (23 in total), 1.2 (23) and 1.3 (26) are shown in the photographs. Value type category 1.1 "Acknowledging land's instrumental value" is mainly represented by the code I.II "people dealing with crops or resources" (14 photographs in total, *see e.g.*, A36, A76 or A82). Showing people with crops seems to be of high importance for Lebensbaum. The instrumental value is presented in a way that makes the reader of the report understand through the photographs only, without reading the text, how employees are treated by the company and at the same time how the employees treat the natural resources they use for food production. The next code is I.IV "natural food products" (7). Photograph A64 (p. 87) is an example of how to show many meanings for the company in one picture: Not only the instrumental value is shown in form of the food product, but also the value type category 1.2 "acknowledging land's intrinsic value" represented by the code II "beauty of nature or natural food products" which is literally shown in the hands of the woman. In addition, this is the code III.I "hands holding fruit, nut, plant, soil" which stands for the value type subcategory 1.3.1 "responsibility towards nature". Generally, value type category 1.3 is the overall category for the subcategories 1.3.1-1.3.3. They are all related to harmony with nature in the sense of Leopold (1981, 1999). When a picture meets the categories 1.3.1-1.3.3 then it automatically falls into category 1.3 as well.

The Lebensbaum report mainly shows the value type subcategory 1.3.4 "unity with nature: fitting into nature" (13) with the codes III.IV "people within crops, landscape, field, wilderness" (8) (*see e.g.*, A42) and III.V "building surrounded by plants" (5) (*see e.g.*, A108 (p. 124), A109

(p. 125)). Photograph A42 (p. 62) symbolises also many meanings to the company: careful treatment of land's instrumental values (harvesting) and at the same time being a unit with nature and respecting its values without destructing the environment. Photographs A108 and A109 are colourful and striking even though the buildings are more obvious than the plants. However, these photographs seem to show Lebensbaum's attitude towards a unity with nature which also includes company or factory buildings. Also very often shown is the value type subcategory 1.3.2 "holism" with the code III.II "building or people surrounded by or next to plants" (11). Photograph A42 also represents code III.II. Regarding A64, it is code III.I "hands holding fruit, nut, plant, soil". This code is found six times in the report. It is a very striking picture, that is well-known as a code for sustainability and responsibility[42]: to be responsible means to take the duty to deal with it (Cambridge Dictionary, 2021) – to be able to cope with the burden of being responsible and accountable. This means, hands holding or carrying soil or plants show how responsibility towards nature or natural resources becomes carried out. Depicting this in a sustainability report means to directly address how accountability is literally understood.

Value type category 2.2 "acknowledging nature's beauty and therefore its intrinsic values (beauty, preciousness)" is presented 18 times, represented by the code II.II "pure nature/landscape (no company)". Concerning 2.2, the front page is striking not only because of the wide angle, showing the tropical landscape. It is furthermore due to the exotic of the landscape. As a German company, Lebensbaum deals with many exotic crops for its production of rather ordinary food products (mainly coffee, spices tea). The fact, that Lebensbaum puts the origin of its products on the front page is a commitment towards climate, environmental and social issues which are directly affected by Lebensbaum's decision to use foreign, much travelled resources for its production. A1 is a photograph that shows the pure beauty of nature. It looks untouched, not polluted or destroyed by mankind, without any traces of human cultivation or settlement. Lebensbaum places this picture as if to make a statement concerning its believe of sustainability and how wise a food company can treat such a region, rich of wildlife and rare species and often combined with unstable social conditions for local people. Chapter 8.6 shall prove this thought. Other photographs showing value type category 2.2 are A19 (p. 25), A26 (p. 46) and A95-A101 (pp. 114-116). They all show local German landscape and in contrast to A1 or A80 (p. 99), which also show a tropical landscape, the immediate connection towards sustainability only concerns the environmental aspect of biodiversity in terms of local insects or plants. The key difference here is the local component:

---

42 *Cf.* Feix and Philippe (2020).

biodiversity in Europe is also endangered, not only in the tropics – but the photographs also lead to the impression that the local environment is intact or becomes preserved, whereas the tropical, non-local environment just does not get polluted or destroyed while using its resources. This thematical distance becomes very clear through the technical distance and angle of the photographs. A1 and A80 are taken from high above (*e.g.*, with a drone or from helicopter), A19, A26 and A95-A101 are mainly taken straightforward and from a very near position. The missing distance leads to a more familiar connection towards these landscapes.

The remaining value type categories found in the sustainability report by Lebensbaum are 2.1 "acknowledging nature's beauty and therefore its instrumental values (recreation, the beauty of food)" (3) as well as 1.5 "protecting and preserving the environment" (1). Value type category 2.1 is represented through the code II.Ia "natural food products" (3). In contrast to 1.1, which is a land ethic aspect, the aesthetic aspect of instrumental values plays a minor role in the report. 1.5 is a very rare value type; only the report by Schwartau shows it once as well. However, considering the wild flower strip shown in photograph A26, the value type category 1.5 seems well chosen. The fact that 1.5 is only shown once does not lead to the impression that environmental protection is considered as unimportant to Lebensbaum. The reason for this is the high number of value type category 1.3 "harmony between human and nature/land" (26), which generally proves a strong connection with nature. Regarding land's and nature's instrumental (1.1 and 2.1) and intrinsic values (1.2 and 2.2), there are more intrinsic values (41 in total) found in the report than instrumental ones (26). Value type category 1.3 can be partly considered as intrinsic values as well. Those values, which are considered as intrinsic values among the value type category 1.3 are those with subcategory 1.3.1 "responsibility towards nature" (6), 1.3.3 "respecting the Earth: harmony with other species" (2) and 1.3.4 "unity with nature: fitting into nature" as what concerns code III.IV "people within crops, landscape, field, wilderness" (8). This increases the number of intrinsic values found in the report by Lebensbaum up to 50. This high number is a proof for the very good quality of the relationship between company and nature (*see* below). Many colourful drawings complement the photographs and the texts, tables and graphics. The text becomes eclipsed through the colourful layout of the report.

Continuing with the sustainability report of *Rapunzel* (*see* Table 8.2b), there are less value types and codes found than in the previously presented report by Lebensbaum. In the report by Rapunzel there are 82 value types found in total, represented through 82 codes. The value type category 1.1 "acknowledging land's instrumental value" (34 in total) is found most often. It is mainly represented through the code I.II "people dealing with crops or resources" (24), followed by I.I "people praising crops" (7) and I.IV "natural food products" (3). Code I.II can be easily recognised in many photographs in the report. People are shown during farm work such

as harvesting, ploughing, processing or seeding (*see e.g.,* B20 (p. 21), B22 (p. 24), B24 (p.25), B25 (p. 25), B27-B29 (p. 25)). In the photographs B1 (front page), B31 (p. 25), B32 (p. 25), B36 (p. 25), B39 (p. 25), B48 (p. 30) and B50 (p. 30) land's instrumental value is shown through code I.I which is quite often represented in contrast to the other reports (only one photograph in the report by Lebensbaum). Praising crops is a very striking picture of how to be in a relationship with nature, even though it is about the instrumental values of land, hence the usage (or misuse and waste) of crops or other resources such as soil or water. Nevertheless, by showing how intensively people deal with the crops (*e.g.,* B50), how they treat them with care and respect and as a result praise them for their beauty, perfection and existence, there is thankfulness shown that is different from just harvesting without having a real connection to the crops. The picture of having a strong connection towards nature is further manifested through value type category 1.3 "harmony between human and nature/land" (33), which is found through the codes 1.3.2 "holism" (12), 1.3.1 "responsibility towards nature" (10), 1.3.4 "unity with nature: fitting into nature" (10) and finally 1.3.3 "respecting the earth: harmony with other species" (1). Photographs like B3 (p. 4), B52 (p. 31) and B138 (p. 98) are pictures that show how Rapunzel represents holism through architecture. The buildings are not higher than their surroundings, not even higher than normal living houses. It has no factory character, but rather seems as a holistic image in terms of architecture and (from knowing the company without reading the text) principles of operation with regard to people and ecology. Showing people outside the company or generally near plants or crops is a common picture in Rapunzel's report. From just looking at the photographs, people seem to be the dominant feature of the report. All in all, the instrumental values of land and nature (value type categories 1.1 and 2.1) are found 38 times, whereas the intrinsic values of land and nature (1.2 and 2.2) are found only ten times. The intrinsic values are represented through the codes II "beauty of nature or natural products" (6) and II.II "pure nature/landscape (no company)" (4). Adding value type category 1.3 to the intrinsic values leads to a total number of 39 intrinsic values. This observation fits to the impression that people and how they use and treat instrumental values are the focus of the company. The illustrated intrinsic values 1.2 and 2.2 are about pure landscape and its beauty (*see e.g.,* B19 (p. 19) or B37 (p. 25)). Those pictures which show pure nature or natural landscape without people are represented quite rarely in contrast to those intrinsic values which include people (value type subcategories 1.3.1, 1.3.2, 1.3.4; see *e.g.,* B36 (p. 25), B40 (p. 25) or B52 (p. 31)).

Coming to the next report by *Schwartau,* it is firstly the generally small amount of value types found that is interesting. In total, there are only 24 value types found. A reason for this is probably the small number of pages because less photographs leads to less possible value type categories that could be found. Secondly, the category is interesting: 1.1 "acknowledging land's instrumental value" is found eight times; represented through the codes I.IV "natural

food products" (5) and I.II "people dealing with crops or resources" (3). It is not surprising that also code II.Ia "natural food products" is found five times, which stands for the value type category 2.1 "acknowledging nature's beauty and therefore its instrumental values (recreation, the beauty of food)". However, more surprising is the comparably high number of intrinsic values found in the report by Schwartau: value type category 1.2 "acknowledging land's intrinsic value" is found seven times, represented through the code II "beauty of nature or natural products" (7). Value type category 2.2 "acknowledging nature's beauty and therefore its intrinsic values (beauty, preciousness)" is found only once, which makes a number of eight value types which stand for intrinsic values. Another value type category found is 1.3 "harmony between human and nature/land" (2). The subcategory 1.3.1 „responsibility towards nature" is found once (*see* C1, front page). It is a very striking picture and leads to the impression of a very caring and responsible company, which treats its resources carefully and with respect. Subcategory 1.3.2 "holism" is found once as well (*see* C18 (p. 25)). This makes a total number of nine intrinsic values. Finally, there is the value type category 1.5 "protecting and preserving the environment" found once. This is a category that is not categorisable into instrumental or intrinsic values. Both is possible, depending on the intention of the company (either preserving the environment due to the instrumental values of land or the intrinsic values of nature).

The sustainability report by *Seeberger* shows 37 value types found, represented through 37 codes. The most presented category is 1.3 "harmony between human and nature/land" (16) with the subcategories 1.3.2 "holism" (14) and 1.3.4 "unity with nature: fitting into nature" (2). The latter is represented through the code III.IV "people within crops, landscape, field, wilderness" (2). Subcategory 1.3.2 is very present throughout the whole report. The photographs D1-D3 (pp. 3,5,8), D7 (p. 15), D20 (p. 31), D23 (p. 35), D27 (p. 37), D34 (p. 46), D36 (p. 48), D43 (p. 54) all belong to the same group of pictures: employers or employees. A holistic image is created through the arrangement of a person with a tree, bush or green lawn. The employees are presented as strongly connected towards nature. In contrast to the three other sustainability reports, Seeberger's front page does not show any photograph. The green colour dominates that page, even though most parts of the page are left white. It is the dominating colour in the report as if to demonstrate Seeberger's strong relation to the natural environment. As the company does not have any certification regarding organic products (*e.g.*, Bioland, Demeter etc) or sustainable production (*e.g.*, EMAS[43]), it seems that it tries to convince readers of the sustainability report by making use of certain colours and pictures which are easy to relate with nature. The attempt to show a relationship with nature is successful performed through the usage of photographs such as D1, D8 (p. 24) or D36 (p. 48). Value type category 1.1 Acknowledging land's instrumental value is found seven times,

---

43 Eco Management and Audit Scheme of the European Union.

represented through the codes I.IV "natural food products" (5) and I.II "people dealing with crops or resources" (2). In contrast, 2.1 "acknowledging nature's beauty and therefore its instrumental values (recreation, the beauty of food)" is found only four times through the code II.I "people in natural landscape" (4). Value type category 1.2 "acknowledging land's intrinsic value" is illustrated seven times, 2.2 "acknowledging nature's beauty and therefore its intrinsic values (beauty, preciousness)" three times.

Regarding the **relationship of food business and nature**, there is clear evidence for good qualities of relationships and thus good or even strong relations between the selected food business and nature. In accordance with Chapter 4, value types are indicators for an existing relationship of food business and nature. Such a relationship is furthermore defined through the qualities of that relationship. These qualities can be good (respect and love for nature/land) or bad (oppressive or exploitative behaviour). Depending on the qualities of the relationship the level of this relationship is either strong, less strong but good, or weak. However, there are differences in the levels of the qualities. As the differentiation between good and bad qualities (*cf.* Box 4.2), is too vague, I now propose a distinction between the following value types which influence the value orientation of companies towards nature:

Value types which stand for **a strong relationship with nature**[44]:

- Intrinsic values (value type categories 1.2 and 2.2) which are about the beauty of nature, landscape and food products

- Harmony between humans and nature/land (value type category 1.3), which stand for intrinsic values and include the following subcategories:

    o 1.3.1 Responsibility towards nature

    o 1.3.3 Respecting the Earth: harmony with other species

    o 1.3.4 Unity with nature: fitting into nature (only code III.IV "people within crops, landscape, field, wilderness")

- Instrumental values (value type category 1.2; only code I.I people praising crops; value type category 2.1), which are about respect towards land and its resources, the beauty of food and recreation in nature as long it is not harmed by pollution

- Worship of landscape (value type category 1.6).

---

44 = very good quality of relationship and hence a strong relationship with nature.

Value types which stand for a **good, but less strong relationship with nature**[45]:

- Harmony between humans and nature/land (value type category 1.3) which regards a generally holistic attitude towards nature by a company and includes the following subcategories:

    o 1.3.2 „holism"

    o 1.3.4 "unity with nature: fitting into nature" (only code III.V "building surrounded by plants")

- Protection and preservation of the environment, without resource exploitation or pollution (value type categories 1.4, 1.5, 2.3, 2.4)

Value types which stand for a **weak relationship with nature**[46]:

- Instrumental values (value type category 1.1) which stand for the general use of land and natural resources, but without exploitation; *e.g.*, harvesting (only codes I.II "people dealing with crops or resources" and I.III "built areas")

- Protection and preservation of the environment, without resource exploitation or pollution (value type categories 1.4, 1.5, 2.3, 2.4)

The qualities of the relationship with nature are, depending on whether the relationship is strong, good or weak, hence they are either very good, good or poor. According to Figure 4.2 a relationship is existent as long as value types are found, which can be linked to the three above categories (strong, good, weak). In the four analysed reports, there is no bad quality of relationship found – this is easily observable as there are only value types, which belong to good qualities of relationships.

The distinction between qualities of relationships will be applied below to the four reports. In the case of *Lebensbaum* and regarding Chapter 4.2, this leads to the following conclusions:

(1a)   Value orientation found:
        If I am successful in retrieving values from the pictures, I can state that there is an existing value orientation towards nature by the company, at least depicted in the report.

(2a)   Relationship of food company and nature "good qualities":
        In case of (1a), I can state there is evidence from pictures, that an existing value orientation towards nature means a strong relationship between the food company and nature, with good qualities.

---

45 = good quality of relationship and hence a good, but less strong relationship with nature.

46 = poor quality of relationship and hence a weak relationship with nature.

(1a): As I was able to retrieve values from the pictures, I can state that there is an existing value orientation towards nature by Lebensbaum, at least depicted in the report by the photographs.

(2a): I can state there is evidence from the pictures, that an existing value orientation towards nature means a strong relation between Lebensbaum and nature, with **very good qualities**. The qualities are about respect and love for nature and land. They are made visible through the following value types:

- Intrinsic values (value type categories 1.2 and 2.2) which are represented by the codes II "beauty of nature or natural products" (23) and II.II "pure nature/landscape (no company)" (18)

- Intrinsic values (value type category 1.3) which concern the harmony between company and land/nature, with the following subcategories, which stand for a strong relationship with nature:

    o 1.3.1 "responsibility towards nature" (6)

    o 1.3.3 "respecting the Earth: harmony with other species" (2)

    o 1.3.4 "unity with nature: fitting into nature", expressed through the code III.IV "people within crops, landscape, field, wilderness" (8)

  - Instrumental values (value type categories 1.1, 2.1), expressed through the codes I.I "people praising crops" (1) and II.Ia "natural food products" (3)

Moreover, there are those value types, which stand for good qualities and hence a **less strong, but still good relationship** with nature. These are:

- 1.3 "harmony between human and nature/land" regards the subcategories 1.3.2 "holism" (11) and 1.3.4 "unity with nature: fitting into nature" (only with the code III.V building surrounded by plants) (5)

- 1.5 "protecting and preserving the environment" (1)

Concerning the value types which represent poor qualities and hence a **weak relationship** with nature, these are the following ones:

- Instrumental values (value type category 1.1) with the codes I.II "people dealing with crops or resources" (14), I.III "built areas" (1) and I.IV "natural food products" (7)

All in all, the high number of the 61 found value types with very good qualities, 17 value types with good qualities and finally 22 value types with poor qualities for a relationship stand for a very strong relationship of Lebensbaum with nature. The recontextualisation phase (*see*

Chapter 8.6) will elaborate on that finding and prove whether it also relates to the overall image that Lebensbaum demonstrates in its sustainability report.

In the case of *Rapunzel* and with regard to Chapter 4.2, the following conclusion can be made:

> (1a) Value orientation found:
> If I am successful in retrieving values from the pictures, I can state that there is an existing value orientation towards nature by the company, at least depicted in the report.

> (2a) Relationship of food company and nature "good qualities":
> In case of (1a), I can state there is evidence from pictures, that an existing value orientation towards nature means a strong relationship between the food company and nature, with good qualities.

(1a): As I was able to retrieve values from the pictures, I can also state in the case of Rapunzel that there is an existing value orientation towards nature by the company, at least depicted in the report by the photographs.

(2a): I can state there is evidence from the pictures, that an existing value orientation towards nature means a strong relation between Rapunzel and nature, with very good and good qualities. Again, these qualities are about respect and love for nature and land. They are made visible through the following value types with very good qualities which stand for a **very good quality of relationship:**

- Intrinsic values (value type categories 1.2 and 2.2) which are represented by the codes II "beauty of nature or natural products" (6) and II.II "pure nature/landscape (no company)" (4)

- Intrinsic values (value type category 1.3) which concern the harmony between company and land/nature, with the following subcategories, which stand for a strong relationship with nature:

  o 1.3.1 "responsibility towards nature" (10)

  o 1.3.3 "respecting the Earth: harmony with other species" (1)

  o 1.3.4 "unity with nature: fitting into nature", expressed through the code III.IV "people within crops, landscape, field, wilderness" (7)

  - Instrumental values (value type categories 1.1, 2.1 (4)), expressed through the codes I.I "people praising crops" (7) and II.Ia "natural food products" (1)

Those are the value types, which stand for a less strong, but still **good relationship** with nature due to good qualities. These are:

- 1.3 "harmony between human and nature/land" regards the subcategories 1.3.2 "holism" (12) and 1.3.4 "unity with nature: fitting into nature" (only with the code III.V building surrounded by plants) (3)

Concerning the value types which represent a **weak relationship** with nature due to poor qualities, these are the following ones:

- Instrumental values (value type category 1.1) with the codes I.II "people dealing with crops or resources" (24) and I.IV "natural food products" (3)

In sum, there is also a high number of value types found in the report by Rapunzel, but with 82, they are less than in the report by Lebensbaum. There are 36 value types of very good qualities, 15 value types with good qualities and 27 value types with poor qualities for a relationship which in total stand for a very strong relationship of Rapunzel with nature. As the number of very good and good qualities is higher than the number of poor qualities, this report is also conserved as showing a strong connection with nature. The recontextualisation phase (*see* Chapter 8.6) will elaborate on that finding and prove whether it also relates to the overall image which Rapunzel shows in its sustainability report.

Looking at the sustainability report of *Schwartau* and with regard to Chapter 4.2, the following conclusions can be made:

(1a) Value orientation found:
If I am successful in retrieving values from the pictures, I can state that there is an existing value orientation towards nature by the company, at least depicted in the report.

(2a) Relationship of food company and nature "good qualities":
In case of (1a), I can state there is evidence from pictures, that an existing value orientation towards nature means a strong relationship between the food company and nature, with good qualities.

(1a): As I was able to retrieve values from the pictures, I can also state in the case of Schwartau that there is an existing value orientation towards nature by the company, at least depicted in the report by the photographs.

(2a): I can state there is evidence from the pictures, that an existing value orientation towards nature means a good relation of Schwartau with nature, with very good, good and weak qualities. The **very good qualities** are again about respect and love for nature and land. They are made visible through the following value types:

- Intrinsic values (value type categories 1.2 and 2.2) which are represented by the codes II "beauty of nature or natural products" (7) and II.II "pure nature/landscape (no company)" (1)

- Intrinsic values (value type category 1.3) which concern the harmony between company and land/nature, with the following subcategories, which stand for a strong relationship with nature:

    o 1.3.1 "responsibility towards nature" (1)

- Instrumental values (value type category 2.1), expressed through the code II.Ia "natural food products" (5)

These are the value types, which stand for a less strong, but still **good relationship** with nature due to good qualities. These are:

- 1.3 "harmony between human and nature/land" regards the subcategory 1.3.2 "holism" (1)

- 1.5 "protecting and preserving the environment" (1)

Concerning the value types which represent a **weak relationship** with nature due to poor qualities, these are the following ones:

- Instrumental values (value type category 1.1) with the codes I.II "people dealing with crops or resources" (3) and I.IV "natural food products" (5)

Summarising, there is a generally small number of only 24 value types found in the report by Schwartau. There are 14 value types of very good qualities, two value types which stand for a good quality of relationship and finally eight value types with poor qualities of a relationship between Schwartau with nature. Indeed, the number of very good and good qualities is higher than the number of poor qualities, however, in contrast to the previous reports by Lebensbaum and Rapunzel, a strong relationship with nature is debatable, which will be elaborated on in Chapter 8.6. There are only 24 value types in general in the report by Schwartau, which is less than the total number of 61 value types with very good qualities in the report by Lebensbaum and 36 value types with very good qualities in the report by Rapunzel. This leads to a further distinction which concerns the level of relationship qualities. Because value types influence the value orientation of a company (see Chapter 4), the qualities and their level matter in terms of how deep companies are related to nature. In the case of Schwartau, the level of relationship quality is less distinct.

Regarding the sustainability report by *Seeberger*, and with regard to Chapter 4.2, the following conclusions can be made:

(1a) Value orientation found:
If I am successful in retrieving values from the pictures, I can state that there is an existing value orientation towards nature by the company, at least depicted in the report.

(1a): I was able to retrieve values from the pictures and I can also state that in the case of Seeberger there is an existing value orientation towards nature by the company, at least depicted in the report by the photographs.

(2a): I can state there is evidence from the pictures, that an existing value orientation towards nature means a good relation of Seeberger with nature, with very good, good and weak qualities. The **very good qualities** are again about respect and love for nature and land. They are made visible through the following value types:

- Intrinsic values (value type categories 1.2 and 2.2) which are represented by the codes II "beauty of nature or natural products" (7) and II.II "pure nature/landscape (no company)" (3)

- Intrinsic values (value type category 1.3) which concern the harmony between company and land/nature, with the following subcategories, which stand for a strong relationship with nature:

    o   1.3.4 "unity with nature: fitting into nature", represented by the code III.IV "people within crops, landscape, field, wilderness" (2)

- Instrumental values (value type category 2.1), expressed through the code II.I people in natural landscape (4)

Those are the value types with good qualities, which stand for a less strong, but still **good relationship** with nature. These are:

- 1.3 "harmony between human and nature/land" as of what regards the subcategories 1.3.2 "holism" (14)

Concerning the value types with poor qualities which represent a **weak relationship** with nature, these are the following ones:

- Instrumental values (value type category 1.1) with the codes I.II "people dealing with crops or resources" (2) and I.IV "natural food products" (5)

All in all, there is also a comparably small number of only 37 value types found in Seeberger's sustainability report. There are 16 value types of very good qualities, 14 value types which stand for a good quality of relationship and finally seven value types with poor qualities for a relationship between Seeberger with nature. Again, the number of very good and good

qualities is higher than the number of poor qualities. Like in the case of Schwartau, a strong relationship with nature is debatable, which will be further elaborated in Chapter 8.6. The level of relationship quality is less distinct than the ones of Lebensbaum and Rapunzel.

8.5 Answer to sub questions

According to Chapter 6.1 the research question can be best answered when previously answering the sub questions. This first sub question is:

1. *If the investigated reports display environmental values, what values are reflected in the images displayed?*

According to the findings in Chapter 8.2, there are different values found in all of the four sustainability reports. The values can be categorised in different value type categories and subcategories. These are the found value types (*see* Table 8.5):

Value type category	Number of value types found	Number of value types found	Number of value types found	Number of value types found
	Lebensbaum	Rapunzel	Schwartau	Seeberger
1.1 Acknowledging land's instrumental value	23	34	8	7
1.2 Acknowledging land's intrinsic value	23	6	7	7
1.3 Harmony between human and nature/land	26	33	2	16
1.3.1 Responsibility towards nature	6	10	1	0
1.3.2 Holism	11	12	1	14
1.3.3 Respecting the Earth: harmony with other species	2	1	0	0
1.3.4 Unity with nature: fitting into nature	13	10	0	2
1.4 No resource exploitation	0	0	0	0
1.5 Protecting and preserving the environment	1	0	1	0
1.6 Worship of landscape	0	0	0	0
2.1 Acknowledging nature's beauty and therefore its instrumental values (recreation, the beauty of food)	3	0	0	0
2.2 Acknowledging nature's beauty and therefore its intrinsic values (beauty, preciousness)	18	5	5	4
2.3 No exploitation	0	4	1	3

2.4 No pollution	0	0	0	0
Total number	**100**	**82**	**24**	**37**

Table 8.5.1: Values found in the photographs of the sustainability reports by Lebensbaum, Rapunzel, Schwartau and Seeberger.

The number of the values differs depending on the report. The sustainability report by Lebensbaum shows the highest number of values with 100, followed by Rapunzel with 82 values. The report by Seeberger shows 37 values. The least values are displayed in the report by Schwartau. Obviously, the number of pages matters in terms of how many photographs are depicted, which leads to one (rarely two) value(s) found per photograph. Lebensbaum's report has got 212 pages (with front and back page), including 143 photographs, of which 61 photographs show 100 values. In the report by Rapunzel there are 91 pages, 138 photographs and 82 values. Seeberger's report has got 54 pages with 43 photographs and 37 times values depicted. The report by Schwartau is 41 pages long, includes 27 photographs and 24 values. The most depicted value type category is 1.1 "acknowledging land's instrumental value", at least in the case of Rapunzel (34) and Schwartau (8). Lebensbaum (26) and Seeberger (16) make use of the value type category 1.3 "harmony between human and nature/land" as the most often represented value type category (Lebensbaum mainly with subcategory 1.3.4 "unity with nature: fitting into nature" (13) and Seeberger with subcategory 1.3.2 "holism" (14)). Also, the reports by Rapunzel (33) and Lebensbaum (26) show the value type category 1.3 "harmony between human and nature/land" very often. The report by Lebensbaum is also highlighted by the number of photographs that show either value type category 1.1 "acknowledging land's instrumental value" (23) or 1.2 "Acknowledging land's intrinsic value" (23). It follows value type category 2.2 "acknowledging nature's beauty and therefore its intrinsic values (beauty, preciousness)" (18). In the report by Rapunzel the value type categories 1.2 (6) and 2.2 (5) play a minor role. The same goes for Seeberger (7 and 4). Schwartau, however, shows value type category 1.2 seven times and value type category 2.2 five times. Compared to the total number of pages, this is roughly a third or fourth of the total number of value type categories depicted. Subcategory 1.3.3 and subcategories 1.4-1.6 and 2.3 play minor roles in all of the four reports. Value type category 2.4 is not shown in any of the reports.

2. *Are there different qualities and levels of a food business – nature relationship?*

In all of the four analysed reports there are environmental values found. This is, there cannot be no relationship between business and nature. There are, however, differences regarding the qualities of the relationship with nature (Table 8.5.2). To categorise the levels of the relationship between food company and nature, the following range is made:

- Strong relationship: ≥50% value types with very good qualities in dependence of total number of value types found

- Less strong, but good relationship: <50 % value types with very good qualities in dependence of total number of value types found

- Weak relationship: <25% value types with very good qualities in dependence of total number of value types found

- No relationship: = 0% value types with any kind of quality found.

	Lebensbaum	Rapunzel	Schwartau	Seeberger
Total number of photographs	143	138	27	43
Number of photographs included in analysis	61	60	12	25
Total number of value types found	100	82	24	37
Value types with very good qualities	61	40	14	16
Value types with good qualities	17	15	2	14
Value types with poor qualities	22	27	8	7
Categorisation into level of relationship with nature	**Strong**[47] Because of 61% very good qualities	**Good** Because of ca. 49% very good qualities	**Strong** Because of 58% very good qualities	**Good** Because of 43% very good qualities

Table 8.5.2 Number of qualities and categorisation into level of relationship with nature.

Beginning with the report by *Lebensbaum*, there are value types shown which stand for either very good, good or poor qualities of a relationship. As the report mainly displays those with very good qualities (61), 17 value types with good qualities and only 22 with poor qualities, the overall result for Lebensbaum is a strong relationship with nature that is depicted in the photographs of the sustainability report 2016. The sustainability report by *Rapunzel* differs in terms of the number of qualities found in the photographs. Most value types are found in the group of those obtaining very good qualities for a relationship (40), 17 photographs show value types with good qualities of a relationship with nature and 27 times there are value types shown which belong to the group of poor qualities. The relationship towards nature by Rapunzel cannot be accounted as a strong one, even though the percentage is nearly touching the line of 50%, it is thus regarded as a less strong, but good relationship. In the case of *Schwartau*,

47 In dependence of total value types found.

those value types which depict very good qualities of a relationship can be found 14 times. Only twice there are good qualities found and eight times poor qualities. The relationship towards nature depicted in the photographs in the sustainability reports by Schwartau is considered as strong according to the percentage of very good qualities found. Regarding *Seeberger*, the sustainability report shows mainly very good (16) and good qualities (14) of a relationship. Only seven value types represent poor qualities of a relationship with nature. The photographs thus show a good relationship with nature.

3. *Are there differences in type and representation of environmental values in corporate reports between conventional and organic food companies?*

There are not many differences in type and representation of environmental values in the reports between conventional and organic food company. Concerning the organic companies, represented by the sustainability reports of Lebensbaum and Rapunzel, the number of values is higher than the number of photographs. The holds true for the reports by the conventional companies Schwartau and Seeberger. They also show more values than photographs in their reports. Concerning the level of relationship, there is one report displaying a strong relationship with nature in both groups. Among the organic companies, it is the report by Lebensbaum. Among the group of conventional companies, it is the report by Schwartau. The latter is surprising concerning the small number of pages and generally small number of photographs, which leads to the assumption of a necessary duty of an ecological account, but not necessarily the duty to reveal more than necessary information. Nevertheless, the high number of value types that are displayed stand for very good qualities of a relationship with nature, which finally leads to the categorisation of a report with pictures that display a strong relationship with nature. In terms of the numbers of quality levels displayed, the reports by Lebensbaum, Rapunzel and Schwartau show mainly very good qualities, followed by poor qualities and at last the good qualities. Only the report by Seeberger shows more good qualities than poor ones. One of the main differences between organic and conventional food companies is the total number of photographs and value types displayed. The reports by the organic companies are longer in terms of pages, show a lot more photographs and value types.

The other main difference concerns the second site of a picture by Rose (2012) - the image and its effect (*see* Chapter 7.1), basically what is depicted on the photographs (*see* Table 8.5.3).

	Lebensbaum	Rapunzel	Schwartau	Seeberger
Cultural / natural landscape	22 photographs	7	2	4
Natural food products	2	-	3	4
Natural resource and food product	-	-	1	-
People in landscape	15	24	1	16
People with natural food products	7	22	4	1
People, planted areas next to building	-	8	1	-
Planted areas next to building	13	3	-	-
People with animal	-	1		-
Plants and food products	-	1	-	-
Other	2	-	-	-

Table 8.5.3: Categories of depictions.

