Corporate Social Responsibility & Information and Communication Technology in the Digital Age

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Abstract

Pervasive digital technologies are transforming economies and societies worldwide. This dissertation focuses on Corporate Social Responsibilities (CSR) as the dominant model of business ethics over the last decades, in an attempt to better understand the digital transformation. Digitalization represents a fundamental and challenging transformation and promises to touch on almost all areas of life. While the broad field of CSR and business ethics have started to address this fundamental shift, research remains in its infancy, given the extent and scope of the rapidly evolving technologies. Consequently, this dissertation strives to contribute to ongoing research efforts by investigating corporate conduct in relation to the digital transformation, drawing on theories and concepts from business ethics, management, political science, surveillance studies, as well as digital and information ethics. A particular focus is thereby placed on the political impacts and shifting roles and responsibilities of corporations. The dissertation consists of six individual chapters that are embedded in an introduction, as well as a discussion and conclusion section. The six chapters are briefly depicted next:

Chapter I provides an overview of corporate citizenship as a foundation for an expanded sense of politics and corporations. The chapter thereby highlights the political roles that corporations can adopt in terms of: (1) engaging in the provision of citizenship rights as quasi-governmental actors ("corporations as governments"), and (2) engaging in political decision-making processes as members of a political community ("corporations as citizen"). Based on this theoretical foundation, the chapter discusses theoretical and practical issues associated with these corporate roles, such as the scope of engagement, voluntariness, selectivity, and legitimacy.

Chapter II presents and discusses legitimacy as a core concept in business ethics literature. After a brief introduction of four main approaches of ethics, Habermasian discourse ethics is outlined as a communication-driven approach and cornerstone of political CSR's framework "legitimacy as deliberation." Along with the concept of greenwashing and astroturf lobbying, the chapter outlines how corporations can struggle

with a legitimacy deficit ("legitimacy lost"). Further, it shows how companies can gain legitimacy through credible communication of their CSR commitment, and responsible lobbying ("legitimacy gained"). The chapter closes by describing limitations of corporate legitimacy creation through deliberation, rooted in idealized Habemasian normative thinking, and indicates pathways for Habermasian political CSR in the digital age.

Chapter III. The digital transformation brings along novel forms of digital exchange based on ICT and data-driven platform infrastructures, known as sharing economy platforms (SEPs). SEPs reshape classical roles and responsibilities in society via institutional strategies. Against the background of political CSR theory, the chapter argues that SEPs carry the potential to contribute to the broader society when taking over new responsibilities that build on their digital capacities. The chapter outlines five initial dimensions in which SEPs may contribute to the common good, termed as platform CSR. Consequently, the chapter conceptualizes SEPs digital capacities from a political CSR perspective proposing a democratization of SEPs grounded in Habermasian and Rawlsian political CSR notions to overcome the legitimacy deficit arising with their new role.

Chapter IV addresses the controversial Janus-face of surveillance as manifested by distributed ledger technology (DLT) and blockchain-based product identifiers in the Swiss luxury watch industry. Via an inductive approach to data collection and analysis, based on a survey and interviews with luxury watch experts, the chapter explores perceptions of the digital transformation in the form of DLT along with sector-specific trends and challenges. The findings reveal salient industry challenges and four distinct characteristics of the enduring transformations. Based on the findings, the chapter conceptualizes 'networked surveillance' as a digital transparency concept that bridges dichotomous notions of surveillance, underlining benefits of learning and control for an ethical-informed luxury watch industry.

Chapter V investigates the changing political impacts of corporations in light of the emerging digitalization drawing on the illustrative case of the starry sky beetle – as a systemic environmental threat. Accordingly, the chapter explores political CSR and

multistakeholder action in settings with well-functioning governments, where public and private goods are at stake. By framing digitalization in terms of transparency, surveillance, and data-sharing, the chapter shows how the digital sphere offers corporations new scope for political deliberation. Based on this advancement, the chapter develops a conceptualization and definition of data-deliberation, highlighting the potential of corporations to act as active deliberators in a Habermasian sense to better address systemic challenges.

Chapter VI. Algorithmic pricing becomes increasingly widespread among corporations that use this strategy to set prices for their products and services dynamically and based on personal characteristics. To gain an in-depth understanding of this pricing approach and the ethical challenges it entails, the chapter engages in a systematic review of 315 related articles on the topics of dynamic and personalized pricing, and pricing algorithms. Given the novelty of the topic, the review provides a definition of the term algorithmic pricing and maps ethical issues along micro-, meso-, and macro-levels of society, ultimately connecting to the debates on algorithmic accountability and algorithmic governance.

These six chapters separately, as well as collectively, demonstrate how digitalization changes the impacts that corporations can have in the digital age and the opportunities for corporations to adopt new roles and responsibilities in society. The dissertation offers a contribution to CSR and business ethics, explicitly advancing the research stream of political CSR and the understandings of the corporation as a political actor in the digital age. For practitioners and policymakers, the depicted digital transformation requires careful navigation to seize the opportunities it brings along. In this regard, this thesis draws managerial and policy implications.

Keywords: Business Ethics, Corporate Social Responsibility (CSR), Political CSR, Habermas, Business Legitimacy, Digital Age, Digital Transformation, Digitalization, Transparency, Surveillance, Data-deliberation, Algorithmic Pricing

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Introduction

1.1 Corporate Social Responsibility and Business Ethics

Corporate Social Responsibility (CSR) is a multifaceted research field, which examines the role of corporations in society. CSR is embedded in the broader field of business ethics and thereby located at the intercept of several disciplines such as management, economics, philosophy, psychology, political as well as communication science (Bowie, 2001; Crane & Matten, 2016; Crane, Matten, McWilliams, Moon, & Siegel, 2009; Luetge, 2013). Business ethics can be broadly defined as "the study of business situations, activities, and decisions where issues of right and wrong are addressed" (Crane & Matten, 2016, p. 5). Two broad streams or framings of business ethics research can be distinguished: a positivist and a normative. The positivist or empirical stream describes how firms behave in the market and thus refers to factual aspects of morality, whereas the normative stream strives to explain how actors in the market ought to behave informed by different philosophical theories (Aßländer, 2011).

CSR represents the dominant model of business ethics at least over the past decades, with its historical roots reaching back to the late 1800s (Bowie, 2001; Carroll, 2009; Luetge, 2013). From a historical perspective, corporate concern for society has been labeled differently in the past centuries, including terms such as "[s]ervice, civic-mindedness, welfare work, trusteeship" (Husted, 2015, p. 125). Although these labels differ from today's wordings subsumed und corporate social responsibility, they carry the same core concepts and practices that are characteristic for CSR as the dominant umbrella term and the key identifier of current debates (Carroll, 2015; Husted, 2015).

Today's research body grouped under the umbrella of CSR includes various branches and approaches such as sustainability, corporate citizenship, social and environmental governance, business and sustainability, sustainable development, business and human rights (Aguinis & Glavas, 2012; Jędrzej George Frynas & Yamahaki, 2016;

Garriga & Melé, 2004; Wang, Tong, Takeuchi, & George, 2016; Wettstein, 2009). The research on CSR is proliferating, as Aguinis and Glavas (2012) highlight. Out of an estimated amount of 588 journal articles and 102 book chapters considered in their review, over 50 percent has been published since 2005. The growing CSR research body is thereby accompanied by increasing interest from practitioners, policymakers, and the wider public, concerned about the role of business in society (Pisani, Kourula, Kolk, & Meijer, 2017). Against this background and in light of the pluralistic CSR field, it is not surprising that no universally accepted definition CSR[1] exists (for a recent overview of existing definitions and related approaches, see, e.g., P. Bansal & Song, 2017).

Considering societal expectations in relation to corporations, academic research has strived to clarify the responsibilities of businesses for many years and will certainly do so in the future. One perspective that is widely recognized today (albeit equally criticized by others Friedman, 1970) is Archie Carroll's CSR pyramid (Kaplan, 2020). The pyramid allows for a useful approximation to the CSR concept, distinguishing between four CSR domains (Carroll, 1991; M. S. Schwartz & Carroll, 2003): (1) economic, (2) legal, (3) ethical, and (4) philanthropic. Carroll (2015) stresses that the first two domains represent requirements, whereas ethical responsibilities are expected, and the philanthropic responsibilities appear as desirables. In other words: "[b]ecause laws are essential but not sufficient, society expects businesses to be ethical; that is, to embrace those activities, practices, and standards that are expected or prohibited by society even though they may not (yet) be codified into laws" (Carroll, 2015, p. 90). In this regard, law can be perceived as a codification of ethics (M. S. Schwartz & Carroll, 2003).

As societal prospects toward businesses change over time, so do the ethical responsibilities expected from them and, in turn, potential legal requirements. Responsibility is thereby often spelled out as the avoidance of harm, or distribution to the

[1] In light of the pluralistic CSR cosmos with its various branches and approaches, as well as diverse historical roots, CSR is treated as an umbrella term in this dissertation.

broader society (Crane et al., 2009). However, what falls precisely within the scope of corporate social responsibility, is often subject to extensive debate, as "responsibility covers “the full scope of norms, standards, values and expectations that reflect what consumers, employees, shareholders and other stakeholders regard as fair, just and consistent with respect for protection of stakeholders’ moral rights” (Carroll, 2015, p. 90). Different theories have been utilized to explain corporate social responsibilities, along with various levels of analysis (Jędrzej George Frynas & Yamahaki, 2016). Consequently, CSR can be approached through different conceptual lenses. In a widely cited article, Garriga and Melé (2004) differentiate between (a) instrumental, (b) integrative, (c) ethical, and (d) political approaches, based on the main focus of a given CSR theory:

(a) *Instrumental theories* treat the corporation as a means for value creation. From this perspective, wealth creation represents the primary social responsibility of the corporation (Friedman, 1962, 1970; Jensen, 2002; Porter & Kramer, 2011; Sundaram & Inkpen, 2004). Managerial literature and practitioners often refer to the instrumental conception of CSR as a win-win situation (Porter & Kramer, 2011). However, critiques say that this view may be outdated:“[t]he principles of the “business case” for CSR, along with the notions of “shared value,” have at their basis an instrumental logic because although they posit a win-win, the first win (financial performance) always trumps the second win (social good)” (Kaplan, 2020, p. 3).

(b) *Integrative theories* approach CSR in the way that they argue for an integration of social demands. From this perspective, social demands ought to be included in business practice due to the dependence of business on society as a central element for the existence, continuation, and growth of the firm (Garriga & Melé, 2004).

(c) *Ethical theories* treat the business society's relationship against the background of ethical values present in a societal context. CSR is thereby approached as an ethical obligation, whereby corporations ought to include social responsibilities (Garriga & Melé, 2004).

(d) *Political theories* approach CSR against the background of corporate power in the political arena of business, government, and society relations. Due to political power, firms may take on social responsibilities, and engage with the government and society in various cooperative modes (Garriga & Melé, 2004).

The group of political theories has grown substantially in recent years, with many authors adding to the understandings of corporations as political actors (Jędrzej George Frynas & Stephens, 2015; Matten & Crane, 2005; Scherer & Palazzo, 2007, 2011; Willke & Willke, 2008; Wood, Logsdon, Lewellyn, & Davenport, 2006). This political turn was also well received by a general management audience as the before mentioned citations in some of the key management outlets indicate. Thus, over the past two decades, business ethics, with its key derivate CSR and the sub-section of political approaches, has made its way to mainstream management theory (Hühn, 2018; Seele, 2016a, 2018). As the political perspective on CSR drew more research attention, several different conceptions have been developed and discussed under labels such as "(global) business citizenship," "corporate citizenship," and "Political CSR" (Aßländer & Curbach, 2017; Matten & Crane, 2005; Matten, Crane, & Chapple, 2003; Scherer & Palazzo, 2007; Wood et al., 2006). In this thesis, political approaches to CSR or what came to be known as the political CSR 'brand' will be used as a central reference point (Mehrpouya & Willmott, 2018).

1.1.1 Political CSR

Over a decade ago, Scherer and Palazzo (2007) introduced 'the politicization of the corporation' and the concept of 'political CSR: corporate legitimacy as deliberation,' building on previous research that began to connect the CSR debate to research in political science and political philosophy (Moon, Crane, & Matten, 2005; Palazzo & Scherer, 2006; Young, 1995, 2004). Over the years, political CSR has triggered intriguing insights and brought substantial value to the academic debate also in relation to the nonmarket strategy literature, where the term corporate political activity (CPA) is predominantly used (Mellahi, Frynas, Sun, & Siegel, 2016). Several agenda-setting publications emerged (Scherer, 2018; Scherer & Palazzo, 2011; Scherer, Rasche, Palazzo, & Spicer, 2016), and reviews on major trends and general theoretical views within the literature were published

(Jędrzej George Frynas & Stephens, 2015; Scherer, 2018). Consequently, since its inception, the research stream on political CSR has opened a new chapter in the CSR literature and various authors have contributed to expanding the political understandings and responsibilities of corporations (see, e.g., Aßländer & Curbach, 2017; den Hond, Rehbein, de Bakker, & Lankveld, 2014; Ehrnström-Fuentes, 2016; Jędrzej George Frynas & Stephens, 2015; Kourula & Delalieux, 2016; Mäkinen & Kasanen, 2016; Mäkinen & Kourula, 2012; Rehbein, den Hond, & Bakker, 2018; Whelan, 2012).

Political CSR (or PCSR) can be defined as "as activities where CSR has an intended or unintended political impact, or where intended or unintended political impacts on CSR exist" (Jędrzej George Frynas & Stephens, 2015, p. 483). Thus, political CSR deals with responsibilities of corporations, when "firms become political actors by engaging in public discourse, influencing collective decisions, and by providing public goods (or fighting against public bads) because their impact reaches beyond their immediate contract partners and affects others" (Scherer et al., 2016, p. 276). In this way, political CSR engages with corporate self-regulation, public-private partnerships, corporate lobbying, and situations when private firms are taking over governmental tasks concerning the provision of public goods (Anastasiadis, Moon, & Humphreys, 2018; Jędrzej George Frynas & Stephens, 2015; Scherer et al., 2016).

The widely cited political CSR approach of Scherer and Palazzo addresses legitimacy questions that arise when corporations engage in political activities that touch on the public good in situations where national governments are ineffective, failing, or completely absent (Scherer & Palazzo, 2007, 2011; Scherer et al., 2016). Thus, their approach strives to provide an answer to a corporate legitimacy void that arises from transnational business conduct in a (globalized) world with sometimes fragile nation-states and influential corporate players that take over governmental responsibilities. When businesses engage in such activities that affect the wider society and public good, they lack a political mandate akin to a democratically elected government (Wagner & Seele, 2017). As a consequence, a democratic deficit arises, which may be overcome by what Scherer and Palazzo term 'corporate legitimacy as deliberation' (Palazzo & Scherer, 2006;

Scherer & Palazzo, 2007). This approach builds on the Habermasian ideal of deliberate democracy where public debate and public reason between free and equal citizens are at the core of legitimate political interest aggregation (Palazzo & Scherer, 2006; Scherer & Palazzo, 2007). A central aim of this dissertation is the discussion of political CSR theory against in light of recent transformations brought along by digital technologies.

1.2 A new game-changer for CSR and Business Ethics: The arrival of the Digital Age

What falls within the scope of (political) responsibilities of the business firm is not carved in stone, given changing societal expectations and new emerging trends and issues that impact on business and society. As CSR and business ethics research evolved over the past years, several authors have pointed out the need to keep track of emerging transformations and issues, which may touch on the business and society relations (Aguinis & Glavas, 2012; Jędrzej George Frynas & Stephens, 2015; Greenwood & Freeman, 2018; Scherer et al., 2016). This thesis explores political CSR and business ethics in light of the disruptive changes associated with digitalization and new ICTs that characterize what has been labeled as the "digital age," the age of surveillance capitalism," or the "fourth revolution" (Floridi, 2014; D. Lyon, 2018; E. Schmidt & Cohen, 2013; Seele & Lock, 2017; Zuboff, 2019). The digital transformation initiated by new information and communication technologies (ICTs) can be seen as a new key trend that is progressively unfolding and gaining importance in society (Nature, 2017; E. Schmidt & Cohen, 2013; Taddeo & Floridi, 2018; Wachter, 2019). Against the background of historical inventions such as the steam engine that triggered substantial economic and societal transformations, some authors indicate that the shift initiated by digital technologies will be even more profound (Floridi, 2014; Lanzolla et al., 2018; Zuboff, 2019).

More than 80 years after Alan Turing laid down the theoretical foundations for the modern computer, society has entered a new digital era, enabled and shaped by rapid advances in ICT (Floridi, 2014; D. Lyon, 2018; E. Schmidt & Cohen, 2013; Zuboff, 2019). Today's understandings of the digital transformation, or in short digitalization, encompasses a variety of ICTs, which allow for increased efficiency, connectivity, trust

disintermediation, and automation, and contribute to the generation of exponentially growing digital data (Hampton et al., 2013; Lanzolla et al., 2018). At the core of the digital age is the shift from analog, offline data to digital, online data (Floridi, 2014). In other words, in its smallest digital representation, information becomes a binary digit (bit), representing a discrete and stable state in a computational system often described as 0 and 1 (Floridi, 2016). The following paragraphs strive to shed light on some of the most prominent characteristics of this digitalization transformation, particularly concerning the labels of big data, and artificial intelligence.