The pictures in the report of Lebensbaum mainly show cultural or natural landscapes, which are about crops but also (rather) untouched nature. Plants are often displayed as well, *e.g.*, next to buildings or in form of drawings which could be regarded as an upgrade of the existing photographs. People are mainly displayed while being in landscape and during harvest or they are displayed together with food products. This is often the representation of the common picture of sustainability and responsibility (six times the codes III.I "hands holding fruit, nut, plant, soil" is shown; A39 (p. 60), A63-A66 (pp. 87, 89), A100 (p. 116)). The report by Rapunzel has a focus on people in its photographs. Mainly people during harvest are shown or with natural food products (10 times the code III.I "hands holding fruit, nut, plant, soil" is shown; B18 (p. 18), B48 (p. 30), B50 (p. 30), B57 (p. 54), B72-B77 (pp. 46-51)). The reports by Schwartau and Seeberger have got a slight focus on people with natural food products and photographs showing only natural food products, such as strawberries, without people. Only once, Schwartau displays the image of responsibility (code III.I "hands holding fruit, nut, plant, soil"). Seeberger, however, has got a focus on people being placed in landscape. The people shown are mainly (assumingly) employees (D1-D3 (pp. 3,5,8), D7 (p. 15), D20 (p. 31), D23 (p. 35), D27 (p. 37), D34 (p. 46), D36 (p. 48), D43 (p. 54)). Seeberger does not show III.I "hands holding fruit, nut, plant, soil" at all. This is a very striking difference between the organic and conventional companies and their sustainability reports. It is also quite amusing and relieving that both, Schwartau and Seeberger, which produce conventionally, do not show many of the

commonly known pictures of responsibility. They rather represent a picture of a close relationship with nature in general (Seeberger through its photographs D1-D3, D7, D20, D23, D27, D34, D36, D43), and considerate handling of resources and Schwartau with the help of photographs C2 (p. 3), C10 (p. 14), C14 (p. 18), C19 (p. 26), C22 (p. 32).

8.6 Recontextualisation through visual hermeneutics (referring to Chapter 5)

So far, the photographs of the four analysed sustainability reports revealed insights concerning their visual content, mainly the image and its effect and partly the compositional modality of an image (*see* Chapter 7.1).

This chapter now concerns the recontextualisation of the four analysed sustainability reports with the help of the visual hermeneutics (*see* Chapter 5). It is necessary to put the photographs into context, which means to include the text of the sustainability reports into the analysis. This will reveal the compositional and social modalities. All in all, this is done in order to answer the overall research question.

Starting again with the sustainability report by *Lebensbaum*, the overall image that Lebensbaum transports in its report is the image of a report in form of a food product: "Exquisites, ausgewogenes, facettenreiches Lesevergnügen[48]". The slogan reminds of a package of coffee. As can be seen on page 67, the coffee products have a label on top which shows the origin of the coffee. The first page of the report looks alike. The image of the report as a package of coffee, however, is not found throughout the whole report. Simply the back page ends with a quality statement concerning 100% bio quality, no use of genetic engineering, without artificial, fairness and climate friendly production. Chapter 8.2 brought about the idea that "[t]he company obviously wants to stress the original location of where many of the products or ingredients for them come from"[49] (p. 103 in 8.2) This cannot be proved as the image of the report in form of a food product is limited to the front and back pages.

The many photographs in Lebensbaum's sustainability report differ in terms of colours and shapes. They are complemented with the many drawings and colourful boxes. The latter are mainly held in green shapes, which furtherly proves the green and organic image of the company. Photographs of products, factory halls, production processes, portraits of people or buildings are mostly smaller than those photographs showing nature or cultural landscape (*see e.g.*, pp. 12-13 and 24-25 in contrast to pp. 46, 86-87 and 114-115). The dominant colours of the report are green, blue and brown; all of them in different shades. The drawings are

---

47 Translation: Exquisite, balanced, multi-faceted reading pleasure.

49 Cited from page 103.

colourful, however, rather in pastel shades. The colour red is almost totally missing throughout the whole report. The often long and small written texts are mainly held in black letters. The texts are thus partly eclipsed by the photographs. The headlines, however, are colourful, which makes the reader read the headline and see the photographs immediately. In most of the photographs, the headlines match with the illustrated topic of the photographs: the photographs on pages 24-25 show old and new buildings and generally historic photographs. This matches with the headlines "history 1979-2015".

However, A19 on p. 25 needs more explanations. The photograph depicts a moor, as the subtitle explains. Keeping it intact contributes to mitigating climate change impacts or at least $CO2_{eq}$-emissions. Depicting such a photograph contributes to an understanding of the company as a caring company. The preciousness becomes extremely evident once you understand it is a moor. Not abusing it, not touching it, leaving it wild may be seen as caring even though the company is not directly shown on the photograph. The ecosystem stays intact by acknowledging the moor's intrinsic value. But also, by leaving aside its instrumental value (peat-mining). A19 is an example for how important subtitles are to be able to recognise the importance of the content of a photograph.

Photographs A24 on p. 33 is a background photograph showing a light blue sky with white clouds. The labels placed on top of the photograph are of different organisations such as the German coffee organization or certification organisations such as Demeter and Naturland. For some of these organisations associations with the sky or our atmosphere might be clearly given. But associations with coffee (beans) or spices are rather funny in connection with a sky. The sky is part of what Lebensbaum stands for: for alliances across regions for a wide range of interests, people, cultures, ecosystems. The wide space of the sky is mirrored in the wide engagement of Lebensbaum's associated organisations.

On page 46, a natural/cultural landscape is shown prominent with a photograph which has the size third of the page. Again, this photograph matches with the title "18 years environmental management". Less obvious, but fitting is the title "modular design principle" on p. 49 with the photographs A29 and A30. Pages 50-51 show different photographs, which represent factory halls, machinery and roasted coffee beans. The title concerns the new roaster. The title matches but is not that necessary in order to understand what the pages are about. A42 shows people harvesting leaves. The title explains that this page is about "tea masterpieces". All these examples show that the photographs are well chosen and correspond to the texts[50]. Regarding

---

50 Certainly, the texts have been read comprehensively for this Chapter. As for better comprehension, not every detail is explained about the contents. Only very striking exceptions or examples are shown here.

those photographs which show plants or animals, these are mostly not that easy to recognise[51].
Pages 86-87 show tropical forests, green berries and seeds. In this case, however, it needs
an explanation which topic the photographs show. The title says, "cardamom from Guatemala".
A63 and A64 are special as they show hands holding the cardamom capsules. The pictures
represent the well-known image of responsibility, in this case of responsible care for rare
resources. The text explains the long way from a blossom to a capsule of cardamom,
whereabout and how it is grown and finally by whom and how it is harvested until it gets
transported to Germany, where it becomes grinded for a better aroma and taste (pp. 86-87).
The text further explains how careful the spice is treated and that its production is organised
as a cooperative of smallholders. The pictures of the hands holding the cardamom thus
demonstrate the responsibility Lebensbaum is aware of concerning its resources and the
people living from its production. Other photographs that need more explanation are *e.g.*, A65-
67. These are about the horns of cows and their meaning for Demeter-certified production (*see*
p. 89). A75 (p. 97) and A76 (p. 97) show the harvest of pepper. The texts are, however, about
the buying process of resources from abroad. A82 (p. 102) shows two people between bushes
full of green leaves. The connection towards natural resources is immediately recognised,
however, the topic of this page is about fair partnerships. This cannot be recognised from just
looking at the photographs. The same goes for A83 (p. 103) and A84 (p. 103) – the title of
"reasonable prices" cannot be found in the photographs and is consequently added through
the text which acts as a useful information pool. The photographs, however, are general
illustrations or possibly put there for pleasure.

Pages 114-115 (pp. 140, 142) are again striking, as they obviously show local landscape.
Indeed, these pages are about the headquarter's location, which is Diepholz in Lower Saxony,
Germany. The pages belong the chapter "nature". It starts with a quote by Bertrand Russel:
"Man is a part of nature, not contrasting with nature."[52] The following pages are about the
organic cotton of the thread of the tea bags, the environmental management of the headquarter
(pp. 114-115 *e.g.*, the use of recycled paper, day light, energy saving machines; the
photographs A95-98: management of grassland with fruit trees, wildflower strips for insects,
ponds for amphibians, plants and as retreats for employees). Further topics of this chapter are
organic cultivation, packaging, energy concepts, climate friendly mobility (e-cars, bicycles), the
company's carbon footprint, digitalisation and use and non-use of printing. Pages 132-133
concern the topic of a sponsorship for moor landscapes. Especially, photograph A110 (p. 132)

---

51 This is indeed a very subjective interpretation. For sure, experts can easily recognise certain seeds from just
watching a photograph. However, as a sustainability report is made to be read by different stakeholders, the
ordinary reader is not understood as an expert.

52 Translated with the help of https://todayinsci.com/R/Russell_Bertrand/RussellBertrand-Quotations.htm
[accessed: 20.01.2021].

is striking as it shows moor but is complemented with drawings as if to highlight it. The chapter ends with the general title "meaningful environmental aspects", which concern direct environmental aspects such as waste, energy, emissions and indirect aspects such as environmental impacts of harvests and resource usage or energy consumption and climate impacts. All in all, the strong relationship with nature by Lebensbaum is literally expressed through this chapter. Nevertheless, the many value types, which are found in the photographs during the analysis of them are rarely represented in the text. This is surprising as it is assumed that the nature chapter best describes (narratively) how much the company is in interaction with nature and how much it is aware of it.

Even though, the report gives the impression of being very responsible concerning resources, employees and environmental management, the term "value oriented" is nused once in the beginning of the report (see p. 18). Being responsible, however, is named approximately 30 times. But code III.I is only expressed through photographs (*see* Chapter 8.2 (2a) and Table A8.2a). The instrumental values (1.1) of land are named mainly indirectly. The codes I.I – I.IV are not mentioned as such, however chapters like "Buying" or "Quality work" deal with the topics of harvest and origin of the resources, which are expressed as "raw ingredients" (*see* pp. 86-87), used for further procession. Value type 2.1 is mentioned once in the form of "recreation", but not shown in form of a photograph (*see* p. 115). The other value types found in the photographs are not mentioned in the texts at all. Generally, the report by Lebensbaum touches many aspects of sustainable agriculture and environmental management.

Concerning the sustainability report by *Rapunzel,* the bright colours used for letters, figures and photographs are very striking. The black-coloured texts become slightly eclipsed by the colourful layout of the report. Compared to the report by Lebensbaum, there is no story told like the report as a food product. Rather, Rapunzel informs about its company actions with big titles and colours, which change for each chapter. The many photographs with smiling people fit to the subtitle of the front page, which – apart from company logo and heading "sustainability report 2013-2017" - is literally translated "We make bio with love". This love is transported by all those pictures showing people who happily deal with natural resources, while harvesting, processing or selling and tasting (*see e.g.*, B20 (p. 21), B50 (p. 30), B57 (p. 34), B62 (p. 37), B72 (p. 46)). It seems that every food product is touched with love and hence with care and that employees and employers work in harmony with each other (*e.g.*, B4 (p. 5), B14* (p. 12), B17* (p. 17), B19 (p. 19), B21* (p. 22)). The term "value-oriented" is not used as such. Instead, the values Rapunzel commits itself to are mentioned indirectly through *e.g.*, its "Vision" (p. 6), or "Philosophy and values" (p.7). The instrumental value of land is shown in 34 photographs; the instrumental value excerpted from the literature of land aesthetics is shown four times. The chapter "Organic agriculture & seeds" explicitly addresses the instrumental values of land,

whereas the value type "harmony between human and nature/land" with the subcategory "responsibility towards nature" is emphasised and shown in six photographs (B72 (p. 46), B73 (p. 47), B74 (p. 48), B75 (p. 49), B76 (p. 50), B77 (p. 51)). However, the term "responsibility" is not named at all. The responsibility towards nature is hence more shown than written down, which is akin to the report by Lebensbaum.

The remaining value types found through the photographs are not mentioned directly in the texts. Also in this report, the photographs complement the text. They are not contrasting, even though they are mostly not further explained (only a few show subtitles) or the text does not directly address any of the displayed values that are inhered in the photographs. Every chapter shows many big photographs, which are eye-catching and often distract from the rather small and short text. The headings, however, are colourful and easy to recognise after seeing the photographs. The many colourful figures and maps give the report a more professional touch. Nevertheless, the colourful layout of the report makes it seem more like a photo album than a professional company report. Of course, the latter is shown very distinctly in the texts and as many aspects of sustainability (organic agriculture, no use of chemical pesticide, fair trade, etc.) and environmental management (energy consumption due to production processes, environmentally friendly packaging, climate friendly power generation etc.) are explained, it can definitely be regarded as a professional company report. The layout is just not that typical for a company concerning the bright colours and shapes used.

In contrast to the report by Lebensbaum, the colour red can be found and leads through one of the chapters. Green and yellow shades are generally dominating the report, which matches with the yellow and green painted company buildings of Rapunzel. This, in turn, shows the holistic image, which Rapunzel demonstrates in its overall management. The management and the values are part of the sustainability thinking of the company, which influences every part of production, from seeds to harvests, farm, smallholders, fair prices, fair working conditions, cultural and local engagement and finally the reporting style. The colours and photographs are eye-catching instruments to transport the sustainable ideas of Rapunzel. In terms of the relationship with nature, the report's texts reveal a stronger relationship of nature than the photographs reveal through their description of their holistic attitude.

Schwartau's sustainability report is comparably short and shows few, but big photographs together with small and black-written text. The latter is, like in the cases of Lebensbaum and Rapunzel, eclipsed. The texts are often held shortly; longer texts are split into sections for better readability. The tables and figures underline the overall image that is transported in the report: professional business making. This corresponds with the values, which Schwartau names and that are about business making, change, family and personal responsibility (p.7). In the report these are the only named values.

The inserted fruits are breaking up the sterile look of texts. Furthermore, the mainly big and striking photographs of employees or fruits emphasise the company values. The chapter concerning the "environment" shows photograph C19 (p. 26), which is about bees flying next to a wooden box (beehive). This photograph, however, does not show any employee or any direct involvement of the company with honey making. The short text placed on top of the picture also does not explain anything regarding honey making or insects. In fact, this photograph is missed-placed here. The following text, however, explains more detailed how Schwartau is committed to responsible resource use (p. 27), which touches upon the typical topics of environmental management: "energy- and water consumption" (pp. 27-28, "emissions and waste" (pp. 29-31) and finally "impacts on protective areas" (p. 32). Here, photograph C22 shows a wooden insect nesting aid, which is Schwartau's idea of increasing biodiversity through a project regarding bee health (p. 33). The text on p. 32, however, does only say that the company is aware of the negative impacts of pesticides and land use on biodiversity. The instrumental values of land and aesthetics (1.1 and 2.1) are prominently shown in photographs C2 (p. 3), C5 (p. 6), C10 (p. 14), C12 (p. 16), C14 (p. 18), C20 (p. 28) and finally on p. 34 in C23. This page does not address harvesting in its text but is about the region where Schwartau and its suppliers grow their fruits for their products and is moreover about cultural events. C23 thus does not fit into this chapter as it is about harvesting and not about a cultural event. The report ends like the other report with environmental indicators. All in all, the report is less colourful than the reports by Lebensbaum and Rapunzel. The photographs are striking and distract from the sterile texts. In addition, the photographs confuse concerning the image they transport and what is in the text and what the company stands for. The report is nevertheless of a professional look and makes use of the photographs in a clever manner. The strong relationship towards nature that is show in the photographs (*see* Chapter 8.5) cannot be verified in the text.

The sustainability report by *Seeberger*, is akin to the report of Schwartau in terms of its layout. It seems professional due to its sterile texts written in black and divided into sections. The photographs play a minor role, so do colours. The front page does not show any photograph, only the logo, the heading "sustainability report" with a green background and the date "2016/2017". The term value-oriented is not mentioned at all. The company values are nevertheless indirectly addressed in the texts. They are akin to the ones in the report by Rapunzel: humans matter in terms well-being and partnerships and decent working conditions and by this referring to the social components of sustainability (p.3). The report generally gives the impression that it is value-oriented towards nature because of the following terminations: "natural products" (p.5), "the best of nature" (p.6), and "respect towards nature and humans" (p.5), which addresses value type subcategories 1.3.1 and 1.3.3. However, none of these value

types are expressed in photographs. The report further addresses the topics "products" (pp.6-7), "product quality and quality philosophy" (pp.10-11) and "stakeholders" (pp.12-13). The few and small inserted photographs are not striking.

The chapter "sustainability" (pp. 14-17) shows only one photograph (D7 (p. 15)), text and figures, which are mainly held in green shades. The sustainability aspects of the company become compared with the ones of the SDG[53]s. Apart from orange headings, the green shades as background for texts and figures as well as the black letters of the texts are the main colours used throughout the report. Just a few figures use more colourful colours, such as on pp. 26-30. The photographs used on these pages, however, are eclipsed by the long texts and colours. This goes also for other photographs, especially the small ones. Many of them (*see e.g.*, D32* (p. 44), D34 (p. 46), D36 (48)) are not eye-catching due to their natural colouring of brown and green shades. The figures in the following chapters are more striking than photographs and texts. Only the photographs on pp. 49-51 are striking as they are comparably big and more colourful. The report ends with the GRI-Index[54]. Although the report is considered as showing a good relationship towards nature in its photographs (see Chapter 5.4), the text does not say much concerning this relationship. It is rather the general topic of sustainability, with a focus on the social aspects, which are described in the report.

The analysed reports are very different in terms of values they display in text and images. The instrumental values are shown more often but named not that much. This goes for all the reports. The aesthetics of land are used differently again: The reports by the organic companies use photographs showing the beauty of landscape or food as if to say, that these are rare and need to be treated carefully and with respect. The reports by the conventional company rather use such photographs as if to say, that they are aware of respect towards resources and rather to prove this image through the photographs. According to Brady *et al.* (2018, p. 46) "(…) aesthetics within agricultural landscapes sits alongside or is integrated within practical, productive activities that are not ordinarily or mainly aimed at an aesthetic effect. Indeed, the aesthetic response is in some cases an outcome of working the land, especially in the way that working the land brings about a deeper engagement with natural processes and qualities, leading to a richer and more complex appreciation than a superficial encounter." It is this engagement that can be found in the photographs of especially Rapunzel and Lebensbaum. It is less evident in the report by Seeberger and hardly to be found in the report by Schwartau.

---

53 Sustainable Development Goals of United Nations.

54 Global Reporting Initiative.

8.7 Answer to the overall research question

The previous chapters showed that different value types are found in the photographs of the four analysed sustainability reports. Furthermore, it has been possible to reveal differences in the qualities of the relationships between company and nature. After including the text in the analysis (see Chapter 8.6), it is now possible to answer the overall research question for this PhD Thesis:

How is the relationship between food business and nature constructed through ecological accounts of food companies?

All of the four analysed reports show a relationship between the companies and nature. It is however, of importance to differentiate between what is depicted in the photographs and what is said in the texts. Concerning the investigations of the photographs, the relationships towards nature are of a good level in the cases of Rapunzel and Seeberger. The relationships towards nature are strong in the cases of Lebensbaum and Schwartau. However, Chapter 8.6, the recontextualization, showed that what is depicted in the photographs, is not necessarily the same story that is told in the texts of the reports. The reports by both, Lebensbaum and Rapunzel are very good examples of how the relationship and its "product of (…) interaction" (Crawford, 1993, pp. 144-145), such as coffee, herbs or tea, can be a symbiosis and not a "(…) synthesis [where] (…) the natural or the artificial (…) may retain its identity" (*ibid*). The product is a result of the interaction with and the resulting change of land by the companies working with the land. In fact, there is a beauty to be realised in the photographs, such as in photographs A87 (p. 105), A90 (p. 105), A99 (p. 116), B34 (p. 25), B36 (p. 25) or B69 (p. 44).

Being surrounded by nature, being part of it by touching it and creating a product together with nature – not in opposition. This is shown especially in Rapunzel's sustainability report on p. 25. The cultivated land conditions the company and the other way around (see Brady *et al.*, 2018). This is also expressed narratively in Rapunzel's report (in particular the chapter concerning "organic cultivation & seeds"). The "just" good relationship with nature becomes stronger through the narratives of the reports. The visual alone is strong but does not cover the relationship with nature that Rapunzel expresses in its texts.

The photographs of Lebensbaum's report focus on the beauty of nature (*e.g.*, front page, A79 (p. 98), A81 (p. 99)) and very much emphasise land's intrinsic values, whereas Rapunzel has a focus on the instrumental values. The latter is the reason why the analysis revealed a good, not a strong relationship with nature in the case of Rapunzel. In the case of Lebensbaum, the many intrinsic values found in the photographs led to the categorisation of a strong relationship with nature. This could be verified by reading the texts in the report as well as in the internet

presence of Lebensbaum (Lebensbaum, 2021). Indeed, the strong relation towards nature is of importance to the company, which is emphasised in chapter "nature". Both, Rapunzel and Lebensbaum show a holistic attitude towards nature.

The report by Schwartau, in turn, has a focus on its products concerning the photographs. They are shown in big and colourful pictures, either as raw products, such as strawberries (*e.g.*, front page, C2 (p. 3)) or in the form of processed goods like glasses of jam (*e.g.*, C7* (p. 8), C10 (p. 14)). The photographs are that eye-catching that the text becomes eclipsed and while reading it, one recognises that not every picture matches with the text. The strong relationship that is depicted is a result of Chapter 8.5's categorisation of the quality levels of the relationships. As many photographs depict very good levels of a relationship with nature, the categorisation of Schwartau's report is a strong relationship. The whole report, which includes texts and figures, shows a different image, which is less about the natural environment and more on employees, regional activities and the products themselves. The aspects of sustainability are nevertheless addressed in the report.

Seeberger shows a good relationship with nature, which is a result of the many good and poor qualities of value types found in the photographs compared to very good qualities. This relationship can be verified in the report, as Seeberger is concerned with many aspects of sustainable production, which also affects how land becomes cultivated. However, a strong relationship cannot be found, neither through the pictures, nor through the texts. The reports by Schwartau and Seeberger show a non-holistic attitude towards nature.

All in all, within the ecological accounts of the companies Lebensbaum, Rapunzel, Schwartau and Seeberger, the relationship between food companies and nature is mainly constructed through photographs and the depicted environmental value types. Those value types differ in terms of their quality and thus lead to a different level of relationship, either strong or good. The texts are normally the core of ecological accounts as they have the power to elaborate on issues that the companies are held responsible for. The analysis of this PhD thesis, however, showed, that photographs play a dominant role in revealing information about the relationship with nature and environmental values which they display, even though the texts inform differently. The construction of the relationship with nature is thus the result of the audience of the images and the narratives because the audience constructs the relationship towards nature through its knowledge, experience and the learning process while reading the report. The context is hence of importance to understand the whole picture of the report and to draw the right conclusions about the relationship between food company and nature.

8.8 Discussion of overall results and further aspects of EA, VMS and the relationship of food business and nature

The agricultural and food sector is contributing to climate change to a large extent (Clapp *et al.*, 2018; FAO, 2020). It is therefore important for food companies to understand the impacts they have on climate, but also on land use or pollution. Moreover, it is necessary, that the agricultural and food sector lowers negative impacts and increases those processes that lead to positive effects on biodiversity, land and water, such as less chemical inserts, setting up wild flower strips, less resource waste, cradle to cradle production, industrial symbiosis or enough food provision as such (*see e.g.*, FAO, 2020; Hemphill, 2013; Rigby and Cáceres, 2001). The organic agriculture is one way to address the needs of soil, animals, plants and humans by making use of organic cultivation techniques. I argue that food companies that are value-oriented towards the natural environment, are more likely to invest in nature and see it as part of their overall management and as a considerable stakeholder. This is what organic companies are commonly held for. Communicating company values, and especially environmental values, is a way to show stakeholders how a company is related to nature. Sustainability reports are thus a perfect instrument for food companies to show, visually or narratively, how committed they are in terms of their relationship towards nature. Below several aspects of how the values are displayed in the sustainability reports by Lebensbaum, Rapunzel, Schwartau and Seeberger, and with what effect will be discussed.

In Chapter 3.3, it is stated that De Groot and Steg (2008, p. 331) […] "(…) explain that "[v]alues serve as a guiding principle for selection or evaluating behavior, people or events […] ordered in a system of value priorities." *"This matters in terms of food businesses which are guided through principles. The more they value the environment, the higher is the priority on the environment."* (cited from p. 31). With regard to the sustainability reports by Rapunzel, the priorities of values are on the people. The company seems to have a very anthropocentric attitude towards its employees. One example for this impression can be found in the sustainability report, under the heading "philosophy and values", which is mainly about "we" and "our partners" and less about nature or environment. But Rapunzel is also known for its holistic approach of treating the natural environment with respect and cultivating land with decent methods of organic farming. This can be read not only in the sustainability reports, but also in the internet presence of Rapunzel (Rapunzel, 2021). In addition, the investigated values in the photographs revealed the holistic attitude of the company (*see* Table 8.2b). This is an example showing that the photographs tell a slightly different story than the texts do and that only the overall context matters and reveals how value-oriented the company is and how it constructs its relationship with nature. Overall, the impression of De Groot and Steg (2008) can be verified by the analysis (*see* above; Chapter 8.2). I broaden and specify their comment

by stating that the higher the quality of that value, the stronger the relationship towards nature is (*cf.* Table 8.5.2). In the case of the conventional companies, the instrumental values matter more than the intrinsic ones. Even though, Schwartau shows the beauty of nature or natural resources in its photographs (*e.g.,* front page with red and shiny strawberries), it does not see the aesthetic values of these resources but uses the beauty simply for the purpose of showing the reader a beautiful picture. Instead, the instrumental value of the resources is what the company is actually interested in. With regard to Chapter 3.4 of this thesis, there is no *will to aesthetically value* the strawberry but to use it for economic purposes (which is a legitimate wish). According to Carlson (2010), environmental protection works best when being able to objectively value nature aesthetically. This is probably the reason why organic companies have a different approach towards cultivation of land than conventional companies and why they disclose their relationship differently in their sustainability reports.

In Chapter 3.3 it is mentioned that employees can be valued as being intrinsic or instrumental. Callicott (2006) argues, "[…] *that those values which are obviously instrumental (a car) are explicit values and those values which are intrinsic (a child to his parents) could be considered as implicit values (Callicott, 2006). He further argues that an employee could be valued both, intrinsically and instrumentally (ibid.)"[55].* The way, Lebensbaum, Rapunzel and Seeberger present the importance of their employees, gives the impression of employees who inhere an intrinsic value (recreation and fun through common events and activities). According to Callicott (2006), those employees have an implicit value then, besides their explicit value of manpower. The explicit values of employees are also often shown in the reports by Lebensbaum and Rapunzel. They can be recognised through the instrumental values they depict, namely during farm work. Brady *et al.* (2018, p. 45) state that "(…) the aesthetic response to agricultural landscapes is importantly embedded within human practices that involve a direct and close relation between individual, community and natural forces. The relationship that emerges between humans and nature is often expressed through hybrid nature-culture characteristics in the land itself." It is exactly that relationship that can be found in the reports of Lebensbaum and Rapunzel, but only when reading both, pictures and texts. Moreover, these two companies could be considered as so-called "spiritually conscious organization[s]" (Pandey and Gupta, 2008, p. 894), where "[m]anagement decisions are inspired by an awareness of the organization being embedded in its social and natural environment." (*ibid.*; *see also* Chapter 4.1). This is, companies being aware of their role as part of a system full of interconnected entities (*see* Figure 3.4) and being less individualistic but holistic in their attitudes (*see* Figure 3.5), also consider nature as a stakeholder and hence include it in its management decisions and accounting (*cf.* Laine, 2010). The report by

---

55 Cited from p. 35.

Seeberger already shows through its photographs in its sustainability report that nature is seen as a separate entity. Schwartau shows such an individualistic attitude less in the photographs, but in its overall report.

In Chapter 3.4 two important questions for this PhD thesis were raised, which are: *"How will valuing based in aesthetic experience motivate care and respect towards environments with which we have not developed relationships?"* (Brady, 2006, p. 281)[56] and *"But how can nature then be appreciated and protected when there is no unifying aesthetic concept of what makes nature beautiful and hence precious and worth protecting?"*[57]. The answers lie in the relationship of the one ethically judging with nature. The context of the viewer of the aesthetic, here, the photographs, matters in terms of how the viewer judges on the seen. There is no recipe for how to value by watching a photograph, but there is the possibility to ethically judge and take action (*cf.* Figure 3.2) based on the context the viewer is in. A food company may possibly act due to its ethical judgements when seeing how their actions in a value chain impact local people. When stakeholders see photographs in a sustainability report of a food company, they expect to find (1) the truth as reporting is held for this (*cf.* Gray *et al.*, 2014)), (2) a sustainability related debate and information regarding ecological, economic and social concerns, and (3) they judge ethically on the company in relation to their context as the audience. The audience might be critical, or generally information-seeking. In sum, the audience finds values in the photographs that depend on the audience's context. The viewer takes actions according to this context and how he judges on the perceived values. Because the viewer of such photographs is also the reader of the report, the context becomes expanded throughout the reading process, such as a continuous learning loop. Hence, "*the valuing of* [the aesthetic] *depends on the viewer and the context*"[58].

In Chapter 4.1 I stated that: *"I assert, that only a holistic approach can help companies to comprehend on the many interlinkages it has with nature. In order to* "conceive our relationship to living things" *(*Taylor, 1986, p. 152*) (and species as well as ecosystems), a foundation of aesthetic values must be given. This is, only what can be consciously conceived can be transformed into business relevant values. I argue that aesthetic values are easy to perceive and thus easy to comprehend on. For food businesses it should be possible to set up value types, such as intact nature, wilderness, biodiversity, species and ecosystem conservation. These factors could enhance the understanding of nature's preciousness.* Additionally, "(…) natural aesthetic appreciation is a powerful way of modelling our ethical relation with the natural

---

56 Cited from p. 38.

57 Cited from p. 40.

58 Cited from p. 38.

world." (Varandas, 2015, p. 210) The sustainability reports by Lebensbaum and Rapunzel show that these companies are on a very good way to transform aesthetic values into business values. Such values concern especially values type 1.2, 2.1 and 2.2, which are about the beauty of nature, landscape and food. Intrinsically valuing beauty means to consider the need of preserving these landscapes[59]. The method of organic cultivation is such a way of recognising aesthetic values. In fact, it needs a shift in business making, and in accounting in particular. Guthrie and Parker (2012) "(…) argue that academic researchers must not be simply observers but also construct an enabling accounting" (*in:* Guthrie *et al.*, 2019). Making the visual such as pictures as accounts more visible could be a promising approach in accounting considering the many challenges the discipline faces (see *ibid*). It is at least worthy to acknowledge the power of the visual (which several interdisciplinary researchers already prove; *see* Chapter 2.3) and to use pictures as considerable accounts and as a research instrument for a better understanding of how accounting and accounts are perceived by stakeholders. This might help businesses to use photographs as transmitters of their business values, and not only as beautiful and colourful items. The latter cannot be regarded as accounts. However, business values are accounts of business making. It is time for food businesses to transform aesthetic values into relevant business values.

The well-known picture of sustainability and responsibility, mainly represented through hands holding a tree, the globe or soil is often used to illustrate the sustainable thinking of a company (*see* Feix and Phillipe, 2020). Whenever companies show this picture, stakeholders understand that meaning. Also, in the reports of Lebensbaum, Rapunzel and Schwartau, this image is found and linked to the value type "responsibility towards nature" (subcategory 1.3.1), which has a strong meaning, both, in terms of accountability and sustainability. Regarding Chapter 2.1, responsibility is what ecological accounting's core task is – being transparent about the responsibility companies have due to their actions that affect the natural environment. The photographs are accounts of those actions. They are a powerful instrument in the sustainability reports and must be regarded as accounts, which visually prove what the companies do in terms of sustainability.

This touches upon two discussion points: firstly, the values, the companies visually display and the values they actually see as important (what they note down in a written form), and secondly the reception of the audience (see Chapter 7.1). Concerning the first discussion point: In Chapter 2.1, I stated, that *"(…) companies need to reveal such values in order to be accountable for their ecological impacts"* (p. 11). Indeed, the four analysed reports show different value types and hence a different level and quality of relationship with nature. But the values are not much shown in the texts. The photographs, which have a strong visual power

---

59 *cf.* Chapter 3.2, Justifications.

(*cf.*, Davison, 2015), are obviously used to give an impression of being value-oriented towards nature, even though the companies often hardly are (at least in terms of a close relationship expressed through the value types 1.3.1 "responsibility towards nature" or 1.3.3 "respecting the Earth: harmony with other species"). Nevertheless, the image the four companies (literally) show are good or strong relationships with nature.

This leads to the second discussion point: Rose (2012) suggests using the three sites of a picture for analysing the visual. The third site is the reception of the audience, hence what the audience could think about a picture. Within the analysis (*see* Chapter 8.6) it has been revealed that what is shown in the photographs (the value types) mainly differs from what is expressed in the text. The immediate impression, the audience of the reports might get is hence misleading (especially in the case of Schwartau). The photographs in Rapunzel's report are that distracting from the text due to their size, shapes and colour, that the reader is easily led to the impression of a photo album and that people are the focus of Rapunzel's accomplishments, which is only partly correct. In fact, as a company with a holistic attitude towards nature, Rapunzel includes people as well as nature in its managerial activities (*see* Figure 3.5). In the case of Lebensbaum, the many photographs are also eye-catching and, in some cases, need the texts to be understood. Certain images cannot be recognised without reading the text. This is at the same time a very clever move by Lebensbaum as it makes the audience read both, text and picture. Seeberger's report makes the impression of being a pure information sheet as the photographs are mainly small and held in colours that are less striking. By watching the photographs only, the professional image becomes underlined: business people with a weak relationship towards nature. The analysis, however, showed that Seeberger has a strong level of relationship with nature and that there are at least 43% very good qualities of a relationship shown. All in all, the reception of the audience is in either case very much influenced by the photographs displayed in the four reports, no matter how striking they are. This is because all the reports tell a story, being a picture or not. Moreover, in accordance with Berger (2013), photographs ask for an immediate decision whether to trust this story or not. They call for a decision whether to take the relationship that is depicted as granted or not. This, in turn, leads to the question of accountability in general and how to make use of the visual in reporting in particular.

As mentioned in Chapter 8.7, the power the visual has in company reports is strong and shall thus not be underestimated by companies while producing reports. As those reports are accounts of what companies are held responsible for, they need to consider carefully how they present themselves to their stakeholders. This does not mean to show less than necessary or to even resign from using photographs, but to use them context sensitively. The audience of company reports automatically uses photographs as accounts and is hence likely to oversee the explanations if the photographs are too eye-catching and distract from the texts. Hence,

company reports that touch upon many aspects of activities, such as ecological accounts do, need to wisely insert photographs and text, which correspond and do not counteract to each other.

This PhD thesis investigated four sustainability reports. Of course, this small number of reports cannot be related to the whole food sector. But it provides an impression of how differently companies present themselves in their reports regarding their relationship with nature. In fact, not finding any relationship with nature in one of the reports has been almost impossible as all the reports are sustainability reports and hence to some extent mention the natural environment, as it is part of one of the sustainability dimensions. It has been, however, astonishing to find differences in terms of the level of relationship among the two organic companies as well as among the two conventional companies. I expected to find more higher qualities of values in the report of Rapunzel and less good qualities in the values of Schwartau's report.

The hermeneutic approach of deep interpretation and continuously learning is regarded as a decent way of understanding the impact of photographs in reporting and accounting, as the hermeneutic circle asks for feedback, which is done by coming back to the debates and theories at the beginning of this thesis. Also, by sticking to the previously set up value types, it has been a reasonable result to find different levels of relationships in the reports, even though this has been a bit surprising. This, in turn, shows that my investigation can be of importance to companies in terms of how to effectively use photographs in their reports. This is also important due to the fact, that the reports and moreover the pictures are accounts. The values that are depicted in these accounts are also taken as serious accounts (admittedly, not every stakeholder might see the values in the photographs). So, companies need to ask themselves what values they want to show, which ones they want to be held accountable for and finally how companies define accountability at all.

All in all, this PhD thesis contributes to the understanding of picture interpretation as a method and from a value-oriented perspective. This is contributing to both, the methodological approach of using a theoretical perspective as a lens to understand pictures (*cf.* Rose, 2012) and the general approach of finding a relationship between companies and nature in pictures from company reports.

From a methodological point of view, this research is driven by a German led approach of how to interpret pictures (Mayring, 2004) with the attempt to combine the methods known and used in the VMS. By mixing up these methodological approaches, I broadened up the way of how to interpret photographs in a structured way by using (1) the description of pictures (my own perspective); (2) the theoretical perspective (land ethics, aesthetics) and finally, (3) the reconstructive perspective (visual hermeneutics) (*cf.* Chapter 5.2). It can be summarised that

context sensitive methods are needed for picture interpretation (*cf.* Powell *et al.*, 2015) and that the interpretation process itself is only weakly concerned within the VMS literature.

From a theoretical point of view, this thesis contributes to the discussion of ecological accounting in general and in particular to pictures as accounts as well as environmental and business values in reporting. As mentioned in the beginning, food companies are not only asked by law to inform about their actions, but they are also expected to contribute to sustainability by using environmentally friendly and socially decent ways of production. This includes value-oriented behaviour and can be found in many of the photographs in the reports of both, the organic driven and the conventionally producing companies which have been investigated in the course of this research. However, the way they report about such values is different from the disclosures in the photographs. The relationship between them and nature is shown quite obviously in the photographs (especially in pictures showing hands holding fruits; *cf.* Feix and Philippe, 2018), but are less emphasised in the texts. In line with Gray (2019) ecological accounts can be used by companies as warnings about the impacts, they have on ecology (and the social). At the same time, the companies themselves but also stakeholders could use such information as guidelines for decision making and improvements in terms of sustainable ways of consumption and production. In terms of sustainable production, the ecological food sector is ahead of the conventional food sector. Regarding the investigated reports in this thesis, their reports, however, do not differ much in terms of how they display their relationship with nature.

Generally, using pictures as accounts for the business-nature relationship can be considered as a helpful tool to gain insights into companies' understanding of how close they see themselves in a relationship with nature. This is useful for all stakeholders of the food industry.

From this research it can be concluded that food businesses need to be more concerned and aware about the impact pictures have and to what extent they understand such pictures as accounts for their sustainability actions. This will lead to a more practically driven and critical discussion of ecological accounting.

9 Conclusion and Outlook

This PhD thesis aimed to analyse the construction of the relationship between food business and nature. As the food sector is regarded as affecting the natural environment due to resource use and cultivation methods, the company reports of the food businesses Lebensbaum, Rapunzel, Schwartau and Seeberger have been chosen with the intention to reveal whether they show a strong or weak relationship with nature. Because company reports are considered as accounts of what companies are held responsible for, this thesis used ecological accounts, in particular sustainability reports, for the analysis of such a relationship. The environmental values, extracted from environmental ethics and land aesthetics literature, helped to define value types that make up relationships between entities such as companies and nature. Based on the visual management studies, a visual content analysis of the photographs within the reports has been conducted and revealed many environmental values with different qualities. Furthermore, hermeneutics informed about how to interpret pictures. The analysis additionally showed that the reports demonstrate differences in their value-orientation depending on photograph or text. All in all, context sensitivity matters to understand how the relationship towards nature by a company is constructed. Future research could reveal further environmental and aesthetical values in the relationship between food companies and nature. Either on a visual base or through other methods such as photo-elicitation or focus groups interviews these values could be uncovered. As additional input for this thesis such photo-interviews would have a benefit in terms of understanding how employees think concerning environmental values, especially against the background of their reports. In addition, the business ethics literature or environmental psychology might help to reveal other values and qualities of a company – nature relationship.

References

Abson, D., von Wehrden, H. Baumgärtner, S., Fischer, J., Hanspach, J., Härdtle, W., Heinrichs, H., Klein, A., Lang, D., Martens, P. and Walmsley, D. (2014). Ecosystem services as a boundary object for sustainability. *Ecological Economics*, 103, pp. 29-37.

Abdel-Kader, M. and Luther, R. (2006). Management accounting practices in the British food and drinks industry. *British Food Journal*, 108 (5), pp. 336-357.

Ajzen, I. and Fishbein, M. (1980). *Understanding attitudes and predicting social behaviour*. Englewood-Cliffs: Prentice-Hall.

Allport, G. (1963). *Pattern and growth in personality*. London: Holt, Rinehart and Winston.

Anderson, C. and Imperia, G. (1992). The Corporate Annual Report: A Photo Analysis of Male and Female Portrayals. *The Journal of Business Communication*, 29 (2), pp. 113-128.

Astheimer, J. (2008). *Qualitative Bildanalyse. Methodische Verfahrensweisen und Techniken zur Analyse von Fotograhien*. Baden-Baden: Nomos Verlagsgesellschaft.

Badura T., Ferrini S., Agarwala M. and Turner K. (2017). *Valuation for Natural Capital and Ecosystem Accounting. Synthesis report for the European Commission.* Centre for Social and Economic Research on the Global Environment, University of East Anglia. Norwich 2017.

Baldwin, C. (2015). *The Ten Principles of Food Industry Sustainability*. Chichester: Wiley Blackwell.

Ballingall, J. and Winchester, N. (2010). Food Miles: Starving the Poor? *The World Economy*, 33 (10), pp. 1201-1217.

Banerjee, S. (2002). Corporate environmentalism: The construct and its measurement. *Journal of Business Ethics*, 55 (3), pp. 177-181.

Bansal, P. and Kistruck, G. (2006). Seeing Is (Not) Believing: Managing the Impressions of the Firm's Commitment to the Natural Environment. *Journal of Business Ethics*, 67, pp. 165-180.

Baron, R. and Byrne, D. (1984). Social psychology understanding human interaction, 4th ed. Boston: Allyn and Bacon Inc.

Barr, S. (2007). Factors influencing environmental attitudes and behaviours: A U.K. case study of household waste management. *Environment and Behaviour*, 39 (4), pp. 435-473.

Barthes, R. (2000). *Camera Lucida*. London: Vintage, trans. by Howard, R.

Barthes, R. (1982). *Empire of Signs*. New York, NY: Hill and Wang, trans. by Howard, R.

Barthes, R. (1982a). *Rhe´torique de l'image, L'obvie et l'obtus*. Paris: Le Seuil (originally published in 1964).

Barthes, R. (1977a). "From work to text". In: (*ibid.*) *Image, Music, Text*. London: Fontana Press, pp. 155-64, trans. by Heath, S.

Barthes, R. (1977b). "Rhetoric of the image*"*. In: (*ibid.*) *Image, Music, Text*. London: Fontana Press, pp. 32-51, trans. by Heath, S.

Barthes, R. (1977c). "The photographic message". In: (*ibid.*) *Image, Music, Text*. London: Fontana Press, pp. 15-31), trans. by Heath, S.

Barthes, R. (1977d). "The third meaning". In: (*ibid.*) *Image, Music, Text*. London: Fontana Press, pp. 52-68, trans. by Heath, S.

Barthes, R. (1977e). "Introduction to the structural analysis of narratives". In: (*ibid.*) *Image, Music, Text*. London: Fontana Press, pp. 79-124, trans. by Heath, S.

Barthes, R. (1967). *Elements of Semiology*. London: Jonathan Cape, trans. by Lavers, A. and Smith, C.

BASIC (Bureau d'Analyse Sociétale pour une information Citoyenne) (2014). *Wer hat die Macht? Machtkonzentration und unlautere Handelspraktiken in landwirtschaftlichen Wertschöpfungsketten*. [online] Available at: https://www.forum-fairer-handel.de/fileadmin/user_upload/dateien/publikationen/andere_publikationen/studie_wer_hat_die_macht_langfassung.pdf (Accessed: 2 Feb 2021).

Bayou, M., Reinstein, A. and Williams, P. (2011). To tell the truth: A discussion of issues concerning truth and ethics in accounting. *Accounting, Organization and Society*, 36, pp. 109-124.

Bebbington, J., and Gray, R. (2001). An account of sustainability: failure, success and a reconceptualization. *Critical Perspectives on Accounting*, 12, 557–587.

Bebbington, J., Brown, J., Frame, B. and Thomson, I. (2007). Theorizing engagement: the potential of a critical dialogic approach. *Accounting, Auditing and Accountability Journal*, 20(3), pp. 356-381.

Bebbington, J., Brown, J. and Frame, B. (2007a). Accounting technologies and sustainability assessment models. *Ecological Economics*, 61(2/3), pp. 224-236.

Bebbington, J., Schneider, T., Stevenson, L. and Fox, A. (2020). Fossil fuel reserves and resources reporting and unburnable carbon: Investigating conflicting accounts. *Critical Perspectives on Accounting*, 66, pp. 1-22.

Bekkers, V. and Moody, R. (2014). Accountability and the Framing of Visual Technologies: How Do Visualized Reconstructions of Incidents Influence Public and Political Accountability Discussion? *The Information Society*, 30, pp. 144-158.

Bell, P. (2001). Content Analysis of Visual Images. In: Van Leeuwen, T. and Jewitt, C. (Eds.). The Handbook of Visual Analysis. London: Sage, pp.10-34.

Bell, C. (1913 [1958]). *Art*. New York: G.P. Putnam' Sons.

Bell, E. and Davison, J. (2013). Visual Management Studies: Empirical and Theoretical Approaches. *International Journal of Management Reviews*, 15, pp. 167-184.

Benschop, Y. and Meihuizen, H. (2002). Keeping up gendered appearances: representations of gender in financial annual reports. *Accounting, Organizations and Society*, 27, pp. 611-636.

Benson, J. (2008). Aesthetic and Other Values in the Rural Landscape. *Environmental Values*, 17, pp. 221-238.

Benson, J. (2000). *Environmental Ethics: An Introduction with Readings*. London: Routledge.

Berger, J. (2013). *Der Augenblick der Fotografie. Essays*. München: Carl Hanser Verlag.

Berger, J., Blomberg, S., Fox, C., Dibb, M. and Hollis, R. (1972). *Ways of seeing. Based on the BBC television series with John Berger*. London: British Broadcasting Corporation and Penguins Books.

Berleant, A. (2005). *Aesthetics and Environment: Variations on a Theme*. Aldershot: Ashgate.

Berleant, A. (1997). *Living in the Landscape: Toward an Aesthetics of Environment*. Lawrence: University Press of Kansas.

Berleant, A. (1992). *The Aesthetics of Environment*. Philadelphia: Temple University Press.

Berleant, A. (1991). *Art and Engagement*. Philadelphia: Temple University Press.

Bernardi, R., Bean, D. and Weippert, K. (2002). Signaling gender diversity through annual report pictures: a research note on image management. *Accounting, Auditing and Accountability Journal*, 15, pp. 609-616.

Birkin, F. (2003). Ecological accounting: new tools for a sustainable culture. *International Journal of Sustainable Development & World Ecology*, 10(1), pp. 49-61.

Bohnsack, R. (2008) 'The Interpretation of Pictures and the Documentary Method', *Forum: Qualitative Social Research* 9(3). Available at: http://nbn-resolving.de/urn:nbn:de:0114-fqs0803267 [Accessed: 1 March 2021].

Bolten, Jürgen (1985). Die Hermeneutische Spirale. Überlegungen zu einer integrativen Literaturtheorie. *Poetica*, 17 (1985), 3/4.

Bookchin, M. (2014). What is Social Ecology? In: Boylan, M., ed., *Environmental Ethics*, 2nd ed. West Sussex: Wiley Blackwell, pp. 46-58.

Bookchin, M. (1988). Social Ecology Versus Deep Ecology. Socialist Review, 88, pp. 11-29. In: Schmidtz, D. and Willott, E., eds., (2002), *Environmental Ethics. What really matters, what really works*. Oxford: University Press, pp. 126-136.

Bowles, S., 2008. Policies designed for self-interested citizens may undermine 'the moral sentiments': evidence from economic experiments. *Science,* 320, pp. 1605–1609.

Boyce, G. (2000). Public discourse and decision making. Exploring possibilities for financial, social and environmental accounting. *Accounting, Auditing & Accountability Journal*, 13(1), pp. 27–64.

Boyd, J. and Banzhaf, S. (2007). What are ecosystem services? The need for standardized environmental accounting. *Ecological Economics*, 63, pp. 616-626,

Boylan, M. (ed.) (2014). *Environmental Ethics*. 2nd ed. West Sussex: Black Wiley.

Boylan, M. (2014a). Anthropocentric versus Biocentric Justifications. In: Boylan, M., ed., *Environmental Ethics*, 2nd ed. West Sussex: Black Wiley, pp.115-118.

Boyle, M. (2003). Reconciling aesthetics and justice in organization studies. In: Carr, A. and Hancock, O., eds., *Art and aesthetics at work*. London: Palgrave Macmilland, pp. 51-64.

Brady, E., Brook, I. and Prior, J. (2018). *Between Nature and Culture. The Aesthetics of Modified Environments*. London: Rowman and Littlefiled International.

Brady, E. (2014). Aesthetic Value, Ethics and Climate Change. *Environmental Values*, 23, pp. 551-570.

Brady, E. (2006). Aesthetics in Practice: Valuing the Natural World. *Environmental Values*, 15, pp. 277-291.

Brady, E. (2003). *Aesthetics of Natural Environmental*. Edinburgh: University Press.

Brady, E. (1998). Imagination and the Aesthetic Appreciation of Nature. *Journal of Aesthetics and Art Criticism*, 56, pp. 139-147.

Breitbarth, T. Harris, P. and Insch, A. (2010). Pictures at an exhibition revisited: reflections on a typology of images used in the construction of corporate social responsibility and sustainability in non-financial corporate reporting. *Journal of Public Affairs*, 10, pp. 238-257.

Brown, J. (2017). On the need for broadening out and opening up accounting. In: Brown, J., Söderbaum, P. and Dereniowska, M., eds., *Positional Analysis for Sustainable Development: Reconsidering Policy, Economics and Accounting*, Chapter 5. London: Routledge, pp. 45-60.

Brown, H., de Jong, M. and Levy, D. (2009). Building institutions based on information disclosure: lessons from GRI's sustainability reporting. *Journal of Cleaner Production*, 17, pp. 571-580.

Budd, M. (2002). *The Aesthetic Appreciation of Nature. Essays on the Aesthetics of Nature*. Oxford: University Press.

Budolfson, M. (2014). Why the Standard Interpretation of Aldo Leopold's Land Ethic is Mistaken. *Environmental Ethics*, 36 (4), pp. 441-453.

Burritt, R. (2004). Environmental management accounting: roadblocks on the way to the green and pleasant land. *Business Strategy and the Environment*, 13(1), pp. 13-32.

Callicott, J.B., 1980. Animal liberation, a triangular affair. *Environmental Ethics*, 2, pp. 311–338.

Callicott, J.B., (1983). The Land Aesthetics. *Environmental Review*, 7(4), pp. 345-358.

Callicott, J. (1984). Non-anthropocentric value theory and environmental ethics. *American Philosophical Quarterly*, 21, pp. 299-309.

Callicott, J. (1986). 'On the intrinsic value of nonhuman species'. in: Norton, B., ed., *The Preservation of Species*. Princeton, NJ: Princeton University Press, pp. 138-172.

Callicott, J. (1987). *Companion to a Sand County Almanac*. Madison: The University of Wisconsin Press.

Callicott, J. (1989). *In Defense of the Land Ethic: Essays in Environmental Philosophy*. State University of New York Press, Albany NY.

Callicott, J. (2006). Explicit and implicit values. In: Scott, J., Goble, D., Davis, F., eds., *The Endangered Species Act at Thirty: Conserving Biodiversity in Human-Dominated Landscapes*, vol. 2. Island Press, Washington, D.C., pp. 36–48.

Callicott, J. B. (2008). Leopold's land aesthetic. In: Carlson, A. and Lintott, S., eds., *Nature, Aesthetics, and Environmentalism: From Beauty to Duty*. New York: Columbia University Press.

Cambridge Dictionary (2021). Responsibility. Available at: https://dictionary.cambridge.org/de/worterbuch/englisch/responsibility [Accessed: 3 Jan 2021].

Cameron, K. (2011). Responsible leadership as virtuous leadership. *Journal of Business Ethics*, 98, pp. 25-35.

Cameron, K. (2006). Good or not bad: Standards and ethics in managing change. *Academy of Management Learning and Education Journal*, 4, pp. 317-323.

Carlson, A. (2013). Environmental Aesthetics. In: Gaut, B. and McIver Lopes, D., eds, *The Routledge Companion to Aesthetics*, 3rd ed, Abingdon: Routledge, pp. 485-498.

Carlson, A. (2010). Contemporary Environmental Aesthetics and the Requirements of Environmentalism. *Environmental Values*, 19, pp. 289-314.

Carlson, A. (2006). We See Beauty Now Where We Could Not See it Before: Rolston's Aesthetics of Nature. In: Preston, C. and Ouderkirk, W., eds., *Nature, Value, Duty: Life on Earth with Holmes Rolston*, III. Dordrecht: Springer.

Carlson, A. (2000*). Aesthetics and the Environment: The Appreciation of Nature, Art, and Architecture*. New York: Routledge.

Carlson, A. (1976). Environmental Aesthetics and the Dilemma of Aesthetic Education, *Journal of Aesthetic Education*, 10, pp. 69-82.

Carroll, N. (2013). Formalism. In: Gaut, B. and McIver Lopes, D. eds., *The Routledge Companion to Aesthetics*, 3rd ed., Abingdon: Routledge, pp. 87-95.

Carroll, N. (1993). On Being Moved by Nature: Between Religion and Natural History. In: Kemal, S. and Gaskel, I., eds., *Landscape, Natural Beauty and the Arts*. Cambrigde: University Press.

Chaiken, S. and Stangor, C. (1987). Attitudes and attitude change. *Annual Review of Psychology*, 38, pp. 575-630.

Chan, K., Satterfield, T. and Goldstein, J., (2012). Rethinking ecosystem services to better address and navigate cultural values. *Ecological Economics*, 74, pp. 8–18.

Choy, Y. (2014). Land Ethics from the Borneo Tropical Rain Forests in Sarawak, Malaysia: An Empirical and Conceptual Analysis. *Environmental Ethics*, 36 (4), pp. 421 – 441.

Clapp, J., Newell, P. and Brent, Z. (2018). The global political economy of climate change, agriculture and food systems. *The Journal of Peasant Studies*, 45(1), pp. 80-88.

Clark, M. and Tilman, D. (2017), Comparative analysis of environmental impacts of agricultural production systems, agricultural input efficiency, and food choice. *Environmental Research Letters*, 12, pp. 1-11.

Colwell, R. (1989). Natural and unnatural history; biological diversity and genetic engineering. In: Shea, W. and Sitter, B. (1989). *Scientists and their responsibilities*. Canton: Publishing.

Cooper, C. (1992). The non and Nom of Accounting for (M)other Nature. *Accounting, Auditing and Accountability Journal*, 5 (3), p. 16-39.

Cooper, D. J. and Morgan, W. (2013). Meeting the evolving corporate reporting needs of government and society: arguments for a deliberative approach to accounting rule making. *Accounting and Business Research*, 43(4), pp. 418-441.

Constanza, R. (2006). Nature: ecosystems without commodifying them. *Nature,* 443, 749.

Constanza, R., d'Arge, R. and de Groot, R. *et al.* (1997). The value of the world's ecosystem services and natural capital. *Nature,* 387, 253–260.

Corbett, M. (2006). Scents of identity: organization studies and the cultural conundrum of the nose. *Culture and Organization*, 12(3), pp. 221-232.

Cox, D. (1997). On the Value of Natural Relations. *Environmental Ethics*, 19(2), pp. 173-183.

Craig, D. (2017). Twenty five years of social and environmental accounting research within Critical Perspectives of Accounting: Hits, misses and ways forward. *Critical Perspectives on Accounting*, 43, pp. 65-87.

Crary, J. (1992). *Techniques of the observer*. Cambridge, MA: MIT Press.

Crawford, D. (2013). *Kant*. In: Gaut, B. and McIver Lopes, D.,eds., The Routledge Companion to Aesthetics 3rd ed., Abingdon: Routledge, pp. 46-55.

Crawford, D. (1993). Art and Nature: Some Dialectical Relationships. *Journal of Aesthetics and Art Criticism*, 42(1), pp. 49-58.

Creswell, J. (2014). *Research Design. Qualitative, quantitative, and mixed methods approaches*. 4th ed. Thousand Oaks, London, New Delhi, Singapore: Sage,

Crisp, R. (1994). Values, Reasons and the Environment. *Royal Institute of Philosophy Supplement*, 36, pp. 75-87.

Dabbert, S., Lippert, C. and Zorn, A. (2014). Introduction to the special section on organic certification systems: Policy issues and research topics. *Food Policy*, 49, pp. 425-428.

Daily, G.C., 1999. Developing a scientific basis for managing Earth's life support systems. *Conservation Ecology*, 3(2) pp. 1-14.

Dasgupta, P. (2021). *The Economics of Biodiversity: The Dasgupta Review*. London: HM Treasury.

Davidson, M. (2013). On the relation between ecosystem services, intrinsic value, existence value and economic valuation. *Ecological Economics*, 95, pp. 171-177.

Davison, J. (2015) Visualising accounting: an interdisciplinary review and synthesis. *Accounting and Business Research*, 45(2), pp. 121-165

Davison, J. (2014). Visual rhetoric and the case of intellectual capital. *Accounting, Organizations and Society*, 39, pp. 20-37.

Davison, J. (2011). Barthesian perspectives on accounting communication and visual images of professional accountancy. *Accounting, Auditing & Accountability Journal*, 24(2), pp. 250 – 283.

Davison, J. (2010). [In]visible [in]tangibles: Visual portraits of the business élite. *Accounting, Organizations and Society*, 35, pp. 165-183.

Davison, J. (2009). Icon, iconography, iconology: visual branding, banking and the case of the bowler hat. *Accounting, Auditing and Accountability Journal*, 22, pp. 883-906.

Davison, J. (2008). Rhetoric, repetition, reporting and the "dot.com" era: words, pictures, intangibles. *Accounting, Auditing & Accountability Journal*, 21(6), pp. 791 - 826

Davison, J. (2007). Photographs and accountability: Cracking the codes of an NGO. *Accounting, Auditing & Accountability Journal*, 20(1), 133–58.

De Clercq, R. (2013). Beauty. In: Gaut, B. and McIver Lopes, D. (eds.) (2013). The Routledge Companion to Aesthetics. Abingdon: Routledge, 3rd ed., pp. 299-308.

Deegan, C. (2017). Twenty-five years of social and environmental accounting research within Critical Perspectives of Accounting: Hits, misses and ways forward. *Critical Perspectives on Accounting*, 43, pp. 65–87.

Deegan, C., & Shelly, M. (2014). Corporate social responsibilities: alternative perspectives about the need to legislate. *Journal of Business Ethics*, 121, pp. 499–526.

Deegan, C., Rankin, M. and Tobin, J. (2002). An examination of the corporate social and environmental disclosures of BHP from 1983-1997: a test of legitimacy theory. *Accounting, Auditing & Accountability Journal*, 15(3), pp. 312-43.

Denzin, N. (1991). *Images of Postmodern Society: Social Theory and Contemporary Cinema*. London: Sage.

Dewey, J. (1989). Art as Experience. In: Boydston, A., ed., *The Later Works of John Dewey* Carbondale: Southern Illinois University Press, Vol. 10.

Dewey, J. (1981). Experience and Nature. In: Boydston, J., ed., *The Later Works of John Dewey*, Carbondale: Southern Illinois University Press, Vol. 1.

Dewey, J. and Tufts, J. (1932). Ethics. In: Boydston, J. (1985), ed., *The Later Works of John Dewey*, Carbondale: Southern Illinois University Press.

De Groot, J. and Steg, L. (2008). Value Orientations to Explain Beliefs Related to Environmental Significant Behavior. *Environment and Behavior*, 40 (3), pp. 330-354.

De Groot, M., Drenthen, M. and De Groot, W. (2011). Public Visions of the Human/Nature Relationship and their Implications for Environmental Ethics. *Environmental Ethics*, 33(1), pp. 25-44.

De Young, R. (2000). Expanding and Evaluating Motives for Environmentally Responsible Behavior. *Journal of Social Issues*, 56(3), pp. 509-526.

Dibrell, C., Craig, J., Kim, J. and Johnson, A. (2015). Establishing How Natural Environmental Competency, Organizational Social Consciousness, and Innovativeness Relate. *Journal of Business Ethics*, 127, pp. 591-605.

Dibrell, C., Craig, J. and Hansen, E. (2011). How managerial attitudes toward the natural environment affect market orientation and innovation. *Journal of Business Research,* 64(4), pp. 401-407.

Dilthey, W. (1981). *Der Aufbau der geschichtlichen Welt in den Geisteswissenschaften*. Frankfurt/M.: Suhrkamp.

Droge, C., Germain, R. and Halstead, D. (1990). A note on marketing and the corporate annual report: 1930-1950. *Journal of Academy of Marketing Science*, 18(4), pp. 355-364.

Duff, A. (2011). Big four accounting firms' annual reviews: A photo analysis of gender and race portrayals. *Critical Perspectives on Accounting*, 22, pp. 20-38.

Dunlap, R. and Van Liere, K. (1978). The New Environmental Paradigm. *Journal of Environmental Education*, 9(4), pp. 10-19.

Dunlap, R., Van Liere, K., Mertig, A. and Jones, R. (2000). Measuring Endorsement of the New Ecological Paradigm: A Revised NEP Scale. *Journal of Social Issues*, 56(3), pp. 425-442.

Dutton, D. (1994). Kant and the Conditions of Artistic Beauty. *British Journal of Aesthetics*, 34(3), pp. 226-241.

Easterby-Smith, M., Thorpe, R. and Jackson, R. (2015). *Management and Business Research*. London: Sage.

Ehrenfeld, D. (1972). Conserving Life on Earth. New York: Oxford University Press.

Emmison, M., Smith, P. and Mayall, M. (2000). *Researching the Visual*. 2nd ed. London: Sage.

Emmons, R. (2000). Is Spirituality an Intelligence? Motivation, Cognition, and Psychology of Ultimate Concern. *The International Journal for Psychology of Religion,* 10(1), pp. 3-26.

European Commission (EC) (2018). *Company reporting.* [online] Available at: https://ec.europa.eu/info/business-economy-euro/company-reporting-and-auditing/company-reporting_en [Accessed: 25 January 21].

Fahy, G. (2012). A Deweyan Response to J. Baird Callicott's Land Aesthetic. *Contemporary Pragmatism*, 9(1), pp. 53-66.

FAO (Food and Agricultural Organization of the United Nations) (2020). *The State of Food and Agriculture. Overcoming Water Challenges in Agriculture*. [Online] Available at: http://www.fao.org/3/cb1447en/CB1447EN.pdf [Accessed: 25 January 21].

FAO (2014). *Climate change's potential impact must figure in food production efforts*. [Online] Available at: http://www.fao.org/news/story/en/item/224958/icode/ [Accessed: 25 January 21].

Färe, R., Grosskopf, S. and Pasurka, C. (2016). Interfaces with Other Disciplines. Technical change and pollution abatement costs. *European Journal of Operational Research*, 248, pp. 715-724.

Feix, A. and Philippe, D. (2020). Unpacking the Narrative Decontestation of CSR: Aspiration for Change or Defense of the Status Quo? *Business and Society*, 59(1), pp. 129-174.

Ferkany, M and Whyte, K. (2012). The importance of participatory virtues in the future of environmental education. *Journal of Agricultural and Environmental Ethic*s, 25(3), pp. 419–434.

Fisher, B., Turner, K., Zylstra, M., Brouwer, R., Groot, R.D., Farber, S., Ferrano, P., Green, R., Hadley, D., Harlow, J., Jefferiss, P., Kirby, C.,Morling, P.,Mowatt, S., Naidoo, R., Paavola, J., Strassburg, B., Yu, D. and Balmford, A., (2008). Ecosystem services and economic theory: integration for policy-relevant research. *Ecology Applied*, 18(8), 2050–2067.

Foster, C. (1992). Aesthetic Disillusionment: Environment, Ethics, Art. *Environmental Values*, 1, pp. 205-215.

Frankental, P. (2001). Corporate social responsibility – a PR invention? *Corporate Communication: An International Journal*, 6(1), pp. 18-23.

Freeman, R. (1984). *Strategic Management: A Stakeholder Approach*. Marshall: Pitman.

Freundlieb, M., Gräuler, M. and Teuteberg, F. (2014). A conceptual framework for the quality evaluation of sustainability reports. *Management Research Review*, 37(1), pp. 19-44.

Friedman, A. (2014). The relationship between research method and visual display: a study of conference proceedings in the field of knowledge organization. *Information Research*, 19(4), pp. 1-18.

Fryxell, G. and Lo, C. (2003). The Influence of Environmental Knowledge and Values on Managerial Behaviours on Behalf of the Environment: An Empirical Examination of Managers in China. *Journal of Business Ethics*, 46, pp. 45-69.

Gadamer, H. (1972). *Wahrheit und Methode. Grundzüge einer philosophischen Hermeneutik*. 3rd ed., Tübingen: Mohr.