1.2.1 Digitalization and Big Data

Big or large scale datasets derive from human online activities and an ever-growing network of interconnected sensors and devices (Floridi, 2014; Kagermann, 2015). In recent years, many societies are experiencing an increasing datafication, referring to the digital quantification of previously analog areas of life, such as communication, consumption, health and fitness, transportation, political participation, leisure, and private relationships (H. Kennedy, 2018; D. Lyon, 2018; Zuboff, 2019). The use of smartphones, online search engines, social media, self-tracking devices, and smart assistance generate an unprecedented amount of data points, holding comprehensive information of individual and group behavior (George, Haas, & Pentland, 2014; Pentland, 2015; Shah, Cappella, & Neuman, 2015). Next to the human actors, machines, and sensors are becoming key data producers (Kagermann, 2015). Smart manufacturing, smart cities, and smart living are the colloquial descriptions of an expanding network of physical devices that are connected to a broader network and contribute to ever-growing data sets (Y. Liu & Chou, 2018). Thus, big data can be understood as a rising pool of digital information generated by humans and machines (Herschel & Miori, 2017).

Big data divide

Ethicists and privacy advocates warn that big data is a valuable resource. However, in the hands of only a few large corporations may serve specific interests instead of benefitting the wider public (Couldry & Yu, 2018; Zuboff, 2019). When firms collect,

store, and analyze user data, it is often unclear how individuals and groups are affected. Researchers have critically highlighted a rising 'big data divide,' which refers to the asymmetric power relationship between data collectors and data providers (Andrejevic, 2014). Areas of tension are data privacy and security (Chalcraft, 2018), data ownership (Francis, 2018; van der Burg, Bogaardt, & Wolfert, 2019), and discrimination (Hacker & Petkova, 2017). Further, the rising corporate power related to surveillance has been stressed (Brayne, 2017; D. Lyon, 2014; Zuboff, 2019). As a result, many governments have started to overhaul regulations to account for the new conditions. The new European Union General Data Protection Regulation (GDPR) is a key example in this regard (Chalcraft, 2018; Sharma, 2020).

The big data divide also refers to an increasing gap between those who can fully utilize the advantages of big data and the digital sphere and those with no or limited access or missing resources to do so (UNCTAD, 2017). Corporations that are situated in countries with highly developed digital infrastructures have a clear advantage over those that are operating in less developed regions of the world. The utilization of big data requires significant resources and reliable digital infrastructures. Thus, IT-systems for data storage and analysis, as well as trained personnel, are essential. Further, big data builds on users and sensors that are connected to the digital sphere. The offline regions of the world, where the necessary enabling technologies are often limited or unreliable, lowers the potential to create value from big data (Noriega-Campero et al., 2020). Not surprisingly, large-scale infrastructure projects, of Google, Facebook, or SpaceX, aim at integrating the offline regions into the digital network, by offering (global) internet services. Proponents of such efforts, see great potential in giving populations access to what is increasingly regarded as a human right (United Nations General Assembly, 2016). Meanwhile, critics stress that privately owned and operated internet infrastructure can be turned into a source of social control and corporate profit, rejecting the seemingly altruistic notions behind projects such as "Facebook's grand plan to wire the world" (Hempel, 2018). In this regard, access to the digital sphere might be free in monetary terms, but users may instead "pay" for the access with their personal data (Hacker & Petkova, 2017).

Big data as a resource

For corporations, digital data has become a synonym for efficiency gains, new business opportunities, the source of competitive advantage, and a means to create new value for shareholders, customers, but also for the larger society (George et al., 2014) (George et al., 2014; Kronblad, 2020; Sanders, 2016). As the digitalization is becoming more widespread around the globe, investors are positioning themselves to get a stake in a 'big data market' that is estimated to be worth $7.1 trillion in 2020 (Wortmann & Flüchter, 2015; Zuboff, 2019). Framed as a natural resource that is more valuable than oil, the promises of big data entices businesses worldwide, triggering a new rush for its 'mining' (Parkins, 2017). The corporate goals focus, thereby, often on the prediction of individual actions, consumer choices, and behavior, as well as larger group patterns that can be transferred into value streams (Zuboff, 2019). However, the utilization of large-scale data sets also requires substantial corporate resources, which not every firm can afford. In its initial form – as a 'digital raw resource'– it is a mere agglomeration of data points, which only becomes valuable through refinement, via the suitable computational tools and techniques. Thus, the key to deriving value from big data lies in deciphering the information it contains.

1.2.2 Artificial Intelligence

"The data is 'Big' because it is difficult to sort and analyze with existing computing." (Mittelstadt & Floridi, 2016, p. 309). The sense-making of Big Data has become one of the most important processes in the digital age and requires sophisticated analytical tools to structure and extract insights from otherwise meaningless data points. Linear statistical models have been the benchmark to explain potential relationships between variables for many years. Big data, however, requires much more complex computer science methods, which go beyond conventional statistics. The arrival of machine learning techniques, such as decision trees, support vector machines, neural nets, and deep learning, allows for modeling of much more complex and flexible relationships than most statistical approaches permit (Varian, 2014). These techniques are often

summarized under the term artificial intelligence (AI), coined by the mathematician and computer scientist John McCarthy in 1964 (Markoff, 2016).

Artificial Intelligence often builds on algorithms, which are – in simple words – problem-solving methods, recipes, or step-by-step instructions to fulfill a specific task (Finn, 2017). Artificial Intelligence, like CSR, is generally used as an umbrella term, which entails various scientific fields and technological branches (Bhatnagar et al., 2018; Russel & Norvig, 2016). A useful first distinction can be made between narrow AI (ANI), general AI (AGI), and Artificial Super Intelligence (ASI) (Corea, 2018; Floridi, 2019; Goertzel & Pennachin, 2007). Whereas depictions of AI in popular culture often refer to AGI and ASI, the real-life is far from this futuristic portrayal. Instead, current research aims, in the long run, to achieve AGI, meaning that current approaches are still narrow AI. ANI represents computational techniques that are used for specific tasks within a context, unable to resolve tasks outside this predefined scope (Bostrom, 2014).

Nevertheless, AI is progressing at an enormous pace, and existing AI systems are already capable of automating management tasks and performing duties that used to be carried out by middle or upper management (Bostrom, 2014; Müller & Bostrom, 2016). Generally, three factors contribute to its rapid development: algorithmic innovation, big data, and the amount of compute available for training. A recent analysis of Openaai (2018) indicates that the third factor – the amount of compute available – even exceeds Moore's Law, with a current doubling-period of 3.5 months.

AI consists of several sub-fields out of which machine learning has recently evolved as one of the most promising and impactful areas, with significant and fast progress (Allen & Chan, 2017). Machine learning has been described as the power horse of AI dealing with pattern recognition in large-scale data sets "wherein computation is used to discover useful regularities in data" (Bryson, 2020, p. 4). Particularly relevant are the three salient branches of computer vision, natural language processing, and neural networks (including deep learning and generative adversarial networks) (Bhatnagar et al., 2018; Corea, 2018). As the success and progress in machine learning are expected to gain

in pace, private companies are heavily investing in this field, exceeding even the funding of the United States Government in the field (Allen & Chan, 2017). However, this dominance might be challenged as advancements in AI are not only considered to be a future driving force of corporate success, but also as "a transformative national security technology, on a par with nuclear weapons, aircraft, computers, and biotech" (Allen & Chan, 2017, p. 1)

The training of the algorithms can be typically differentiated according to three methods (Bhatnagar et al., 2018; Russel & Norvig, 2016): (1) supervised learning (providing the answer to a task) (2) unsupervised learning (when the algorithm has to find a pattern or solution by itself) and (3) reinforcement learning (trial-and-error to achieve a particular goal). The result of machine learning is typically twofold: classification and prediction. Big data provides unprecedented amounts of data to the algorithm, supporting " informed – yet, not necessarily defensible or valid – decisions or choices" (Tien, 2013, p. 127). AI generates patterns to predict future occurrences – or correlations but less causal relations. Thus, AI answers rather the what than the why question (Cukier & Mayer-Schoenberger, 2013). For many use cases, this is sufficient, and particularly the corporate quest for efficiency, productivity, and profit builds on the predictive capacities of AI when suggesting the book to buy, the person to employ, or the future business strategy to follow.

However, the predictive and classificatory capacity of AI is not free of errors (Zou & Schiebinger, 2018). Not infrequently, a mismatch between the real world and the forecasts and analyses arises. Especially the combination of datasets with differing structures can create machine-learning challenges (Salathé, 2016), and small algorithm design elements can lead to racial, gender, and other forms of discrimination (Benjamin, 2019; Bock, 2016; Coeckelbergh, 2020; Hagendorff, 2020). Thus, aspects that are highly relevant from the perspective of CSR and business ethics.

1.2.3 CSR, Business Ethics, and the Digital Age: The need to explore the challenges and opportunities of the digital transformation

CSR and the broader business ethics research have only recently started to conceptualize the digital transformation and to shed light on the changing impacts and

new roles and responsibilities that arise for corporations in light of the digital age (Etter, Fieseler, & Whelan, 2019; Etzioni, 2018, 2019; Flyverbom, Deibert, & Matten, 2019; K. Martin, 2019c; K. Martin, Shilton, & Smith, 2019; Whelan, 2019b, 2019a; Whelan, Moon, & Grant, 2013). As the digital transformation and digital technologies become pervasive around the globe, new challenges and opportunities arise: The digital age triggers new business strategies such as dynamic and personalized pricing enabled by big data and advanced algorithms (N. Chen & Gallego, 2019; Q. G. Chen, Jasin, & Duenyas, 2016; Koh, Raghunathan, & Nault, 2017). Further, an evolution of innovative forms of doing business, such as in the case of sharing economy, can be observed, where platforms challenge incumbents, tapping into regulatory voids (L. D. W. Thomas & Leiponen, 2016; Uzunca, Rigtering, & Ozcan, 2018). In addition, trust disintermediation technologies such as blockchain provide a secure, public ledger system, opening up new opportunities for transparent supply chains and ownership registries (Dierksmeier & Seele, 2019; Kewell, Adams, & Parry, 2017). Meanwhile, businesses, governments, and society are facing sustainability and other systemic challenges, where digital technologies may enable new forms of cooperation between business, government, and society (Boyd et al., 2018, p. 1237).

In sum, these examples show that the digital transformation raises new questions and brings new opportunities for CSR and business ethics research. Consequently, this thesis strives to contribute to the previously mentioned efforts undertaken in the field (Etter et al., 2019; Etzioni, 2018, 2019; Flyverbom et al., 2019; K. Martin, 2019c; Whelan, 2019b, 2019a; Whelan et al., 2013), in an attempt to shed new light on the digital transformation.

1.3 Structure of the Thesis and Integrated Manuscripts

This thesis is positioned at the intercept of CSR, business ethics, and the digital transformation, as outlined above. Therefore, the core of the thesis consists of several chapters that are grouped in three broader parts: Part A. with Chapter I and Chapter II discusses foundations, approaches, and background concepts of business ethics and

political CSR. Part B. engages with CSR and business ethics along with specific business sectors: Chapters III and IV, engage with the digital transformation in the sharing economy and the luxury watch industry, along with the conceptual lenses of political CSR and surveillance. Part C. takes a broader political CSR and business ethics perspective on digital transformation: Chapter V highlights political CSR and the changing political impacts of businesses in the digital age, and Chapter VI draws attention to the ethicality of algorithmic pricing. All integrated work in the thesis was undertaken during the period as a registered doctoral student at the Università della Svizzera italiana between 2016 and 2020. The following graphical abstract provides an overview of the integrated chapters, followed by a brief explanation of each section and an overview of the publication status of the integrated manuscripts.

1.3.1 Graphical Abstract

<table>
<tr><th colspan="4">Part A. Foundations, approaches, and background concepts of business ethics and political CSR</th></tr>
<tr><th>Ch. I</th><th>Corporate Citizenship (Dirk Matten, Andrew Crane, Jeremy Moon)</th><th>Ch. II</th><th>Business Legitimacy and Communication Ethics: Discussing Greenwashing and Credibility Beyond Habermasian Idealism</th></tr>
<tr><td colspan="2">• Ch. I provides an overview of corporate citizenship as a foundation for an expanded sense of politics and corporations, focusing on to key political roles modern corporations may adopt:
• Corporations engaging in the provision of citizenship rights as quasi-governmental actors (1. role “corporations as governments”)
• Corporations engaging in political decision-making processes as a member of political community (2. role “corporations as citizen”).
• The chapter reflects on core critique that has been raised in the literature concerning the corporate citizenship approach and the corporation as political actor, delineating the main issues related to the scope of corporate engagement, voluntariness, selectivity, and legitimacy.</td><td colspan="2">• Ch. II presents and discusses legitimacy as established in business ethics literature. Habermasian discourse ethics is outlined as a communication driven approach and cornerstone of political CSR’s “legitimacy as deliberation.”
• Along with the concept of greenwashing and astroturf lobbying, the chapter outlines how corporations can struggle with a legitimacy deficit (“legitimacy lost”). Also, it is shown how companies can gain legitimacy through credible communication of their CSR commitment, and responsible lobbying (“legitimacy gained”).
• Further, limitations of corporate legitimacy through deliberation and idealized Habermasian normative thinking are discussed, indicating pathways for political CSR in the digital age.</td></tr>
<tr><td colspan="2">Publication status: accepted for publication in: Aßländer, Michael S. (ed) Handbuch Wirtschaftsethik, Metzler Verlag, Part of Springer Nature.</td><td colspan="2">Publication status: published 2019, in: Rendtorff J. (ed) Handbook of Business Legitimacy. Springer.</td></tr>
</table>

Part B. CSR and Business Ethics: Sector Specific Digital Transformation			
Ch. III	**CSR and the Sharing Economy: A pathway to Data-Driven Platform CSR**	**Ch. IV**	**Networked Surveillance for Good? A Perception Study on Blockchain-Based Supply Chain Transparency**
• Ch. III discusses novel forms of digital exchange based on ICT and data-driven platform infrastructures: sharing economy platforms (SEPs). • SEPs represent a particularly noteworthy example of corporate conduct in the digital age as they reshape classical roles and responsibilities in society via institutional strategies. • In light of political CSR, the chapter argues that SEPs carry the potential to contribute to the broader society when taking over new responsibilities that build on their digital capacities. • The chapter outlines five initial dimensions in which SEPs may contribute to the common good, termed as platform CSR and considers a democratization of SEPs building on political CSR theory.		• Ch. IV addresses the controversial Janus-face of surveillance as manifested by distributed ledger technology (DLT) and blockchain-based product identifiers in the Swiss luxury watch industry. • Via an inductive approach to data collection and analysis, based on a survey and interview data, the chapter explores perceptions of the digital transformation in the form of DLT along with sector-specific trends and challenges. • The findings reveal salient industry challenges and four distinct characteristics of the enduring transformations. • Conceptualizes 'networked surveillance' as a digital transparency concept that bridges dichotomous notions of surveillance, underlining benefits of learning and control for an ethical-informed luxury watch industry.	
Publication status: 1st round revise & resubmit in: *Li Langergaard, L., Rendtorff, J (eds.) New Economies for Sustainability: Limits and Potentials for Possible Futures. Springer Series Ethical Economy: Studies in Economic Ethics and Philosophy.*		**Publication status**: Conference paper accepted 2020, *80th Annual Meeting of the Academy of Management.*	

Part C. The digital transformation from a wider PCSR and Business Ethics perspective: Systemic Threats and Pervasive Pricing Algorithms			
Ch. V	**Conceptualizing Data-Deliberation: The Starry Sky beetle, environmental System Risk, and Habermasian CSR in the Digital Age**	**Ch. VI**	**Mapping the Ethicality of Algorithmic Pricing: A Review of Dynamic and Personalized Pricing**
• Ch. V investigates the changing political impacts of corporations in light of the emerging digitalization drawing on the illustrative case of the starry sky beetle - a systemic environmental threat. • The chapter thereby explores political CSR and multistakeholder actions in settings with well-functioning governments, where public and private goods are at stake. • Frames digitalization in terms of transparency, surveillance, and data-sharing, and shows how the digital sphere offers corporations new scope for political deliberation. • Conceptualizes and defines data-deliberation, highlighting the potential of corporations to act as active deliberators in a Habermasian sense to better address systemic challenges.		• Algorithmic pricing becomes increasingly widespread among corporations that use this strategy to set prices for their products and services dynamically and based on personal characteristics. • Although legal, the ethicality of discriminating prices both dynamically over time and personally depending on individual consumer information can trigger concerns and even outrage. • The chapter provides an overview and discussion of the ethical challenges connected to algorithmic pricing, based on a systematic review of 315 related articles related to dynamic and personalized pricing as well as pricing algorithms in general. • The review provides a definition of the term algorithmic pricing and maps ethical issues along micro-, meso-, and macro-levels of society, ultimately connecting to the debates on algorithmic accountability and algorithmic governance.	
Publication status: published 2020, *Business Ethics: A European Review.*		**Publication status:** published 2019 (online first), *Journal of Business Ethics.*	

1.3.2 Overview of Chapters

Chapter I: Corporate Citizenship (Dirk Matten, Andrew Crane, Jeremy Moon)

Chapter I gives an overview of the concept of corporate citizenship as outlined in the approach of Matten, Crane, and Moon. (Crane, Matten, & Moon, 2004, 2008, 2010; Matten & Crane, 2005; Matten et al., 2003; Moon et al., 2005; Moon, Crane, & Matten, 2008b, 2008a). Thus, the chapter represents the conceptual foundation of the thesis in terms of an expanded sense of politics and corporations in modern societies that also represents the starting point of political CSR theory. The chapter underlines the political roles that modern business firms can adopt concerning (1) the provision of citizenship rights as quasi-governmental actors, and (2) the participation in decision-making processes of a political community. The chapter then discusses theoretical and practical issues that can arise with these expanded roles and responsibilities, such as the scope of engagement, voluntariness, selectivity, and business legitimacy.