Gadarner, H. (1986). *Gesammelte Werke Hermeneutik*. Tübingen: Mohr, *Vol.1/2.*

Gebhard, E., Hagemann, N., Hensler, L., Schweizer, S. and Wember, C. (2015). Agriculture and Food 2050: Visions to Promote Transformation Driven by Science and Society. *Journal of Agricultural and Environmental Ethics*, 28, pp. 497-516.

Gee, K. and Burkhard, B. (2010). Cultural ecosystem services in the context of offshore wind farming: a case study from the west coast of Schleswig-Holstein. *Ecological Complexity*, 7(3), pp. 349–358.

Gewirth, A. (2002). Human Rights and Future Generations. In: Boylan, M. (2014), ed., *Environmental Ethics*, 2nd ed. West Sussex: Black Wiley, pp. 118-121.

Global Reporting Initiative (GRI) (2021). Global Reporting Initiative. [Online] Available at: https://www.unglobalcompact.org/ [Accessed: 25 January 21].

Godlovitch, S. (1994). Icebrakers: Environmentalism and naturel aesthetics. *Journal of Applied Philosophy*, 11, pp. 15-30.

Goffman, E. (1979). *Gender Advertisements*. London: Macmillan.

Godfray, C., Muir, J., Pretty, J. and Robinson, S. (2010). Food Security: The Challenge of Feeding 9 Billion People. *Science*, 327, pp. 812-818.

Goldman, A. (1995). *Aesthetic Value*. Boulder: Westview Press.

Golley, F. (1998). *A Primer for Environmental Literacy*. New haven: Yale University.

Goodman, D. and Redclifft, M. (1991). *Refashioning Nature: Food, Ecology and Culture*. London: Routledge.

Goodpaster, K. (1978). On being morally considerable. *Journal of Philosophy*, 75(6), pp. 308–325.

Gorz, A. (1989). *Critique of Economic Reason*. London: Verso.

Gray, R. (2019). Towards an ecological accounting: Tensions and possibilities in social and environmental accounting. In: Birkin F. and Polesie, T., eds., *Intrinsic Capability: using empirical science & traditions for sustainability*, World Scientific Press, Chapter 4.

Gray, R. (2002). The social accounting project and Accounting, Organizations and Society: privileging engagement, imaginings, new accountings and pragmatism over critique?. *Accounting, Organizations and Society*, 27(7), pp. 687-708.

Gray, R., & Gray, S. (2011). Accountability and human rights: a tentative exploration and a commentary. *Critical Perspectives on Accounting*, 22, pp. 781-789.

Gray, R. and Milne, M. (2015). It's not what you do, it's the way that you do it? Of method and madness. *Critical Perspectives on Accounting*, 32, pp. 51-66 .

Gray, R., and Milne, M. (2013). W(h)ither Ecology? The Triple Bottom Line, the Global Reporting Initiative, and Corporate Sustainability Reporting. *Journal of Business Ethics*, 118(1), pp. 13–29.

Gray, R., Adams, C. and Owen, D. (2014*). Accountability, Social Responsibility and Sustainability. Accounting for Society and the Environment*. Harlow: Pearson.

Gredel, E. (2017). Wort- und Themenkarriere in der Wirtschaftskommunikation: Nachhaltigkeitsberichte als Teildiskurse. In: Behr, I., Kern, A., Plewnia, A. und Ritte, J., eds., *Wirtschaft erzählen. Narrative Formatierungen von Ökonomie*. Institut für Deutsche Sprache: Studien zur deutschen Sprache, 73, pp. 93-109.

Greenbaum, A. (2005). Nature Connoisseurship. *Environmental Values*, 14, pp. 389-407.

Greiner, R. (2014). Environmental Duty of Care: From Ethical Principle Towards a Code of Practice for the Grazing Industry in Queensland (Australia). *Journal of Agricultural Ethics*, 27, pp. 527-547.

Grube, J., Maybeton, D. and Ball-Rokeach, S. (1994). Inducing change in values, attitudes, and behaviors: Belief system theory and the method of value self-confrontation. *Journal of Social Issues*, 50(4), pp. 153-173.

Grunert, K., Jeppesen, L., Jespersen, K., Sonne, A., Hansen, K., Trondson, T. and Young, J. (2005). Market orientation of value chains: A conceptual framework based on four case studies from the food sector. *European Journal of Marketing*, 39(5/6), pp. 428-455.

Guthrie, J., Parker L., Dumay, J. and Milne, M. (2019). What counts for quality in interdisciplinary accounting research in the next decade: A critical review and reflection. *Accounting, Auditing & Accountability Journal*, 32(1), pp. 2-25.

Guthrie, J. and Parker L. (2012). Reflections and projections: 25 years of interdisciplinary perspectives on accounting, auditing and accountability research. *Accounting, Auditing & Accountability Journal*, 25(1), pp. 6-26.

Haapala, A. (2005). On the aesthetics of the everyday: familiarity, strangeness, and the meaning of place. In: Light, A. and Smith, J. (eds.) (2005). *The Aesthetics of Everyday Life*. New York: Columbia University Press, pp. 39-55.

Hall, S. (1997). Representation. *Cultural Representations and Signifying Practices*. London: Sage.

Hall, S. (1973). Encoding and Decoding in the Television Discourse. *CCCS selected working papers*, 2, pp. 386-398.

Hall, S., Hobson, D., Lowe, A. and Willis, P. (1980). *Culture, Media, Language*. London: Routledge.

Hansla, A., Gamble, A., Juliosson, A. and Gärling, T. (2008). The relationhips between awareness of consequences, environmental concern, and value orientations. *Journal of Environmental Psychology*, 28, pp. 1-9.

Hargrove, E. (1989). *Foundations of Environmental Ethics*. Englewood Cliffs: Prentice Hall.

Hargrove, E. (1979). The historical foundations of American environmental attitudes. *Environmental Ethics*, 1, pp. 209-240.

Harper, D. (2002). Talking about pictures: a case for photo elicitation. *Visual Studies*, 17(1), pp. 13-26.

Hartmann, M. (2011). Corporate social responsibility in the food sector. *European Review of Agricultural Economics*, 38(3), pp. 297-324.

Havemo, E. (2018). Visual trends in the annual report: the case of Ericsson 1947-2016. *Corporate Communications: An International Journal*, 23(3), pp. 312-325.

Heisterkamp, J. (2009). *Kapital = Geist. Pioniere der Nachhaltigkeit: Anthroposophische Unternehmen*. Frankfurt: Brüll und Heisterkamp.

Hemphill, T. (2013). The Global Food Industry and "Creative Capitalism": The Partners in Food Solutions Sustainable Business Model. *Business and Society Review*, 118(4), pp. 489-511.

Herzig, C and Kühn, A.-L. (2017). Corporate Responsibility Reporting. In: Rasche, A., Morsing, M. and Moon, J., eds., *Corporate Social Responsibility. Strategy, Communication, Governance*. Cambridge: University Press, pp. 187-219.

Hitzler, R., Reichertz, J. and Schröer, N. (1999). Das Arbeitsfeld einer hermeneutischen Wissenssoziologie. In: Hitzler, R., Reichertz, J. and Schröer, N., eds., *Hermeneutische Wissensziologie. Standpunkte zur Theorie der Interpretation*. Konstanz: Universitätsverlag, pp. 9-16.

Hopwood, A. (2009). Accounting and the environment. *Accounting, Organizations and Society*, 34, pp. 433-439.

Horngren, C., Datar, S. and Raja, M. (2015). *Cost Accounting. A Managerial Emphasis*, 15th ed., Harlow: Pearson.

Hunter, W. C. (2008). A typology of photographic representations for tourism: Depictions of groomed spaces. *Tourism Management*, 29, pp. 354-365.

Imdahl, M. (1994). Ikonik. Bilder und ihre Anschauung. In: Boehm, G., ed., *Was ist ein Bild?..* Munich: Fink, pp. 300–24.

Jones, M. (2010). Accounting for the environment: Towards a theoretical perspective for environmental accounting and reporting. *Accounting Forum*, 34, pp. 123-138.

Joyner, B. and Payne, D. (2002). Evolution and implementation: A study of values, business ethics, and corporate social responsibility. *Journal of Business Ethics*, 41, 297-311.

Kant, I. (1987 [1790]). *Critique of Judgments*. Indianapolis: Hackett, translated by Pluhar, W.

Kaplan, R. (1984). The Evolution of Management Accounting. *The Accounting Review*, 59(3), pp. 390-418.

Kaplan, S. (2000). Human Nature and Environmentally Responsible Behavior. *Journal of Social Issues*, 56(3), pp. 491-508.

Karlson, M (2014). Es ist möglich! In: Meyer von Bremen, A. and Rundgren, G., eds., *Food monopoly. Das riskante Spiel mit billigem Essen*. Bonn: Bundeszentrale für politische Bildung.

Kath, R., Schaal, G. and Dumm, S. (2015). New Visual Hermeneutics. *Zeitschrift für Germanistische Linguistik*, 43(1), pp. 27-51.

Kelsall, C. (2020). Ecological Management Accounting- Taking into Account Sustainability, Does Accounting Have Far to Travel? *Sustainability*, 12, pp. 1-20.

Kernohan, A. (2012). *Environmental Ethics. An Interactive Introduction*. Ontario: Broadview Press.

Kieran, M. (2013). Value or Art. In: Gaut, B. and McIver Lopes, D., eds., *The Routledge Companion to Aesthetics*, 3rd ed. Abingdon: Routledge, pp. 289-298.

Klemm Verbos, A. and Miller, J. (2015). When Harm is at Stake: Ethical Value Orientation, Managerial Decisions, and Relational Outcomes. *Journal of Business Ethics*, 127, pp. 149-163.

Kong, D. (2012). Does corporate social responsibility matter in the food industry? Evidence from a nature experiment in China. *Food Policy*, 37, pp. 323-334.

Kosoy, N. and Corbera, E. (2010). Payments for ecosystem services as commodity fetishism. *Ecological Economics*, 69(6), 1228–1236.

Krutilla, J. (1976). Conservation reconsidered. *American Economic Review*, 57(4), 777–786.

Kuasirikun, N. (2011). The portrayal of gender in annual reports in Thailand. *Critical Perspectives on Accounting*, 22, pp. 53-78.

Kuhn, T. (1966). *The structure of scientific revolutions*, 3rd ed..Chicago: University of Chicago Press.

Kuhn, T. (2000). Reflections on my critics. In: Conant, J. and Haugeland, J., eds., *The road since structure: philosophical essays, 1970-1993. With an autobiographical interview*. Chicago: University of Chicago Press, pp. 123-175.

Kurt, R. (2004). *Hermeneutik. Eine sozialwissenschaftliche Einführung*. Konstanz: UVK Verlagsgesellschaft.

Laine, M. (2010). The Nature of Nature as a Stakeholder. *Journal of Business Ethics*, 96, pp. 73-78.

Lanka, S., Khadaroo, I. and Böhm, S. (2017). Agroecology accounting: biodiversity and sustainable livelihoods from the margins. *Accounting, Auditing and Accountability Journal*, 7, pp. 1592-1613.

Latour, B. (2005). *Reassambling the Social: An Introduction to Actor-Network Theory*. Oxford: University Press.

Laubach, S. (2014). *Living a Land Ethic. A History of Cooperative Conservation of the Leopold Memorial Reserve*. Madison: The University of Wisconsin Press.

Lea, E. and Worsley, A. (2006). Australian farmers' and food processors' values. *British Food Journal*, 108(2), pp. 105-117.

Lebensbaum (2021). For nature and mankind. [Online] Available at: https://www.lebensbaum.com/en/about-us/sustainability [Accessed: 22.01.2021].

Leopold, A., 1949. A Sand County Almanac. Oxford University Press, Oxford.

Leopold, A. (1966). *A Sand County Almanac, With Essays on Conservation from Round River*. New York: Ballantine Books.

Leopold, A. (1981). A Sand County Almanac. Oxford: University Press. In: Schmidtz, D. and Willott, E. (2002), eds., *Environmental Ethics. What really matters, what really works*. Oxford: University Press, pp. 27-33.

Leopold, A. (1999). *For the Health of the Land: Previously Unpublished Essays and Other Writings*. Washington, D.C.: Island Press.

Liu, Y. and Sumaila, U. (2010). Estimating Polluation Abatement Costs if Salmon Aquaculture: A Joint Production Approach. *Land Economics*, 86(3), 569-584.

Lohman, L. (2009). Toward a different debate in environmental accounting: The cases of carbon and cost–benefit. *Accounting, Organizations and Society*, 34(3–4), 499–534.

Lueger, M., and Hoffmeyer-Zlotnik, J. (1994). Hermeneutic interpretation in qualitative research: between art and rules. In: I. Borg and Mohler, P., eds., *Trends and perspectives in empirical social research*. Berlin: de Gruyter, pp. 294-307.

Macharia, J., Collins, R. and Sun, T. (2013). Value-based consumer segmentation: the key to sustainable agri-food chains. *British Food Journal*, 115(9), pp. 1313-1328.

Maloni, M. and Brown, M. (2006). Corporate Social Responsibility in the Supply Chain: An Application in the Food Industry. *Journal of Business Ethics*, 68, pp. 35-52.

Martin, P. (2002). Sensation, bodies, and the 'spirit of the place': aesthetics in residential organizations for the elderly. *Human Relations*, 55(7), pp. 861-885.

Mata, C.; Fialho, A. and Eugénio, T. (2018). A decade of environmental accounting reporting: What we know? *Journal of Cleaner Production*, 198, pp. 1198-1209.

Maunders, K. and Burritt, R. (1991). Accounting and Ecological Crisis. *Accounting, Auditing & Accountability Journal*, 4(3), pp. 9-26.

Maybery, D., Crase, L. and Gullifer, C. (2005). Categorising farming values as economic, conservation and lifestyle. *Journal of Economic Psychology*, 26(1), pp. 59-72.

Mayring, P. (2004). Qualitative Content Analysis. In: Flick, U. von Kardoff, E. and Steinke, I., (2000), eds., *A Companion to Qualitative Research*. London: Sage, pp. 266–9.

McCaughly, J. (2006). Selling out on nature. *Nature*, 443(7107), pp. 27–28.

MEA (Millennium Ecosystem Assessment) (2005). Ecosystems and Human Well-being: Synthesis. Wahsington: Island Press.

Merchant, C. (1990). Ecofeminism and Feminism Theory. In: Diamond, I. and Orenstein, G. eds., Reviewing the World: The Emergence of Ecofeminism, Sierra Club Books, pp. 77-83. In: Boylan, M. (2014), ed., *Environmental Ethics*, 2nd ed West Sussex: Wiley Blackwell, pp. 59-63.

Messner, M. (2009). The limits of accountability. *Accounting, Organizations and Society*, 34(8), pp. 918–938.

Meya, J., Baumgärtner, S., Drupp, M. and Quaas, M. (2020). Inequality and the Value of Public Natural Capital. *CESifo Working Paper*, 8752, Dec 2020.

Midgley, M. (1994). The End of Anthropocentrism? *Royal Institute of Philosophy Supplement*, 36, pp. 103-112.

Milfont, T. and Duckitt, J. (2004). The structure of environmental attitudes: A first and second-order confirmatory factor analysis. *Journal of Environmental Psychology*, 24(3), pp. 289-303.

Milgrom, P. (1993). Is sympathy an economic value? Philosophy, economics and the contingent valuation method. In: Hausman, J., ed., *Contingent Valuation: A Critical Assessment*. Amsterdam: North-Holland, pp. 417-441.

Miller, P. and Power, M. (2013). Accounting, organizing, and economizing: Connecting accounting research and organization theory. *The Academy of Management Annals*, 7(1), pp. 557–605.

Millimet, D. L. (2003). Environmental abatement costs and establishment size. *Contemporary Economic Policy*, 21(3), pp. 281-296.

Milne, M. J. (1991). Accounting, Environmental Resource Values, and Non-market Valuation Techniques for Environmental Resources: A Review. *Accounting, Auditing & Accountability Journal*, 4(3), pp. 81-109.

Mitroff, I. and Denteon, E. (1999). *A Spiritual Audit of Corporate America: A Hard Look at Spirituality, Religion, and Values in the Workplace*. San Francisco: Jossey-Bass.

Morgan, G. (1988). Accounting as reality construction: towards a new epistemology for accounting practice. *Accounting, Organizations and Society*, 13(5), pp. 477-485.

Mothersill, M. (1984). *Beauty Restored*. Oxford: Clarendon Press.

Murdoch, J. (1994). Some Comments on "Nature" and "Society" in the Political Economy of Food. *Review of International Political Economy*, 1(3), pp. 571-577.

Murdoch, J., Marsden, T. and Banks, J. (2000). Quality, Nature, and Embeddedness: Some Theoretical Considerations in the Context of the Food Sector. *Economic Geography*, 76(2), pp. 107-125.

Müller, M. (2012). Figurative Hermeneutik. Zur methodologischen Konzeption einer Wissenssoziologie des Bildes. *sozialer sinn*, 13(1), pp. 129-161.

Müller-Doohm, S. (1997). Bildinterpretation als struktural-hermeneutische Symbolanalyse. In: Hitzler, R. and Honer, A., eds., *Sozialwissenschaftliche Hermeneutik*. Opladen: Leske+Budrich, pp. 81–108.

Müller-Doohm, S. (1993). Visuelles Verstehen. Konzepte kultursoziologischer Bildhermeneutik. In: Jung, T. and Müller-Doohm, S., eds., *Wirklichkeit im Deutungsprozess. Verstehen und Methoden in den Kultur- und Sozialwissenschaften*. Frankfurt, Main: Suhrkamp, pp. 438-457.

Müller-Doohm, S. (1990a). Aspekte einer kultursoziologischen Bildhermeneutik. In: Neumann, K. and Charlton, M., eds., *Spracherwerb und Mediengebrauch*. Tübingen: Gunter Narr Verlag, pp. 205-220.

Müller-Doohm, S. (1990b). Medienforschung als Symbolanalyse. In: Charlton, M. and Bachmair, B. (eds.). *Medienkommunikation im Alltag*. München: K.G. Saur Verlag, pp. 76-102.

Naess, A. (1997). Die tiefenökologische Bewegung. Einige philosophische Aspekte In: Krebs, A., ed., *Naturethik. Grundtexte der gegenwärtigen tier- und ökoethischen Diskussion*. Frankfurt: Suhrkamp, pp. 182-210.

Naess, A. (1983). The Shallow and the Deep, Long-Range Ecology Movement. Inquiry, 16, pp. 95-100. In: Boylan, M., ed., *Environmental Ethics*, 2nd ed. West Sussex: Wiley Blackwell, pp. 42-45.

Niebuhr, R. (1970). The Center of Value. In: Niebuhr, R., ed., *Radical Monotheism and Western Culture – With Supplementary Essays*. New York: Harper Torchbooks, pp. 100-113.

Norton, B. (1991). *Toward Unity Among Environmentalists*. New York: Oxford University Press.

Oevermann, U. (1993). Die objektive Hermeneutik als unverzichtbare Grundlage für die Analyse von Subjektivität. Zugleich eine Kritik der Tiefenhermeneutik. In: Jung, T. und Müller-Doohm, S., eds., *"Wirklichkeit" im Deutungsprozeß. Verstehen und Methoden in den Kultur- und Sozialwissenschaften*. Frankfurt/M.: Suhrkamp, pp. 106-189.

Oevermann, *U*. (1991). Genetischer Strukturalismus und das sozialwissenschaftliche Problem der Erklhng der Entstehung des Neuen. In: Müller-Doohm, S., ed., *Jenseits der Utopie.* Frankfurt/M.: Suhrkamp, pp.267-336.

Oevermann, U., T. Allert, E. Konau, J. Krarnbeck (1979). Die Methodologie einer "objektiven Hermeneutik" und ihre allgemeine forschungslogische Bedeutung in den Sozialwissenschaften. In: Soeffner, H., ed., *Interpretative Verfahren in den Sozial- und Textwissenschaften.* Stuttgart: Metzler, pp.352-434.

O'Neill, O. (1997). Environmental Values, Anthropocentrism and Speciesism. *Environmental Values*, 6(2), pp. 127-142.

Ostapski, S. and Isaacs, C. (1992). Corporate moral responsibility and the moral audit: challenges for refuse relief inc. *Journal of Business Ethics*, 11, 231–239.

Owen, D. (2014). The Evolution of Social Reporting: The 'Early Days'. *Social and Environmental Accountability Journal*, 34(2), pp. 75-80.

Owen, D. (2008). Chronicles of wasted time?: A personal reflection on the current state of, and future prospects for, social and environmental accounting research. *Accounting, Auditing & Accountability Journal*, 21(2), pp.240-267

Pandey, A. and Gupta, R. (2008). A perspective of collective consciousness of business organizations. *Journal of Business Ethics*, 80, pp. 889-898.

Panofsky, E. (1955). Iconography and Iconology: An Introduction to the Study of Renaissance Art. In: Panofsky, E.,ed., *Meaning in the Visual Arts: Papers in and on Art History*. Garden City, NY: Doubleday Anchor, pp. 26–54.

Parson, G. and Carlson, A. (2009). *Functional Beauty*. Oxfod: University Press.

Pascual, U., Muradian, R., Brander, L., Gómez-Baggethin, E., Martín-López, B. and Verma, M. (2010). The economics of valuing ecosystem services and biodiversity. In: Kumar, P., ed., *The Economics of Ecosystems and Biodiversity: Ecological and Economic Foundations*. London and Washington: Earthscan, pp. 183-256.

Patten, D. (2015). An insider's reflection on quantitative research in the social and environmental disclosure domain. *Critical Perspectives on Accounting*, 32, pp. 45-50.

Patton, M. (1990). *Qualitative evaluation and research methods*, 2nd ed..Newbury Park: Sage Publications.

Pink, S. (2001). *Doing Visual Ethnography*. London: Sage.

Philipps, A. (2012). Visual protest material as empirical data. *Visual Communication*, 11(1), pp. 3-21.

Phillips, R. A. and Reichart, J. (2000). The Environment as a Stakeholder? A Fairness-Based Approach. *Journal of Business Ethics*, 23, pp. 185-197.

Powell, T., Boomgaarden, H., De Swert, K. and de Vreese, C. (2015). A Clearer Picture: The Contribution of Visuals and Text to Framing Effects. *Journal of Communication*, 65(6), pp. 997-1017.

Preston, A., Wright, C. and Young, J. (1996). Imag[in]ing Annual Reports. *Accounting, Organisation and Society*, 21(1), pp. 113-137.

Preyer, G. (2001). Kognitive Semnatik. In: Preyer, G., Ulkan, M. and Ulfig, A., eds., *Intention – Bedeutung – Kommunikation. Kognitive handlungstheoretische Grundlagen der Sprachtheorie*. Frankfurt, M.: Humanities Online, pp. 74-128.

Pruzan, P. (2001). The Question of Organizational Consciousness: Can Organizations have Values, Virtues and Visions? *Journal of Business Ethics*, 29, pp. 271-284.

Przyborski, A. (2018*). Bildkommunikation. Qualitative Bild- und Medienforschung*. Berlin, Boston: Walter De Gruyter.

Quinn, J. (1997). Personal ethics and business ethics: The ethical attitude of owner/managers of small business. *Journal of Business Ethics*, 16, pp. 119-127.

Randall, A. (1986). Human preferences, economics, and the preservation of species. In: Norton, B., ed., *The Preservation of Species*. Princeton: University Press, pp. 79-109.

Randall, A. and Stoll, J. (1983). Existence value in a total valuation framework. In: Rowe, R. and Chestnut, L., eds., *Managing Air Quality and Scenic Resources at National Parks and Wilderness Areas*. Boulder: Westview Press, pp. 265-274.

Rapunzel (2021): "The Rapunzel Turkey Project - groundbreaking and sustainable". [Online] Available at: https://www.rapunzel.de/en/turkey-project.html [Accessed: 22.01.2021].

Regan, T. (1981). The Nature and Possibility of an Environmental Ethics. *Environmental Ethics*, 3, pp. 19-34.

Rigby, D. and Cáceres, D. (2001). Organic farming and the sustainability of agricultural systems. *Journal of Agricultural Systems*, 68, pp. 21-40.

Rodin, J. (2014). *The Resilience Dividend. Being Strong in a World Where Things Go Wrong*. New York: PublicAffairs.

Roe, E. (2010). Ethics and the Non-Human: The matterings of animal sentience in the meat industry. In: Anderson, B. and Harrison, P., eds., *Taking-Place. Non-representational geographies*. London: Ashgate, pp. 261-280.

Rolston, H. III. (2008). From beauty to duty: Aesthetics of nature and environmental ethics. In: Carlson, A and Lintott, S., eds., *Nature Aesthetics and Environmentalism, From Beauty to Duty*, 2nd ed. New York: Columbia University Press, pp. 325-337.

Rolston, H. (2002). From Beauty to Duty: Aesthetics of Nature and Environmental Ethics. In: Berleant, A., ed., *Environment and the Arts: Perspectives on Environmental Aesthetics*. Aldershot: Ashgate, pp.127-141.

Rolston, H. (1997). Werte in der Natur und die Nature der Werte. In: Krebs, A., ed., *Naturethik. Grundtexte der gegenwärtigen tier- und ökoethischen Diskussion*. Frankfurt: Suhrkamp, pp. 247-270.

Rolston, H. (1995). Does Aesthetic Appreciation of Nature Need to be Science Based? *British Journal of Aesthetics*, 35, pp. 374-386.

Rolston, H., III. (1994). Value in Nature and the Nature of Value. *Royal Institute of Philosophy Supplement*, 36, pp. 13-30.

Rolston, H., III. (1991). Environmental Ethics: Values in and Duties to the Natural World. In: Bordmann, F. and Kellert, S., eds., The Broken Circle: Ecology, Economics, and Ethics. Yale: University Press, pp. 228-247. In: Boylan, M., ed., (2014). *Environmental Ethics*, 2nd ed. West Sussex: Wiley Blackwell, pp. 135-151.

Rolston, H, III. (1988). *Environmental Ethics: Duties to and Values in the Natural World*. Philadelphia: Temple University Press.

Rolston, H. III. (1982). Are value in nature subjective or objective*? Environmental Ethics*, 4, pp. 125-151.

Rose, G. (2012). *Visual Methodologies. An Introduction to Researchiung with Visual Materials*, 3rd ed. London, Thousand Oaks, New Delhi, Singapore: Sage.

Rose, G. (2007). *Visual methodologies*, 2nd ed. London: Sage.

Roxas, B. and Coetzer, B. (2012). Institutional Environment, Managerial Attitudes and Environmental Sustainability Orientation of Small Firms. *Journal of Business Ethics*, 111, pp. 461-476.

Rønnow-Rasmussen, T. and Zimmerman, M. (2005). *Recent Work on Intrinsic Value.* Springer, Dordrecht.

Russell, S., Milne, M. and Dey, C. (2017). Accounts of nature and the nature of accounts: Critical reflections on environmental accounting and propositions for ecologically informed accounting. *Accounting, Auditing and Accountability Journal*, 30(7), pp.1426-1458

Rutherford, R., Blackburn, R. and Spence, L. (2000). Environmental management and the small firm: An international comparison*. International Journal of Entrepreneurial Behaviour & Research*, 6(6), pp. 301-325.

Ryan, J. (2011). Plants as Objects: Challenges for an Aesthetics of Flora. *Philosophy Study*, 1(3), pp. 222-236.

Saito, Y. (2010). Future Directions for Environmental Aesthetics. *Environmental Values*, 19, pp. 373-391.

Saito, Y. (1998). Appreciating Nature on its Own Terms. *Environmental Ethics*, 20, pp. 135-149.

Schmidtz, D. and Willott, E. (2002). *Environmental Ethics. What really matters, what really works*. Oxford: University Press.

Schroeder, J. (2002). E-commerce, architecture, and expression. In: Schroeder, J., ed., *Visual Consumption.* Oxford: Routledge, pp. 90-114.

Schwartz, S. (1992). Universals in the content and structure of values: Theoretical advances and empirical test in 20 countries. In: Zaune, M., ed., *Advances in experimental social psychology.* Orlando: Academic Press, pp. 1-65.

Scott, M. and Lyman, S. (1986). Accounts. *American Sociological Review*, 33(1), pp. 46-62.

Scoville, J. (1995). Value Theory and Ecology in Environmental Ethics: A Comparison of Rolston and Niebuhr. *Environmental Ethics*, 17(2), pp. 115-133.

Seel M. (1997). Ästhetische und moralische Anerkennung der Natur. In: Krebs, A.,ed., *Naturethik. Grundtexte der gegenwärtigen tier- und ökoethischen Diskussion*. Frankfurt/M.: Suhrkamp, pp. 307-330.

Sessions, G. (1984). *Deep Ecology: Living as if Nature mattered.* Layton: Peregrine Smith Press.

Seufert, V., Ramankutty, N. and Meyerhofer, T. (2017). What is this thing called organic? – How organic farming is codified in regulations. *Food Policy*, 68, pp. 10-20.

Sharma, S. (2006). *Management in New Age: Western Windows Eastern Doors.* New Delhi: New Age International.

Shaw, B. (2001). Economics and the Environment: A "Land Ethic" Critique of Economic Policy. *Journal of Business Ethics*, 33, pp. 51-57.

Shaw, B. (1997). A Virtue Ethics Approach to Aldo Leopold's Land Ethic. *Environmental Ethics*, 19(1), pp. 53-67.

Shearer, T. (2002). Ethics and accountability: From the for-itself to the for-the-other. *Accounting, Organization and Society*, 27, pp. 541-573.

Shelley, J. (2013). The Aesthetic. In: Gaut, B. and McIver Lopes, D., eds., *The Routledge Companion to Aesthetics*, 3rd ed. Abingdon: Routledge, pp. 246-256.

Shrivastrava, P. (1995). Ecocentric Management for a Risk Society. *The Academy of Management Review*, 20(1), pp. 118-137.

Sienkiewicz, A. (2006). Toward a Legal Land Ethic: Punitive Damages, Natural Value, and the Ecological Commons. *Pennsylvania State Environmental Law Review*, 15(1), pp. 91-123.

Sinclair, A. (1995). The chameleon of accountability: forms and discourses. *Accounting, Auditing and Accountability Journal*, 20(2/3), pp. 219-237.

Singer, P. (1974). All animals are equal. Philosophical Exchange, 1, pp. 103-116. In: Schmidtz, D. and Willott, E., eds. (2002), *Environmental Ethics. What really matters, what really works*. Oxford: University Press, pp. 17-26.

Soeffner, H.-G. (1999). Verstehende Soziologie und sozialwissenschaftliche Hermeneutik. Die Rekonstruktion der gesellschaftlichen Konstruktion der Wirklichkeit. In: Hitzler, R., Reichertz, J. and Schröer, N., eds., *Hermeneutische Wissensziologie. Standpunkte zur Theorie der Interpretation*. Konstanz: Universitätsverlag, pp. 39-50.

Soulé, M.E., 1985. What is conservation biology? *BioScience*, 35(11), 727–734.

Stanton, P. and Stanton, J. (2002). Corporate annual reports: research perspectives used. *Accounting, Auditing and Accountability Journal*, 15(4), pp. 478-500.

Starik, M. (1995). Should trees have managerial standing? Toward stakeholder status for non-human nature. *Journal of Business Ethics*, 14, pp. 207-217.

Starik, M. and Kanashiro, P. (2013). Toward a Theory of Sustainability Management. Uncovering and Integrating the Nearly Obvious. *Organization and Environment*, 26(1), pp. 7-30.

Stead, W. and Stead, J. (1996). *Management for a small planet*, 2nd ed. Thousand Oaks: Sage.

Stecker, R. (2013). Interpretation. In In: Gaut, B. and McIver Lopes, D. (eds.) (2013). The Routledge Companion to Aesthetics. Abingdon: Routledge, 3rd ed., pp. 309-319.)

Stecker, R. (2010). *Aesthetics and the Philosophy of Art: An Introduction*, 2nd ed. Lanham: Rowman and Littlefield.

Stecker, R. (1997). *Artworks: Definition, Meaning and Value*. University Park: Pennsylvania State University State.

Sterba, J. (1994). Reconciling Anthropocentric and Nonanthropocentric Environmental Ethics. Environmental Values, 3, pp. 229-244. In: Boylan, M., ed., (2014). *Environmental Ethics*, 2nd ed. West Sussex: Wiley Blackwell, pp. 163-175.

Stern, P. (2000). Toward a coherent theory of environmentally significant behaviour. *Journal of Social Issues*, 56(3), pp. 407-424.

Stern, P. and Dietz, T. (1994). The value basis of environmental concern. *Journal of Social Issues*, 50, pp. 65-84.

Stern, P., Young, O. and Druckman, D. (1992). *Global environmental change: Understanding the human dimensions*. Washington, DC: National Academy Press.