Chapter II: Business Legitimacy and Communication Ethics: Discussing Greenwashing and Credibility Beyond Habermasian Idealism

Chapter II builds on chapter I by taking-up and discussing the legitimacy concept, tracing its roots in business ethics research. Against the background of key ethics perspectives established in the literature, Habermasian discourse ethics is outlined and discussed as a communication driven approach and a core element of political CSR, where it is also known as corporate (moral) legitimacy as deliberation (Palazzo & Scherer, 2006). The chapter engages with the legitimacy concept considering practical legitimacy struggles, which may arise in corporate contexts. Accordingly, the greenwashing and astroturf concepts are depicted and how corporations may lose legitimacy. The chapter also outlines how legitimacy can be (re)gained via credible corporate CSR communication and responsible lobbying. The chapter closes by outlining limitations of the "corporate legitimacy as deliberation" approach pointing to idealized and aspirational Habermasian philosophy in contrast to challenging real-world business settings. The outlook sets the

stage for the following core chapters indicating pathways for Habermasian political CSR in the digital age, such as digital transparency, standardization, and accountability.

Chapter III: CSR and the Sharing Economy: A pathway to Data-Driven Platform CSR

Chapter III engages directly with the digital transformation, analyzing sharing economy platforms, as a new digitally-enabled exchange platform which disrupts and reshapes institutional contexts and the classical division of moral labor in society (Scherer et al., 2016; Sundararajan, 2016; Uzunca et al., 2018). The chapter adopts the theoretical lens of political CSR to discuss the new roles and responsibilities that SEPs adopt, based on their digital capacities and highlights five key dimensions through which platforms may contribute to the broader society. Given information and power asymmetries, and a broader legitimacy deficit arising with SEPs corporate conduct, the chapter proposes a democratization of SEPs building on Habermasian and Rawlsian political CSR.

Chapter IV: Networked Surveillance for Good? A Perception Study on Blockchain-Based Supply Chain Transparency

Chapter IV. In the previous chapter, SEPs with their digital capacities can be seen as the "digital disrupters" that are at the center of an economic transformation. In contrast, in this chapter, the digital transformation can be perceived as an externality that is gradually advancing into a well-established sector, the luxury watch industry. Thus, against the background of the Swiss luxury watch industry, the chapter engages with the concept of surveillance in the form of distributed ledger technology (DLT) and blockchain-based product identifiers (Dierksmeier & Seele, 2016; D. Lyon, 2007; Whelan, 2019b). The chapter applies an inductive approach to collecting and analyzing data via interviews and a survey focusing on experts' perceptions of the digital transformation brought along by DLT in light of industry trends and challenges. The findings indicate salient industry challenges, and four themes characterizing the ongoing transformations of the sector. In light of these findings, the chapter advances a

conceptualization of networked surveillance as a form of digital transparency (Bernstein, 2017; D. Lyon, 2007; Whelan, 2019b).

Chapter V: Conceptualizing data-deliberation: The starry sky beetle, environmental system risk, and Habermasian CSR in the digital age

Chapter V is framed around an illustrative case concerning a systemic environmental threat to public goods and the multi-stakeholder response it triggered. Against this background, the chapter takes a political CSR perspective, to investigate the changing political impacts of corporations in the digital age (Baru, 2018; Etter et al., 2019; Whelan, 2019a). The chapter demonstrates that digitalization in terms of transparency, surveillance and data-sharing gives corporations new scope for engagement in public deliberation (Baru, 2018; Enderle, 2018; Gross & De Dreu, 2019; Scherer et al., 2016). If acted on, corporations can contribute to handling better threats to public goods, such as the starry sky beetle infestation. The chapter conceptualizes data-deliberation as a Habermasian derivate of political CSR and provides a definition of it. Thus, chapter V shows that the digital transformation brings new possibilities and scope for corporations in terms of public deliberation that can contribute to addressing systemic threats, particularly in contexts with functioning governmental institutions. The following chapter further broadens the perspective touching on corporate conduct relevant across contexts, by engaging in the topic of algorithmic pricing, which shows in general terms that the new possibilities of corporations related to algorithms and big data, can also raise ethical concerns.

Chapter VI: Mapping the Ethicality of Algorithmic Pricing: A Review of Dynamic and Personalized Pricing

Chapter VI systematically reviews for the first time, the scientific research on the topic of algorithmic pricing (N. Chen & Gallego, 2019; Q. G. Chen et al., 2016; Koh et al., 2017). Although being legal, the price-setting via algorithms comes with ethical challenges that the chapter discusses based on a review of 315 related articles from the multiple scientific fields. Consequently, the chapter advances a map of the algorithmic

pricing territory according to micro-, meso-, and macro-levels of society, to provide a first approximation of ethically relevant issues and identify topics that deserve closer attention of future research (Dopfer, Foster, & Potts, 2004). Further, the chapter offers a contribution to research by providing an ethically informed definition of algorithmic pricing as well as linking the subject to the recent scientific and policy discussions on algorithmic accountability and algorithmic governance (K. Martin, 2019b; Mittelstadt, Allo, Taddeo, Wachter, & Floridi, 2016).

In the Discussion and Conclusions section of this thesis, a summary of the chapters and their core findings is given. Moreover, theoretical as well as managerial implications are outlined along with implications for public policy. In addition, the final section discusses limitations and provides a future research outlook.

1.3.3 Status of Integrated Manuscripts

In light of the multidisciplinary research field of CSR and business ethics, the chapters of this thesis have been submitted to diverse research outlets and conferences. As the first two chapters provide a detailed overview of the foundations, approaches and background concepts related to P(CSR) and business ethics, they are aimed at handbooks in the field: Chapter I "Corporate Citizenship (Dirk Matten, Andrew Crane, Jeremy Moon)" is accepted for publication in: Aßländer, Michael S. (ed) *Handbuch Wirtschaftsethik, Metzler Verlag, Part of Springer Nature*. Chapter II "Business Legitimacy and Communication Ethics: Discussing Greenwashing and Credibility Beyond Habermasian Idealism" is published (2019) in: Rendtorff J. (eds) *Handbook of Business Legitimacy, Springer*.

Chapter III, "CSR and the Sharing Economy: A pathway to Data-Driven Platform CSR" is in the first-round revise & resubmit, in: Li Langergaard, L., Rendtorff, J (eds.) *New Economies for Sustainability: Limits and Potentials for Possible Futures. Springer Series Ethical Economy: Studies in Economic Ethics and Philosophy*. Previously, chapter III has been accepted and presented (2018) as a conference paper at the Academy of Management Specialized Conference Big Data and Managing in a Digital Economy,

Surrey, UK. The abstract is published in the *Academy of Management Global Proceedings*.

Chapter IV, "Networked Surveillance for Good? A Perception Study on Blockchain-Based Supply Chain Transparency" has been accepted (2020) as a conference paper for presentation in a divisional paper session "Data and Privacy Issues" of the *Social Issues in Management* (SIM) division, at the 80th *Annual Meeting of the Academy of Management*. Thus, the abstract of the chapter will be published in the AOM Annual Meeting Proceedings.

Chapter V "Conceptualizing data-deliberation: The starry sky beetle, environmental system risk, and Habermasian CSR in the digital age" has been published (2020) in the journal *Business Ethics: A European Review* (Impact Factor: 2.919 in 2018). A previous version of the manuscript received the *second prize*: *Best-Paper-Awards in the field of Business Ethics of the Görres Society (Germany)* titled: "Toward Data-Deliberation: Digital Surveillance, Political CSR and the peculiar case of the Starry Sky Beetle." Moreover, a previous version was accepted as a conference paper (2017) "How the Asian Longhorn Beetle updates our understanding of political CSR theory in the digital age" presented at the 77th Annual Meeting of the Academy of Management, Atlanta, USA. The abstract is published in the *Academy of Management Proceedings*.

Chapter VI "Mapping the Ethicality of Algorithmic Pricing: A Review of Dynamic and Personalized Pricing" has been published (2019, online first article) in the *Journal of Business Ethics* (Impact Factor: 3.796 in 2018), listed in the Financial Times FT 50 as one of 50 journals in the renowned Business School research rank.

Chapter I

Corporate Citizenship

(Dirk Matten, Andrew Crane, Jeremy Moon)

***Manuscript accepted for publication**:*

Schultz MD (accepted). Corporate Citizenship (Dirk Matten, Andrew Crane, Jeremy Moon). In: Aßländer, Michael S. (ed) Handbuch Wirtschaftsethik, Metzler Verlag, Part of Springer Nature.

Chapter I
Corporate Citizenship
(Dirk Matten, Andrew Crane, Jeremy Moon)

1.1 Einleitung

In diesem Beitrag wird das in der angloamerikanischen Managementliteratur weitverbreitete Corporate Citizen Konzept von Dirk Matten, Andrew Crane und Jeremy Moon vorgestellt, welches sich in wesentlichen Punkten von der allgemeinen Corporate Citizen Debatte unterscheidet und somit einer genaueren Betrachtung bedarf. Allgemein befasst sich das Corporate Citizen Konzept mit der gesellschaftlichen Rolle von Unternehmen, wobei diesen eine Rolle als politischer Akteur zugeschrieben wird. Der Ansatz von Matten, Crane und Moon zeichnet sich dabei insbesondere dadurch aus, dass er sich aus der Bürgerschaftstheorie ableitet und somit eine theoriegeleitete Besonderheit innerhalb der Corporate Citizen Debatte darstellt. Ziel des Beitrags ist es, einen strukturieren Überblick über das Corporate Citizen Konzept von Matten, Crane und Moon zu geben. In diesem Sinne werden zunächst die Grundgedanken des Ansatzes dargestellt und die theoretischen Ausgangspunkte des liberalen Bürgerschaftskonzeptes erläutert, auf welchem der Ansatz im Kern basiert. Anschließend wird das Konzept in Bezug auf Unternehmen, die Rolle des Staates und des Bürgers ausdifferenziert; auch werden die im wissenschaftlichen Diskurs erhobenen zentralen Kritikpunkte an diesem Konzept veranschaulicht. Im abschließenden Resümee wird die Bedeutung des Corporate Citizen Ansatzes aufgezeigt, der wesentlich zur Entwicklung des Political Corporate Social Responsibility Konzepts beigetragen hat.

1.2 Das Unternehmen als Corporate Citizen

Das Corporate Citizenship (CC) Konzept hat seinen Ursprung in den USA, von wo aus seine Verbreitung seit den 1980er Jahren stattgefunden hat (vgl. Schwabe, 2013, p. 5). Der CC-Diskurs geht dabei über traditionelle Betrachtungsweisen des Unternehmens als rein wirtschaftliche Organisation hinaus und befasst sich mit der grundsätzlichen Frage, welche Rolle und Verantwortung Unternehmen in der Gesellschaft ein- und übernehmen. In der Literatur werden zahlreiche unterschiedliche Ansätze und Objektbereiche unter dem Corporate Citizenship Begriff zusammengefasst, wobei oftmals weder eine klare Abgrenzung zu verwandten Konzepten (wie etwa Corporate Social Responsibility – CSR), noch eine theoretische Herleitung des Konzepts erfolgt. Eine Ausnahme in dieser breit gefächerten CC-Forschungslandschaft ist der Ansatz von Dirk Matten, Andrew Crane und Jeremy Moon, in dem die Autoren den Begriff des Bürgers auf Basis der Politikwissenschaft in einer Reihe von Publikationen weiterentwickeln (vgl. Crane et al., 2004, 2008, 2010; Matten & Crane, 2005; Matten et al., 2003; Moon et al., 2005, 2008b, 2008a). Im Folgenden werden zunächst die Grundgedanken des CC-Konzepts nach Matten, Crane und Moon skizziert.

Innerhalb der Forschungslandschaft lassen sich drei unterschiedliche Sichtweisen einer Corporate Citizenship unterscheiden, welche von Matten und Crane als „limited view," „equivalent view" und „extended view" bezeichnet werden(vgl. Matten & Crane, 2005, pp. 168–174). Die „eingeschränkte Sichtweise" („limited view"), setzt CC mit Philanthropie gleich und bezieht sich mithin auf das unternehmerische Engagement innerhalb lokaler Gemeinschaften. Dabei wird davon ausgegangen, dass sich derartige Zuwendungen an die Gemeinschaft positiv auf das Unternehmen auswirken würden, da dies von einem stabilen sozialen Umfeld profitiere. Demzufolge wird CC in dieser Perspektive als strategische Philanthropie interpretiert und als Teil einer Corporate Social Responsibility (CSR) betrachtet (vgl. Matten et al., 2003, p. 112 f.). Im Gegensatz dazu werden aus der „Gleichsetzungsperspektive" („equivalent view"), CSR, Nachhaltigkeit und CC äquivalent behandelt (vgl. Carroll, 1998). Eine Gleichsetzung von CC mit CSR und Nachhaltigkeit findet dabei jedoch nur auf begrifflicher Ebene statt und beinhaltet

keine konzeptionell neue Sichtweise der unternehmerischen Verantwortung. Dieser Forschungsstrang wird vorwiegend mit der unternehmerischen Praxis um die Jahrtausendwende verknüpft. In dieser Zeit war der CC-Begriff in der Geschäftswelt weit verbreitet. Die Berichterstattung zu Sozial- und Umweltstandards von Großunternehmen wurde deshalb oftmals als „(Global) Citizen Report“ bezeichnet (vgl. Crane et al., 2010, p. 65). Aus heutiger Sicht zeigt sich, dass dieser Trend nur von vorübergehender Dauer war. In der Geschäftswelt hat sich mittlerweile zunehmend der CSR Begriff durchgesetzt, was sich wiederum in der Namensgebung der Berichterstattung widerspiegelt, da Umwelt- und Sozialberichte nun vornehmlich als „CSR Report“ gekennzeichnet werden (vgl. Gatti, Vishwanath, Seele, & Cottier, 2019, p. 965). Die „erweiterte Sichtweise“ („extended view“) geht über die beiden zuvor genannten Perspektiven hinaus und leitet sich aus der Bürgerschaftstheorie ab. Neben dem Ansatz, von Wood und Logsdon (vgl. Logsdon & Wood, 2005; Wood et al., 2006), lässt sich in dieser erweiterten Sichtweise auch das CC-Konzept von Matten, Crane und Moon verorten.

1.3 Corporate Citizenship und die liberale Bürgerschaftstheorie

Aufgrund der starken Verbreitung des Citizen Begriffs in der Unternehmenspraxis nach der Jahrtausendwende greifen Matten, Crane und Moon auf Basis politikwissenschaftlicher Forschung das Citizen Konzept auf und entwickeln dieses in Bezug auf unternehmerisches Handeln systematisch weiter (vgl. Crane et al., 2004; Matten & Crane, 2005; Matten et al., 2003; Moon et al., 2005). Sie verwenden das Konzept als Metapher, um die veränderte gesellschaftliche Rolle von Unternehmen zu beleuchten. Vor dem Hintergrund tatsächlicher Bürger- oder Staatsbürgerschaft verstehen Matten et al. das Bürgerschaftskonzept als ein Organisationsprinzip mit dessen Hilfe sowohl Machtverteilungen als auch Verantwortungszuweisungen zwischen Teilnehmern einer politischen Gemeinschaft untersucht werden können (vgl. Moon et al., 2008b, p. 9 f.). Im Kern geht es deshalb darum, unternehmerisches Handeln in Analogie zum staatsbürgerlichen Handeln zu untersuchen und mögliche Parallelen aufzuzeigen (vgl. Crane et al., 2008, pp. 1–5). Das Unternehmen wird dabei als Organisation betrachtet, welche in Bezug auf den Staat und die Zivilgesellschaft eine erweiterte Rolle übernimmt,

die über die unmittelbare wirtschaftliche Wertschöpfung hinausgeht. Zur genaueren Betrachtung werden von Matten et al. vier grundlegende Modelle der demokratischen Bürgerschaftstheorie herangezogen, die es ermöglichen, Rechte und Pflichten von Mitgliedern einer politischen Gemeinschaft zu benennen: Liberalismus, Republikanismus, Entwicklungsdemokratie und Deliberative Demokratie (vgl. Carter & Stokes, 2002, pp. 37–40; Moon et al., 2005, pp. 435–443). Anhand dieser vier Grundmodelle der politischen Partizipation ergeben sich für Unternehmen unterschiedliche Handlungsspielräume und somit unterschiedliche Rollen als Corporate Citizen in einer Gesellschaft. Matten und Crane stützen sich in ihrem breit rezipierten Kernbeitrag auf die liberale Tradition nach Marshall und skizzieren eine staatsähnliche Rolle des Unternehmens, die im Folgenden genauer betrachtet werden soll (vgl. Crane & Matten, 2005, pp. 171–174; T. H. Marshall, 1950, p. 10 ff.).