Stierle, Karlheinz (1985). Für eine Öffnung des Hermeneutischen Zirkels. *Poetica*, 17(3/4), pp. 340-354.

Stolnitz, J. (1998). The Aesthetic Attitude. In: Korsmeyer, C., ed., *Aesthetics: The Big Questions*. Malden: Blackwell Publishing, pp. 78-83.

Stolze, M., Piorr, A., Häring, A. and Dabbert, S. (2000). *The Environmental Impacts of Organic Farming in Europe*. Stuttgart-Hohenheim: Universität Hohenheim.

Stone, G., Joseph, M. and Blodgett, J. (2004). Toward the creation of an eco-oriented corporate culture: A proposed model of internal and external antecedents leading to industrial firm eco-orientation. *Journal of Business & Industrial Marketing*, 19(1), pp. 68-84.

Sturken, M. and Cartwright, L. (2001). *Practices of looking*. Oxford: Oxford University Press.

Styhre, A. (2010). *Visual Culture in Organizations: Theory and Cases*. London: Routledge.

Taylor, P. (1997). Die Ethik der Achtung gegenüber der Natur. In: Krebs, A., ed., *Naturethik. Grundtexte der gegenwärtigen tier- und ökoethischen Diskussion*. Frankfurt: Suhrkamp, pp. 111-143.

Taylor, P. (1986). Respect for Nature: A Theory of Environmental Ethics. Princeton; NJ: University Press. In: Boylan, M., ed. (2014). *Environmental Ethics*, 2nd ed..West Sussex: Wiley Blackwell, pp. 152-162.

Talyor, P. (1984). Are humans superior to animals and plants. *Environmental Ethics*, 6(2), pp. 149-160.

TEEB (The Economics of Ecosystems and Biodiversity) (2018). *Measuring what matters in agriculture and food systems: a synthesis of the results and recommendations of TEEB for Agriculture and Food's Scientific and Economic Foundations report*. Geneva: UN Environment.

TEEB (2010). *The Ecological and Economic Foundations*. Chapter 5. [Online] Available at: http://www.teebweb.org/wp-content/uploads/Study%20and%20Reports/Reports/Ecological%20and%20Economic%20Foundations/TEEB%20Ecological%20and%20Economic%20Foundations%20report/TEEB%20Foundations.pdf [Accessed: 1 March 2021].

Teays, W. (2014). Patently Wrong. The Commercialization of Life Forms. In: Boylan, M., ed., *Environmental Ethics*, 2nd ed. West Sussex: Wiley Blackwell, pp. 71-82.

Thompson, J. (1995). Aesthetics and the Value of Nature. *Environmental Ethics*, 17(3), pp. 291-305.

Thompson, J. (1990). A Refutation of Environmental Ethics. *Environmental Ethics*, 12, pp. 147-160.

Traill, W. and Meulenberg, M. (2002). Innovation in the food industry. *Agribusiness*, 18(1), pp. 1-21.

Tran, T. and Herzig, C. (2020). Material Flow Cost Accounting in Developing Countries: A Systematic Review. *Sustainability*, 12, pp. 1-18.

Tregigda, H., Milne, M. and Lehman, G. (2012). Analyzing the quality, meaning and accountability of organizational reporting and communication: Directions for future research. *Accounting Forum*, 36, pp. 223-230.

Tsang, E. (1998). A longitudinal study of corporate social reporting in Singapore. The case of the banking, food and beverages and hotel industries. *Accounting, Auditing and Accountability*, 11(5), pp. 624-635.

Turner, B., Wuellner, M., Nichols, T. and Gates, R. (2014). Dueling Land Ethics: Uncovering Agricultural Stakeholder Metnal Models to Better Understand Recent Land Use Conversion. *Journal of Agricultural Environmental Ethics*, 27, pp. 831-856.

Turner, R. (1999). *The place of economics values in environmental valuation*. In: Bateman, I. and Willis, K., eds., *Valuing Environmental Preferences*. Oxford: University Press, pp. 17-41.

Turner, R. and Paavola, J. *et al.* (2003). Valuing nature: lessons learned and future research directions. *Ecological Economics*, 46(3), pp. 493-510.

UNFCCC (United Nations Framework Convention on Climate Change) (1998). Kyoto Protocol the UNFCCC. [Online Available]: http://unfccc.int/resource/docs/convkp/kpeng.pdf [Accessed 1 March 2021].

UNGC (United Nations Global Compact) (2021). United Nations Global Compact. [Online] Available at: https://www.unglobalcompact.org/ [Accessed 24 January 2021].

Van Leeuwen, T. and Jewitt, C. (2001). *The Handbook of Visual Analysis*. London: Sage.

Varandas, M. (2015). The Land Aesthetic, Holmes Rolston's Insight. *Environmental Values*, 24, pp. 209-226.

Varner, G. (2012). *Personhood, ethics, and animal cognition: situating animals in Hare's two-level utilitarianism*. Oxford: University Press.

Verhoog, H. (1992). The Concept of Intrinsic Value and Transgenic Animals. *Journal of Agricultural and Environmental Ethics*, 5, pp. 147-160.

Wakhlu, A. (2000). *Management by Heart*. New Delhi: Sage.

Warren, S. (2005). Photography and voice in critical qualitative management research. *Accounting, Auditing and Accountability Journal*, 18(6), pp. 861-882.

Warren, S. (2008). Empirical Challenges in Organizational Aesthetics Research: Towards a Sensual Methodology. *Organization Studies*, 29(4), pp. 559-580.

Warren, K. (1990). The Power and Promise of Ecological Feminism. Environmental Ethics, 12, pp. 125-126, 138-145. In: Boylan, M., ed., (2014). *Environmental Ethics*, 2nd ed. West Sussex: Wiley Blackwell, pp. 64-71.

Weber, J. (2015). Identifying and Assessing Managerial Value Orientations: A Cross-Generational Replication Study of Key Organizational Decisions-Makers' Values. *Journal of Business Ethics*, 139, pp. 493-504.

Wilber, K. (2002). *Spectrum of Consciousness*. New Delhi: Motilal Bavarsidas.

Willis, A. and Goodfellow, J. (1991). The name of the game. *CA Magazine*, 43–50.

Windelband, W. (1921). *An Introduction to Philosophy*. London: T. Fisher Unwin.

Young, R. (Sustainable Food Trust) (2020). Maximum growth: whatever the cost. Use of growth-promoting antibiotics and beta-agonists in US meat production: implications under a US/UK trade deal. *Chemicals in Agriculture, Health, News and Reviews*, Dec 20, pp. 1-17.

Zangwill, N. (2001). *The Metaphysics of Beauty*. Ithaca: Cornell University Press.

Zimmerman, M. (2010). Intrinsic vs. Extrinsic Value. Stanford Encyclopaedia of Philosophy. [Online] Available at: http://plato.stanford.edu/entries/value-intrinsic-extrinsic/ [Accessed 1 March 2021].

Zohar, D and Marshall, I. (2000). *SQ – Spiritual Intelligence the Ultimate Intelligence*. London: Bloomsbury.

Annex

Content of Annex

Listing of selected and analysed sustainability reports:

- Lebensbaum: A (http://nachhaltigkeit.lebensbaum.com/nhb2016/#/1)
- Rapunzel: B (https://www.rapunzel.de/epaper/nachhaltigkeitsbericht/2017/#1)
- Schwartau: C (https://www.schwartau.de/home/sites/de.schwartauer-werke/files/SW_Nachhaltigkeitsbericht_2017_6.pdf)
- Seeberger: D (https://www.seeberger.de/fileadmin/user_upload/seeberger/unternehmen/Seeberger_Nachhaltigkeitsbericht_2016-2017.pdf)

Table A8.1a

Photo ID[60]	Page #	Photo description (image itself)	Category of depictions
A1	Front page (1)	Tropical landscape; green mountains in the background, trees and plants; foggy sky; colourful bird flying in the front; coloured photograph; photograph taken from above, but same height like background mountains; rectangular; half of page; label on the top; title in the middle; subtitles at the bottom	Cultural / natural landscape
A2*	5	Man in superhero position smiling into camera; slightly open mouth; casual clothing; wearing slightly open coloured shirt with dark cardigan; upper body; coloured; eye contact with viewer; rectangular photograph; quarter of page	
A3*	12	Man slightly smiling into camera; mouth almost closed; head and shoulders; casual clothing; slightly opened checked shirt with dark cardigan; black-and-white; eye contact; round-shaped; twelfth part of page	
A4*	13	Man smiling into camera; open mouth; head and shoulders; casual clothing; slightly opened checked shirt; shelves with products in the background; eye contact; black-and-white; round-shaped; twelfth part	
A5*	13	Man smiling broadly into camera; open mouth; head and shoulders; business clothing; suit, shirt, tie; black-and-white; eye-contact; round-shaped; twelfth part	
A6	22	Blooming flowers in front; company building in background; no windows; cloudy sky; coloured; from below; rectangular; less than twelfth part	Planted areas next to building
A7	22	Green tree in front; bituminised lanes; small green patches; Office building with windows in background; cloudy sky; coloured; straightforward; rectangular; less than twelfth	Planted areas next to building
A8*	23	Company building in background; few windows; blue sky as half of photograph; two parking cars; few bushes; coloured; from below; rectangular; less than twelfth part	
A9	23	Green plants in front; company / office building in background; few windows; blue sky; coloured photograph; angular, slightly from below; rectangular; less than twelfth	Planted areas next to building
A10*	24	Half-timber house; fading colours; straightforward; squared photograph; small	
A11*	24	Man talking to another person (only back to see); casual clothing; shelves with products in the background; coloured; slightly fading colours; slightly from below; squared; small	

60 Photographs which are not used for perspective 2 are indicated with *.

A12*	24	Red brick house; loading ramp in front of house; blue sky; coloured; straightforward; squared; small	
A13*	24	Driveway in front; company building in background; two men loading big machinery into building in the middle; men wearing working clothing; grey sky; coloured; straightforward; squared; twelfth part of page	
A14	24	Green plants in front; company / office building in background; few windows; blue sky with few clouds; coloured; slightly from below; rectangular; less than a twelfth; same photograph like A7 from another angle	Planted areas next to building
A15*	25	Four men playing wind instruments in the front; men wearing suits and hats; shelves with big parcels in the background; coloured; straightforward; rectangular; less than a twelfth of page	
A16	25	See A6; same photograph just smaller; squared	Planted areas next to building
A17*	25	Inside a factory hall; conveyer belts; high machines; coloured; from below; rectangular; less than twelfth part	
A18*	25	See A8; same photograph just smaller; squared	
A19	25	Small lake and plants (grasses, green areas) in the front; green hedges and trees in the background; cloudy sky; coloured; straightforward; rectangular; less than twelfth	Cultural / natural landscape
A20*	25	Inside a factory hall; big machines and collecting container; coloured; straightforward; rectangular; less than twelfth part	
A21*	25	Three persons standing on a stage; colours and lights in the background; coloured; from below; squared; small	
A22*	26-27	Wooden shelves; unusual arranged individual shelves; 6 award-like looking objects placed on different part of the shelves (e.g. golden figure (tall man holding up arm) with batch at the bottom; figure placed nearly in the middle of photograph); coloured; straightforward; almost whole pages covered with this photograph; two text boxes placed in the front (but separated) to the left and right of the pages (photograph in background)	
A23*	28-29	Wooden shelves; unusual arranged individual shelves; 3 award-like looking objects placed on different part of the shelves; coloured; straightforward; almost whole pages covered with this photograph; two text boxes placed in the front (but separated) to the left and right of the pages (photograph in background)	
A24	33	Blue sky with clouds; background photograph; coloured; straightforward; squared; half of page; text in the front	Cultural / natural landscape
A25*	42	Man smiling into camera; mouth opened; head and shoulders; business clothing; suit, shirt, tie; shelves and posters in the background; black-and-white; eye-contact; round-shaped; twelfth part	
A26	46	Landscape; plants, blossoming flowers, grasses in the front; wide green area in the middle; trees/ forest in the back; blue sky with	Cultural / natural landscape

		clouds; sunshine on the green area; coloured; straightforward; rectangular; third	
A27*	47	Two hands holding wooden hammer and chisel; working on a white object; coloured; from below/straightforward on hands; round-shaped; quarter	
A28*	48	Train riding along tracks; power lines at the top; fading colours; coloured; round-shaped; perspective angle; sixth	
A29	49	company / office building in the middle; green surrounding with trees, bushes and bituminised roads; coloured; from above; round-shaped; twelfth	Planted areas next to building
A30	49	company / office building in the middle; green surrounding with trees, bushes and bituminised roads and buildings; coloured; from above; rectangular; quarter; same like A30 but wider angle	Planted areas next to building
A31*	50	Copper coloured pipes in factory building; coloured; from below; round-shaped; small	
A32*	50	Pipe covered with black cloth; coloured; from below; round-shaped; less than twelfth	
A33*	50	Machinery in factory hall; coloured, straightforward; round-shaped; eighth	
A34*	51	Brown items in pipe behind glass; pipe dark; illuminated; coloured; from above; round-shaped; less than twelfth	
A35*	51	Factory hall; machinery to the right and in the background; coloured; straightforward; rectangular; half	
A36	51	Hand opening pipe; brown coffee beans dropping out of pipe into bowls; three more pipes and bowls with coffee beans in the background; coloured; straightforward; round-shaped; less than twelfth	People with natural food products
A37*	51	Computer monitors and person watching monitors in the front; machinery in the background; in factory hall; coloured; slightly from above; round-shaped; small	
A38*	57	Women smiling into camera; mouth closed; head only; black-and-white; eye-contact; round-shaped; twelfth	
A39	60	Women smiling into camera; mouth closed; holding pumpkin in right hand next to face; wearing dark pullover; necklace; watch on left arm; upper torso; black-and-white; eye-contact; round-shaped; twelfth	People with natural food products
A40	61	Food products: two fishes, herbs, figs on blue wood; coloured; from above; round-shaped; less than twelfth	Natural food products
A41	61	Small part of lake in the front; white temple in the background; palm trees to the left and right; coloured; straightforward; round-shaped; less than twelfth	Planted areas next to buildings
A42	62	Four women picking leaves; women surrounded by green bushes; wearing longs clothes, big hats and big baskets on the back, attached to forehead; high trees in the background; coloured; round-shaped; straightforward; sixth	People in landscape

A43*	66	Wooden shelve with packaged products (small bags, cartons); varying amounts of products per shelve; different products; unusual arranged shelves; coloured; straightforward; rectangular; full page	
A44*	67	Wooden shelve with packaged products (small bags, jars, cans, cartons); varying amounts of products per shelve; different products; unusual arranged shelves; coloured; straightforward; rectangular; full page	
A45*	69	Woman smiling into camera; mouth closed; wearing blouse; holding small carton with right arm next to face; holding another carton with left arm in front of body; upper torso; black-and-white; slightly from below with eye-contact; round-shaped; twelfth	
A46*	69	Two women looking at each other holding white cup in hand; about to taste; wearing casual clothing; women placed to the left and right of photograph; shelves with products in the middle/background; upper torsos; coloured; slightly from below with eye-contact; round-shaped; twelfth	
A47*	69	Man smiling into camera in the front; closed mouth; holding green cup in right hand next to body; holding plate with food in left hand next to body; man pouring drink into cup on the left/middle; upper torsos; coffee booth in the background; coloured; straightforward/eye-contact; round-shaped; twelfth	
A48*	70	Woman smiling into camera; mouth slightly opened; wearing dark blazer; necklace; earrings; upper torso; window in the background; black-and-white; eye-contact; round-shaped; twelfth	
A49*	71	Woman smiling into camera; mouth closed; head and shoulders; tree in the background; black-and-white; eye-contact; round-shaped; twelfth	
A50*	74	Man looking into camera; mouth closed; wearing dark suit and white shirt; upper torso; black-and-white; eye-contact; round-shaped; small	
A51*	76	Same like A11; from below; wider angle; round-shaped; small	
A52*	76	Man smiling into camera to the left; mouth slightly opened; wearing suit and shirt; holding pen in right hand with papers below hands; desk with several small items in the front; monitor and flower in front of window in the background; coloured; from below with eye-contact; round-shaped; less than twelfth	
A53*	80	Two women laughing into camera; mouths wide opened; both holding a product in hand; wearing blouses; woman to the right wearing apron; woman placed to the left and the right; upper torsos; shelves with products and banner in the background; coloured; straightforward/eye-contact; round-shaped; less than twelfth	
A54*	80	Two women looking at each other in the front; looking serious; holding products in their hands; shelves with products in the	

		background; coloured; straightforward; round-shaped; sixth; same photograph like A53 but wider angle	
A55*	81	Man smiling into camera; mouth opened; wearing suit and shirt; shelves in the background; upper torso; black-and-white; eye-contact; round-shaped; less than twelfth	
A56	85	Man sniffing on coffee beans placed on flat white bowl; holding bowl with both hands; only parts of face and hands to see; coloured; straightforward; round-shaped; twelfth	People with natural food products
A57	85	Brown coffee beans behind round-shaped glass with metal frame; illuminated; coloured; slightly from above; round-shaped; less than twelfth	Natural food products
A57*	85	Brownish bags with lables, piled up; coloured; straightforward; rectangular; fifth	
A58*	85	Four white cups with different amounts and shades of brown liquid and froth; pot pouring water into one of the cups in the background/on the top; coloured; from above; round-shaped; eighth	
A59	86	Green beans on stem in the front; brown dry leaves/rests of leaves in the background; coloured; from above; round-shaped; less than twelfth	Cultural / natural landscape
A60	86	Colourful bird sitting on branch; leaves in the background; green background; coloured; straightforward; round-shaped; twelfth	Cultural / natural landscape
A61	86	Forest; green grass and bushes in the front; many trees in the background; bright sky between leaves/trees; coloured; straightforward; rectangular; third	Cultural / natural landscape
A62	87	Green berries on brown stems planted in row; coloured; straightforward; round-shaped; twelfth	Cultural / natural landscape
A63	87	Open hand holding green seeds; only parts of fingers and hands to see; coloured; from above; round-shaped; less than twelfth	People with natural food products
A64	87	Woman and man looking at each other; looking serious; holding green seeds in their hands; another man touching green stems in the middle; green plants in the background; all wearing casual clothing; coloured; straightforward; rectangular; third	People with natural food products
A65	89	Two hands holding soil, partly shaped like a horn; human legs in the background; brown ground; coloured; from above; round-shaped; less than twelfth	People with natural food products
A66	89	Two persons digging with hands in ground in sunshine; surrounded by green grass; person standing in the background (lower torso); wearing casual clothing; coloured; from above; round-shaped; twelfth	People with natural food products
A67	89	Hundreds of horns stapled in front of barn in sunshine; surrounded by green grass; coloured; from above; rectangular; third	other
A68*	91	Woman smiling into camera; mouth closed; wearing business clothing; black-and-white; eye-contact; round-shaped; small	

A69*	94	Person looking into camera; slightly smiling; mouth closed; casual dressed; another person in background; casual dressed; upper torsos; coloured; eye-contact, slightly from below; rectangular; eigth	
A70*	94	Man looking into camera; smiling; opened mouth; casual clothing, sitting at desk with trays; persons partly to see in the background; eye-contact, slightly from below; rectangular; fifth	
A71*	95	Two hands holding small carton between fingers on a desk; coloured; from above; squared; third	
A72*	95	Two hands touching tea bags placed in shelve; coloured; slightly from above; round-shaped; less than twelfth	
A73*	95	Man smiling into camera; opened mouth; casual clothing; sitting at table; holding thumbs up; persons, chairs, desks, pipe in the background; coloured; eye-contact, slightly from below; round-shaped; twelfth	
A74*	95	Woman smiling into camera; slightly opened mouth; casual clothing; eye-contact; monitor, shelves and trays in background; coloured; round-shaped; twelfth	
A75	97	Green leaves, berries and stems in the front; trees and grasses in the background; straightforward; round-shaped; less than twelfth	Cultural / natural landscape
A76	97	Person climbing in trees with green leaves; looking into camera; wearing casual clothing; bag fixed to the back; eye-contact, from below; round-shaped; sixth	People in landscape
A77	98	Field with grooves in the front; brown soil and green plants; tractor with plough attached to front on field in the middle; trees in the background; coloured; straightforward; round-shaped; less than twelfth	Cultural / natural landscape
A78	98	Harvester on field; plants and three persons working on machine; heads only; green field and trees in the background; straightforward; round-shaped; less then twelfth	People in landscape
A79	98	Green fields; green hills in the background; straightforward; round-shaped; twelfth	Cultural / natural landscape
A80	99	Bush full of green leaves; coloured; straightforward; round-shaped; less than twelfth	Cultural / natural landscape
A81	99	Blue sea; islands with green hills; coloured; from above; round-shaped; sixth	Cultural / natural landscape
A82	102	Bushes with green leaves in the front; two men in the bushes in the middle; looking at what on man holds; casual/business clothing, one man wears short, other pullover; upper torsos; green plants with some red leaves in the background; coloured; straightforward; round-shaped; less than twelfth	People in landscape
A83	103	Three women standing in field of bushes; wearing casual clothes; baskets on back; hands touching leaves; hilly fields; coloured; angular, from above; rectangular; small	People in landscape

A84	103	Person standing backwards at sieve; other person partly to see; heap of brown substances below sieve; green grass in the background; coloured; slightly from above; rectangular; small	People in landscape
A85*	103	Many children in uniform in front of yellow house; one adult behind children in entrance; coloured; straightforward; rectangular; small	
A86*	104	Man looking next to camera; slightly opened mouth; looking serious; wearing jacket; head and neck only; house and tree without leaves in the background; black-and-white; from below; round-shaped; less than twelfth	
A87	105	Two men holding poster between them; looking into camera; smiling; casual clothing; surrounded by bushes with leaves; three persons picking leaves in the background; wearing casual clothing and baskets attached to heads; trees with white painted stems throughout the field; straightforward; rectangular; third	People in landscape
A89*	105	Eight men standing next to each other in front of factory building with entrance; looking into camera; wearing pointy heads and colourful scarfs; business clothing; coloured; slightly from below; round-shaped; less than twelfth	
A90	105	Person smiling into camera; mouth opened; casual clothing with gloves and gum boots; kneeling on floor with brown soil and bushes with green leaves; coloured; eye-contact; round-shaped; less than twelfth	People in landscape
A91*	106	Man smiling into camera; business clothing, wearing shirt and suit; only head and shoulder; products in shelves in the background; coloured; eye-contact; round-shaped; less than twelfth	
A92	107	Four cows standing closely next to each other on grass; three white, one brown fur; three on them looking into camera; bright sky; coloured; from below; round-shaped; less than twelfth	Cultural / natural landscape
A93	107	Entry to barn in the front; barn with open entrance in the background; few stabled hay bales in barn; blue sky with clouds; from below; round-shaped; less than twelfth	Other
A94*	108	Man slightly smiling into camera; business clothing; only head and neck; eye-contact; black-and-white, slightly from below; round-shaped; less than twelfth	
A95	114	Apple trees on grass; red apples on trees; coloured; straightforward; round-shaped; eighth; graphics placed on top of photograph	Cultural / natural landscape
A96	115	Blossoming violet and yellow flowers, green plants in the front; green trees in the background; cloudy sky; coloured; straightforward; round-shaped; sixth; graphics placed on top	Cultural / natural landscape
A97	115	Stone in front with colourful bird on top; green leaves on the left, right and background; coloured; slightly from above; round-shaped; eighth; graphics placed on top	Cultural / natural landscape

A98	115	Green grasses and grey stones in the front; water in the middle; green areas, bushes and trees in the background; coloured; slightly from above; round-shaped; sixth; graphics placed on top	Cultural / natural landscape
A99	116	Two men handling with big sieve in brown soil; one man holding stick into soil; casual clothing; surrounded by soil; green trees in the background; coloured; slightly from below; rectangular; quarter	People in landscape
A100	116	Hand holding brown soil in fingers; coloured; from above; round-shaped; less than twelfth	People in landscape
A101	116	Eight persons working with soil in front and on top of truck; casual clothing; surrounded by brown soil; with green grass covered hill to the left; roof in the background; coloured; straightforward; rectangular; sixth	People in landscape
A102*	117	Man looking to right site; slightly smiling; mouth closed; wearing shirt; head and neck; book in shelves in the background; black-and-white; slightly from below; round-shaped; less than twelfth	
A103*	118	Same like A102, just smaller	
A104*	120	Machine in factory; coloured; straightforward; rectangular; tenth	
A105*	121	Man looking in to camera; slightly smiling, mouth closed; business closing, shirt and suit; upper torso; black-and-white; slightly from below; round-shaped; small	
A106*	123	Woman looking into camera; slightly smiling; mouth closed; business clothing, shirt and suit; upper torso; machinery in the background; black-and-white; eye-contact, slightly from below; round-shaped; small	
A107	124	Hand holding cable to charge car; green plants and office / company building in the background; coloured; straightforward; round-shaped; twelfth	Planted areas next to buildings
A108	124	Car in the front; man holding cable and pointing on charging station in the middle; casual clothing parking ground, plants and office / company building in the background; cloudy sky; coloured; from below; rectangular; half of page	Planted areas next to buildings
A109	125	Man in the middle, two women to the left and right; all on bicycles; smiling into camera; mouth opened; casual clothing; parking ground, plants and office / company building in the background; blue sky; coloured; from below; round-shaped; twelfth	Planted areas next to buildings
A110	132	Grasses in the front; water in the middle; grasses, plants in the background; coloured; slightly from above; round-shaped; twelfth; graphics placed at the bottom	Cultural / natural landscape
A111	133	Man pointing to the right; casual clothing; talking; six persons to the left looking at what man points at; upper torsos; field with brownish grasses and trees in the background; blue sky; coloured; straightforward; round-shaped; less than twelfth	People in landscape
A112	134	Building with three corridors and windows; surrounded by green patches, parking ground, cars, lanes, playground; coloured; from	Planted areas next to buildings

		above; rectangular with one round edge to the left; less than twelfth	
A113	135	Man looking into camera on the left; smiling; mouth slightly opened; holding binoculars in right hand; casual clothing; field and tree on the right; black-and-white; eye-contact, from below; round-shaped; less then twelfth	People in landscape
A114	140	Boat in lake; reed to the left; forest in the background; cloudy sky; coloured; straightforward; squared; quarter	Cultural / natural landscape
A115	142	Green grass in the front; many people on bicycles looking into camera in the middle; trees in the background; coloured; from below; round-shaped; small	People in landscape
A116*	142	Two heads in the front; looking at stage; people with white clothing holding letter and numbers ("35 Jahre"); background and roof colourful illuminated; coloured; straightforward; round-shaped; small	
A117*	143	Man pouring product on potatoes; upper torso; inside a kitchen; coloured; straightforward; round-shaped; less than twelfth	
A118*	143	Man looking to the left; laughing; positioned to the right; inside a kitchen; person to left working on shelve, only back to see; black-and-white; straightforward; squared; eighth	
A119*	143	Burger on plate; coloured; from above; round-shaped; less than twelfth	
A120*	144	Lunch box with food arranged in funny way as chickens; places on table cloth; wooden fork next to it; coloured; from above; squared; eighth	
A121*	144	Man looking into camera; mouth opened; only head and neck; budiness clothing, shirt, suit, tie; black-and-white; eye-contact; round-shaped; less than twelfth	
A122*	146	Two white couches and small table in small red coloured room; coloured; slightly from above; round-shaped; less than twelfth	
A123*	146	Office with desk, monitor, chair, room dividers; windows; bright colours; coloured; straightforward; round-shaped; twelfth	
A124*	146	Office with monitor, green chairs, small table, desk, room divider; window; coloured; straightforward; round-shaped; twelfth	
A125*	146	Office with green chair, desk, monitor seen through glass room divider; coloured; straightforward; round-shaped; less than twelfth	
A126*	147	Woman looking into camera; serious; business clothing, blouse; black-and-white; eye-contact, slightly from below; round-shaped; small	
A127*	147	Three stools, black and red in office-like room; wooden panel to the left; window to the right; coloured; slightly from above; rectangular; eighth	
A128*	147	Meeting room with round table and green chairs around; table to the left; person walking away to the left, only back to see; seen	

		through glass wall; windows mirrored; coloured; straightforward; rectangular; quarter	
A129*	149	People standing in front of factory building; looking into camera; casual clothing; coloured; straightforward; round-shaped; twelfth	
A130*	149	People walking in front of factory building; only backs to see; protective clothing; tree on the right; blue sky; coloured; straightforward; squared; quarter	
A131*	149	People standing backwards; looking at house with red paint and wooden ornaments; priest-like looking man on stairs at entrance of house looks at people; trees left and right; coloured; from below; rectangular; twelfth	
A132*	150	One man, one woman standing at bar table; laughing, looking at magazines; woman holds pen in right hand; casual clothing; coloured; straightforward; round-shaped; twelfth	
A133*	152	Foot in plaster cast bedded in cushions; coloured; straightforward; round-shaped; twelfth	
A134*	155	Woman looking into camera; smiling; mouth opened; wearing shirt; shutters in the background; black-and-white; eye-contact, slightly from below; round-shaped; small	
A135*	156	Woman lying on chair; looking into camera; wearing sari; examination at dentist; two persons next to her; coloured; eye-contact, from below; round-shaped; less then twelfth	
A136*	157	Five persons standing next to each other; looking into camera; smiling; mouths partly opened; business and casual clothing; head to knee; posters in the background; coloured; from below; round-shaped; less then twelfth	
A137*	157	Three girls smiling; two of them looking into camera; tasting food; yellow lunch boxes in the front; coloured; slightly from above; round-shaped; twelfth	
A138	161	Striped spider with dark sport hanging in spider web between green thin stems; stems in the background; fading colours in the background; coloured; straightforward; round-shaped; less than twelfth	Cultural / natural landscape
A139	162	Two persons pulling and pushing on tree in muddy area; brown leaves on ground; water and brown plants in the background; coloured; straightforward; round-shaped; less than twelfth	People in landscape
A140*	163	Jars with food in shelves; coloured; straightforward; round-shaped; twelfth	
A141*	164	Hundreds of people in front of stage; stage illuminated; at night; coloured; from above; round-shaped; less than twelfth	
A142	167	Bird with yellow head, colourful bill, black body sitting on branch; big green leaves in the background; coloured; slightly from below; round-shaped; less than twelfth	Cultural / natural landscape
A143	175	Few grass stalks in the front; company building in the background; windows; blue sky; coloured; from below; round-shaped; small	Planted areas next to buildings

Table A8.1a: Description of photographs Lebensbaum.

Table A8.2a

Photo ID	Category of Depictions[61]	Value type category #	Value type category	Code #	Code	Interpretation
A1	Cultural/natural landscape	1.2	Acknowledging land's intrinsic value	II	Beauty of nature	This photograph shows nature's pureness. It is untouched, natural. It looks like intact nature with a rich wildlife, hidden in the green tropical forests. No humans are seen who could destroy this ecosystem. The photograph does not even allow for thoughts about exploitation or pollution as it is pure of beauty. As it is taken from distance, partly from above and at the same height of a flying bird, it appears as if we could not even touch this landscape. It is pure because humans have not got the chance to.
		2.2	Acknowledging nature's beauty and therefore its intrinsic values (beauty, preciousness)	II.II	Pure nature/landscape (no company)	
A6	Planted areas next to building	1.3	Harmony between human and nature/land	III	Main category	This is a photograph that shows how a company building can be part of the "broader ecological community" (Callicott in Fahy, 2012, p. 54) when it is placed within flowers. The photograph is taken from below, where the building is in the background and the flowers seem bigger than the building. The blossoms promise a prospering future with a company that is part of the ecosystem, where the plants are healthy (as they are blossoming) and the company is just one part in this ecological community. This holism at the same time shows how united the company is with nature. It grows from it, kind of a hidden dependence, however a positive one that is expressed through a shared identity, a common ground from where both, plants and company can grow and blossom.
		1.3.2	Holism	III.II	Building or people surrounded by or next to plants	
		1.3.4	Unity with nature	III.V	Building surrounded by plants	
A7	Planted areas next to building	1.3	Harmony between human and nature/land	III		This photograph is dominated by the office building / company building even though it is located in the background. The tree as well as the bushes in front of the building look placed as if a company needs to have a bit of green in front of its building. Nevertheless, it shows that every single space is used for planting. The rest of the space is a parking ground so there is hardly any space left for more plants. As the tree is higher than the building (at least the angle from which the photograph is taken promises this), it demonstrates a longevity and sustainability that can be assigned to the company as well.
		1.3.2	Holism	III.II	Building or people surrounded by plants	
A9	Planted areas next to building	1.3	Harmony between human and nature/land	III		Here we see a building that is growing from the bottom just like the plants do in front of it. Because of the angular angle the photograph is taken from, it seems as if the building withdraws from the plants. As if the plants,

---

61 *See* Table A8.1a.

		1.3.4	Unity with nature	III.V	Building surrounded by plants	even though much lower in height, dominate the picture and partly also the building. Nevertheless, building and plants build a unity where both have there right to exist, together.
		1.3.2	Holism	III.II	Building or people surrounded by plants	A connection can be interpreted by comparing the shapes of building and patches. Both range from the left of the photographs to the far right. There is no part of the building without plants and vice versa. They belong to each other, grow together. A holism and unity.
A14	Planted areas next to building	1.3	Harmony between human and nature/land	III		This photograph is the same like A7. However, here we see the building from a different angle as well as the plants. In fact, here we are likely to see more of the building, less of the plants. As the building still dominates the picture. However, the green parts on the parking ground seem wider than in A7. From the angle in A14 we gain evidence that indeed every single space has been used to "green" the space in front of the building.
		1.3.2	Holism	III.II	Building or people surrounded by plants	
A16						See A6
A19	Cultural / natural landscape	1.2	Acknowledging land's intrinsic value	II	Beauty of nature	This is the first photograph shown in the report that shows natural landscape (apart from the front page). It depicts a natural landscape, untouched and pure. The value types that are depicted here are 1.2 and 2.2. The intrinsic values can only be seen by viewers due to a close look at the picture because it is rather small. The different heights of the plants are proof for the untouched nature. It is a precious and rich landscape. Different shades of green promise intact nature.
		2.2	Acknowledging nature's beauty and therefore its intrinsic values (beauty, preciousness)	II.II	Pure nature/landscape (no company)	
A24	Cultural / natural landscape					A cloudy sky is seen. Even though clouds are dominating the photograph, the sky seems bright and friendly as some bright blue sky is visible. The photograph is taken from below as if clouds and the sky in general are building a wide, but covering umbrella. Allocating a value type to this photograph turns out to be difficult. None of the possible value types fit to it.
A26	Cultural / natural landscape	1.2	Acknowledging land's intrinsic value	II	Beauty of nature	The green grass with blossoming plants, the wide field with green forests in the background together with slightly cloudy, but blueish sky is a picture representing a cultural landscape that is taken care of by humans through mowing only certain parts in order to leave parts of the land for insects or wilderness to be home for natural living beings and by this contributing to biodiversity. The bright sunshine offers an almost dazzling view on the green space. This space seems to be an appearance which needs protection and should be only touched by humans for caring reasons, not for recreational reasons. The sunshine offers pause for a moment to understand the uniqueness of nature (even though culturally influenced).
		1.5	Protecting and preserving the environment	I.V	Caring people	
		2.2	Acknowledging nature's beauty and therefore its intrinsic values (beauty, preciousness)	II.II	Pure nature/landscape (no company)	

A29	Planted areas next to building	1.3	Harmony between humand and nature/land	III		The company building is directly surrounded by green trees and bushes. Next to one side of the building and the road near it there green fields to see, which are again surrounded by trees. As the picture is taken from high above (possibly with a drone) the dark roof is very prominent. Nevertheless the green colour of the surrounding fields is what catches one's attention immediately.
		1.3.4	Unity with nature: fitting into nature	III.V	Building surrounded by plants	
A30	Planted areas next to building	1.1	Acknowledging land's instrumental value	I.III	Built areas	This picture is nearly the same like A29. However, the angle is different, the photographs is rectangular. There is more to see of the building, obviously it became bigger with larger premises. Here the building is the focus. There is less green to see. This is because the green space gave way for more roads and bigger buildings. The photographs shows how the company grows and this goes along with less space for planting.
A36	People with natural food products	1.1	Acknowledging land's instrumental value	I.II	People dealing with crops or resources	This picture shows how coffee beans become treated. Even though there is some speed to see with which the beans come out of the pipe, the hands turning the handle of the pipe seem to consciously act. The coffee beans are immediately understood as a resource, not a just one of many products. A test of different coffee beans states is made which additionally shows that the beans and their final coffee production are not taken for granted.
A39	People with natural food products	1.1	Acknowledging land's instrumental value	I.II	People dealing with crops or resources	Woman holding proudly a pumpkin in her hand. Showing it into camera. She is in the focus, but the pumpkin is very present at the same time. Even though it is black and white, the pumpkin is shiny. It seems as if the lady wants to tell us that this pumpkin has some meaning or a story to tell. That we, humans, should listen to is and care it with respect.
		1.3	Harmony between humand and nature/land	III		
		1.3.1	Responsibility towards nature	III.I	Hands holding fruit, nut, plant, soil	
A40	Natural food products	2.1	Acknowledging nature's beauty and therefore its instrumental values (recreation, the beauty of food)	II.Ia	Natural food products	The fish bodies, decorated with herbs and figs in the front, olive oil in a bottle in the background, this picture shows how tasty and healthy fresh food can look like. Even though the viewer only sees the food, and cannot taste it, it seems as if this is how simple natural ingredients can be composed to a delicious dish. Pure taste can be found in nature. The company (Lebensbaum) obviously supports this simple idea of combining few ingredients to create something delicious, directly taken from nature. Value type categories 1.1 and 1.2 do not fit here, as the fish it too much processed (not the pure fish/ natural product any more).
A41	Planted areas next to buildings	1.3	Harmony between human and nature/land	III		The exotic looking building (probably northern Africa) stands in between palm trees. In front of the building there is water. The picture reminds on intact urban nature which is about to be enjoyed by people. Recreation in an urban

		1.3.4	Unity with nature: fitting into nature	III.V	Building surrounded by plants	area with all facilities people need to enjoy a modern (western) life style. Nevertheless there is connection between the human built building and the (partly) natural surroundings. The trees indicate that beauty is connected to natural items such as palm trees and water. There is a unity between the building and nature/cultural landscape. The trees belong to the house and vice versa.
A42	People in landscape	1.1	Acknowleding land's instrumental value	I.II	People dealing with crops or resources	The women on this picture are working. It seems like long-lasting, hard work. However, this picture shows how carefully they pick the leaves (presumably for tea production). They treat the leaves with respect as they work with their hands and not with machines (which would probably ruin the product). They look at their hands to pick the right leaves instead of randomly picking some. This picture is an example of how people are part of nature and even though they use nature's instrumental value for food production, they do not dominate it. There are very high trees behind them and bushes around them. This unity is dominating the picture even though the women use the bushes' instrumental value.
		1.3	Harmony between humand and nature/land	III		
		1.3.2	Holism	III.II	Building or people surrounded by plants	
		1.3.3	Respecting the Earth: harmony with other species	III.III	People caressing plants or animals	
		1.3.4	Unity with nature: fitting into nature	III.IV	People within crops, landscape, field, wilderness	
A56	People with natural food products	1.1	Acknowleding land's instrumental value	I.I	People praising crops	Here a person has his nose close to a bowl with coffee beans. He seems to smell and closely view the beans with care. There is a relation between the person and the product. The way he looks and sniffs, while treating the beans with care, leads to the impression of respect for the product and moreover, for respect for natural products by nature, which we are "allowed" to use and process.
		1.3	Harmony between humand and nature/land	III		
		1.3.3	Respecting the Earth: harmony with other species	III.III	People caressing plants or animals	
A57	Natural food products	1.1	Acknowleding land's instrumental value	I.IV	Natural food products	Even though this is a processed product (roasted coffee beans) it is a product that has no additives or any completely new shape or consistence. Its structure changed due to the roasting process, but it is still a coffee bean. This picture shows on the one hand what instrumental value nature provides (the coffee for consumption). On the other hand, it shows how beautiful this product is (intrinsic value). From an aesthetic value point of view, the picture is not about the production process but rather on how aesthetic enjoyment can look like, how beautiful natural products are (even though roasted). A kind of thankfulness can be interpreted here, like: "Look, this is what nature gives us. Treat it with care and don't waste it!" At the same time the company tells that is does exactly what its value is about: beauty that needs to treated with care.
		1.2	Acknowledging land's intrinsic value	II	Beauty of nature or natural products	
		2.1	Acknowledging nature's beauty and therefore its instrumental values	II.Ia	Natural food products	

A59	Cultural / natural landscape	1.2	Acknowledging land's intrinsic value	II	Beauty of nature or natural products	Here we see green beans (or maybe leaves) and brown rests of leaves in the background. This picture implies that there is a close relation towards nature as only the plant is in the focus and nothing else it seems to deeply matter to the company.
		2.2	Acknowledging nature's beauty and therefore its intrinsic values	II.II	Pure nature/landscape	The beauty of nature is shown. A second category of depiction can be found by a closer view of the picture. On the first sight the beans seem to be leaves with no importance for food production. On the second view these leaves seem to be beans which might have a need for the company as an ingredient (such as herbs). The second category would be "natural food product" then. This can be further proved in step three of the analysis while including the text.
A60	Cultural / natural landscape	1.2	Acknowledging land's intrinsic value	II	Beauty of nature or natural products	This picture shows the beauty of nature and its creatures, such as a bird. Moreover, the picture emphasizes nature's uniqueness. Intrinsic values are placed within this picture.
		2.2	Acknowledging nature's beauty and therefore its intrinsic values	II.II	Pure nature/landscape	
A61	Cultural / natural landscape	1.2	Acknowledging land's intrinsic value	II	Beauty of nature or natural products	Here we see a natural landscape, almost wilderness (no possibility to prove this). Again, intrinsic values are placed in this picture. Beauty and pureness of nature are shown and seem to make a statement concerning how important it is to treat nature with respect in order to preserve the intrinsic values which are already hard to explain. So they are shown in a photograph, which people might enjoy longer while viewing it and through this understand that nature provides more than instrumental values.
		2.2	Acknowledging nature's beauty and therefore its intrinsic values	II.II	Pure nature/landscape	
A62	Cultural / natural landscape	1.2	Acknowledging land's intrinsic value	II	Beauty of nature or natural products	This picture is akin to picture A59. Green beans on brown stems are seen. It is pure beauty of nature.
		2.2	Acknowledging nature's beauty and therefore its intrinsic values	II.II	Pure nature/landscape	
A63	People with natural food products	1.1	Acknowledging land's instrumental value	I.IV	Natural food products	This picture represents several value types. First of all, this picture describes land's instrumental values: A product that is meant to be processed as a food product. However, this is an interpretation that can only be manifested after step 3 of the analysis (compared to the previous photographs, like A62, the people indicate a serious interest in the beans which leads to the immediate assumption of a later food product and hence the instrumental value that is seen in them).
		1.2	Acknowledging land's intrinsic value	II	Beauty of nature or natural products	Secondly, it is about the responsibility that is shown. This is done by a simple way of

					showing the connection between humans and natural food products: a hand. A hand, that carries the green beans with care, is proof for how valuable the beans are for the one holding it. It is not just a product that might be sold in future, it is also a part of nature that needs careful treatment. This leads to another value: it is the beauty of nature, to land's intrinsic value.
		1.3	Harmony between humand and nature/land	III	
		1.3.1	Responsibility towards nature	III.I	Hands holding fruit, nut, plant, soil
A64	People with natural food products	1.1	Acknowledging land's instrumental value	I.IV	Natural food products	This photograph is akin to A63, a wider angle is taken and much more is too see, namely the person holding the beans from A63. This picture emphasizes the meaning of the beans to the three persons shown in the picture. Their serious looks show with how much responsibility they treat the plants and beans. So indeed they care about the final food product, but the picture shows one of the first steps (after seeding of course) of contact between the plant and the people. This promises a very deep connection of the (presumably) coworkers of Lebensbaum with the origin of the food product. It is not taken for granted as a totally processed and finished product ready to be sold. The product is shown as is it – a bean that grows at a stem in an arable landscape.
		1.2	Acknowledging land's intrinsic value	II	Beauty of nature or natural products	
		1.3	Harmony between humand and nature/land	III		
		1.3.1	Responsibility towards nature	III.I	Hands holding fruit, nut, plant, soil	
A65	People with natural food products	1.1	Acknowledging land's instrumental value	I.IV	Natural food products	Even though it is firstly the respect towards nature that is prominent within this picture (and with is the responsibility towards nature), it is further the instrumental value that matters here. The soil in the hands of the person is partly prepared or compressed. So, there has been an obvious intention to prepare it for further processing steps. This fact is proof for the instrumental value that is seen in the soil. The intrinsic value and the beauty of the natural product might be less obvious to the viewer, but denying it would be too easy.
		1.2	Acknowledging land's intrinsic value	II	Beauty of nature or natural products	
		1.3	Harmony between humand and nature/land	III		
		1.3.1	Responsibility towards nature	III.I	Hands holding fruit, nut, plant, soil	

A66	People with natural food products	1.1	Acknowledging land's instrumental value	I.IV	Natural food products	Here it is mainly the responsibility towards nature that is shown. Too persons caring for one plant promises a very deep connection with nature and a deep sense for it and its protection.
		1.2	Acknowledging land's intrinsic value	II	Beauty of nature or natural products	Nevertheless, there must be some intention behind the people's action of planting. That is, an instrumental must be included. The promise, that one day this plant will be used for food production (against the backdrop of this food company report).
		1.3	Harmony between humand and nature/land	III		The intrinsic value and the beauty of nature is easier to understand while viewing this photograph. Especially the plant itself is part of the pure beauty of nature. The way the people treat it with care and respect further proofs that they also see this intrinsic value.
		1.3.1	Responsibility towards nature	III.I	Hands holding fruit, nut, plant, soil	
A67	Other					This photograph does not fit into any of the value type categories. On the backdrop of pictures A65 and A66, one assumes soil in the horns. So obviously this photograph shows a preparation step for further processing steps. From just viewing the picture it is hard to understand what this picture wants to tell the reader.
A75	Cultural / natural landscape	1.2	Acknowledging land's intrinsic value	II	Beauty of nature or natural products	By watching the photograph one might not immediately think about a certain food product. Rather it shows natures rarities or possibilities. It is a beautiful and pure plant with green beans or fruits. It doesn't look extremely exotic but definitely unusual to European eyes.
		2.2	Acknowledging nature's beauty and therefore its intrinsic values	II.II	Pure nature/landscape	
A76	People in landscape	1.1	Acknowledging land's instrumental value	I.II	People dealing with crops or resources	The person, that seems to pick leaves, fruits or parts of the tree, looks into camera or at least to the bottom. The Western style fashion indicates a Western person, presumably a coworker of Lebensbaum, who gets an impression of the tree's fruits or leaves. The person touches the tree with his/her hands which calls for a careful treatment with respect towards nature.
		1.3	Harmony between humand and nature/land	III		
		1.3.4	Unity with nature: fitting into nature	III.IV	People within crops	
A77	Cultural / natural landscape	1.1	Acknowledging land's instrumental value	I.II	People dealing with crops or resources	The tractor dominates the greenish field with the brown soil as well as the trees in the background. It is a small and round picture which seems to reduce the technical part of machines. It is one of the first photographs where a machine is the dominating part of the picture and neither nature nor people. As the tractor is rather small (which is probably the fact due to the size of the picture), it nevertheless gives the impression that fields are treated with care even though the plough is not avoidable.
A78	People in landscape	1.1	Acknowledging land's	I.II	people dealing with crops or resources	The harvester is the main focus of this photograph. The persons working at it are hardly visible. Nevertheless, the people give

		instrumental value				the impression that still not every harvesting part is dominated by machines as if the hands working on the plants are an important part of this harvesting step.
A79	Cultural / natural landscape	1.1	Acknowledging land's instrumental value	I.IV	Natural food products	As this is obviously a cultural landscape, a planted field, it is difficult to speak of intrinsic values here. The pure beauty is nevertheless given. The field is untouched, there are no people to see, nor any machines. The focus is on the green colour and the plants themselves with more natural landscaps (hills, forests) in the background.
		2.2	Acknowledging nature's beauty and therefore its intrinsic values (beauty, preciousness)	II.II	Pure nature/landscape (no company)	
A80	Cultural / natural landscape	1.2	Acknowledging land's intrinsic value	II	Beauty of nature	This photograph is about pure nature, beauty and wilderness. It might be product valuable for food production. However, this is not clear from viewing it. Thus, the preciousness is dominating the picture.
		2.2	Acknowledging nature's beauty and therefore its intrinsic values (beauty, preciousness)	II.II	Pure nature/landscape (no company)	
A81	Cultural / natural landscape	1.2	Acknowledging land's intrinsic value	II	Beauty of nature	This picture shows a natural landscape from high above. There are no people to see but islands with thick green forests, coasts and blueish ocean. It seems to be intact nature, enjoyable and rich of natural plants. It promises intrinsic values, which are about this pure beauty. As there are no people to see, the landscape seems further untouched. It is questionable whether this picture shall show instrumental values as well. They are at least not directly visible.
		2.2	Acknowledging nature's beauty and therefore its intrinsic values (beauty, preciousness)	II.II	Pure nature/landscape (no company)	
A82	People in landscape	1.1	Acknowledging land's instrumental value	I.II	People dealing with crops or resources	This photograph shows the careful treatment of plants or leaves or fruits. There is obviously an instrumental value here. But also the unity with nature is shown here. The two persons are almost surrounded by the plants, they are part of it, almost at one level. They are all part of nature.
		1.3	Harmony between humand and nature/land	III		
		1.3.4	Unity with nature: fitting into nature	III.IV	People within crops	
A83	People in landscape	1.1	Acknowledging land's instrumental value	I.II	People dealing with crops or resources	Also this photograph shows the instrumental values of nature as people are obviously harvesting the plants. At the same time, the three persons are part of their surroundings, they are fitting into nature.
		1.3	Harmony between humand and nature/land	III		

		1.3.4	Unity with nature: fitting into nature	III.IV	People within crops	
A84	People in landscape	1.1	Acknowledging land's instrumental value	I.II	People dealing with crops or resources	The two persons are processing natural products. The instrumental value is hence clearly addressed. The product is not shown, neither the technique is clearly identifiable, but the material for processing seems selfmade with woods. Hence natural products are used for dealing with the products. Of course, the reason for this could be the location or the financial background. Nevertheless, the usage of (maybe local) natural material indicates a strong connection with nature, that leads to an understanding of food products as valuable goods based on what nature provides.
A87	People in landscape	1.1	Acknowledging land's instrumental value	I.II	People dealing with crops or resources	People are harvesting leaves. This is an acknowledgement towards land's instrumental values.

Two persons holding a poster, surrounded by trees and bushes – they are part of the nature, they fit into what grows around them. The men do not stamp on any of the bushes, they obviously want to be photographed (as they smile) in this field of bushes, as part of the field. They are praising the harvest/the bushes with they poster and seem to be proud according to their smiling faces. It seems as if the own the field as they are high above the bushes with a very big poster between them. In opposite to the people harvesting, who are bent over, they stand relaxed, but upright. With this position they dominate the picture, the bushes and also the people. |
		1.3	Harmony between humand and nature/land	III		
		1.3.4	Unity with nature: fitting into nature	III.IV	People within crops	
A90	People in landscape	1.1	Acknowledging land's instrumental value	I.II	people dealing with crops or resources	The acknowledgement of land's instrumental value is proved by the smile of the person working on the ground, digging into the soil. Even though the person looks in to the camera, by her gesture of her hands on the ground, she shows how valuable the land is, what it gives (food).
A92	Cultural / natural landscape					There is no value type that connects with this picture (at least based on the chosen literature). However, this picture is meaningful in connection with the report, as it is the sustainability report by an organic food company. The cows standing on green grass are part of an agricultural system. They look into the camera with as if they are curious and by no means shy. The photographer doesn't seem to be threat to them. Some of them graze meanwhile the photograph is taken. There are no humans seen on the pictures.
A93	Other					Like A92, there is no value type that connects with this picture (at least based on the chosen literature). Also, this picture is meaningful in connection with the report. The barn stands for animal husbandry that is small, more natural than industrial farming. The barn is old, made out of woods and looks manmade instead of machine-build.

A95	Cultural / natural landscape	1.1	Acknowledging land's instrumental value	I.IV	Natural food products	The apple trees look natural as they seem to be left as they are, not as industrial products. The tree trunks grow awry, the red apples are ripe, but not harvested yet. People are not seen, the trees grow on a lawn, like a garden. This photograph shows a scenery of how easy and untouched food can be produced, simply by nature in a simple garden. The instrumental value is the apple as such.
		1.2	Acknowledging land's intrinsic value	II	Beauty of nature or natural products	The intrinsic value within this picture is illustrated by the pureness of the apple trees, highlighted by the red apples, as they seem to be ripe and beautiful. The complementary colours (red and green) are eye-catchers and both are colours of nature.
		2.1	Acknowledging nature's beauty and therefore its instrumental values	II.Ia	Natural food products	According to the Land Aesthetics, the value of the beauty of the those apple trees is an instrumental one.
A96	Cultural / natural landscape	1.2	Acknowledging land's intrinsic value	II	Beauty of nature or natural products	This photograph illustrates natural landscape. The plants grow differently, they seem to be left to their own resources, hence it looks as if nobody touches or even destroys the field so that everyone can enjoy its beauty. The photograph shows intrinsic values that are inhered in the blossoms and colours – there is no human influence and plants, animals and also people can enjoy this part of natural landscape. However, as no people are seen on this picture the value of recreation (2.1) cannot be manifested here, instead the value type category 2.2
		2.2	Acknowledging nature's beauty and therefore its intrinsic values	II.II	Pure nature/landscape	
A97	Cultural / natural landscape	1.2	Acknowledging land's intrinsic value	II	Beauty of nature or natural products	The picture shows a bird, one of the rare pictures with animals. As birds normally fly away when they get in touch with humans, this picture represents a natural landscape, where birds are left as they are, not interrupted by buildings, roads, traffic or other possible human made outdoor interruptions. By looking at the picture the beauty and pureness of nature can be felt.
		2.2	Acknowledging nature's beauty and therefore its intrinsic values	II.II	Pure nature/landscape	
A98	Cultural / natural landscape	1.2	Acknowledging land's intrinsic value	II	Beauty of nature or natural products	Also, this picture shows natural landscape, at least from judging the different, non-cut trees and plants which grow with different heights surrounding a lake with stones. It is possible to enjoy the beauty of this scenery by watching this photograph.
		2.2	Acknowledging nature's beauty and therefore its intrinsic values	II.II	Pure nature/landscape	Pictures A95-A98 have in common that they serve as background pictures. They have labels placed on top with texts that explain something about the company. Even though these labels partly cover up to a third of a photograph, the photographs are big and colourful enough to recognize them (first). As the labels and the photographs are round-shaped they are more striking than the handmade drawing in the middle of the double page. Altogether the photographs, labels, texts and drawings connect to each other as they are overlapping. The interpretation of this is a connection of nature (the photographs) and company building (the drawing), all explained by small texts or few or even single words (labels).

A99	People in landscape	1.1	Acknowleding land's instrumental value	I.II	People dealing with crops	The three persons are working with soil, they use a sieve and other instruments. Moreover, they use their hands. This picture not only illustrates how hard the work is, as no technical auxiliaries are used, but also how deeply connected the workers are with the soil and hence nature. In addition, this picture shall give the impression that land has an instrumental value, which is highlighted here (not just the soil itself, but people working with it, hence the use of it is of importance to the workers themselves, but also to the company which paced the picture in its report). The workers, while doing the hard work probably do not feel the instrumental value of land here because their intention might be most likely about earning money (this means that the instrumental value of working is money not using soil). However, by placing this photograph, Lebensbaum highlights the instrumental value of land as if the company worships it.
A100	People in landscape	1.3	Harmony between humand and nature/land	III		The hand holding soil is a typical image of sustainability. Many companies use such images as a way to show how they care for nature (here, soil represents nature) on the long-term. The hands show how a company is connected with nature, that the resource of soil, which is needed for the production of its products is not unknown. On the contrary, it is a well-known resource, even a product itself that is felt with hands.
		1.3.1	Responsibility towards nature	III.I	Hands holding soil	
A101	People in landscape	1.1	Acknowleding land's instrumental value	I.II	People dealing with crops	Eight people are dealing with soil and different instruments. Except a truck, there is no other technical equipment seen on this picture. The instrumental value of land is illustrated by the direct connection of people with soil and by showing the soil itself (most parts of picture A101 and A99 are covered with brown soil). The soil is a prominent part of the picture, thus the instrumental value is highlighted (as if the company needs to proof how well it knows its resources, as well as how workers are treated and under what conditions they work).
A107	Planted areas next to buildings	1.3	Harmony between human and nature	III		This photograph is about charging a car, not directly about the connection between company or humans and nature. Nevertheless, there are green plants in the background, next to company building and the person charging the car. There is much to see on this picture: technical equipment (battery charge station, car), hands charging the car, plants, buildings, roads. Most parts of the picture are covered with the car, still all colours are present, and hence the green plants in the background.
		1.3.2	Holism	III.II	Building or people next to plants	
A108	Planted areas next to buildings	1.3	Harmony between human and nature	III		This picture connects to A107, it is a wider perspective, probably shot at the same time. This time, the person shows directly at the battery charging station next to the car. More green plants are seen. There is a holism by all the different elements on the picture. As if these elements belong to each other. The colours are bright, except the black car. The plants in the front are yellowish/greenish and correspond to the yellow paint of the buildings in the background.
		1.3.2	Holism	III.II	Building or people next to plants	

A109	Planted areas next to buildings	1.3	Harmony between human and nature	III		The people on their bikes look friendly and open as they directly look into the camera and partly smile. They symbolise freedom because they seem to be happy and free of any duties, except for enjoying the sunny weather. There are green plants between pavements and buildings. There is no conflict of interests to be seen as the bright colours as well as the friendly looking people on their bicycles illustrate happiness and a holism of human and natural elements.
		1.3.2	Holism	III.II	Building or people next to plants	
A110	Cultural / natural landscape	1.2	Acknowledging land's intrinsic value	II	Beauty of nature or natural products	This photograph is not easy to distinguish from a drawing. The background is a photograph, showing a lake with gras surrounding it. In the foreground there are drawings, such as a frog and additional plants. The intrinsic value of land is demonstrated by the big size of the picture in addition to the round shape which is both eye-catching. The pure beauty of nature is even more demonstrated through the drawing as if to emphasise the beauty.
		2.2	Acknowledging nature's beauty and therefore its intrinsic values	II.II	Pure nature/landscape	
A111	People in landscape	1.3	Harmony between human and nature	III		Here, people are standing within crops, surrounded by plants, trees in the background. A man, prominent in the middle, points to plants, others are following with eyes his hand. The people seem to listen and learn from the man. They are not enjoying nature, but rather are part of it, learn from it.
		1.3.4	Unity with nature: fitting into nature	III.IV	People within landscape	
A112	Planted areas next to buildings	1.3	Harmony between human and nature	III		The photograph, taken from high above, is dominated by a building with three long corridors and a round middle part. There are grass patches around the building and few trees in the right-hand corner. People cannot be seen.
		1.3.2	Holism	III.II	Building or people next to plants	
A113	People in landscape	1.3	Harmony between human and nature	III		The man smiling into the camera seems to enjoy the landscape around him. He stands partly in a crop field, as if part of it. The harmony of him with the field is emphasised by his smile.
		1.3.4	Unity with nature: fitting into nature	III.IV	People within landscape	
A114	Cultural / natural landscape	1.2	Acknowledging land's intrinsic value	II	Beauty of nature	This photograph is about nature's beauty and how people can use it. However, there are no people seen, just a boat in the lake. Because of the fact, that there are no people, the value type 2.1 does not match here. It would be recreation in case of people using the boat or swimming in the lake.
		2.2	Acknowledging nature's beauty and therefore its intrinsic values	II.II	Pure nature/landscape (no company)	
A115	People in landscape	1.3	Harmony between human and nature/land	III		Many people are standing on lawn with bicycles, all looking into camera. Trees in the background. The picture is three-fold. The people in the middle of the picture are colourful dressed, they split the picture into the tree

		1.3.2	Holism	III.II	People surrounded by plants	parts of trees, the people themselves and the lawn. This is a kind of holism, as the people are standing within nature. Nevertheless, the value type 1.3.4 (unity with nature) does only partly fit here. The unity is not directly seen as the people rather split the greenish nature. Still they are a part of nature and the photograph. As at this step of the analyse the picture is described in connection with the value types, the Code description of "person within landscape" fits.
		1.3.4	Unity with nature: fitting into nature	III.IV	People within landscape	
A138	Cultural / natural landscape	1.2	Acknowledging land's intrinsic value	II	Beauty of nature	This photograph looks like a shot in natural landscape. The spider is an animal that can only be seen like this in nature. Its pure natural look is the focus of this photograph.
		2.2	Acknowledging nature's beauty and therefore its intrinsic values	II.II	Pure nature/landscape	
A139	People in landscape	1.1	Acknowledging land's instrumental value	I.II	People dealing with crops	In this case, it is not crops but a tree that is removed by two persons. They might use the tree which leads to the instrumental value of land.
A142	Cultural / natural landscape	1.2	Acknowledging land's intrinsic value	II	Beauty of nature	The colourful bird is an eye-catcher even though it is not a big picture. The small texts surrounding is, however, leave it as a striking picture. It is commonly known as tropic bird, which can be interpreted as the acknowledgment of its pure beauty but also as the sustainable thinking of birds in other regions of the earth, where some products of the Lebensbaum product range origin from.
		2.2	Acknowledging nature's beauty and therefore its intrinsic values	II.II	Pure nature/landscape	
A143	Planted areas next to buildings	1.3	Harmony between human and nature	III		Even though the building with a huge label on top takes most space of this photograph, the cloudy bright sky in the background and the grass in the front are more striking. The building seems to be part of nature, although the grass in the front is probably planted by people. The angle of the photograph makes the building appearing as a small harmonic part of the natural surroundings.
		1.3.2	Holism	III.II	Building or people next to plants	

Table A8.2a: Theoretical perspective Lebensbaum (value types).