1.4 Corporate Citizenship - Das Unternehmen als Staat

Der wohl am häufigsten zitierte Beitrag von Matten, Crane sieht das Unternehmen in einer staatsähnlichen Rolle (vgl. Matten & Crane, 2005, pp. 171–174). Hierbei bauen Matten und Crane auf die liberale Bürgerschaftstheorie nach Marshall auf (vgl. T. H. Marshall, 1950, pp. 27–31). In dieser Tradition definiert sich die Bürgerschaft über ein Bündel von Rechten, welche vonseiten des Staates dem Einzelnen eingeräumt werden. Dabei lassen sich bürgerliche Ansprüche in Bezug auf (1) zivile, (2) soziale, und (3) politische Rechte unterscheiden (vgl. Crane et al., 2008, p. 6 f.; Matten & Crane, 2005, p. 169 ff.; Moon et al., 2008b, p. 18 f.): (1) z*ivile Rechte oder Grundrechte* sollen den Einzelnen vor Missbrauch und vor Eingriffen Dritter schützen. Zentrale Grundrechte sind unter anderem das Recht auf Eigentum und die Meinungsfreiheit. Derartige Grundrechte sind mit dem Bürgerschaftsstatus verknüpft und beziehen sich auf die Individualsphäre des Bürgers (vgl. Matten & Crane, 2005, p. 170). Im Gegensatz dazu werden (2) *soziale Rechte* von Moon, Crane und Matten als bürgerliche Ansprüche bezeichnet, da sie dem Einzelnen die Freiheit geben, am gesellschaftlichen Leben teilzunehmen (vgl. Matten & Crane, 2005, p. 170; Moon et al., 2008b, p. 56 f.). Meist werden Bildung, Wohlstand und Gesundheit als zentrale sozioökonomische Rechte benannt. Die letzte Kategorie, die (3)

politischen Rechte, beziehen sich auf die Partizipation in einer politischen Gemeinschaft und dementsprechend auf Rechte, die es dem Bürger ermöglichen, an Prozessen der politischen Willensbildung teilzunehmen (vgl. Matten & Crane, 2005, p. 170; Moon et al., 2008a, p. 56). Hierzu gehören etwa das Wahlrecht und das Recht, ein politisches Amt zu bekleiden. Auf Basis dieser drei zentralen Bürgerrechte definieren Matten und Crane (Matten & Crane, 2005, p. 173) die Corporate Citizen Rolle wie folgt:

"CC describes the role of the corporation in administering citizenship rights for individuals. Such a definition reframes CC away from the notion that the corporation is a citizen in itself (as individuals are) and toward the acknowledgement that the corporation administers certain aspects of citizenship for other constituencies. These include traditional stakeholders, such as employees, customers, or shareholders, but also include wider constituencies with no direct transactional relationship to the company."

Mit dem Verwalten von Bürgerrechten („administering citizenship rights") verknüpfen Matten und Crane (vgl. Matten & Crane, 2005, p. 174) die folgenden drei unternehmerischen Funktionen: (1) die Gewährung von Grundrechten und zivilen Bürgerrechten, (2) die Bereitstellung von sozialen Rechten, wie etwa Dienstleistungen im Gesundheits-, Sicherheits-, oder Bildungsbereich und (3) die Kanalisierung von politischen Rechten. Durch diese drei zentralen Funktionen bietet sich für Unternehmen ein aktives gesellschaftspolitisches Gestaltungspotenzial und somit die Möglichkeit, ethische Fragestellungen in unternehmerische Prozesse einzubeziehen, welche über philanthropische Gesichtspunkte hinausgehen. Im Umkehrschluss ergibt sich bei einer kritischen Betrachtung die Möglichkeit, dass Unternehmen Grundrechte beschränken, soziale Rechte ignorieren und politische Rechte blockieren können (vgl. Crane et al., 2008, p. 70 f.). Kennzeichnend für diese Perspektive ist, dass Unternehmen nicht als tatsächliche Bürger auftreten, sondern als einflussreiche öffentliche Akteure, deren Verantwortung darin besteht, die Bürger und deren Rechte zu respektieren (vgl. Matten & Crane, 2005, p. 174 ff.).

Im CC-Ansatz von Matten und Crane, liegt diese veränderte Rolle von Unternehmen als politischer Akteur vor allem in der zunehmenden Globalisierung begründet. Hierbei stützt sich der Ansatz einerseits auf die Annahme, dass Nationalstaaten zunehmend weniger dazu in der Lage seien, das Verhalten global agierender Unternehmen mittels nationaler Gesetzgebung zu steuern; anderseits geht dieser Ansatz davon aus, dass damit dem Verhalten korporativer Akteure auch im politischen Bereich zunehmend größere Bedeutung zukomme (vgl. Matten & Crane, 2005, p. 171). In diesem Sinne schließen Unternehmen als Corporate Citizens Lücken, die durch den Rückzug des Nationalstaates hinterlassen wurden. Matten und Crane schreiben Unternehmen in diesem Kontext die Rolle „quasi-staatlicher" Akteure zu, die in all jenen Fällen aktiv werden, in denen Regierungen bei der Bereitstellung von Bürgerrechten versagen, diese nur unzureichend bereitstellen oder in denen die Bereitstellung derartiger Rechte die Möglichkeiten nationalstaatlicher Kompetenzen übersteigen würde (vgl. Matten & Crane, 2005, p. 172): "Our central argument is that corporations enter the arena of citizenship at the point of government failure in the protection of citizenship" (Matten et al., 2003, p. 116), "we are talking here about corporations taking over what are hitherto or in other circumstances governmental functions" (Crane et al., 2004, p. 109 f.).

Die Rolle als quasi-staatlicher Akteure richtet sich somit nach dem Kontext und den Handlungsspielräumen des Unternehmens relativ zum Staat und staatlichen Institutionen. Die Gewährung von Grund oder zivilen Bürgerrechten im Sinne des CC-Ansatzes wird insbesondere an Standorten sichtbar an denen die Regierung bei der Bereitstellung dieser Rechte versagt (vgl. Crane et al., 2008, pp. 64–70). In Industrieländern werden Grundrechte und zivile Bürgerrechte von nationalen Regierungen meist angemessen geschützt. Daher richtet sich laut Matten und Crane der Fokus von zahlreichen CC-Initiativen in diesen Kontexten eher auf die Stärkung oder Ergänzung des Wohlfahrtsstaates (vgl. Crane et al., 2008, pp. 64–70; Matten & Crane, 2005, p. 172 ff.). Das CC-Engagement zielt dabei auf die Bereitstellung von sozialen Rechten, wie Bildung, Sicherheit und Gesundheit, beispielsweise durch die Schaffung oder Verbesserung von Bildungseinrichtungen, der Gesundheitsvorsorge und Sicherheitsdienstleistungen, welche mangels staatlicher Förderung vernachlässigt wurden (vgl. Crane et al., 2008, pp. 64–70).

Darüber hinaus spielen die öffentliche Wahrnehmung und die gesellschaftliche Erwartung gegenüber Unternehmen eine wichtige Rolle: “Our premise is that corporations enter the arena of citizenship in circumstances where traditional governmental actors fail to be the ‘counterpart‘ of citizenship. (…) [C]orporations have tended to partly take over (or are expected to take over) certain functions with regard to the protection, facilitation, and enabling of citizens’ rights – formerly an expectation placed solely on governments” (Matten & Crane, 2005, p. 171). Gesellschaftliche Erwartungen gegenüber Unternehmen als Corporate Citizens zeigen sich insbesondere in Bezug auf politische Rechte. Einerseits können sich Unternehmen für bestimmte politische Rechte in der Gesellschaft einsetzen und etwa Arbeitnehmervertretern eine Stimme in Entscheidungsprozessen geben. Andererseits kann sich aber auch die Zivilgesellschaft gegen Unternehmen richten, wie etwa durch Konsumentenboykott und andere Proteste, wenn vom Unternehmen bestimmte Erwartungen nicht erfüllter werden (vgl. Crane et al., 2008, p. 66; Matten & Crane, 2005, p. 172).

Als praktische Beispiele für Unternehmen als quasi-staatliche Akteure nennen Matten und Crane transnationale Unternehmen, die sich für existenzsichernde Mindestlöhne einsetzen, Schulen finanzieren, oder sich für demokratische Rechte und politische Mitbestimmung in Entwicklungsländern engagieren (vgl. Matten & Crane, 2005, p. 172). Meist ist das Engagement dabei mit dem Kerngeschäft der Unternehmung verbunden, wie etwa dann, wenn ein Pharmakonzern Medikamente kostenlos oder vergünstigt bereitstellt und Aufgaben bei der Gesundheitsversorgung der Bevölkerung übernimmt. Somit ersetzt das Unternehmen durch die genannten Funktionen teilweise oder sogar ganz staatliche Institutionen, was die Metapher des Corporate Citizen als widersprüchlich erscheinen lässt, da Bürger im traditionellen Bürgerschaftsverständnis die Adressaten von spezifischen Rechten sind, diese jedoch nicht anderen gewähren können (vgl. Schrader, 2006, p. 224; van Oosterhout, 2008, p. 36 ff.). Neben der Konzeptionalisierung des Unternehmens als quasi-staatlichen Akteur, beschreiben Crane et al daher auch die Rolle des Unternehmens als Bürger (vgl. Crane et al., 2008, pp. 17–49; Moon et al., 2008a, p. 57 ff., 2008b, p. 19 ff.).

1.5 Corporate Citizenship - Das Unternehmen als Bürger

In der zweiten Corporate Citizenship Konstellation tritt das Unternehmen eher als tatsächlicher Bürger einer funktionierenden, demokratischen Gesellschaft in Erscheinung. Der Analysefokus liegt dabei auf dem Prozess der politischen Teilhabe von Unternehmen an einer politischen Gemeinschaft (vgl. Carter & Stokes, 2002, pp. 27–44; Crane et al., 2008, p. 32). In dieser Rolle können Unternehmen analog zu echten Bürgern betrachtet werden, denen vom Staat Rechte gewährt werden. Matten et al. erläutern in diesem Zusammenhang, dass Unternehmen das Recht haben, Verträge abzuschließen, über Eigentumsrechte verfügen, sowie klagen oder verklagt werden können (vgl. Crane et al., 2008, p. 25 f.). Aus ökonomischer und wirtschaftsethischer Sicht sind dies natürlich keine Neuheiten. Die konzeptionelle Innovation dieser Sichtweise liegt vielmehr darin begründet, dass Unternehmen in ihrer Rolle als korporative Bürger als Teil der politischen Gemeinschaft gesehen werden und ihre Interessen als Corporate Citizen im Prozess der politischen Willensbildung einbringen können (vgl. Crane et al., 2008, p. 32). In dieser Sichtweise tritt die Unternehmung somit nicht als Akteur in Erscheinung, welcher stellvertretend staatliche Aufgaben übernimmt. Vielmehr wird die Unternehmung nun als Teil eines politischen Gemeinwesens betrachtet, in dem sie als Corporate Citizen an politischen Entscheidungen mitwirkt, diese aber auch blockieren kann. Unternehmen beinflussen so die Bedingungen unter denen sie innerhalb eines Nationalstaates operieren, und versuchen, diese Bedingungen im Rahmen ihrer politischen Partizipationsmöglichkeiten zu gestalten. Diese beziehen sich vor allem auf verschiedene Formen des Lobbying sowie die Beeinflussung politischer Entscheidungsprozesse. Unternehmen können beispielsweise gegen staatliche Regulierung und Kontrolle lobbyieren und sich so in Gesetzgebungsverfahren einmischen (vgl. Moon et al., 2005, p. 429 f.). Darüber hinaus spielt die Unterstützung von politischen Partein und Politikern eine wichtige Rolle, wobei Parteispenden von Unternehmen eine besondere Bedeutung zukommt. Jenseits dieser bereits fest etablierten Formen politischer Partizipation identifizieren Matten et al. mit Blick auf (a) den Liberalismus (b) den Republikanismus, (c) die Entwicklungsdemokratie und (d) die Deliberative Demokratie, weitere Potentiale

für die Ausgestaltung und Übernahme einer politischen Mitverantwortung durch den Unternehmensbürger (vgl. Crane et al., 2008, pp. 32–42; Moon et al., 2005, p. 429 f.):

(1) Im Liberalismus bietet sich für die Metapher des Unternehmensbürgers kein Ansatzpunkt, da sich die Verantwortung des Unternehmens auf das Einhalten von Gesetzen bezieht und generell keine zusätzlichen sozialen oder politischen Pflichten beinhaltet (vgl. Moon et al., 2005, p. 435 f.).

(2) Im Republikanismus stehen im Zusammenhang mit der CC-Metapher Verpflichtungen gegenüber dem Staat im Vordergrund. Demnach liegt die normative Basis der politischen Partizipation in der Beteiligung an gesellschaftlichen Steuerungsprozessen begründet (vgl. Crane et al., 2008, pp. 32–39). Der Republikanismus verlangt in diesem Sinne nach einer politischen Einflussnahme, die primär dem Gemeinwohl dient und nicht nur auf die Wahrung von Unternehmensinteressen, etwa auf die Abwendung von Gesetzen, abzielt.

(3) Im Kontext einer Entwicklungsdemokratie beruht die normative Basis der politischen Partizipation auf der notwendigen Abstimmung zwischen dem unternehmerischen Eigeninteresse und den gesellschaftlichen Entwicklungszielen (vgl. Crane et al., 2008, pp. 39–41). Corporate Citizenship bezieht sich hierbei auf den Austausch und die Zusammenarbeit des Unternehmens mit der Zivilgesellschaft. Zu nennen ist hierbei insbesondere die Kooperation von Unternehmen mit Nichtregierungsorganisationen bei der Verfolgung gesellschaftlicher Zielsetzungen.

(4) Eine erweiterte Perspektive auf die Rolle des Unternehmensbürgers ergibt sich unter der Konstellation einer deliberativen Demokratie. Hier sind Unternehmen nicht nur dazu aufgerufen, durch ihr politisches Engagement zur Lösung von zentralen gesellschaftlichen Problemen beizutragen, sondern auch den politischen Willensbildungsprozess und den Diskurs über infrage stehende gesellschaftliche Problemlagen und deren Lösungen mitzugestalten (vgl. Crane et al., 2008, p. 41 ff.; Moon et al., 2005, p. 442 f.). Diese erweiterte Rolle sieht Unternehmen als Bürger, die ihren Standpunkt in einem politischen Forum äußern. Hierbei wird betont, dass sich die

normative Basis der Coporate Citizenship darauf stützt, dass sich Unternehmen als Gleichberechtigte am Diskurs beteiligen und ihre wirtschaftliche Macht somit keinen Einfluss auf die Überzeugungskraft der vorgebrachten Argumente haben soll (vgl. Moon et al., 2005, p. 443).

1.6 Problemfelder

Wenn Unternehmen, wie oben beschrieben, auf verschiedene Art und Weise politisch agieren, ergeben sich daraus unabhängig vom Demokratiemodell drei grundlegende Problemfelder (vgl. Crane et al., 2008, pp. 82–87): (1) Das erste Problem bezieht sich auf das Bekenntnis von Unternehmen zur Rolle als quasi-staatlicher Akteur. Ohne eine rechtliche und administrative Grundlage erscheint das politische Handeln des Unternehmens willkürlich. Es ist somit unwahrscheinlich, dass Unternehmen diese Rolle mit der gleichen Verpflichtung wie Regierungen übernehmen. Hinzu kommt das private Interesse, das unternehmerischen Handeln zugrunde liegt und zu möglichen Zielkonflikten bei der Verfolgung gesellschaftlicher Anliegen führt. Allerdings gilt dies nach Matten et al. auch für andere gesellschaftliche Organisationen, wie etwa Nichtregierungsorganisationen (NGOs), die in ähnlicher Weise agieren, ohne sich dabei auf eine entsprechende rechtliche Basis als Legitimationsgrundlage ihres Handelns stützen zu können (vgl. Crane et al., 2008, p. 43 f.). (2) Das zweite Problemfeld bezieht sich auf die Transparenz hinsichtlich der Aktivitäten als quasi-staatlicher Akteur. In Demokratien wird die Fairness und Effektivität der Regierung unter anderem durch Mechanismen wie Regierungs- und Haushaltsberichte gewährleistet, welche detaillierte Einblicke in das Handeln der Regierung gewähren (vgl. Crane et al., 2008, p. 84). Mit der Unternehmensberichterstattung bietet sich ein ähnliches Instrument, um den gesellschaftlichen Transparenzerwartungen zu begegnen. (3) Das dritte Problemfeld umfasst die unternehmerische Rechenschaftspflicht. Dies ist mit der normativen Annahme verknüpft, dass Unternehmen als Corporate Citizens dazu verpflichtet seien, Rechenschaft darüber abzulegen, inwiefern sie dem Gemeinwohl dienen (vgl. Crane et al., 2008, p. 84 f.). Insbesondere dann, wenn Unternehmen quasistaatliche Funktionen ausüben, müssen sie, ähnlich wie Regierungen in demokratisch verfassten Gemeinschaften, durch die

Bürger kontrolliert werden können. Nach Matten et al. müsste jedoch auch hier gezeigt werden, inwieweit eine demokratische Kontrolle auch bei anderen Akteuren, zum Beispiel bei NGOs, von den Bürgern tatsächlich eingefordert wird (vgl. Crane et al., 2008, p. 44 f.). Crane et al empfehlen daher, gesellschaftliche Anliegen innerhalb des unternehmerischen Entscheidungsfindungsprozesses mittels Selbstverpflichtungserklärungen institutionell zu verankern, um so die gesellschaftlichen Interessen mit denen des Unternehmens in Einklang zu bringen (vgl. Crane et al., 2008, p. 44 ff. 84 f.).