Table A8.1b

Photo ID	Page #	Photo description (image itself)	Category of depictions
B1	Front page (1)	Two men holding plant with green leaves and red berries between them; looking left or right of camera; one man smiling; opened mouth; other man closed mouth; casual clothing; trees in the background; coloured; straightforward; full page; title at the top; subtitles and logo at the bottom	People with natural food products
B2*	2	Women and man smiling into camera; coloured; eye-contact; rectangular; ninth	

B3	4	Many people forming "40" in front of company building; holding up arms; casual clothing, all wear red T-shirt; in the background houses and trees; snow covered roofs; coloured; from above; full page	People, planted areas next to buildings
B4	5	Two men, four women standing at or sitting on stone outside company building; looking into camera; smiling; mouths opened; casual clothing; bushes, company building, trees, lawn in background; coloured; straightforward; rectangular with some curves; third	People, planted areas next to buildings
B5*	8	Food products on the right placed on wooden table; coloured; straightforward; full page; background photograph; text on the left	
B6	9	Food products on the right placed on wooden table; green plant on the left in the background; coloured; straightforward; full page	Plants and food products
B7*	10	House with windows; bushes next to house; old picture, reddish fading colours; coloured; straightforward; round-shaped; small	
B8	10	Two men sitting outside a grey brick building; children and trees in background; fading colours, coloured; straightforward; round-shaped; small	People, planted areas next to building
B9*	10	Factory building; straightforward; black-and-white; round shaped; small	
B10	11	Children wearing uniform; laughing or smiling into camera (except one looking to the left); big green leaves in the background; coloured; eye-contact; round-shaped; small	People in landscape
B11*	11	Roofs with photovoltaic installation on top; cloudy sky; coloured; straightforward; round shaped; small	
B12*	11	People with banner; casual clothing; smiling partly into camera; eye-contact, straightforward; round shaped; small	
B13*	11	Person working at assembly line; wearing casual clothing and hair net; inside factory hall; coloured, from above; round-shaped; small	
B14*	12	Two men to left and right, five women in the middle; standing in front of door; all smiling; mouths slightly opened; business and casual clothing; coloured; eye-contact, slightly from below; rectangular with some curves; third	
B15	13	Grass and flowers in the front; colourful VW-bus with logo in the middle; no passenger; blue sky with some clouds in the background; coloured; from below; full page; background photograph; graphics capture two thirds of page	Cultural / natural landscape
B16	14	Many people walking, standing, sitting on grass, driveways in front of yellow company building and yellow tower; casual clothing; colourful VW-bus in the middle; tree on the right; coloured; slightly from above; rectangular with some curves; third	People, planted areas next to buildings
B17*	17	Man and woman smiling into camera; mouths opened; woman leans on man's shoulder; casual clothing; wall with logos in the	

		background; coloured; eye-contact, slightly from below; rectangular with some curves; third; subtitles at the bottom	
B18	18	Hand holding hundreds of hazelnuts; below a jute bag with further nuts; coloured; from above; rectangular with some curves; third	People with natural food products
B19	19	Landscape with green grasses, stony path, trees on the right; green mountains with grass and trees in the background; blue sky; coloured; straightforward; rectangular; sixth; background photograph; man and woman shaking hands in front of photograph	Cultural / natural landscape
B20	21	Woman smiling into camera; mouth opened; casual clothing; holding flat basket in hands and throwing up brown beans; sitting on plastic sheet; house in background; brown stones, floor composed of dirt, wooden box, few plants in the background; coloured; eye-contact; rectangular with some curves; two thirds	People with natural food products
B21*	22	Many people holding hands; some kneeling, some standing on sheet with world map; most of them smiling; some mouths opened; one man holds logo in hand; pictures and cards lying on sheet; coloured; eye-contact, slightly from above; full page; title on top	
B22	24	Woman shaking brown seeds on plastic sheet; person and brownish mountains in the background; blue sky; coloured; slightly from below; rectangular with some curves; third	People with natural food products
B23*	25	Four persons holding cups in hand; some of them looking into camera; standing beneath wooden roof; casual clothing; coloured; eye-contact, slightly from below; round-shaped; small	
B24	25	Person kneeling on brown field; casual clothing; digging with hands in field; tables and forest in background; coloured; straightforward; round-shaped; small	People in landscape
B25	25	Man smiling into camera; mouth slightly opened; carrying loaded box on shoulder; head to shoulders only; coloured; eye-contact; round-shaped; small	People with natural food products
B26	25	Woman and man standing between high green, thin plants; blue sky; coloured; eye-contact; round-shaped; small	People in landscape
B27	25	Food boxes in the front; three persons looking at each other; casual clothing; building in the background; coloured; eye-contact; round-shaped; small	People with natural food products
B28	25	Man holding plant; wearing shirt; upper torso; plants in background; coloured; straightforward; round-shaped; small	People in landscape
B29	25	Man hunkering on field with few grasses; cutting sth; naked from the waist up; from above; round-shaped; small	People in landscape
B30*	25	Woman smiling; mouth opened; casual clothing; protective glasses; standing in fabric hall; upper tortso; coloured; slightly from below; round-shaped; small	

B31	25	Woman smiling into camera; casual clothing; holding flat basket with brown beans; upper torso; coloured; eye-contact; round-shaped; small; same like B20, just smaller and without movement	People with natural food products
B32	25	Woman smiling into camera; mouth opened; causal clothing; holding orange fruit in hands; upper torso; basket with fruits in the front; boxes in the background; coloured; eye-contact; round-shaped; small	People with natural food products
B33	25	Person standing next to high pants; wearing protective clothing; knife in left hand; blue sky; coloured; from below; round-shaped; small	People in landscape
B34	25	Person bowing down to field; casual clothing; brownish fields and mountains in the background; coloured; straightforward; round-shaped; small	People in landscape
B35	25	Man standing in field with green leaves on the left; looking to the right; casual clothing; upper torso; greenish hill in the background; coloured; straightforward; round-shaped; small	People in landscape
B36	25	Woman standing in high plants; looking into camera; casual clothing; grass in the front; coloured; straightforward; round-shaped; small	People in landscape
B37	25	Green treetop; coloured; straightforward; round-shaped; small	Cultural / natural landscape
B38	25	Person smiling; mouth closed; casual clothing; upper torso; green leaves and red berries on the left; coloured; straightforward; round-shaped; small	People in landscape
B39	25	Man standing in green field; looking towards camera; casual clothing; holding long green stick in hands; palm trees in the background; coloured; straightforward; round-shaped; small	People in landscape
B40	25	Man looking toward camera; standing on brownish field; casual clothing; green hills in the background; coloured; straightforward; round-shaped; small	People in landscape
B41*	26	Many children and adults smiling or laughing; raising up hands; most wearing yellow T-shirts; building with bleu decoration in the background; coloured; slightly from above; rectangular; third	
B42*	26	Four children looking into camera; wearing yellow T-shirt; sitting on chair at desks with monitor; coloured; eye-contact; squared; ninth	
B43*	27	Three persons cooking in kitchen at big pot; wearing protective clothing; kitchen equipment, person, food in background; window opened; coloured; straightforward; squared; less than twelfth	
B44*	27	Many people sitting at long tables; eating; casual clothing; inside big hall; green trees behind windows in the background; coloured; straightforward; squared; less than twelfth	

B45*	27	Entrance of building; opened; two plants left and right of entrance; tree in the background; cloudy sky; coloured; straightforward; squared; less than twelfth	
B46*	27	Many people kneeling or standing in courtyard; looking into camera; holding up a paper; casual clothing; stony floor; tree to the left; house in background; coloured; eye-contact, slightly from above; squared; less than twelfth	
B47	28	Four children running outside on a field next to half fallen hut; laughing; fields and mountains in the background; blue sky; coloured; eye-contact, slightly from below; rectangular with some curves; third	People in landscape
B48	30	Man looking into camera; smiling; mouth opened; casual clothing; upper torso; holding leaves with nuts in right hand and showing it into camera; holding basket in other hand; forest in the background; coloured; eye-contact, slightly from below; round-shaped; small	People with natural food products
B49	30	Two men, one woman looking into camera; partly smiling; mouth of women opened; upper torsos; business and casual clothing; man holding and showing box with brownish content; woman touches content; tree in the background; coloured; eye-contact, slightly from below; round-shaped; small	People in landscape
B50	30	Woman looking into camera; smiling; mouth opened; protective clothing; upper torsos; holding grapes in hands; showing into camera; eye-contact; round-shaped; small	People with natural food products
B51	30	Woman looking into camera; smiling; mouth opened; casual clothing; upper torso; basket in left arm; right arm up in tree; trees in the background; eye-contact, from below; round-shaped; small	People in landscape
B52	31	Bushes and trees in the front; company building / factory in the middle; windows; entrance; mountain in the background; blue sky; coloured; straightforward; rectangular; sixth	Planted areas next to buildings
B53*	31	Two men looking into camera; smiling; mouth slightly opened; sitting on small wall; one man holds paper in hands; horse on the right; wooden object and house in the background; coloured; eye-contact; squared; less than twelfth	
B54*	32	Several people standing at assembly line inside factory hall; protective clothing; upper torsos; hands touching fruits; coloured; slightly from below; squared; less than twelfth	
B55*	33	Two persons looking into camera; smiling; one with mouth opened; protective clothing; upper torsos; sitting at table inside a room; food in front of them; cutlery in hands; people, desks, chairs in background; coloured; eye-contact, slightly from below; squared; less than twelfth	
B56	33	Many people forming circle on grassy field; holding hands; people playing instruments in the middle of circle; casual	People, planted areas next to building

		clothing; people surrounding, sitting, watching; building to the left; driveway to the left; grass and trees in the background; coloured; from above; rectangular; eighth	
B57	34	Woman looking into camera; smiling; mouth opened; casual clothing; only head; holding and showing grapes in left hand; plants in the front and background; coloured; eye-contact; rectangular with some curves; third	People with natural food products
B58	35	Many people sitting around big baskets with different fruits, nuts; flat baskets on the womens' legs; casual clothing; working with hands on fruits, nuts; talking to each other; inside hall with open windows; container, house in background; coloured; from above; rectangular; third	People with natural food products
B59	36	Woman holding paper and pen in hands; man pointing towards right and explaining; casual clothing with helmet; brown heaps, container, house, trees in background; cloudy sky; coloured; straightforward; squared; less than twelfth	People, planted areas next to building
B60	36	Four men looking into camera; slightly smiling; mouths closed; casual clothing; upper torsos; standing behind container with brown content; horse to the right; palm tree in the background; coloured; eye-contact; squared; less than twelfth	People in landscape
B61	36	Man standing between plants; holding long brown stick on palm tree; casual clothing; palm trees in the background; coloured; straightforward; rectangular; tenth	People in landscape
B62	37	Woman smiling into camera; mouth opened; casual clothing; holding left hand and thumb up; sitting; plate with fruits on her legs; coloured; eye-contact; rectangular with some curves; third; subtitles at the bottom	People with natural food products
B63*	38	Woman smiling; carrying tray with food; many people sitting at table inside room; food in front of them; casual clothing; coloured; straightforward; full page; title at the top	
B64*	39	Three woman looking into camera; partly smiling; mouths opened; upper torsos; wall with photographs in background; coloured; eye-contact, slightly from below; rectangular with some curves; third; subtitles at the bottom	
B65*	41	Three persons kneeling on yoga mats; pushing hands into backs; woman on stage smiling in same pose just mirrored; sports clothing; drinks on the floor; coloured; straightforward; rectangular with some curves; third	
B66	43	Children sitting in grass; looking at man who holds honeycomb with bees in hands; casual clothing; trees and house in background; coloured; straightforward; rectangular; fifth	People, planted areas next to building
B67*	43	Children sitting at table; smiling; mouths opened; cases with funnels in front of them; woman pouring water into funnel; equipment and logo in the background; coloured; from above; rectangular with some curves; third	

B68	44	Woman standing on grass; casual clothing; backwards; pointing on small tower with female figure on top; house in the background; coloured; straightforward; rectangular with some curves; third	People, planted areas next to building
B69	44	Two persons standing on grass; bowing down to bees; holding honeycomb in hands; protective clothing; trees in background; coloured; straightforward; rectangular; less than twelfth	People in landscape
B70*	45	Many people looking into camera; smiling; mouths mostly opened; one person looking to other side; some holding flowers in hands; one person costumed as bee; casual clothing; inside room; coloured; from above; squared; twelfth	
B71	45	Bees on honeycomb; coloured; straightforward; rectangular with some curves; two thirds	Cultural / natural landscape
B72	46	Man looking into camera; slightly smiling; mouth slightly opened; behind pushcart with many yellow seeds; holding, showing seeds in hands; casual clothing; green and brown fields, trees, hills in background; coloured; eye-contact; full page; title at the top	People in landscape; People with natural food products
B73	47	Man looking into camera; smiling; mouth closed; kneeling in field; touching plant with right hand; holding soil with left hand; woman next to him; kneeling; holding soil with right hand; man standing behind them; smiling; mouth closed; hand on the left holding soil; plants in background; coloured; eye-contact, straightforward; rectangular with some curves; third	People in landscape; People with natural food products
B74	48	Two men looking at each other; left man has paper and pen in hands; right man holds grapes; casual clothing; standing in field; green bushes in background; bright sky; coloured; slightly from below; rectangular with some curves; third	People in landscape; People with natural food products
B75	49	Hands with gloves holding cut tomatoes; vines at the bottom; coloured; from above; rectangular with some curves; third	People with natural food products
B76	50	Man looking into camera; slightly smiling; mouth closed; casual clothing; kneeling in field with brown, green plants; holding seeds in hands; trees in background; cloudy sky; coloured; eye-contact, from below; rectangular with some curves; third	People in landscape; People with natural food products
B77	51	Man looking into camera; slightly smiling; slightly opened mouth; casual clothing; upper torso; holding, showing seeds in hands; standing in brownish field; crops in the background; blue sky; coloured; eye-contact; squared; less then twelfth	People in landscape; People with natural food products
B78*	51	Man and woman looking into camera; slightly smiling; mouths closed; casual clothing; man's arm on her shoulders; tree, tractor, house in background; coloured; eye-contact, from below; squared; less then twelfth	
B79	51	Man looking into camera; slightly smiling; mouth closed; casual clothing; head to knees; standing in field with green plants;	People in landscape

		bowing down, touching plants; coloured; eye-contact, from below; rectangular with some curves; third	
B80	52	Man on the left smiling; mouth slightly opened; holding sheet with little slices in right hand; holding knife in left hand; woman on the right smiling; mouth closed; writing on paper with right hand; protective clothing; upper torsos; nuts on table in the middle; room behind window in background; coloured; straightforward; full page; title on top	People with natural food products
B81*	53	Woman smiling into camera; mouth opened; casual clothing; upper torso; coloured; eye-contact; rectangular with some curves; third; subtitles at the bottom	
B82*	55	Man smiling into camera; mouth slightly opened; protective clothing; microscope; coloured; eye-contact; rectangular with some curves; third	
B83	56	Company building with photovoltaic installation on roofs; tress and garden to the left; houses, fields, tress in background; coloured; from above; full page; title at top	Planted areas next to buildings
B84*	59	Machine; coloured; slightly from below; rectangular with some curves; third; text at bottom	
B85	60	Sunflowers; cloudy sky; coloured; slightly from below; rectangular with some curves; third	Cultural / natural landscape
B86*	61	Two men smiling; mouths opened; holding dustpan with wood chips in hands; protective clothing; upper torsos; machines in background; coloured; straightforward; rectangular with some curves; two thirds; text at bottom	
B87*	62	Stacked parcels on machines; coloured; straightforward; rectangular with some curves; third	
B88*	63	Forklifts in factory hall; man standing on one in the background; casual clothing; coloured; straightforward; rectangular with some curves; third	
B89*	64	Man smiling into camera; mouth closed; protective clothing; upper torso; holding pipe into container with seeds; coloured; eye-contact; rectangular with some curves; third; text at bottom	
B90*	65	Man looking into camera; pulling big bag out of tank; inside factors hall; tank to the left; coloured; eye contact/straightforward; rectangular; less than twelfth	
B91	69	White water running down stream; stone, plant in the front; forest in background; blue sky; coloured; straightforward; rectangular with some curves; third	Cultural / natural landscape
B92*	70	Person smiling into camera; mouth slightly opened; hair net; upper torso; standing at assembly line with packages; hands on packages; inside factory hall; latter, person in background; coloured; eye-contact; rectangular with some curves; third	

B93*	71	Filled bottles on assembly line; man holding, looking at bottle; hairnet; inside factory hall; coloured; from below; rectangular with some curves; third	
B94*	72	Colourful leaflets; coloured; straightforward; rectangular with some curves; third	
B95*	73	Open entrance of container; trays inside; inside factory hall; coloured; straightforward; rectangular; less than twelfth	
B96*	74	Many people walking on street; casual clothing, some wearing garbs; balloons, posters in hands; hedges, trees, houses in background; coloured; slightly from above; full page; title at the top	
B97*	75	Town-sign; building, tower in background; grey sky; coloured; from below; rectangular with some curves; two thirds	
B98*	76	Four women looking at small bags on table; holding them in hands; casual clothing; upper torsos; inside room; coloured; straightforward; rectangular; less than twelfth	
B99*	77	Man talking; arms up; mouth opened; microphone on head; casual clothing; upper torso; coloured; slightly from below; squared; small	
B100*	77	Woman smiling; standing at table; casual clothing, microphone; food in front; pointing at food; VW-bus, grass, trees in background; coloured; straightforward; squared; less than twelfth	
B101*	77	Two man sitting, kneeling; one man cries, other calms; acting; casual clothing; microphones; coloured; straightforward; squared; less than twelfth	
B102*	77	Man looking to right; hand gesticulating; talking; business clothing; coloured; slightly from below; rectangular; less than twelfth	
B103*	77	Many people sitting in auditorium; casual clothing; partly smiling; clapping hands; coloured; straightforward; squared; less than twelfth	
B104*	78	Four women looking into bowl; partly smiling, laughing; casual clothing; touching insights; nuts, packages on table; inside room; coloured; straightforward; rectangular with some curves; two thirds	
B105*	79	Woman looking into illuminated box; coloured; straightforward; rectangular; less than twelfth	
B106*	79	Woman talking; showing map to her left; two persons watching; causal clothing; upper torsos; inside factory hall; coloured; slightly from below; squared; twelfth	
B107*	79	Inside old-fashioned shop; scale in front; shelves with packages in background; logo at the top; coloured; angular, straightforward; rectangular; less than twelfth	
B108	79	Woman smiling into camera; mouth opened; casual clothing; upper torso; box in left hand; grapping apples with left hand;	People with natural food products

		apples in boxes on the left; shelves with packages in background; coloured; eye-contact, slightly from below; squared; less than twelfth	
B109*	79	Person smiling; causal clothing, hair net; holding filled jar in hands; standing at assembly line; jars on assembly line; insides factory hall; coloured; slightly from above; rectangular; sixth	
B110*	80	Seven people standing close to each other; some smiling into camera; business clothing; upper torsos; wooden figure between them; screen behind them; coloured; eye-contact, slightly from below; rectangular; fifth	
B111*	80	Two mean laughing, clapping; casual clothing, colourful wall, person with camera in background; coloured; straightforward; rectangular; fifth	
B112*	80	Stand with bags; booths; people watching goods; shelves, trays in background; coloured; straightforward; rectangular; fourth	
B113*	80	Man talking into microphone; wearing shirt; hand gesticulating; upper torso; coloured; straightforward; squared; small	
B114*	80	Man looking into camera; costumed as pirate; arms held shoulder-high; shelve, posters in background; coloured; eye-contact; rectangular; twelfth	
B115*	80	Two children looking into camera; sitting on wooden terrace; wearing garbs; grass, house, entrance in background; coloured; eye-contact; squared; small	
B116*	80	Man looking into camera; costumed as clown; arms held shoulder-high; holding small suitcase in left hand; coloured; eye-contact; rectangular; twelfth	
B117*	81	Woman, two men looking into camera; smiling; mouths opened; casual clothing; head to knee; arms on shoulders; packaged products on table in the front; posters with plants and people in background; coloured; eye-contact, slightly from below; rectangular; less than twelfth	
B118	81	Opened yellow fruit held by man in background; looking into camera; casual clothing; upper torso; coloured; eye-contact, from below; rectangular with some curves; third	People with natural food products
B119*	81	Man playing instrument; looking at dancing woman; wearing shirts; upper torsos; coloured; straightforward; rectangular; less than twelfth	
B120	81	Two heads backwards with chameleon on top; many people in auditorium watching; casual clothing; coloured; straightforward; rectangular; less than twelfth	People with animal
B121*	83	Four people smiling, laughing into camera; mouths opened; figure between them; business clothing; upper torsos; coloured; eye-contact; squared; third; same like B110, just another angle, bigger	

B122*	83	Six persons looking into camera; partly smiling; mouths slightly opened; standing outside; poster between them; casual, business clothing; trees in background; coloured; eye-contact; rectangular; tenth	
B123*	84	Man looking into camera; smiling, mouth opened; casual clothing; holding up bottle in left hand; woman, building in background; coloured; eye-contact, slightly from below; rectangular with some curves; third	
B124*	85	Several persons looking into camera; partly smiling; casual clothing; holding blue papers in hands; parcels in front; building in background; coloured; eye-contact, slightly from below; rectangular; less than twelfth	
B125*	85	Three persons holding parcel; casual clothing; VW-bus on the right; trees, houses in background; coloured; squared; straightforward; less than twelfth	
B126*	86	Several people standing in front of white building with trees; two of them looking into camera; casual clothing; holding up posters, logos, banners; coloured; eye-contact, straightforward; rectangular with some curves; two thirds; logo at the top	
B127*	87	Woman smiling, stepping with coloured feet on sheet; barefoot; leaving footprints; people surrounding, watching; casual clothing; bushes, house in background; coloured; from below; rectangular with some curves; two thirds	
B128*	87	Two feet stepping on sheet; barefoot; coloured feet; coloured; straightforward; squared; small	
B129*	87	Colourful footprints on sheet; coloured; from above; squared; small	
B130*	87	Three persons sitting inside room on chairs; smiling; casual clothing; moving feet or legs; feet in boxes; coloured; straightforward; squared; small	
B131*	88	Woman smiling in the front; signing on sheet; two men looking at each other; talking; casual clothing; upper torsos; people in background; inside room; coloured; straightforward; rectangular; less than twelfth	
B132*	88	Man sitting; talking into microphone; business clothing; people watching, sitting in background; coloured; straightforward; squared; less than twelfth	
B133*	89	Tower greenish illuminated; VW-bus beneath; building in background; at night; dark sky; coloured; straightforward; rectangular with some curves; third; writing at the top	
B134*	89	Three persons looking at each other; smiling; mouths opened; business clothing; one man holding glass in hand; upper torsos; people, trees, sunshade in background; grey sky; coloured; straightforward; squared; less than twelfth	

Photo ID		Description	
B135*	89	Woman, man looking at each other; laughing, mouths opened; business clothing; woman holds leaflet in hands; walls with logos, equipment in background; coloured; straightforward; squared; less than twelfth	
B136*	90	Tablet with webpage on wooden table; coloured; from above; rectangular with some curves; two thirds	
B137*	91	Man talking into microphone; gesticulating with left hand; holding award in right hand; woman to the left holding microphone; woman to the right holding paper in hands; business clothing; women looking at man; screen in background; coloured; slightly from below; rectangular with some curves; third	
B138	98	Green field and roofs of houses in the front; company building in the middle; trees, church to the right; forests, fields, hills in the background; coloured; from above; rectangular; third; background photograph; text on top	Cultural / natural landscape; Planted areas next to buildings

Table A8.1b: Description of photographs Rapunzel.

Table A8.2b

Photo ID	Category of Depictions 62	Value type category #	Value type category	Code #	Code	Interpretation
B1	People with natural food products	1.1	Acknowledging land's instrumental value	I.I	People praising crops	The two persons smile while they are presenting the plant (presumably coffee plant) which they are holding with their hands. They seem to be proud. The people are dominating the photograph even though the plant is in the middle. There is a loft of green colour, which dominates the image. The red berries as well as the dark green leaves of the plant are shiny. There are trees in the background. Labels are placed in the middle, at the top and the bottom of the picture. The instrumental value of the plant is strikingly present. The use of it is shown.
				I.IV	Natural food products	
B3	People, planted areas next to buildings	1.3	Harmony between human and nature/land			The many people, standing in a formation of a 40, are dominating the picture because of the red T-Shirts they wear. The (company) building in the

---

62 *See* Table A8.1a.

		1.3.2	Holism	III.II	Building or people surrounded or next to plants		background is also striking as it is yellow painted. The houses in the background and the trees between them as well as the lawn and the trees in the front of the yellow building are less striking as they are dark or brownish. Even though the people do not consciously touch any plants here, the image of holism is visible as it seems that the company has planted trees and lawn in order to have as much natural surrounding as possible in this urban setting.
B4	People, planted areas next to buildings	1.3	Harmony between human and nature/land				This photograph is clearer about its depicted holism than B3. It is Two persons sitting on a stone, four are surrounding it. In the background a big tree and green grass and bushes as well a (company) building. The people are smiling and seem to be proud. The people are part of the natural elements on this photograph.
		1.3.2	Holism	III.II	Building or people surrounded or next to plants		
B6	Plants and food products	1.1	Acknowledging land's instrumental value	I.IV	Natural food products		Together with B5*, this is a double page photograph of products by Rapunzel. There is a branch with green leaves in the background as if to proof that the products are of natural origin. The background colour is green. The products are mainly wrapped with plastic or glass. The dominating colour on labels are green, yellow and brown. All of them are colours that can be found in nature as well. Though processed, many of the original products can be recognised. The transparent wrapping makes this possible. The instrumental value of food is clearly present.
B8	People, planted areas next to building	1.3	Harmony between human and nature/land				A holistic image is seen in terms of a building, built with sand stone and trees next to it. Indeed, a building stands for a cultural landscape, however, its natural materials makes it fit perfectly into the landscape surrounding it. The two persons are obviously enjoying the landscape in terms of recreation.
		1.3.2	Holism	III.II	Building or people surrounded or next to plants		
		2.1	Acknowledging nature's beauty and therefore its instrumental values	II.I	People in natural landscape		
B10	People in landscape	1.3	Harmony between human and nature/land				The children are smiling, seeming happy, standing in front of plants and very near, which is an image of unity with nature.
		1.3.4	Unity with nature: fitting into nature	III.IV	People within landscape		
B15	Cultural / natural landscape	1.3	Harmony between human and nature/land				Admittedly, there are no people on this photograph, however, the vehicle represents those in a way. It is colouful painted and fits into the natural surroundings. Nevertheless, it is not clear at all from just looking at the picture without reading the graphics why the vehicle has been placed here, neither in the photograph nor in the report. Another
		1.3.4	Unity with nature: fitting into nature	III.IV	People within landscape		

						possible value type fitting here is 1.2. However, the grass in the front looks to less like a natural landscape than a cultivated lawn.
B16	People, planted areas next to buildings	1.3	Harmony between human and nature/land			The (company) buildings are striking in this photograph. The lawn and the many colourful dressed people, enjoying the good weather as well the VW bus in the front are less noticeable. The sky is blue with white clouds. It is a bright picture. The buildings seem to represent how the company works. A tower, rising into the sky, being part of, having the colours of flowers or the sun. The yellow colours of the buildings with green painted window frames are again colours of nature. Also, a sky and a rainbow painted on one building can be seen. Hence, the buildings fit into nature.
		1.3.4	Unity with nature: fitting into nature	III.IV	People within landscape	
B18	People with natural food products	1.3	Harmony between human and nature/land			This is a typical photograph of responsibility in terms of sustainability. Having a close relation to the nuts, a natural product. Holding it carefully with respect.
		1.3.1	Responsibility towards nature	III.I	Hands holdings nuts	
B19	Cultural / natural landscape	1.2	Acknowledging land's intrinsic value	II	Beauty of nature	The photograph is the first rectangular one in this report. Even though it clearly displays the beauty of nature as an intrinsic value, it looks misplaced as it is rectangular and two persons as cut photographs are placed in the front of it. It appears as a different type of photograph, artificial, because of its two layers. The natural beauty of the image does not come to the fore.
		2.2	Acknowledging nature's beauty and therefore its intrinsic values	II.II	Pure nature	
B20	People with natural food products	1.1	Acknowledging land's instrumental value	I.II	People dealing with crops or resources	As the woman holds a sieve and shakes the beans, seems or nuts, the instrumental value is clearly expressed.
B22	People with natural food products	1.1	Acknowledging land's instrumental value	I.II	People dealing with crops or resources	The person spreads seeds or crops and is clearly working in a sunny and hilly surrounding. The instrumental value of food is displayed.
B24	People in landscape	1.1	Acknowledging land's instrumental value	I.II	People dealing with crops or resources	The person works on a brownish field. The instrumental of a bean or crop is expressed here.
B25	People in landscape	1.1	Acknowledging land's instrumental value	I.II	People dealing with crops or resources	The person carrying crops or fruits in a box smiles into the camera. He looks proud. The harvest seems to be his merit.
B26	People in landscape	1.3	Harmony between human and nature/land			The two persons in this photograph are standing between crops. They smile into the camera and look proud, as if they own the crops or care for them. They are at the same time part it and represent harmony with nature/land.
		1.3.4	Unity with nature: fitting into nature	III.IV	People within crops	
B27	People with natural food products	1.1	Acknowledging land's instrumental value	I.II	People dealing with crops or resources	The three women are talking to each, holding fruits in their hands as if to sell

							them. Selling natural products is a code for land's instrumental value.
B28	People in landscape	1.1	Acknowledging land's instrumental value	I.II	People dealing with crops or resources		The man touches or shows the plant in front of him. He seems to be surrounded by more plants. It is not clear whether the man harvests or rather praises the plant. However, the photograph is about the instrumental value of land.
B29	People in landscape	1.1	Acknowledging land's instrumental value	I.II	People dealing with crops or resources		The person cuts a fruit or nut. This is a code for land's instrumental value.
B31	People with natural food products	1.1	Acknowledging land's instrumental value	I.I	People praising crops		The woman holdings beans or seeds in a basket smiles into the camera. She seems proud of the product or her work. She literally praises the natural product and thus land's instrumental value.
B32	People with natural food products	1.1	Acknowledging land's instrumental value	I.I	People praising crops		The woman holding crops in her hands and a basket full of further crops smiles into the camera and seems proud of her work.
				I.II	People dealing with crops or resources		
B33	People in landscape	1.1	Acknowledging land's instrumental value	I.II	People dealing with crops or resources		The person, dressed with protective clothing, works in a crop field. It is a code for the instrumental value of land, the crop that nature gives.
B34	People in landscape	1.1	Acknowledging land's instrumental value	I.II	People dealing with crops or resources		A person smiling into the camera, caught by the camera while working in a field of crops. She seems happy while working.
B35	People in landscape	1.3	Harmony between human and nature/land				A man stands in front of green field and green hills. Even though this is the code for holism, it is debatable whether the man represents the broader ecological community or is just abusing natural resources (such as soil for his crops). The reason for this thought is the non-proud look and the missing smile of the man. There is no unity with nature to be seen in this picture.
		1.3.2	Holism	III.II	People surrounded by or next to plants		
B36	People in landscape	1.1	Acknowledging land's instrumental value	I.I	People praising crops		The person standing between crops, holding them apart to be seen, seems to show and praise the crops. Using her hands, the person does not harm the crops. This harmony and unity with nature is nevertheless also a code for the acknowledgment of land's instrumental value.
		1.3	Harmony between human and nature/land				
		1.3.4	Unity with nature: fitting into nature	III.IV	People within crops		
B37	Cultural / natural landscape	1.2	Acknowledging land's intrinsic value	II	Beauty of nature		This photograph is the only one on page 25 which shows landscape without people displayed. As no natural food products or harvesting can be recognised, this photograph expressed intrinsic values.
		2.2	Acknowledging nature's beauty and therefore its intrinsic value	II.II	Pure nature/landscape		
B38	People in landscape	1.3	Harmony between human and nature/land				The woman in front of green plants with red berries smiles into the camera. She seems happy, which makes a holistic image of her and the plants.

		1.3.2	Holism	III.II	People surrounded by or next to plants	
B39	People in landscape	1.1	Acknowledging land's instrumental value	I.I	People praising crops	The man looking into the camera seems to harvest with his long instrument.
B40	People in landscape	1.3	Harmony between human and nature/land			The person in this photograph looks into camera, does not harvest, but stands in front of a crop field. Like B35 the person fits into the category of holism because the persons stands directly at the field, there is no visible barrier between field and person. The impression of a farmer showing his crops is dominant and hence a holistic image of agriculture.
		1.3.2	Holism	III.II	People surrounded by or next to plants	
B47	People in landscape	2.1	Acknowledging nature's beauty and therefore its instrumental values	II.I	People in natural landscape	The four smiling and running children seem to enjoy nature. The picture shows recreation as an instrumental value of nature.
B48	People with natural food products	1.1	Acknowledging land's instrumental value	I.I	People praising crops	The instrumental value of nature providing nuts is clearly shown in this photograph. The right hand holding and almost embracing the nuts shows the responsibility by the man towards the nuts. He is proud, but at the same accountable for his harvest, as if to show his efforts.
		1.3	Harmony between human and nature/land			
		1.3.1	Responsibility towards nature	III.I	Hands holding fruit	
B49	People in landscape	1.1	Acknowledging land's instrumental value	I.I	People praising crops	The three persons who look into the camera seem proud; the woman happy as she is smiling. The man on the left looks serious. The man in the middle carries fruits or nuts, the woman touches them. All of them look as if to own the fruits/nuts, knowing how to harvest them, how to grow them. The instrumental value of nature providing food is clearly shown here. It is not that easy to ascribe the value type 1.3.1 to the picture. The people are not directly holding the fruits/nuts in their hands. In contrast they present their harvest.
B50	People with natural food products	1.1	Acknowledging land's instrumental value	I.I	People praising crops	The woman holding grapes looks proud and happy while smiling into the camera. She seems to harvest the grapes as she is wearing protective clothing. This is an indicator for responsibility towards nature but also for a careful treatment of the company towards its employees.
		1.3	Harmony between human and nature/land			
		1.3.1	Responsibility towards nature	III.I	Hands holding fruit	
B51	People in landscape	1.1	Acknowledging land's instrumental value	I.II	People dealing with crops or resources	The woman harvesting fruits from a tree looks proudly into camera. The photograph represents the instrumental value of nature.

B52	Planted areas next to buildings	1.3	Harmoyn between human and nature/land			The building is probably a company building as it is painted in the colours of Rapunzel like B3 or B16. However, it is a different region, mountains in the background. Nature is not as striking as the bright yellow building but the building fits into the natural surroundings. Even though the building itself cannot value but because it stands for the company and the company stands for the people (employees, management), the company is the code for the value types 1.3.2 and 1.3.4. The company integrates itself into nature.
		1.3.2	Holism	III.II	Building surrounded by or next too plants	
		1.3.4	Unity with nature: fitting into nature	III.V	Building surrounded by plants	
B56	People, planted areas next to building	2.1	Acknowledging nature's beauty and therefore its instrumental values	II.I	People in natural landscape	Even though the many people dancing and listening to music are located in an obviously cultivated, hence no natural landscape, they are enjoying themselves in nature. They use the natural part of the outside for recreation instead of standing on a pavement.
B57	People with natural food products	1.1	Acknowledging land's instrumental value	I.I	People praising crops	Like B50, just a bigger size of the photograph.
		1.3	Harmony between human and nature/land			
		1.3.1	Responsibility towards nature	III.I	Hands holding fruit	
B58	People with natural food products	1.1	Acknowledging land's instrumental value	I.II	People dealing with crops	This photograph indicates the instrumental value of land and its provision of food.
B59	People, planted areas next to building	1.3	Harmony between human and nature/land			This picture is especially interesting because of its background. It shows how plants are capturing a building. It is literally a holistic image.
		1.3.2	Holism	III.II	Building or people surrounded by or next to plants	
B60	People in landscape	1.3	Harmony between human and nature/land			The four men are proudly showing a label and parts of natural resources in a container. The palm tree in the background is striking. The angle the photograph is taken from let the men appear almost embraced by the palm tree which is a holistic but also united way of being with nature.
		1.3.2	Holism	III.II	Building or people surrounded by or next to plants	
		1.3.4	Unity with nature: fitting into nature	III.IV	People within landscape	
B61	People in landscape	1.1	Acknowledging land's instrumental value	I.II	People dealing with crops	As the person is harvesting, the only value that can be found here is the instrumental value of land.
B62	People with natural food products	1.1	Acknowledging land's instrumental value	I.II	People dealing with crops	The smiling and happy woman having fruits on her lap, holds up a thumb as if to say that she is happy with her work or the products. The instrumental value is dominant.