1.7 Kritik

Der von Matten, Crane und Moon entwickelte CC-Ansatz wird in der Literatur von verschiedenen Autoren kritisiert, da das Konzept in Bezug auf einige Schlüsselaspekte vage und unvollständig bleibt (vgl. Aßländer & Curbach, 2014, 2017; M. T. Jones & Haigh, 2007; Mäkinen & Kasanen, 2016; Tempels, Blok, & Verweij, 2017; van Oosterhout, 2005, 2008). Das CC-Konzept beschreibt zwei sehr unterschiedliche Auffassungen von Citizenship (vgl. van Oosterhout, 2008). Einerseits wird dem Unternehmen eine Rolle als quasi-staatlicher Akteur zugeschrieben, der Rechte gewährt. Andererseits steht demgegenüber die Rolle des Unternehmensbürgers als Adressat von Rechten, also eine durchaus unterschiedliche Sichtweise dessen, wofür CC steht. Vor diesem Hintergrund fehlt dem Konzept eine unmissverständliche Definition und eine tiefergehende Beschreibung des CC-Status und der damit verbunden Aufgaben und Pflichten des Unternehmens gegenüber der Gesellschaft (vgl. Aßländer & Curbach, 2014, 2017).

Wenn Unternehmen wie von Matten et al beschreiben Rechte gewähren und einen Beitrag an die Gesellschaft leisten, bleiben zentrale Fragen dieses CC-Engagements ungeklärt, insbesondere hinsichtlich des Gestaltungsrahmens sowie der Freiwilligkeit und Selektivität dieses Engagements (vgl. Tempels et al., 2017). Handelt es sich bei CC um ein freiwilliges Engagement, dessen Ausgestaltung im Ermessen der Unternehmung liegt und somit zeitlich, örtlich und ökonomisch beliebig erfolgt, oder eher um eine Form der

Treue, des Gehorsams oder eine Verpflichtung, die aus dem Bürgerschaftsstatus erwächst (vgl. Aßländer & Curbach, 2014, p. 542)? Unklar bleibt deshalb auch ob das CC-Engagement in wirtschaftlich schlechten Zeiten weitergeführt wird und auf welche Bereiche es sich erstreckt (vgl. Aßländer & Curbach, 2017, p. 618 f.; Tempels et al., 2017, p. 93 ff.). Diese Problematik wird hinsichtlich der Bereitstellung sozialer Rechte wie Dienstleistungen im Gesundheits-, Sicherheits-, oder Bildungsbereich besonders deutlich. Kann, soll oder muss sich das CC-Engagement auf all diese Bereiche beziehen? Wäre ein CC-Engagement im Gesundheitsbereich gegenüber dem Bildungsbereich zu priorisieren oder umgekehrt? Wie lässt sich kontrollieren oder sicherstellen, dass soziale Dienstleistungen ausreichend bereitgestellt und gerecht verteilt werden (vgl. M. T. Jones & Haigh, 2007, p. 67 f.)? Sollten Angestellte und ihre Familien bei sozialen Dienstleistungen bevorzugt behandelt werden (vgl. Tempels et al., 2017, p. 95 ff.)?

Obwohl die Übernahme eines weitreichenden CC-Engagements durch das Unternehmen als quasi-staatlichen Akteur auf den ersten Blick durchaus wünschenswert erscheinen mag, kann diese Rolle auch zu einer potenziellen Gefahr für den Bürger werden. Besonders drastisch zeigt sich dies bei „company towns," Städte, in denen praktisch die gesamte politische und soziale Verantwortung gegenüber den Angestellten und der lokalen städtischen Bevölkerung in der Hand einer Unternehmung liegt (vgl. Moon et al., 2008a, p. 60). Eine Kündigung durch das Unternehmen geht in company towns de facto mit dem Ausstoß aus der Gesellschaft und dem Entzug der von Unternehmensseite gewährten Bürgerrechte einher (vgl. Mäkinen & Kasanen, 2016, p. 107 ff.). Die Legitimität, auf die sich die freiwillige Verantwortungsübernahme von Unternehmen als Ersatz von demokratisch gewählten Regierungen stützt, ist somit mehr als fraglich (vgl. Gerencser, 2013, pp. 18–40).

Die konzeptionelle Validität des CC-Ansatzes wird bei Fragen zur Legitimität und der gerechten Verteilung auf die Probe gestellt. Wenngleich Matten und Crane stets die deskriptive Natur ihres Ansatzes betonen und auf das faktische CC-Engagement von Unternehmen verweisen, erscheint es fraglich, ob sich Unternehmen dabei stets von demokratischen Idealen leiten lassen (vgl. Crane et al., 2010, p. 85 ff). Somit bleibt die

Problematik einer (fehlenden) Rechenschaftspflicht und die Frage nach der Legitimität und der normativen Grundlage einer derartigen unternehmerischen Verantwortungsübernahme bei der Gewährung von Bürgerrechten ein zentrales Problem der CC-Konzeption von Matten et al (vgl. M. T. Jones & Haigh, 2007, pp. 65–68). So zählt es zu den zentralen Merkmalen demokratisch verfasster Staaten, dass sie es ihren Bürgern ermöglichen, die Regierung zu hinterfragen, zu kritisieren und auch zur Verantwortung zu ziehen. Dies ist mit Blick auf Unternehmen in der Rolle als Verwalter von Bürgerrechten nur sehr begrenzt möglich und somit bleibt fraglich, ob es wünschenswert ist, wenn Unternehmen wie Staaten oder staatliche Institutionen handeln.

1.8 Resümee

Jenseits dieser Kritik gelingt es Matten, Crane und Moon mit ihrem Ansatz, einen wichtigen Beitrag zum wissenschaftlichen Diskurs zu liefern. Indem sie beschreiben, wie korporative Akteure in den öffentlichen Raum eindringen, schärfen sie den Blick für die Fähigkeiten und die relative Macht von Unternehmen, politische Prozesse zu gestalten und sich in Bereichen zu engagieren, die über rein wirtschaftliche Marktaktivitäten hinausgehen. Im Gegensatz zu einer rein systemtheoretischen Betrachtungsweise ermöglicht es die CC-Konzeptualisierung, die Unternehmung eindeutig als politischen Akteur zu identifizieren und unternehmerisches Handeln in Bezug auf den Staat und die Zivilgesellschaft genauer zu erforschen (vgl. Crane et al., 2010, p. 85 ff.). Aus wirtschaftsethischer Sicht ergeben sich dadurch zahlreiche neue Fragen, wie etwa der Balance zwischen Profitabilität und Gemeinwohl. Die erweiterte Verantwortungsübernahme von Unternehmen ist dabei jedoch auch kritisch zu betrachten, weil damit zu rechnen ist, dass sich Unternehmen im Gegenzug zu ihrem Engagement auch einen gewissen Ertrag erwarten. Dies kann ein stabiles soziales Umfeld sein, im Falle von Parteispenden kann dies aber auch ein Investment in mögliche zukünftige Aufträge darstellen. Die im wissenschaftlichen Diskurs erhobenen Kritikpunkte beziehen sich vorwiegend auf die Rolle der Unternehmung als quasi-staatlicher Akteur. Mit Blick auf die Rolle des Unternehmensbürgers bleibt aber auch offen, wie etwa verantwortungsvolles Lobbying aussehen mag (vgl. Anastasiadis, 2014; Lock & Seele, 2016a).

Obgleich Matten et al. die deskriptive Natur ihres Ansatzes betonen, liegt ihr Beitrag jedoch vor allem darin, dass sie damit eine normative Debatte über die Möglichkeiten und Grenzen eines Unternehmenskonzeptes ausgelöst haben, das das Unternehmen als Bürger und Träger konkreter politischer Rechte und Pflichten sieht (vgl. van Oosterhout, 2005, 2008). Dabei stellt sich aus wirtschaftsethischer Sicht vor allem die Frage, in welchem Umfang Unternehmen wie Staaten oder staatliche Institutionen agieren können und sollen (vgl. Aßländer & Curbach, 2014; Néron & Norman, 2008).

In der heutigen Wirtschaftspraxis hat das CC-Konzept im Vergleich zum etablierteren CSR-Konzept an Bedeutung verloren, was daran liegen mag, dass mit der Konzeptualisierung des Unternehmens als Bürger theoretische, rechtliche und praktische Probleme einhergehen (vgl. Crane et al., 2010, p. 85 ff.; Helgesson & Mörth, 2013, pp. 1–12). Doch obwohl die praktische Bedeutung des CC-Konzeptes rückläufig ist, wurde der von Matten, Crane und Moon entwickelte Ansatz im wissenschaftlichen Diskurs vielfach aufgegriffen und weiterentwickelt (vgl. Aßländer & Curbach, 2014, 2017; Whelan et al., 2013). Insbesondere wird das CC-Konzept in der Managementliteratur hinsichtlich der politischen Unternehmensverantwortung unter dem PCSR-Label (Political Corporate Social Responsibility) weitergeführt (vgl. Jedrzej George Frynas, Child, & Tarba, 2017; Mehrpouya & Willmott, 2018; Tempels et al., 2017).

Chapter II

Business Legitimacy and Communication Ethics: Discussing Greenwashing and Credibility Beyond Habermasian Idealism

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Chapter II

Business Legitimacy and Communication Ethics: Discussing Greenwashing and Credibility Beyond Habermasian Idealism

Abstract

In the chapter, we present and discuss the concept of legitimacy as established in business literature from an ethical perspective. After a brief outline of different ethical lenses such as virtue ethics, deontology, and utilitarianism, we identify Habermasian discourse ethics as communication driven approach already established in the literature. The core of the article consists of two parts: 'Legitimacy lost' and 'Legitimacy gained.' Legitimacy lost addresses the various situations where companies struggle with a legitimacy deficit: We make use of the greenwashing concept to illustrate the loss of legitimacy in a communication ethics perspective. In this way, we first introduce the standard definitions of greenwashing going back to the invention of the term from 'towel-reuse' in the hospitality industry, which focusses on the misleading communication of corporations. Subsequently, we present the latest research on greenwashing, redefining greenwashing from a co-constructivist perspective that incorporates not only the sender but also the receiver of a greenwashing message. The second part, 'Legitimacy gained,' deals with the concept of credibility. The context of application chosen here is CSR reporting as an example for (potentially) participating at and contributing to deliberative democracy – and corporate political activity, aka lobbying and here more specifically astroturf lobbying as an example to proactively undermining the (idealized) political role of corporations. We, therefore, discuss in conclusion the limitations of communication driven, Habermasian Political CSR as idealized normative thinking. As a final outlook, we present future questions and possible answers to the limitations of the Habermasian approach depicting the implications of digitalization, which can lead to 'data deliberation' a form of corporate legitimacy creation through bottom-up transparency, standardization, and accountability in the digital democracy of tomorrow.

Keywords: Business legitimacy · Habermas' discourse ethics · Moral legitimacy · Greenwashing · Credibility · CSR reporting · Corporate political activity · Digital democracy · Data deliberation

1.1 Introduction: Ethical lenses and the suitability of Habermas' Discourse Ethics

Business legitimacy has evolved into a central concept in Communication Ethics. It is defined as "generalized perception or assumption that the actions of an entity are desirable, proper or appropriate within some socially constructed system of norms, values, beliefs and definitions" (Suchman, 1995, p. 574). The legitimate behavior of an organization can be viewed from three distinct perspectives: cognitive, pragmatic, and moral legitimacy (Long & Driscoll, 2008; Suchman, 1995). Whereas cognitive legitimacy refers to taken-for-granted norms and values of an organizations' presence in society (Wagner & Seele, 2017), pragmatic legitimacy stems from the benefits that an organization's existence and actions can yield for society (Scherer, Palazzo, & Seidl, 2013). Both cognitive and pragmatic legitimacy mainly rest on the corporate compliance with national regulations and the assumption of stable societal expectations (Palazzo & Scherer, 2006). In contrast, moral legitimacy is permitted to a corporation based on its conformity with (dynamic) social values and responsibilities and thus, relates to the moral judgments of the corporate conduct and behavior (Long & Driscoll, 2008). What is deemed 'appropriate' or legitimate also depends on the ethical principles in a given societal context. In this regard, three major streams of ethical thinking (Virtue ethics; Deontology; Utilitarianism) have served as the analytical basis for moral legitimacy issues. In addition, this chapter focuses on Habermas' notion of discourse ethics, which recently gained novel traction in its extension as political CSR (Scherer & Palazzo, 2007). Political CSR allows for a deliberative legitimation process in which corporations can actively engage in as political actors. Thus, the discourse ethical stream of moral legitimacy in its contemporary form has high practical relevance for practitioners (Scherer & Palazzo, 2011).

Virtue Ethics

Virtue ethics describes individual and organizational virtues and vices by building on Aristotelian virtue ethics (Fernando & Moore, 2014). Aristotle can be seen as "the first business ethicist," advocating the idea that the individual is embedded in a broader

community and should promote the well-being of society by striving for individual virtues, such as integrity (Solomon, 2004). In turn, the larger community determines the positive character traits of the individual. Corporate legitimacy builds on customs and social recognition highlighting the possibility of those with a legitimate interest (stakeholder) to intervene in corporate actions of their concern (Sison, 2011). Thus, legitimacy from a Virtue Ethics perspective is dominated by the role of the individual that is embedded in the organization. Hence, the limitations of this ethical stream arise in the form of the bounded rationality of individuals, who may have self-serving biases that are not favorable to the broader society (Solomon, 2003). Boddy (2011), recently discussed the role of 'Corporate Psychopaths' in this regard, and their role as a cause for the Global Financial Crisis. Moreover, Virtue Ethics – as a character-based approach – is often criticized for its aspirational nature, emphasizing what a person should do rather than focusing on what actions or behavior is permitted.

Deontology/Kant

In contrast, deontological ethics follows a rule-based approach, considering the duties of an individual and the rights of others. According to Kant's categorical imperative, individuals should act only in such a way they want it to become a universal law. Therefore, some actions are seen as intrinsically good or bad. From a deontological perspective, upholding the rules is fundamental, and people should act according to them – regardless of the consequences. Consequently, a rule-based approach to legitimacy faces the challenge that certain groups or individuals are entitled to be treated in a given manner, yet, when the rights of individuals or groups conflict, Deontology provides limited guidance on how to balance them (Gao, 2008). Transferred to the business context, this raises the question, which rules to follow and whose rights are prioritized; id est will the shareholder's demand for higher dividends be prioritized over employees demands of a salary increase or the other way round?

Utilitarianism

Rather than focusing on the intrinsic value of actions, Utilitarianism is concerned with the outcome or consequences of actions. A behavior is deemed appropriate in a moral

sense, if it maximizes the utility, meaning the maximization of happiness for the highest number of people while reducing adverse externalities (Gustafson, 2013). This traditional formulation of Utilitarianism has evolved and presents itself as a cost-benefit analysis of business behavior in today's societies (Gao, 2008). Gao (2008) points out that the cost and benefits may take the form of economic, social, and human value, measured in monetary, societal, and emotional value. Thus, the calculation of legitimate business behavior is given, when the benefits outweigh the costs. In turn, corporate conduct is likely to be unethical once overall cost for society is higher than the benefits. The practical limitations of Utilitarianism lie in the limited possibility to foresee the outcome of future actions, and thus, the potential consequences for society. Further, minority voices, are overruled by the net benefit for the greater society. Ultimately, moral legitimacy that follows a Utilitarian approach might solely focus on the result, overlooking the means taken to reach it.

Discourse Ethics/Habermas

Ethical discussions often center on the three previously mentioned streams overlooking the discourse ethical approach. Particularly representative in this stream is Habermas' conception of discourse ethics (Jügen Habermas, 1984; Jürgen Habermas, 1987), which extends to the concept of deliberative democracy (Jürgen Habermas, 1996) and is also the point of reference for discussions about business legitimacy as Political Corporate Social Responsibility (Scherer, 2018; Scherer & Palazzo, 2007, 2011; Scherer et al., 2016). Discourse ethics prescribes rules for governance participation that rest on the criteria of non-persuasiveness, non-coercion, and expertise (Moon et al., 2005). Further, it is a process-focused approach that evades moral judgments of norms as opposed to the other ethical streams. The moral legitimacy underlying the Habermasian discourse ethics rests on communicative validity. Thus, individual validity claims are brought forth in a deliberative communication process, in which others can challenge the initial claim to arrive at a joint validity that goes beyond negotiation (Sabadoz & Singer, 2017). Essentially, the deliberative process leads to legitimate decisions, actions and thus societal legitimacy.

1.2 Legitimacy lost: Greenwashing

1.2.1 What is greenwashing: The standard definitions

Complex ecological problems are increasing worldwide, bringing the planet to its limits. As a result, 'Planetary Boundaries' have been or are about to be reached – particularly concerning climate change, the global nitrogen cycle, and the loss of biodiversity (Whiteman, Walker, & Perego, 2013). Business firms are criticized and depicted as one of the causes for the worldwide ecological problems. As a consequence, environmental and social management has become a critical aspect of their business conduct to assure the social legitimacy of the firm (Walker & Wan, 2012). However, corporate scandals and catastrophes – such as the sinking BP's Deepwater Horizon – remind the public that corporate commitment to address environmental problems often remains a mere symbolic communication gesture, also known as greenwashing (Matejek & Gössling, 2014). Marciniak (2010, p. 49) describes greenwashing as a negative form of ecological marketing and "the unjustified appropriation of environmental virtue by a company to create a pro-environmental image." The term 'greenwashing' was established over thirty years ago in 1986, when the biologist and environmentalist Jay Westerveld used the word to stress environmental hypocrisy in the hotel industry (Pearson, 2010). Westerveld criticized hotels for promoting a green image by putting up signs that are encouraging the reuse of towels to save water, whereas the real intention aimed at profit maximization by cutting laundry costs. While greenwashing emphasizes the link to the natural environment, the closely related term 'bluewashing' is used to indicate the connection to the blue color of the United Nations and its Global Compact (UNGC) initiative. The UNGC encourages socially and environmentally responsible business conduct with several thousand-participant companies worldwide. The symbolic adherence to ten UNGC principles and the exploitation of its lack of mechanisms to monitor compliance has been portrayed as bluewashing (Stamoulakis & Bridwell, 2009). The term greenwashing is more commonly used than bluewashing, which is also reflected by its entry in the Oxford English Dictionary: "The creation or propagation of an unfounded or misleading environmentalist image." (Oxford English Dictionary, 1990).

Motives for greenwashing

An environmentalist image can be advantageous for a firm because it is associated with an enhanced reputation (Baum, 2012), consumer purchase intention (Spack, Board, Crighton, Kostka, & Ivory, 2012), and willingness to pay (M. Laroche et al., 2001). Most importantly, greenwashing is seen as a corporate activity to attain legitimacy, which in turn is critical for a wide range of corporate activities, such as resource access, the attraction of workforce, and business relations (DiMaggio & Powell, 1983; Walker & Wan, 2012). Legitimacy leads ultimately to increased financial performance (Deephouse, 1999). Thus, corporations have strong incentives to engage in greenwashing. However, when a company is accused of greenwashing, the consequences can be detrimental.

1.2.2 A co-constructionist view on Greenwashing: Accusation-based definition

Due to its disguised nature, greenwashing is not always obvious and is often interpreted differently. The tourism industry shows that a green standing does not always go along with responsible business conduct. In a study about ecotourism on the Galapagos Islands, Self et al. (2010) distinguish between "ecotours" and "greenwashed tours," which both claim to protect the fragile biodiversity, yet differ substantially in their actual commitment. Seele and Gatti (2015) therefore argue that greenwashing lies in the eye of the beholder, meaning that the external accusation determines whether the corporate behavior is deemed to be greenwashing. The authors suggest an accusation-based definition of greenwashing consisting of: **greenwashing** (misleading green message of a firm and a greenwashing accusation), **false greenwashing** (consistent green message of a firm and a greenwashing accusation), **no greenwashing** (consistent green message of a firm without accusation), and **potential greenwashing** (misleading green message without accusation) (Seele & Gatti, 2017). Consequently, greenwashing can remain covered, fostering a firm's legitimacy. However, when the watchful eye of the public raises a greenwashing accusation – regardless of its justification – a firm can easily slide into a legitimacy crisis.

A legitimacy crisis can be viewed as a process-element that emerges from the interplay between legitimacy and greenwashing. The process can be divided into three phases: building, losing and/or restoring legitimacy. Legitimacy can be built on different pillars: 1. strategic manipulation (pragmatic legitimacy), 2. isomorphic adaptation (cognitive legitimacy), and 3. moral reasoning (moral legitimacy) (Seele & Gatti, 2017). In an attempt to gain pragmatic legitimacy, companies strategically and "instrumentally manipulate symbols to attain social support," often resulting in greenwashing accusation (Seele & Gatti, 2017). As a result, instrumental legitimacy may last only for a short amount of time. *Cognitive legitimacy* is usually achieved when corporations mimic common/institutionalized business practices in response to uncertainty (DiMaggio & Powell, 1983). However, 'doing what everyone else does' can also lead to disparities between corporate claims and societal expectations, limiting the chances of gaining durable social acceptance. Thus, from a long-term perspective, building on pragmatic and cognitive legitimacy is not ideal. In contrast, *moral legitimacy* is gained when corporations engage in deliberative discourse to meet societal expectations. Although, this moral legitimacy building process can fail if no consensus is achieved, an infinite number novel attempts can be made. Moreover, moral legitimacy-building provides an avenue, when overcoming a legitimacy loss (phase 2), resulting for example from a greenwashing accusation, and when restoring legitimacy (phase 3). Ford Motor Company can serve as an example in this regard. The corporation managed to overcome a greenwashing accusation and turned into a celebrated 'green' car manufacturer through a moral legitimacy building process (Mitchell & Harrison, 2012). The next paragraphs will center on how businesses can gain moral legitimacy.

1.3 Legitimacy gained: Credibility

1.3.1 Application context 1: CSR Reporting

Corporations can engage in voluntary Corporate Social Responsibility (CSR) activities, such as CSR reporting to express their environmental and social commitment. CSR reporting is also known as non-financial reporting and is usually carried out by following a reporting guideline such as outlined by the Global Reporting Initiative (GRI),

or ISO 26000 (Knebel & Seele, 2015). CSR reporting is becoming widespread and even mandatory in some countries like India and for certain company types such as recently in the European Union (Gatti et al., 2019). Firms can signal their compliance with environmental and social standards to external stakeholders via CSR reports. This is a crucial step when it comes to establishing legitimacy or regaining legitimacy. However, CSR reports are often used as a tool for instrumental communication, and thus, tend to focus on mere pragmatic legitimacy. The reports' lack of comprehensiveness, accessibility, and comparability and the amount of flexibility in the disclosure of non-financial data have been criticized in this regard (Knebel & Seele, 2015). Thus, CSR reporting practices do not always go along with an increase in public trust or confidence in the business performance. This lack of trustworthiness is known as 'credibility gap,' challenging the legitimacy of a firm (Dando & Swift, 2003). Seele and Lock (Seele & Lock, 2015) argue that credibility gaps arise when CSR reports are used as one-way communication tools that inform, rather than interact or engage stakeholders.

CSR reporting in a deliberative democracy

CSR reporting in a Habermasian sense avoids the credibility gap that stems from pragmatic and cognitive legitimacy-building processes (Wagner & Seele, 2017). Gaining moral legitimacy is at the center of political CSR and its deliberative underpinnings (Scherer & Palazzo, 2011). In this sense, a firm's (moral) legitimacy rises from credibility, which is attained through ethical discourse leading do discourse ethics contributing finally to deliberative democracy. The ethical discourse follows the four Habermasian validity claims of communicative action (truth, sincerity, understandability, and appropriateness) and political CSR's demands of open discourse, participation, transparency, and accountability (Lock & Seele, 2016a). Transferred into practice, this means that political CSR reporting goes beyond one-way communication and involves inter alia weblogs, social media and Wikis, but also unpublished communication means, such as stakeholder roundtables, and dialogues with employees, NGOs, and advocacy groups (Seele & Lock, 2015). To raise reporting credibility and thus legitimacy, Lock and Seele (2016b) advice firms to focus on comprehensiveness, truth, sincerity and stakeholder specificity of their

CSR reports; and regulators to provide a level playing field regarding CSR reporting regulations. In sum, corporate communication practices that are embedded in political CSR focus on a broad foundation of discourse and deliberation that is essential to establish sustained (moral) legitimacy. The described form of political corporate action should, however, not be confused with corporate political activities, which are more generally known as lobbying.

1.3.2 Application context 2: lobbying and Astroturf: credibility crisis in CPA

Corporate political activity (CPA) is defined as "corporate attempts to shape government policy in ways favorable to the firm" (Hillman, Keim, & Schuler, 2004, p. 837). CPA functions as an umbrella term to subsume corporate activities that include inter alia campaign contributions, (direct) lobbying, government membership on company boards, voluntary agreements, PACs (political action committees), constituency building (forming grassroots and Astroturf groups) and sometimes even illicit practices such as bribery (Hillman et al., 2004, p. 837; Lawton, Mcguire, & Rajwani, 2013). The question has been raised whether firms should be allowed to influence public policy or even have a legitimate right to do so – in other words – is CPA "part of a healthy democracy or a source of perversion" that should be regulated (Dahan, Hadani, & Schuler, 2013)? (Dahan et al., 2013). Since CPA is understood, practiced and perceived differently across countries, there is no unanimous answer to this question. Whereas some actions, such as bribery are widely denounced and prosecuted as an illegal practice, other CPAs are subject to context-specific interpretation, which leads to varying classifications of their legitimacy. Particularly noteworthy in this regard, are corporate constituency building processes that tap into legal grey zones. They go along with ethical challenges and frequently have detrimental legitimacy effects on the firm if they are discovered.

Lobbying: from grassroots to Astroturf

In recent years, traditional forms of lobbying have been received as increasingly ineffective. In contrast, the so-called grassroots lobbying has become a rising star. In grassroots lobbying, a lobbyist indirectly influences policymakers and the governmental

agenda by involving civil society through citizens' movements that have a stake in an issue of concern (Lock & Seele, 2017a). Grassroots lobbying is a two-stage process in which lobbyists contact citizens, which in turn reach out to politicians via phone or email. The effectiveness of this lobbying strategy stems from the authenticity, trustworthiness, and credibility of the citizen group, which can exert power through their vote during an upcoming election (McGrath, 2005). Grassroots lobbying can thus be seen as a legitimate democratic process that gives voters a (more) substantive collective voice.

Hitherto, on some soil grass does not grow, which led to the invention of Astroturf. Astroturf is a form of artificial grass, symbolizing the instrumental inversion of authentic grassroots activism (Lock, Seele, & Heath, 2016). Astroturf lobbying is pseudo-grassroots lobbying meaning that "apparently grassroots-based citizen groups or coalitions that are primarily conceived, created and/or funded by corporations, industry trade associations, political interests or public relations firms" strive to exert political influence (Sourcewatch, 2018). The lobbying strategy stretches the boundaries of legality, as the sponsoring and orchestrating company remains in the dark (T. P. Lyon & Maxwell, 2004). The covert sponsorship is thereby the decisive element that marks the line between unintentional and intentional mislead. Regardless of legal sanctions that such a strategy might have and which are usually country-specific, if Astroturfing is uncovered, it can result in a significant legitimacy set-back, similar to the consequences of a greenwashing accusation. In fact, it is no coincidence that CSR and CPA – and likewise their instrumental inversions such as greenwashing and astroturfing – often share specific overlaps and should therefore not be treated in isolation.

As outlined by den Hond et al. (2014), the relation between CSR and CPA can take three states: misalignment, non-alignment, and alignment. In the case of misalignment, the company strives to accomplish diverging effects concerning a policy matter. An exemplary 'worst case' of misalignment is, therefore, greenwashing combined with Astroturf lobbying. In such a scenario, the company follows a two-pronged approach of presenting a misleading environmental image to the public while at the same time covertly lobbying regulatory entities for lower environmental standards (den Hond et al., 2014). A

non-alignment of CSR and CPA may evolve but can also be a deliberate firm choice. As a result, a non-alignment, as well as a misalignment of CSR and CPA, can substantially affect corporate reputation and compromise the ongoing legitimacy of a firm (Anastasiadis, 2014). To avoid reputational and legitimacy losses firms can strive for CSR and CPA alignment.

Alignment of CSR and CPA: deliberative lobbying

Deliberative lobbying bridges CSR and CPA by setting out a minimal standard for CPA to coincide with proclaimed CSR strategies. It is defined as "a corporate political activity aligned with CSR that, based on discourse, transparency, and accountability, aims to resolve public issues" (Lock & Seele, 2016a). Similar to political CSR reporting outlined above, the discursive pillar builds on Habermasian discourse ethics and the four validity claims of ideal speech. The exchange of arguments – on an equal level – is central, which is giving minority voices the possibility to participate in a dialogue that reaches consensus through the quality of the argument and not the power or position of an actor (Jügen Habermas, 1984). The second pillar of deliberative lobbying refers to transparency and thus, moral legitimacy creation. It means that the discourse process needs to be transparent to all stakeholders, giving them the possibility to gain relevant insights into the aspects of their concern. The third pillar of deliberative lobbying rests on the accountability of the actors. Not only should the discourse participants know each other, but also bear the responsibility for their statements and actions. In turn, the other discourse participants can hold them accountable. Corporate accountability is, therefore, an essential element of moral legitimacy that ensures societal control over corporate conduct (Seele & Lock, 2015).

In sum, deliberative lobbying takes account of a dynamically evolving world, rather than looking at a static system. Thus, the corporate license to operate is gained through iterative discourse processes establishing moral legitimacy that can be redefined in future deliberations. Deliberative lobbying is, therefore, an "argument to maintain self-regulation against critics claiming that corporations should be excluded from all political processes." (Lock & Seele, 2016a). Conversely, the theoretical core of deliberative

lobbying – political corporate social responsibility and thus Habermas' discourse ethical approach – does not remain unchallenged. Consequently, the following paragraphs will focus on limitations of Habermas' theory, political CSR, and possible future pathways of moral legitimacy creation, which go beyond the dominant schools of ethics depicted above.

1.4 Conclusion: Habermas' limitations as idealized Philosophy / normative thinking

Habermas' notions of deliberative democracy and ethical discourse represent an idealized philosophy. The theory was developed following World War II encouraging critical thinking and normative reasoning (Wagner & Seele, 2017). Thus, the conceptual advancements of it, such as political CSR, remain also normative ideals with aspirational or desirable character (F. Schultz, Castelló, & Morsing, 2013). Their realization and implementation in real-world settings are challenging and require substantial efforts. The practical limitations – still to overcome – are particularly visible when looking at the political CSR construct and the legitimacy of corporate political action conjointly. Political CSR theory depicts corporations as actors with a political mandate to participate in global governance especially in situations where national governments failed or are unable to uphold their regulatory duties (Scherer & Palazzo, 2007, 2011). Still, this corporate political activity – especially in the form of taking over governmental tasks – is marked by a legitimacy deficit that derives from a missing democratic foundation (Wagner & Seele, 2017). Corporate governance models worldwide are characterized by leadership that is selected, and not democratically elected. Hence, corporations have no operating license in the sense of political actors (Scherer & Palazzo, 2007). *Political CSR* strives to overcome the absence of democratic legitimacy by proactive moral legitimacy creation. As outlined above, this can be accomplished through public dialogue and participatory processes that rest on the democratic mechanisms of discourse, transparency, and accountability. From a practical perspective, democratic stakeholder engagement is realized via CSR reporting in a deliberative sense and multistakeholder meetings, which both serve as tools for moral legitimacy creation. However, the 'fuzziness' and non-

binding character of current CSR reporting standards (see, e.g., GRI G4.0) leaves room for reporting that appears to be political in a Habermasian sense (Wagner & Seele, 2017). Closer examination reveals that corporations can provide too much information and even report on aspects that have no ground for comparison. Such Information overload and incomparability leave stakeholders uninformed and thus unprepared for an ideal discourse (Wagner & Seele, 2017). Consequently, the outlined concepts of 'political CSR reporting' and 'deliberative lobbying' are exposed to the risk of misuse in the absence of a global governance framework that assures a level playing field in the global political economy (Banerjee, 2014). Thus, the limitations but also the frontiers of Habermasian theory building lie inter alia in the transformation into practice relevant constructs, which can uphold their aspirational normative demands in a day-to-day business setting. In this sense, firm-level but also global governance structures that are based on the foundations of 'committed' deliberation are promising future pathways – also for a sustained moral legitimacy of the corporation (Banerjee, 2014; Wagner & Seele, 2017).

1.5 Outlook: new approaches beyond utilitarianism, deontology and virtue ethics: Digital democracy and data deliberation

In an increasingly inter-connected world dominated by information and communication technologies, corporations can use novel forms of moral legitimacy creation. In this new digital context, it is worthwhile to consider approaches that go beyond the dominant schools of ethical thinking. Progressive digitalization of corporate data and technological advancements are playing a pivotal role, particularly when it comes to CSR reporting (Seele, 2016b). Whereas early forms of digitalization in the reporting context referred to digitizing written reports into online publications, the more recent digitalization processes indicate a fundamental shift toward digitally enabled transparency and accountability. Thanks to substantial advancements in digital reporting standards that are already in use for financial reporting, CSR reporting can increase its credibility – and in turn firm legitimacy – by building on a unified digital standard, such as XBRL, namely eXtensible Business Reporting Language (Seele, 2016b). The XBRL reporting standard is already used by the US Securities and Exchange Commission for digital financial data

exchange and has recently moved into the focus of the GRI to advance its CSR reporting standard (Seele, 2016b). Applied on a global scale, a unified reporting language can offset the previously mentioned lack of comparability of firm data, giving stakeholders the ability to enter an informed discourse (Wagner & Seele, 2017). Further, the precision of coding standards that follows from the referencing of CSR indicators to single data points in the XBRL repository signifies a shift toward standardization and rule-based regulation (compare to 1.2 Deontology/Kant). Consequently, the creation and propagation of misleading environmental performance data, as well as the exploitation of legal grey zones through unclear and fuzzy information will be complicated.