B66	People, planted areas next to building	1.3	Harmony between human and nature/land			The children and the man in this photograph are sitting on lawn (cultivated) in a garden behind a building. The children seem to listen to the man who holds a honey comb in his hands. There are trees in the background. The green colour of the those and the lawn are dominant in this picture. The children are using the grass like a carpet. It seems as if they enjoy the outside, which leads to the value type 2.1 of recreation.
		1.3.2	Holism	III.II	Building or people surrounded by or next to plants	
		1.3.4	Unity with nature: fitting into nature	III.IV	People within landscape	
		2.1	Acknowledging nature's beauty and therefore its instrumental values	II.I	People in natural landscape	
B68	People, planted areas next to building	1.3	Harmony between human and nature/land			Planting lawn next to a building is normally no code for holism. However, in this case it is the colours of the building which make a holistic image of green grass, the Rapunzel-sculpture and yellow building behind it. It is harmonic.
		1.3.2	Holism	III.II	Building or people surrounded by or next to plants	
B69	People in landscape	1.1	Acknowledging land's instrumental value	I.II	People dealing with crops	The instrumental value of nature provision of honey is shown here. The persons working with the honey combs and the bees make use of nature instrumental value.
B71	Cultural / natural landscape	1.2	Acknowledging land's intrinsic value	II	Beauty of nature	A honey comb does not necessarily make honey in the end (hence no instrumental shown here), but its beauty is on the one hand an intrinsic value and on the other hand an instrumental one from the aesthetic perspective.
		2.1	Acknowledging nature's beauty and therefore its instrumental values	II.Ia	Natural food products	
B72	People in landscape; People with natural food products	1.1	Acknowledging land's instrumental value	I.II	People dealing with crops	On the hand, the instrumental value of food production or resources for it is shown. On the other hand, the responsibility of caring for the resources is shown, as the man holds the crops in his hands. This photograph is important for the report as it shows how much farmers care for the resources, which are later used and processed by Rapunzel. There is no need to read any text related to this photograph because it tells everything at once without description. The same goes for the next photograph.
		1.3	Harmony between human and nature/land			
		1.3.1	Responsibility towards nature	III.I	Hands holding crops	
B73	People in landscape; People with natural food products	1.1	Acknowledging land's instrumental value	I.II	People dealing with crops	Like B72 the hands holding as recourses (in this case soil) is are the code for responsibility towards nature. The sustainability character of this photographs is of importance for the

		1.3	Harmony between human and nature/land			company and therefore expressed in this very colourful, big and hence striking way.
		1.3.1	Responsibility towards nature	III.I	Hands holding crops	
B74	People in landscape; People with natural food products	1.1	Acknowledging land's instrumental value	I.II	People dealing with crops	Same like B72 and B73.
		1.3	Harmony between human and nature/land			
		1.3.1	Responsibility towards nature	III.I	Hands holding crops	
B75	People with natural food products	1.1	Acknowledging land's instrumental value	I.II	People dealing with crops	In contrast to B72-74, this photograph does not show any people or faces, instead just hands. For the remaining observations the same holds true like for B72-74.
		1.3	Harmony between human and nature/land			
		1.3.1	Responsibility towards nature	III.I	Hands holding fruits	
B76	People in landscape; People with natural food products	1.1	Acknowledging land's instrumental value	I.II	People dealing with crops	Same like B72-74.
		1.3	Harmony between human and nature/land			
		1.3.1	Responsibility towards nature	III.I	Hands holding fruits	
B77	People in landscape; People with natural food products	1.1	Acknowledging land's instrumental value	I.II	People dealing with crops	Same like B72-74, B76.
		1.3	Harmony between human and nature/land			
		1.3.1	Responsibility towards nature	III.I	Hands holding fruits	
B79	People in landscape	1.1	Acknowledging land's instrumental value	I.II	People dealing with crops	This photograph is akin to B72-74, B76, but the hands by the man do not hold the plants, just touch them (even though in a careful manner). The instrumental value is dominant here.
B83	Planted areas next to buildings	1.3	Harmony between human and nature/land			The company building is surrounded by plants such as bushes, trees, lawn. The colours in which the company building is painted fits into the surroundings which makes it a holistic image.
		1.3.2	Holism	III.II	Building or people surrounded by or next to plants	

		1.3.4	Unity with nature: fitting into nature	III.V	Building surrounded by plants	
B85	Cultural / natural landscape	1.2	Acknowledging lands' intrinsic value	II	Beauty of nature	Here, the sunflowers show the pure beauty of flowers. They indicate land's/nature's intrinsic values of beauty.
		2.2	Acknowledging nature's beauty and therefore its intrinsic values	II.II	Pure nature	
B91	Cultural / natural landscape	1.2	Acknowledging lands' intrinsic value	II	Beauty of nature	The floating river with forests in the background are placed as if to show how beautiful nature or natural landscape is. The intention behind the reason why to place such a picture is debatable and clearly needs to more description.
		2.2	Acknowledging nature's beauty and therefore its intrinsic values	II.II	Pure nature	
B108	People with natural food products	1.1	Acknowledging land's instrumental value	I.II	People dealing with crops	The woman puts apples into boxes in a shop with shelves full of products. The instrumental value of land is clearly shown here.
B118	People with natural food products	1.1	Acknowledging land's instrumental value	I.II	People dealing with crops	Although not selling in a consumption way, the man in this photograph looks as if to sell the value of the crop. This relates to the instrumental value of it.
B120	People with animal	1.3	Harmony between human and nature/land			This photograph is a rare photograph of people with animals in this report. The two children having a chameleon on their heads are sitting in front of people. The animal looks calm. As the two heads are only seen from the back, but they are not moving, it seems as if there is a harmony between the children and the chameleon. They respect each other.
		1.3.3	Respecting the Earth: harmony with other species	III.III	People caressing animals	
B138	Cultural / natural landscape; Planted areas next to buildings	1.2	Acknowledging land's intrinsic value	II	Beauty of nature	This photograph shows how the company is integrated into the landscape. Not only the natural like colours (green and yellow), but also the roof height fit into the landscape. The buildings are not higher than trees and flatter than the hills in the background. The beauty of land and nature is also expressed.
		1.3	Harmony between human and nature/land			
		1.3.4	Unity with nature: fitting into nature	III.V	Building surrounded by plants	

Table 8.2b: Value types Rapunzel.

Table A8.1c

Photo ID	Page #	Photo Description (image itself)	Category of depictions
C1	Front page (1-2)	Hands holding strawberry plant; green leaves; two red, two green strawberries; coloured; straightforward; rectangular; two thirds; logo at top; writing in the middle	People with natural food product

C2	3	Many red strawberries in white bowl; whole fruits with leaves and stems; grass beneath; coloured; from above; full page; writing in the middle	Natural food product
C3*	5	Man looking into camera; mouth closed; business clothing; upper torso; coloured; eye-contact, slightly from below; round-shaped; small	
C4*	5	Man looking into camera; slightly smiling; mouth closed; business clothing; upper torso; coloured; eye-contact, slightly from below; round-shaped; small	
C5	6	Person holding basket with red cherries between hands; only shirt to see, no head; cherry leaves and stems; coloured; straightforward; full page; text at the top	People with natural food product
C6*	7	Four men looking into camera; partly smiling; partly mouths opened; business clothing; head to knee; standing behind rail in building; coloured; eye-contact; rectangular; twelfth	
C7*	8	Woman looking at jar; holding jar with both hands; protective clothing; upper torso; standing at assembly line; inside factory hall; coloured; straightforward; rectangular; fourth	
C8*	9	Woman, sitting; holding bottle with juice in hand; man with hand at hip standing; upper torsos; casual clothing; both looking at other person; fruits in the front; people, poster in the background; coloured; straightforward; rectangular; half	
C9*	11	Seven people sitting on chairs next to each other in half circle; casual clothing; forming triangle with hands; partly smiling; mouths partly opened; tree, poster with logo and strawberries in background; coloured; slightly from below; rectangular; third	
C10	14	Opened jar with jam and raspberry; lit beside; raspberries, leaves around jar on wood; coloured; from above; full page; writing at the top	Natural food product
C11*	15	Woman smiling; mouth opened; protective clothing; touching muesli bar; standing at assembly line full of muesli bars; machine in background; coloured; straightforward; rectangular; eighth	
C12	16	Fingers showing red strawberries; holding leaves between fingers; green leaves in background; coloured; from above; rectangular; eighth	People with natural food product
C13	17	Man standing at orange tree; casual clothing; holding right arm up towards oranges; touching oranges; trees in background; coloured; straightforward; squared; sixth	People with natural food product
C14	18	Red strawberries in blue plastic boxes; coloured; from above; rectangular; third; writing at bottom	Natural food product
C15*	19	Hand holding half roll with butter and jam; knife spreading jam on roll; two jars with jam on the left; plant in background; coloured; straightforward; rectangular; half; writing at bottom	

C16*	20	Woman and man smiling; mouths opened; protective clothing; standing at tank; inside factory hall; coloured; from below; full page; writing at top	
C17*	21	Woman smiling into camera; mouth opened; business clothing; holding book with company logo and strawberries in hands; coloured; eye-contact; rectangular; third	
C18	25	Four women looking into camera; partly smiling; party mouths opened; casual clothing; holding packages in hand; batches around necks; walking outside; trees, bushes; company buildings in background; coloured; eye-contact, slightly from below; rectangular; half; writing on the right	People, planted areas next to building
C19	26	Bees flying at wooden box; coloured; straightforward; full page; writing at top	Cultural / natural landscape
C20	28	Many jars filled with jam; closed lit; speckled with water drops; coloured; slightly from above; rectangular; third	Natural resource and food product
C21*	30	White car with logos; building and car in background; coloured; straightforward; rectangular; third; writing on the left	
C22	32	Insect nesting aid out of wood; placed in field with grass and trees; coloured; straightforward; rectangular; third; writing at bottom	Cultural / natural landscape
C23	34	Tractor in field with green leaves; two persons picking; trees in background; blue sky; coloured; straightforward; full page; writing at top	People in landscape
C24*	35	Children's toy supermarket out of wood; coloured; straightforward, slightly from above; rectangular; third; writing at top	
C25*	36	Two women standing at assembly line; protective clothing; looking at muesli jars; inside factory hall; coloured; from above; rectangular; half	
C26*	37	Woman smiling into camera; mouth closed; business clothing; coloured; eye-contact; round-shaped; small	
C27*	41 (last page)	Blue wooden panels; coloured; straightforward; full page; logo in the middle	

Table A8.1c: Description of photographs Schwartau.

Table A8.2c

Photo ID	Category of Depictions	Value type category #	Value type category	Code #	Code	Interpretation
C1	People with natural food product	1.3	Harmony between human and nature/land	III		The front page of this report is striking in terms of its colours and the value type shown here. The red strawberries are obvious in contrast to the dark green and

						blue background. The hand holding one of the strawberries is also very striking as it is brighter than the dark leaves but also because of its symbolism of responsibility and hence sustainability.
		1.3.1	Responsibility towards nature	III.I	Hands holding fruits	
C2	Natural food product	1.1	Acknowledging land's instrumental value	I.IV	Natural food products	The red and shiny strawberries seem ripe and are presented like a perfect harvest, no spots to be seen. The fruits are in a white bowl. The grass in the background is blurred, however recognisable. The complementary colours make this photograph even more striking, but also seeming very natural (as green and red are colours of nature). As this is the second page having strawberries with a full page size, the fruits seem to be very important for the report or the company.
		1.2	Acknowledging land's intrinsic value	II	Beauty of natural products	
		2.1	Acknowledging nature's beauty and therefore its instrumental value	II.Ia	Natural food products	
C5	People with natural food product	1.1	Acknowledging land's instrumental value	I.IV	Natural food products	Like C2, the beauty of the products is dominant. In this case, cherries are put into a basket, carried with two hands. Again, the red and shiny fruits are striking in contrast to the dark basket and the blue shirt the person carrying wears.
		1.2	Acknowledging land's intrinsic value	II	Beauty of natural products	
		2.1	Acknowledging nature's beauty and therefore its instrumental value	II.Ia	Natural food products	
C10	Natural food product	1.1	Acknowledging land's instrumental value	I.IV	Natural food products	The instrumental value is clearly seen in kind of the jam. The intrinsic value of the beauty of food is expressed through the red/pink and ripe strawberries, put in the picture as if to enjoy this beauty and at the same to understand how pure and enjoyable the jam is.
		1.2	Acknowledging land's intrinsic value	II	Beauty of natural products	
		2.1	Acknowledging nature's beauty and therefore its instrumental value	II.Ia	Natural food products	
C12	People with natural food product	1.1	Acknowledging land's instrumental value	I.II	People dealing with crops or resources	This photograph could also be linked to value type 1.3.1 but as the fingers holding the strawberry are more likely to harvest, the value types 1.1, but also 1.2 and 2.1 fit. The instrumental value is the strawberry as a resource. The intrinsic value is literary presented by the hand holding the fruit. In terms of the aesthetics literature this is an instrumental value which is about the beauty of food products.
		1.2	Acknowledging land's intrinsic value	II	Beauty of natural products	

		2.1	Acknowledging nature's beauty and therefore its instrumental value	II.Ia	Natural food products	
C13	People with natural food product	1.1	Acknowledging land's instrumental value	I.II	People dealing with crops or resources	The man touching or harvesting apples seems serious, does not smile into the camera as if to show the procedure of harvesting instead of presenting the resource. This calls for the instrumental value of apples only.
C14	Natural food product	1.1	Acknowledging land's instrumental value	I.IV	Natural food products	The shiny red colour of the strawberries is striking. The beauty and soundness of the fruits (even though already partly processed) is presented. The intrinsic value is as obvious as the instrumental one. The latter is not only obvious because of the already removed stalk, but also due to the blue plastic boxes in which the strawberries lie.
		1.2	Acknowledging land's intrinsic value	II	Beauty of natural products	
		2.1	Acknowledging nature's beauty and therefore its instrumental value	II.Ia	Natural food products	
C18	People, planted areas next to building	1.3	Harmony between human and nature/land			The four women, most likely employees, are smiling into camera. They seem happy while walking outside next to buildings and many bushes and some trees. As the photograph takes half of the page, it seems an important photograph which communicates a harmony between the building, the people and the plants. As if the company wants tell something about happiness outside the factory buildings.
		1.3.2	Holism	III.II	Buildings or people next to plants	
C19	Cultural / natural landscape	1.2	Acknowledging land's intrinsic value	II	Beauty of nature or natural products	The honey bees fly to their bee hive hut. It is not clear if the bees only present the beauty of nature or if the intention of this photograph is to show how free the bees can produce honey. But as there is no honey or any honey comb seen, the intrinsic value is dominating.
		2.2	Acknowledging nature's beauty and therefore its intrinsic value	II.II	Pure nature	
C20	Natural resource and food product	1.1	Acknowledging land's instrumental value	I.IV	Natural food products	This is an unusual photograph which would not be included normally as the jars filled with dark red jam cannot be linked to aby of the codes. However, the photograph shows water drops on the jars. As water drops are a natural resource, they represent the instrumental value of nature (the code is the natural product).
C22	Cultural / natural landscape	1.2	Acknowledging land's intrinsic value	II	Beauty of nature	The beauty of nature is not in the fore ground here, however present enough to mention it. More striking is value type 1.5. The insect hotel shows how people/employees/employers/the company try to preserve insects.
		1.5	Protecting and preserving the environment	I.V	Caring people or auxiliaries	
C23	People in landscape	1.1	Acknowledging land's	I.II	People dealing with crops	The tractor and the people in the green fields are codes for the instrumental value of crops/resources as the

		instrumental value			photograph shows the process of harvesting.

Table 8.2c: Value types Schwartau.

Table A8.1d

Photo ID	Page #	Photo Description (image itself)	Category of depictions
D1	3	Two men smiling into camera; mouths opened; business clothing; upper torsos; trees in background; coloured; eye-contact; rectangular; twelfth	People in landscape
D2	5	Man smiling into camera; mouth opened; business clothing; upper torso; trees in background; coloured; eye-contact; round-shaped; small	People in landscape
D3	8	Woman and man smiling into camera; mouths opened; business clothing; upper torsos; trees in background; coloured; eye-contact; round-shaped; small	People in landscape
D4	12	Two man looking at tree; casual clothing; touching tree; man on the right; trees in background; coloured; straightforward; round-shaped; small	People in landscape
D5*	12	Woman smiling; sitting at roller with packaging; upper torso; machines in the middle; man standing at machine in background; looking into camera; both wearing protective clothing; inside factory hall; coloured; eye-contact, straightforward; round-shaped; small	
D6*	12	Woman looking at shelves with products; casual clothing; upper torso; touching products; basket on right arm; coloured; straightforward; round-shaped; small	
D7	15	Woman smiling into camera; mouth opened; wearing blouse; upper torso; trees, lawn in background; coloured; eye-contact; round-shaped; small	People in landscape
D8	24	Man looking into camera; casual clothing; upper torso; hand at leaves; tree on the right; grass, trees in background; coloured; eye-contact; round-shaped; small	People in landscape
D9	26	Brown nuts; coloured; slightly from above; coloured; eye-contact; round-shaped; small	Natural food product
D10*	26	Several people working at assembly line; protective clothing; brown objects in plastic boxes; coloured; slightly from above; round-shaped; small	
D11*	26	People sitting at wooden tables; protective clothing; building, plant in background; coloured; slightly from above; round-shaped; small	
D12	27	Corn; coloured, straightforward; round-shaped; small	Natural food product

D13	27	Grapes; coloured; from above; round-shaped; small	Natural food product
D14	27	Trees; grass at bottom; coloured; straightforward; round-shaped; small	Cultural / natural landscape
D15	28	Person partly hidden by tree with green leaves and red berries; casual clothing; backwards; coloured; straightforward; round-shaped; twelfth	People in landscape; People with natural food product
D16*	28	Three women standing at assembly line; protective clothing; upper torsos; inside factory hall; coloured; slightly from above; round-shaped; twelfth	
D17*	30	Three men at machine; casual clothing; inside factory hall; coloured; straightforward; round-shaped; small	
D18	30	Trees; bushes with green leaves; brown soil; coloured; straightforward; round-shaped; small	Cultural / natural landscape
D19	30	Bee on blossom; two blossoms at bottom and left; coloured; straightforward; round-shaped; small	Cultural / natural landscape
D20	32	Man smiling into camera; mouth opened; business clothing; trees in background; coloured; eye-contact; round-shaped; small	People in landscape
D21*	34	Photovoltaic panels; company building in background; blue sky; coloured; straightforward; round-shaped; small	
D22*	34	VW-bus with logo; building, trees with brown leaves in background; coloured; straightforward; round-shaped; small	
D23	35	Man smiling into camera; mouth opened; business clothing; trees in background; coloured; eye-contact; round-shaped; small	People in landscape
D24	36	Several people looking into camera; partly smiling; partly mouths opened; casual clothing; waving hands; poster in the middle; costumed person on the right; trees in background; coloured; eye-contact; round-shaped; less than twelfth	People in landscape
D25*	36	Two women, four man smiling into camera; mouths opened; business clothing; upper torsos; desk in front; windows, plants in background; coloured; eye-contact; round-shaped; less than twelfth	
D26*	37	Many people looking into camera; sports clothing; kneeling, standing; poster; buildings, trees in background; coloured; eye-contact; round-shaped; less than twelfth	
D27	37	Woman smiling into camera; mouth opened; trees in background; coloured; eye-contact; round-shaped; small	People in landscape
D28*	37	Woman, two men looking into camera; partly smiling; business clothing; upper torsos; holding paper, award in hands; windows in background; coloured; eye-contact, slightly from below; round-shaped; small	
D29*	39	Two women, two men sitting opposite to each other at table; casual clothing; papers, pens on table; lamps shining at wall in background; coloured; slightly from above; round-shaped; small	

D30*	42	Man looking into camera; mouth slightly opened; business clothing; upper torso; holding paper with logo in hand; shelves with products in background; coloured; eye-contact, slightly from above; round-shaped; less than twelth	
D31	43	Brown soil; coloured; from above; round-shaped; sixth; background photograph; graphics placed on top	Cultural / natural landscape
D32*	44	Building under construction; coloured; from above; round-shaped; small	
D33	44	Brown substances in filtering machine; coloured; from above; round-shaped; small	Natural food product
D34	46	Woman smiling into camera; mouth opened; wearing blouse; upper torso; trees in background; coloured; eye-contact; round-shaped; small	People in landscape
D35*	47	Two persons standing/knealing at shelves; coloured; straightforward; round-shaped; small	
D36	48	Woman and man smiling into camera; mouths opened; business clothing; upper torsos; standing close to each other; plant in front; trees in background; coloured; eye-contact, from below; round-shaped; less than twelfth	People in landscape
D37*	49	Three children painting with pens on paper; sitting at table; three children in background; inside room; coloured; straightforward; round-shaped; sixth	
D38	49	Several people standing in line; casual clothing; between planted plants; mesh above them; coloured; straightforward; round-shaped; sixth	People in landscape
D39	50	Several people sitting and clapping in open room; casual clothing; no glass in windows; trees in background; coloured; straightforward; round-shaped; sixth	People, planted areas next to building
D40*	50	Children, one adult standing, sitting in circle; casual clothing; decorated walls; coloured; slightly from above; round-shaped; sixth	
D41	51	Four persons washing clothes; woman handling water pump; casual clothing; outside; children, sandy ground; trees in background; blue sky; coloured; straightforward; round-shaped; less than twelfth	People in landscape
D42*	51	Many people standing, sitting around small space; casual clothing; man offers papers; hut, poster, woods in background; cloudy sky; coloured; straightforward; round-shaped; sixth	
D43	54	Same like D7, just smaller	People in landscape

Table A8.1d: Description of photographs Seeberger.

Table A8.2d

Photo ID	Category of Depictions	Value type category #	Value type category	Code #	Code	Interpretation
D1	People in landscape	1.3	Harmony between human and nature/land			The two men are smiling into camera, looking serious, though; not happy, rather self-confident because of their crossed-arms or their serious dress. Nevertheless, ones gets the impression that the men are part of the broader ecological community with the green background.
		1.3.2	Holism	III.II	Buildings or people next to plants	
D2	People in landscape	1.3	Harmony between human and nature/land			Even though this is a small picture and it could have been excluded due the few green in the background, it is important to the whole report. The man is smiling, looking happy, in contrast to D1.
		1.3.2	Holism	III.II	Buildings or people next to plants	
D3	People in landscape	1.3	Harmony between human and nature/land			Same like D1 and D3. Obviously, all the people on the first photographs are employees or employers of the company.
		1.3.2	Holism	III.II	Buildings or people next to plants	
D4	People in landscape	1.3	Harmony between human and nature/land			This photograph is the first in the report which is about people actually touching plants, in this case a big tree.
		1.3.2	Holism	III.II	Buildings or people next to plants	
		1.3.4	Unity with nature: fitting into nature	III.IV	People within landscape	
D7	People in landscape	1.3	Harmony between human and nature/land			Same like D1-D3, just one person. Additionally, the woman stands next to tree, maybe even touching it with her back. She seems more connected to nature than the people in D1-D3.
		1.3.2	Holism	III.II	Buildings or people next to plants	
D8	People in landscape	1.3	Harmony between human and nature/land			The man looking serious into camera touches a plant and is standing in a field of grass or crops. It is not clear whether the man is an employee/employer or customer/scientist. The photograph

		1.3.4	Unity with nature: fitting into nature	III.IV	People within landscape	needs more context to understand it as it is one of the first and few photographs which show more nature than just some unclear background. This person is literally surrounded by nature, which is rare in the report.
D9	Natural food product	1.1	Acknowledging land's instrumental value	I.IV	Natural food products	The instrumental value (1.1) in this picture is debatable, because nobody is seen who uses the nuts. Clearer is the beauty of the nuts, hence the intrinsic value.
		1.2	Acknowledging land's intrinsic value	II	Beauty of natural products	
		2.1	Acknowledging nature's beauty and therefore its instrumental values	II.Ia	Natural food products	
D12	Natural food product	1.1	Acknowledging land's instrumental value	I.IV	Natural food products	Same like D9, just corn not nuts.
		1.2	Acknowledging land's intrinsic value	II	Beauty of natural products	
		2.1	Acknowledging nature's beauty and therefore its instrumental values	II.Ia	Natural food products	
D13	Natural food product	1.1	Acknowledging land's instrumental value	I.IV	Natural food products	Same like D9 and D12, just grapes.
		1.2	Acknowledging land's intrinsic value	II	Beauty of natural products	
		2.1	Acknowledging nature's beauty and therefore its instrumental values	II.Ia	Natural food products	
D14	Cultural / natural landscape	1.2	Acknowledging land's intrinsic value	II	Beauty of natural products	This is the first photographs in this report showing nature only. The beauty of nature is demonstrated.
		2.2	Acknowledging nature's beauty and therefore its intrinsic values	II.II	Pure nature/landscape	

D15	People in landscape; People with natural food product	1.1	Acknowledging land's instrumental value	I.II	People dealing with crops or resources	This picture is bigger than the previous ones. A person, probably harvesting, is shown within plants, as if to show how valuable nature is and that is provides food.
D18	Cultural / natural landscape	1.2	Acknowledging land's intrinsic value	II	Beauty of natural products	The small photograph shows plants, bushes, trees. It is the pure beauty of nature that is shown here.
		2.2	Acknowledging nature's beauty and therefore its intrinsic values	II.II	Pure nature/landscape	
D19	Cultural / natural landscape	1.2	Acknowledging land's intrinsic value	II	Beauty of natural products	The bee sitting and eating on a yellow blossom symbolises the beauty of nature. The intrinsic values are dominating in this photograph, the instrumental value could be interpreted here (as it is a honey bee), but there is no connection to humans made, e.g., by using honey as a product.
		2.2	Acknowledging nature's beauty and therefore its intrinsic values	II.II	Pure nature/landscape	
D20	People in landscape	1.3	Harmony between human and nature/land			Same like D1-D3, D7. Judging the dress, the man smiling into camera is an employee by the company.
		1.3.2	Holism	III.II	Buildings or people next to plants	
D23	People in landscape	1.3	Harmony between human and nature/land			Same like D1-D3, D7, D20.
		1.3.2	Holism	III.II	Buildings or people next to plants	
D24	People in landscape	1.3	Harmony between human and nature/land			This photograph shows many people in front of trees. They are waving their arms, smiling, laughing and looking happy. The company logo is shown and a mascot.
		1.3.2	Holism	III.II	Buildings or people next to plants	

D27	People in landscape	1.3	Harmony between human and nature/land			Same like D1-D3, D7, D20, D23. The woman looks friendly because of her wide smile.
		1.3.2	Holism	III.II	Buildings or people next to plants	
D31	Cultural / natural landscape	1.1	Acknowledging land's instrumental value	I.IV	Natural food products	Even though there is a label, a box and a tea bag placed on top of the photograph, it is the pure brown soil that is dominating. It is placed like a striking background, that gives a meaning to the label, box and tea bag in the foreground.
		1.2	Acknowledging land's intrinsic value	II	Beauty of nature or natural products	
		2.1	Acknowledging nature's beauty and therefore its instrumental values	II.Ia	Natural food products	
D33	Natural food product	1.1	Acknowledging land's instrumental value	I.IV	Natural food products	Fruits and nuts are seen in machines for processing. This is a clear instrumental value.
D34	People in landscape	1.3	Harmony between human and nature/land			Same like D1-D3, D7, D20, D23, D27. A young woman smiling happy into camera.
		1.3.2	Holism	III.II	Buildings or people next to plants	
D36	People in landscape	1.3	Harmony between human and nature/land			The man and the woman standing very close to each are smiling proudly and friendly into camera. They are business like dressed. Even though the photographs is very similar to D1-D3, D7, D20, D23, D27, D34, it is more striking as it is bigger, there is more torso to see and there is a plant partly in the foreground.
		1.3.2	Holism	III.II	Buildings or people next to plants	
D38	People in landscape	1.1	Acknowledging land's instrumental value	I.II	People dealing with crops	The instrumental value is shown in the crops that are planted. The people are not directly touching them, however, they look at them and walk carefully through them.
		1.3	Harmony between human and nature/land			

		1.3.4	Unity with nature: fitting into nature	III.IV	People within crops	
D39	People, planted areas next to building	1.3	Harmony between human and nature/land			The connection of the people becomes clear through the near trees next to building, probably wooden.
		1.3.2	Holism	III.II	Buildings or people next to plants	
D41	People in landscape	1.3	Harmony between human and nature/land			People are washing fabrics outside with water, buckets and in an old-fashioned way (no technical equipment). In the background green trees are seen.
		1.3.2	Holism	III.II	Buildings or people next to plants	
D43	People in landscape	1.3	Harmony between human and nature/land			See D7.
		1.3.2	Holism	III.II	Buildings or people next to plants	

Table A8.2d: Value types Seeberger.

Legend for tables A8.1a-d:

Photographs with nature depictions or natural products

*   Excluded photographs

Statistics (Perspective 1) for Tables A8.1a-d of all excluded photographs (marked with *):

Lebensbaum:

The angles of the 82 excluded photographs include:

From above	16
From below	10
From below/straightforward	1
Straightforward	27
Straightforward/eye-contact	2
Slightly from above	5
Slightly from below	5
Perspective angle	1
Eye-contact	14
Eye-contact, slightly from below	11

The 82 excluded photographs are of the following shapes:

Rectangular	18
Round-shaped	53
Squared	10

The sizes of the 82 excluded photographs are:

Full page	2
Double page	2
Half of page	1
Third of page	1
Quarter of page	4
Fifth of page	2
Sixth part of page	2
Eighth part of page	6
Tenth part pf page	1
Twelfth part of page	21

Less than twelfth part of page but bigger than the next category	23
Generally small	17

Rapunzel:

The **angles** of the 78 photographs include:

From above	5
From below	3
Slightly from above	4
Slightly from below	7
Eye-contact	12
Eye-contact, slightly from below	8
Eye-contact, slightly from above	2
Eye-contact, from below	1
Eye-contact, straightforward	2
Straightforward	34
Angular straightforward	1

The 78 photographs are of the following **shapes** or of a full-page size (which would equalise with a rectangular shape):

Rectangular	23
Rectangular with some curves	23
Round-shaped	7
Squared	25

The **sizes** of the 78 photographs are:

Full page	4
Two thirds of page	6
Third of page	19
Fourth of page	1
Fifth of page	2
Sixth part of page	1
Ninth part of page	2
Tenth part of page	1
Twelvth part of of page	4
Less than twelfth part of page but bigger than the next category	25

Generally small	13

Schwartau:

The **angles** of the 15 excluded photographs are:

From above	1
From below	1
Eye-contact	3
Eye-contact, slightly from below	2
Straightforward	6
Straightforward, slightly from below	1
Slightly from below	1

The 15 photographs are of the following **shapes** or of a full-page size (which would equalise with a rectangular shape):

Rectangular	12
Round-shaped	3

The **sizes** of the 15 photographs are:

Full page	2
Half of page	3
Third of page	4
Fourth of page	1
Eighth part of page	1
Twelvth part of page	1
Generally small	3

Seeberger:

The **angles** of the 18 excluded photographs are:

From above	1
Eye-contact	2
Eye-contact, slightly from below	1
Eye-contact, slightly from above	1
Straightforward	7
Eye-contact, straightforward	1
Slightly from above	4

The 18 photographs are of the following **shapes**:

Round-shaped	18

The **sizes** of the 18 photographs are:

Sixth part of page	3
Twelfth part of page	1
Less than twelfth part of page but bigger than the next category	3
Generally small	11