The key contribution of a digital reporting standard lies, however, in a 24/7/365 transparency of corporate behavior, which stands in sharp contrast to the current practice of reporting about passed business conduct (Seele, 2016b). The consequence of this time-ontological shift is twofold. On the one hand, digital transparency stands at the borderline of ubiquitous digital surveillance that can create new challenges for moral legitimacy. On the other hand, real-time sustainability data gives corporations the ability to contribute to the resolution of global public challenges in an entirely new manner of pro-social surveillance (Seele 2016b). Corporations are key elements in global societies that are increasingly interconnected, not only by the Internet but also by the 'Internet of Things' (Gershenfeld, Krikorian, & Cohen, 2004). The 'Internet of Things' fosters data generation in an unprecedented manner, such that data volumes "double every 12 hours rather than every 12 months, as is the case now" (Helbing & Pournaras, 2015, p. 33). Thus, corporations will gradually contribute to what is commonly known as 'big data.'

In an ideal scenario, big data can empower citizens and foster the well-being of society at large. In its current form, however, the potential of big data often remains in closed, and or opaque corporate databases, rather than adding value to the broader society. Hence, Helbing and Pournaras (2015, p. 33) call for the open sharing of data in a digital democracy, outlining that big data can help to solve the world's challenges when governed in a pluralistic and bottom-up manner. The digital democracy framework that the authors depict represents a deliberative approach in a Habermasian sense. Thus, moral legitimacy

creation of businesses embedded in a digital democracy can occur through the open sharing of corporate data, building a collective 'data commons.' The data sharing can contribute to (1) societal debates and support governmental efforts that use data analytics to anticipate and resolve local (Seele & Schultz, 2017), and global challenges (Helbing, 2013) of the networked society, (2) a responsible governance of colossal transnational projects such as the Chinese Belt and Road Initiative, also known as the New Silk Road (Seele & Helbing, 2018), (3) fostering and safeguarding peace (Helbing & Seele, 2017). Consequently, for a new form of moral legitimacy creation in the digital democracy of tomorrow, this form of open data sharing can be labeled as '*data deliberation*.'

Chapter III

CSR and the Sharing Economy: A pathway to Data-Driven Platform CSR

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Chapter III

CSR and the Sharing Economy: A pathway to Data-Driven Platform CSR

Abstract

Recent developments in global business gave rise to innovative forms of digital-exchange, facilitated by a new big data-based infrastructure - the sharing economy platform (SEP). SEPs are rapidly expanding, challenging incumbents, regulatory bodies, and the classical division of work in society. Considering this unfolding platform era, we discuss the increasingly momentous role of SEPs through the theoretical lens of political CSR (Corporate Social Responsibility) theory. In this manner, we first outline how SEPs are applying institutional strategies to gain competitive advantage, thereby shaping contexts in their favor and triggering an erosion of persisting social welfare foundations. However, SEPs also strive for legitimacy by taking over novel social responsibilities, making use of their profound digital capacities. Our chapter considers future pathways of platform CSR regimes and a democratization of SEPs building on political CSR theory.

Keywords: Sharing Economy; Big data; Institutional Strategies; Political Corporate Social Responsibility; Social Welfare

1.1 Introduction

With sharing economy platforms (SEPs), a disruptive new economic actor has arrived, raising many questions about the future of work and the foundations of modern market-capitalism (Scholz, 2017; Sundararajan, 2016; Tienhaara, 2014): Is a student renting out his room to foreigners a player in the hospitality industry who needs to collect tourist taxes? Is the early retired person driving people to eke the pension a professional driver and needs a special license and passenger insurance? Do both pay income taxes and social security? Are they accordingly insured against eventualities? Moreover, are established hotels and taxi companies losing business because of them?

To date, conventional research has paid little attention to these questions and the role of digital platforms that silently mediate 'sharing' economy transactions via sheer endless sequences of zeros and ones. In contrast to most corporations of the 20th century, SEPs build on big data and redefine the way in which work is organized, thereby impacting longstanding institutional foundations (Marquis & Raynard, 2015; Uzunca et al., 2018). In recent years, political CSR theory (Scherer & Palazzo, 2007, 2011; Scherer, Palazzo, & Baumann, 2006) has gained substantial momentum discussing the roles and responsibilities of corporations along retreating governmental institutions. However, the political CSR framework lacks conceptual ground to cover recent developments in the evolving sharing economy era (Sundararajan, 2016). Thus, in this manuscript, we revisit the political CSR framework, reflecting on SEPs 'institutional strategies' (Uzunca et al., 2018), which on the one hand trigger an erosion of persisting institutional foundations and on the other hand, carry the potential to contribute to the common good and a sustainable economy by taking over novel responsibilities in the business society nexus (Boström, 2012; Dobusch & Kapeller, 2012; Scholz, 2017; Sundararajan, 2016; Tienhaara, 2014).

By conceptualizing SEPs CSR from a political perspective, we offer a twofold contribution to existing literature. First, we outline the extensive and valuable set of abilities that SEPs can provide to society, labeled here as platform CSR. Platform CSR builds on the digital capacities of SEPs emphasizing five key dimensions, in which SEPs can particularly promote public welfare: (1) Emergency situations (2) Security and Safety

(3) Transparency and reporting (4) Data Commons (5) Common Good and Welfare State. Second, we describe a pathway for platform democratization drawing on Habermasian and Rawlsian notions of political CSR (Mäkinen & Kourula, 2012; Scherer et al., 2016).

1.2 The Sharing Economy

1.2.1 Sharing Economy Platforms

Sharing economy stands for a novel form of socioeconomic value creation, which builds on an ICT-enabled peer-to-peer exchange (Sundararajan, 2016). Although currently representing only a fraction of the global economic sphere, the sharing economy is rapidly expanding and transforming established industries with immense velocity. SEPs, such as Uber, Airbnb, Etsy, TaskRabbit, and Funding Circle are enabling not only innovative ways to exchange goods, services, labor, and capital, but also challenging incumbents, regulatory bodies, and more broadly fundamental institutional structures in the state and market nexus. Defining the sharing economy is a difficult task (Acquier, Daudigeos, & Pinkse, 2017; Codagnone & Martens, 2016), given that it represents an emerging concept. Therefore, we adopt Acquier et al.'s (2017) approach to treat the sharing economy as an umbrella construct, to go beyond the existing conceptual, operational, and disciplinary divides. Whereas sharing might be understood as costless collaboration (Witesman & Heiss, 2017), the majority of SEPs come along with charges for the users, but also for the broader society. Our analysis focuses therefore on a specific platform type, labeled as 'Commercial P2P sharing platform', which "represents the bulk of 'sharing economy,'" covering corporations, such as Uber and Airbnb (Codagnone & Martens, 2016). The platform character in the sharing economy is of utmost importance, which is why we focus more specifically on SEPs, that are considered agents of innovation and prosperous change, promising a welfare gain of € 572bn EU wide, and over € 1,000 per citizen (Zuluaga, 2016). However, SEPs are also carrying substantial risks that could adversely affect and destabilize core pillars of the welfare state (Jonas, 2015; Murillo, Buckland, & Val, 2017; Scholz, 2017; Stewart & Stanford, 2017) In the emergent digital economy, SEPs are challenging existing laws and applying institutional strategies in often unregulated territories, casting doubt on their business conduct. Given that individual

corporate interests and financial success are dominant principles, concerns for the broader society and sustainability appear to be a reference point of minor importance (Melé & Armengou, 2016).

1.2.2 SEPs and Institutional Strategies

Fuelled by large sums of venture capital, SEPs are scaling up and expanding rapidly around the globe (Acquier et al., 2017). The digital nature of their business model enables SEPs to enter and adapt quickly to new and diverse contexts (Dreyer, Lüdeke-Freund, Hamann, & Faccer, 2017). A rapid increase in scale and scope is thereby a crucial aspect of their business strategy to overcome socioeconomic and regulatory struggles and to shape the institutional environment in their favor. Marquis and Raynard (2015, p. 291) label such firm behavior as 'institutional strategies,' meaning "the comprehensive set of plans and actions directed at leveraging and shaping socio-political and cultural institutions to obtain or retain competitive advantage." Accordingly, SEPs institutional strategies bring forth an erosion of the welfare state institutions. By considering the four key background institutions of a country, one can observe how these transformations take place (R. Whitley, 2000; Richard Whitley, 1992):

(1) The political system: The advent of the sharing economy has disrupted political systems around the world (see, e.g., Telles, 2016). SEPs have tapped into and uncovered several regulatory vacuums, which raise questions about how to best integrate the sharing economy in existing institutional and regulatory frameworks (Stewart & Stanford, 2017) and how the division of work between central and local regulatory bodies can be arranged (Davidson & Infranca, 2016). Particularly salient concerns relate to worker classification (Stewart & Stanford, 2017), taxation and compliance (Zuluaga, 2016), and litigation (Laughlin, 2017).

(2) The economic and financial system: Economic market processes are organized and coordinated in different ways. Economies can usually be classified along a continuum running from markets to alliances (Matten & Moon, 2008). SEPs are radically changing this dimension. The very essence of SEPs' business concept rests on the digital

matching of users that access through Internet-enabled devices (Belk, 2014). Market transactions have become transparent, reliable, secure, and efficient – in theory (see, e.g., critically Dudley, Banister, & Schwanen, 2017). Several critical points have been raised in this regard, such as consumer privacy and security (L. Xu et al., 2017), platform liability (Martínez Mata, 2017), equal access, and discrimination (G. Mann & O'Neil, 2016). In addition, with the arrival of financial SEPs, such as Funding Circle and LendingClub traditional forms of corporate financing are now complemented with platform-based solutions (Sundararajan, 2016; Witesman & Heiss, 2017).

(3) The educational and labor system: Workers' rights became institutionalized in many European countries, in the form of extensive labor legislation, but also voiced by strong labor unions and collective bargaining. The impact of the sharing economy on the educational and labor system is profound, especially regarding union rights (Acquier et al., 2017). The undercutting such a central pillar is putting workers at risk of losing bargaining power over: inter alia economic compensation, tiered reimbursements; health and welfare benefits; professional development and training; labor-management committees; grievance procedures (E. J. Kennedy, 2015). Sharing economy 'workers' are exposed to risk factors that affect their work status, the stability of their income, benefits, and labor protection rights. Additionally, the skill development and training, are often 'outsourced' from the employer to the worker (Murillo et al., 2017).

(4) The cultural system: SEPs' owner control ambitions of sectors are very high, given that an early critical mass of users can lead to monopolizing of an industry and a dominant market position. Fast amounts of venture capital combined with a managerial mentality of "innovate first, fix the problems later" seems to be the driving force of many platforms (Murillo et al., 2017, p. 5). Thus, establishing a platform culture has become a means for gaining a dominant market position. Hailing a ride or booking a room via the smartphone app, has become so normal and widely used that 'analog' counterparts are increasingly falling into oblivion. Thus, a clear shift toward a 'platform' culture' can be observed (Sundararajan, 2016).

In aggregation, SEPs impact on the economy and the underlying institutional contexts goes along with an erosion of codified values, norms, and rules, which (used to) set the context for responsible corporate conduct in the welfare state. Therefore, one can conclude that SEPs concerns for social issues are increasingly an aspect of voluntary corporate discretion. In this regard, it is necessary to consider the institutional strategies of SEPs which can lead to the creation of novel company roles.

Table III-1: Dimensions of Platform CSR building on digital capacities of Sharing Economy Platforms

Dimension	Digital capabilities and actions
(1) Emergency Situations	• Pro-social business model in response to emergency situations and natural disasters. • Emergency information and warnings for customers and service providers. • Provision and coordination of emergency services and care in line with governmental efforts
(2) Security and Safety	• Identification technologies for dynamic security functions via the platform interface. E.g., the use of web-based platform 'apps' and mobile phone's sensors/instruments for verification purposes. • Increase trust between consumer and service provider • Link to governmental databases for additional safety • Potential issues regarding the handling of user data, privacy, misuse, and data leaks.
(3) Transparency and Reporting	Platform transactions and interactions create a digital footprint with several implications: • Transparency: new possibilities for digital forms of CSR and reporting. E.g., 24/7/365 reporting. • SEPs can quickly detect potential types of market abuse (e.g., credit card fraud), or discriminatory practices via algorithms. • Counter shadow economy and tax evasion practices • In combination with Blockchain technology, transaction agreements can be enforced even without using a trusted party. • Correction of market failures and thereby strengthening of governmental structures. • Risks for anonymity, data privacy, data abuse, competition law.
(4) Data Commons	• Contribution to data commons via collected primary data. • Broader society can benefit from novel insights. E.g., governmental institutions can use data for public infrastructure improvements and environmental impact assessments.

(5)	**Common Good and the Welfare State**	• Extension, complementation, of governmental institutions through dynamic interaction between public and private entities • Tackling broader societal and environmental issues

1.3 Political CSR in the Sharing Economy Era

In the following, we adopt the theoretical perspective of political CSR theory to discuss the new digital abilities of SEPs and the question of a new political role and responsibility of SEPS in increasingly data-driven societies. Political CSR (Scherer & Palazzo, 2007, 2011; Scherer et al., 2006; Scherer, Palazzo, & Matten, 2009; Scherer et al., 2016; see also critically, Willke & Willke, 2008) goes beyond the traditional division of responsibilities between economic, political and social domains that can be found in dominant instrumental CSR theory (Friedman, 1970; Jensen, 2002; Porter & Kramer, 2011; Sundaram & Inkpen, 2004) and positions the business firm as a political actor in an increasingly interconnected world. In this sense, businesses actively take over political responsibilities in the form of multi-stakeholder meetings or voluntary self-regulation (Scherer & Palazzo, 2011; M. D. Schultz & Seele, 2020). Through these deliberative democratic activities, the business firm can contribute to the resolution of broader societal issues and the provision of public goods, where national governance run short in their efforts (Scherer & Palazzo, 2007; M. D. Schultz & Seele, 2020). Political CSR builds on the democratic principles of discourse, transparency, and accountability, which are guideposts for corporate decision-making (Scherer & Palazzo, 2007; M. D. Schultz & Seele, 2019). Further, variations of political CSR (Habermasian and Rawlsian) reflect the division of moral labor in given welfare states (Mäkinen & Kourula, 2012). This division of labor between business government and society becomes increasingly blurry in the sharing economy (Sundararajan, 2016). Via institutional strategies (relational, infrastructure-building, and socio-cultural bridging), SEPs transform vital institutional structures in welfare states, contributing to their erosion. At the same time, these institutional strategies can lead to positive outcomes for society, as SEPs are adopting new company roles that contribute to the common good.

1.3.1 Toward Platform CSR

In the following, we discuss the abilities and responsibility of SEPs leading to the question of a new political role for businesses (particularly in the sharing economy) in the digital economy. We label this role as platform CSR. Through platform CSR, SEPs can contribute to the well-being of society as a whole, expand contemporary CSR initiatives, and substitute or complement for a decline of the welfare state institutions. Here, we focus on five initial dimensions that build on the digital abilities of platforms concerning: (1) emergency situations, (2) security and safety (3) transparency and reporting (4) data commons (5) common good and the welfare state

(1) Emergency Situations. The digital nature of SEPs enables them to react almost instantly to emergency situations or natural disasters. In such cases, SEPs can switch from a commercial to a pro-social business model. Given that IT-infrastructures are functioning and web-based platform services can be accessed through mobile devices, vital emergency information and warnings can be provided to customers and service providers (see, e.g., emergency alerts after Paris shooting Willett, 2015). Moreover, emergency services and care can be coordinated instantly and in line with governmental efforts (see, e.g., Airbnb's Open Homes, offering free shelter to hurricane evacuees Airbnb Inc., 2017a). Another noteworthy example of platform CSR can be seen in Tesla's software update during hurricane Harvey in 2017. Although Tesla is not a typical SEP, the company's battery update for range extension of its cars shows how modern technologies can be used to shift CSR from a more reactive, toward a proactive concept, which can benefit society and the environment in times of distress.

(2) Security and Safety. SEPs can increase the security and safety of users and service providers alike. Apart from user ratings, data analytics, and modern identification technologies allow for quick and dynamic security functions via the platform interface, which increases the trust between consumer and service provider. Web-based platform 'apps' can be granted access to a mobile phone's sensors and instruments for verification purposes (see, e.g., Airbnb's user verification Airbnb Inc., 2017b). In a future step, such identity verification is likely to be liked to governmental databases (see, e.g., critically the

national database of India Dixit, 2017; and the national database of Australia E. Thomas, 2017). The downsides of these novel capabilities of platforms are potential issues regarding the handling of user data, privacy, misuse and data leaks (see, e.g., a critical perspective about Uber Alba, 2017).

(3) Transparency and reporting. The key differentiating factor of modern platforms compared to their 'analog' predecessors is the digital footprint. Every transaction between customer and services provider is recorded, leaving behind a digital trail that can be traced. This novelty has twofold implications:

First, platform market transactions are becoming more transparent, breaking new grounds for digital forms of social and environmental reporting and thus, accountability (Pucheta-Martínez & Gallego-Álvarez, 2018; M. D. Schultz & Seele, 2019). The real-time digital footprint can set new standards, allowing for a time-ontological shift to 24/7/365 reporting as well as monitoring of stakeholder demands (Seele, 2016b). Further, SEPs can quickly detect potential types of market abuse (e.g., credit card fraud), or discriminatory practices via algorithmic management. Moreover, in comparison to business conduct under traditional market regimes, shadow economy and tax evasion practices (Schneider & Enste, 2013) can be countered, and in combination with blockchain technology, transaction agreements can be enforced even without using a trusted party (L. Xu et al., 2017). Thus, SEPs can correct market failures and thereby strengthen governmental structures. This particularly highlights the blurring of the lines between governments and platforms. Second, the digital footprint bears several risks for anonymity, data privacy, data abuse, and competition law (e.g., Alba, 2017; Zwitter, 2014). Thus, SEPs have to balance the two sides of the scale by acting with due diligence.

(4) Data Commons. SEPs are continually collecting myriads of highly valuable data, which can be used for the immediate service that they are offering but also be transferred to numerous other domains promoting the common good (M. D. Schultz & Seele, 2020). This conception of SEPs may be contrary to current practices of platforms, which often commercialize user data (Kannisto, 2017). However, recent collaborations

between SEPs and local governments show that corporate data can benefit society and the environment at large through data commons. Uber, for example, provides anonymized data to local governments to aid urban planning (Uber Technologies, 2017). Such data sharing has also led to new standards of data exchange between several US cities and SEPs in the mobility sector (A. Marshall, 2019). Given that corporate data can provide new insights and lead to substantially new pathways for environmental sustainability (M. Song et al., 2017), and benefit the society at large (George et al., 2014) public-private data sharing in the form of data commons is about to increase.

(5) Common Good and the Welfare State. On a more general societal level – and in relation to the decline of welfare state institutions – it is essential to follow up on the question if, how, and to what extend platforms can assist or incorporate governmental functions. One of the absolute strengths of SEPs is the ability to tap into underutilized resources (capital and labor) and thus to reduce environmental impacts. This advantage could also be harnessed for the common good (Boström, 2012; Tienhaara, 2014). For example, one could ask if a housing platform such as Airbnb could absorb a social housing shortage, cooperating with welfare states to provide (temporary) accommodation for the least well-off (e.g., refugees, or homeless). Thus, when it comes to tackling complex societal challenges, the dynamic interaction between governmental and private entities may gain in importance and benefit public welfare and the broader economic sustainability (Boström, 2012; Tosun, Koos, & Shore, 2016). Explicit engagement of companies can thereby complement or even substitute governmental efforts (Koos, 2012).

1.3.2 The political role of corporations in platform CSR

The new digital abilities of SEPs carry both opportunities and risks. On the one hand, the empowerment of platforms creates unprecedented possibilities platform CSR. At the same time, however, the new digital capabilities can be easily misused (e.g., Uber's "God view" in: S. Levin, 2017). SEPs risk their reputation and social license to operate if they abuse their newly gained strengths (M. D. Schultz & Seele, 2019). Thus, the digital capacities of SEPs come with increased responsibilities, not only toward platform consumers and service providers but also toward the broader society. Consequently, SEPs

require a broader societal legitimation: The transformation of the welfare state via institutional strategies weakens previously prominent actors, such as labor unions, whereas SEPs gain in power. Thus, existing institutions erode, as the blurring of the lines between business, government, and society continue to become more salient (Sundararajan, 2016). As a result, substantial information and power asymmetries between SEPs, the government, and society arise (Rosenblat & Stark, 2016). We argue that the imbalance and the lack of social legitimacy can be resolved via a democratization of SEPs, establishing platform CSR based on political CSR. The common good can thereby be understood as the organizational reference point for moral legitimacy (Melé & Armengou, 2016).

In light of the sharing economy, political CSR regimes can be a means of promoting democratic platform governance and to reestablishing imbalances created by the erosion of welfare state institutions and the blending of state, market, and firm (Felicetti, 2016). Mäkinen and Kourula (2012) highlight that government failures and information asymmetries are two factors that offer room for political CSR in welfare states.

The democratic politicization of platforms can contribute to a novel understanding of the welfare state in the digital age, as governmental tasks shift toward the platform, and the platform shifts toward the government. Akin political CSR theory goes beyond the division of labor between economic actors, which can be seen as the blurring of lines between state and platforms in the sharing economy (Scherer & Palazzo, 2007; Sundararajan, 2016). The role and responsibility of the platform thereby increase, and platforms start playing an active role in democratic regulation and self-regulation of their market sphere in line with Habermasian ideals outlined in political CSR theory (Scherer & Palazzo, 2011). Hence, with the underlying basement of political CSR, SEPs actions in the above-outlined dimensions can be seen as "responsible because they are directed to the effective resolution of public issues in a legitimate manner, often with the (explicit) aim of contributing to society or enhancing social welfare, and are thus not limited to economic motivations." (Scherer et al., 2016, p. 276).

Further, democratic platform governance represents a necessary step when it comes to decreasing power imbalances and empowering platform workers in the sharing economy. As SEPs algorithmic control capacities and the handling of user data can easily drift into a questionable realm (Jose, Jabbour, Lopes De Sousa Jabbour, Sarkis, & Filho, 2017; Scheiber, 2017) democratic corporate governance and accountability mechanism become essential. Under platform CSR, SEPs are politically mandated to participate in multi-stakeholder meetings, with currently underrepresented stakeholder groups (Lock & Seele, 2017b). In this regard, Kennedy (2015) shows that current practices do not allow informal groups of independent contractors to form unions for collective bargaining. Thus, a mandate to participate in multi-stakeholder meetings can foster deliberation and reasoning – also via digital means – and ultimately increase platform legitimacy to offset the current disparity of powers (Helbing & Pournaras, 2015; M. D. Schultz & Seele, 2020).

Given the open definition of political CSR "with regard to what kind of political and economic system can be assumed to provide the background for PCSR," and the three major models of welfare states – differing notions of platform CSR can match underlying state systems – following Habermasian or Rawlsian approaches (Mäkinen & Kourula, 2012; Scherer et al., 2016; Whelan, 2012). Accordingly, platform CSR may adapt to the underlying welfare state setting and thereby help in (re)establishing the legitimacy of SEPs within a given societal context (Suddaby, Bitektine, & Haack, 2017).

1.4 Conclusion and Outlook

In an ideal utilitarian market-oriented economy, questions about social welfare seem to be unnecessary, as the "greatest good, for the greatest number" is automatically reached (T. M. Jones et al., 2016, p. 217). The current disruptions brought along by SEPs however, remind us that idealistic – and in this case purely utilitarian – economic models are often far from being attained in real-world settings. Thus, opening wide-ranging space for social welfare-oriented research in the state-market nexus (Baglioni, 2017). In this manner, we explored the implications of SEPs in relation to political CSR theory. We have shown, that SEPs can shape institutional environments in their favor, thereby contributing

to the erosion of persisting institutional pillars of social welfare. However, SEPs digital capacities offer great potential to reframe existing CSR approaches and thus potential to contribute to the common good (Boström, 2012; Dobusch & Kapeller, 2012; Du, Bhattacharya, & Sen, 2011; Tienhaara, 2014; Werner, 2015). We have set out some initial dimensions of platform CSR depicting how SEPs can contribute to promote and sustain public welfare and thereby complement or even substitute welfare state arrangements. This typology is not exhaustive, giving room for future research to add to the preliminary categories. More generally, it opens space for common good and social welfare-oriented research in the state-market nexus (Baglioni, 2017; Dobusch & Kapeller, 2012).

SEPs digital capacities bear the potential for contributing to the common good, but also go along with an increase in power and societal reach that may result in information- and power asymmetries between SEPs, government, and society. This imbalance may be overcome via democratization of SEPs. In this sense, Habermasian and Rawlsian conceptions of PCSR represent fruitful avenues to pursue, particularly when it comes to offsetting power imbalances as well as (re)establishing social legitimacy. However, it is important to note that the concept of PCSR in a value pluralistic global context is unlikely to thrive (Arnold, 2013; Banerjee, 2018). Moog et al. (2015) show the practical limitations of the approach on a global level. Thus, a conceptualization of SEPs CSR from a political perspective, as outlined above, requires indirect institutional background conditions that allow for qualitative democratic equality (Richardson, 2002). Crocker (2005) highlights that these institutional 'enabling conditions' (equal political liberty, equality before the law, economic justice, procedural fairness) are, for example, not given in dictatorships or failed states. Future research could, therefore, explore, how notions of PCSR could best be integrated into existing welfare state contexts and in the interplay with state and non-state actors, such as nonprofit organizations (Fontana, 2017). Another fruitful aspect that future research could investigate is the firm's willingness or desire to contribute to the common good, given that SEPs may have different understandings about it. And tensions may arise between promoting the common good and respecting individual autonomy. Furthermore, the Western notion of the welfare state, based on the legitimacy obtained in a deliberative democracy, is not exactly on the rise – to say the least. SEPs however, are.

And they are global. Therefore, intercultural differences also need to be addressed and deserve further research attention.

In the long run, few platforms might survive the harsh battle over market share and customers' favor in a given domain. The users "unwillingness to multi-home" implies that a given domain or industry is sooner or later dominated by a few powerful platforms that are setting the standards (McAfee & Brynjolfsson, 2017, p. 168). Democratizing SEPs in both the Habermasian and Rawlsian sense and beyond, and leveraging their potential to contribute to 'digital democracy' (Helbing & Pournaras, 2015) is thus key for the future of the welfare state – as a necessary precondition for the common good – should there be any.

Chapter IV

Networked Surveillance for Good? A Perception Study on Blockchain-Based Supply Chain Transparency

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Chapter IV
Networked Surveillance for Good?
A Perception Study on Blockchain-Based Supply Chain Transparency

Abstract

The purpose of this study is to investigate the controversial Janus-face of surveillance in the form of distributed ledger technology (DLT) and blockchain-based product identifiers within the Swiss luxury watch industry. We propose the concept of "networked surveillance," as a form of supply chain transparency, to address the currently under-researched novelty of DLT within the luxury watch context. In this exploratory study, an inductive approach to collecting and analyzing data is applied to gain insights into luxury watch experts' perceptions of the disruptive potential of DLT, against the background of current industry trends and challenges. The findings from a survey and in-depth expert interviews indicate salient industry challenges, along with four major themes that are characteristic for ongoing industry transformations: (1) new, younger consumer generations are becoming increasingly important; (2) higher standards with respect to quality, as well as ethical and sustainable product attributes are demanded; (3) personalization beyond the physical product is moving center stage, along with (4) digitalization and innovation. Building on these findings, the offered contribution highlights networked surveillance as a concept for digital transparency that goes beyond dichotomies of the surveillance concept. Networked surveillance can thereby inform an ethical luxury industry, with benefits of learning and control in three key areas: 1) black markets and counterfeits, (2) CSR standards and supply chains, (3) and personalization beyond physical products, toward virtual luxury identities.

Keywords: Networked surveillance; Janus-faced; distributed ledger technology; ethical luxury; supply chain transparency; Swiss luxury watch industry; inductive study

1.1 Introduction

The worldwide luxury industry includes a wide range of companies that produce goods, such as designer clothing, cars, yachts, wines, spirits, footwear, accessories, cosmetics, fragrances, jewelry, and watches but also a wide range of services frequently linked to hospitality (Shukla & Singh, 2017). In a recent industry report, it was estimated that the luxury market came close to annual sales of US $ 1 trillion by the end of 2017, highlighting its robustness and continuous growth despite economic uncertainty and geopolitical issues (Deloitte, 2018). Within the luxury goods industry, the fastest-growing product sectors of recent years are clothing and footwear as well as jewelry and watches (Deloitte, 2018). Luxury watches will be the focus of this study, with Swiss luxury watchmaking seen as the industry leader and being described as one of the mainstays of the worldwide luxury goods industry (J. Hoffmann & Lecamp, 2015). Luxury timepieces are in strong demand worldwide, with consumers expecting high levels of perfection and quality from the product and the materials it contains (Amatulli, De Angelis, Costabile, & Guido, 2017; The Swiss Federal Council, 2017). The popularity of luxury watches is also reflected in the 35 million that are produced and sold via unofficial channels each year, thereby challenging the formal economy and right holders that are faced with economic and social losses (Jaberg & Nguyen, 2017; OECD/EUIPO, 2016).

In this study, we focus on recent shifts brought along by digitalization and its disruptive potential against the background of increasingly interconnected societies. Drawing on surveillance theories (D. Lyon, 2007; Whelan, 2019b), we analyze the controversial Janus-faced nature of surveillance in the form of distributed ledger technology (DLT) and blockchain-based product identifiers as a major force disrupting the luxury watch industry. Given the novelty of DLT and the concept of networked surveillance in general (Whelan, 2019b), little is known about this topic in relation to the luxury watch industry. Thus, the purpose of this article is to look into recent developments brought along by blockchain-based networked surveillance, and how it is perceived in the industry, as a means for transparency that creates novel opportunities for learning and control for luxury corporations and their stakeholders (Bernstein, 2017).

To gain insights into the phenomenon, we apply an inductive approach to collecting and analyzing data, building on open-ended survey data among 87 professionals working in the luxury watch industry, as well as in-depth expert interviews (Creswell & Clark, 2017; J. C. Greene, 2007; Tashakkori & Teddlie, 2010). Consequently, this article describes the most salient challenges (such as black-market sales and counterfeits) that luxury watch experts see for their industry, as well as their perception of recent transformations that are reshaping the industry against increasingly interconnected societies. The findings from the expert data reveal four major themes that are characteristic for the recent transformations: (1) new, younger consumer generations are becoming increasingly important (2) higher standards with respect to quality, as well as ethical and sustainable product attributes are demanded (3) personalization beyond the physical product is moving center stage, along with (4) digitalization and innovation. The findings thereby indicate that the transformations brought along by DLT have the potential to substantially change the interactions between luxury watch corporations, their customers, and the extended network of stakeholders directly or indirectly connected to luxury firms. DLT-based surveillance with blockchain-based product identifiers plays a crucial role in linking the previously depicted themes while carrying potential for addressing industry challenges. Based on these findings, we offer a contribution to existing literature, evoking the depiction of the Roman god Janus. As symbolized by the image of this two-faced god, debates on surveillance are often exclusively focused on one of two opposing conditions: good or bad, desirable or undesirable surveillance (Hong, 2017; D. Lyon, 1994, 2007). We, therefore, outline *networked surveillance* as an approach that accounts for the dual nature of surveillance, with Janus symbolizing the bridge between previous dichotomies (desirable/undesirable), to allow for new ways of thinking about the surveillance (Ball, Haggerty, & Lyon, 2012; Hong, 2017). Specifically, this digital transparency conception of surveillance can inform an ethical luxury industry, providing new insights and opportunities for learning and control along the three key dimensions: (1) black markets and counterfeits, (2) CSR standards and supply chains, (3) and personalization beyond physical products, toward virtual luxury identities.

1.2 The Swiss Luxury Watch Industry

Swiss luxury watches are often perceived as highly ethical and sustainable, coming with the 'Swiss Made' label, which is awarded when inter alia "at least 60% of the manufacturing costs are generated in Switzerland," (Amatulli et al., 2017; The Swiss Federal Council, 2017). Swiss watchmakers are producing about 30 million timepieces a year, which is equivalent to 'only' 2,5 percent of the world's watch production (Jaberg & Nguyen, 2017). This small percentage represents, however, 95 percent of high-end watches, priced CHF 1,000 and above, that are manufactured by Swiss companies (Jaberg & Nguyen, 2017). The Swiss watch industry employs about 60,000 people, working for roughly 500 companies (Jaberg & Nguyen, 2017). In a recent industry report on global luxury goods, the top 100 companies were ranked in terms of sales, featuring three Swiss companies in the top 12 (Deloitte, 2018). The three companies are focusing on high-end luxury watches, with Compagnie Fiancière Richemont SA ranked 3rd (total revenue of 11,677 m US$), Swatch Group Ltd. ranked 6th (total revenue of 7,665 m US$), and Rolex SA ranked 12th (total revenue of 5,379 m US$) (Deloitte, 2018). The three groups dominate the industry given their scale and turnover. Together, they account for the absolute majority of luxury watch sales of all Swiss watchmakers (Deloitte, 2018).

1.2.1 The Swiss economy and the Swiss Franc

As a rather small and worldwide open economy, Switzerland is strongly influenced by global economic activities, given its strong focus on foreign trade (Indergand & Leist, 2013). Therefore, global economic, as well as exchange rate fluctuations traditionally, have a high impact on Swiss industries. The Swiss watch industry is Switzerland's third-largest export sector, with over 90 percent of its business conducted outside the country (Deloitte, 2018; Jaberg & Nguyen, 2017). As a direct consequence of this export focus, the industry is generally characterized by a high dependency on foreign economic activities and the valuation of the Swiss franc. Currency fluctuations, in terms of a strong Swiss franc, can hurt watch exports as past exchange rate shocks have shown. In 2015, the Swiss National Bank suddenly unpegged the CHF from the Euro, leading to a soaring Swiss Franc (Jolly & Irwin, 2015). This, in turn, led to sharp export drops across all global

export markets of Swiss watch manufacturers (Federation of the Swiss Watch Industry FH, 2017). Following this decline, Swiss luxury watch companies have gradually adjusted their strategies and are now able to better handle the strong Swiss franc, resulting in stable export numbers since 2017 (Deloitte, 2017; Federation of the Swiss Watch Industry FH, 2018, 2019d).

1.2.2 Main Markets

The Swiss Watch Industry is focused on three key regions, with Asia accounting for 53 % Europe 31 %, and America 14% of the overall turnover (Federation of the Swiss Watch Industry FH, 2019b). Whereas the Asian (+12,2%) and American (+7,2%) markets are showing a constant growth, the market of Europe (-2.9%) is in decline (Federation of the Swiss Watch Industry FH, 2019b). This trend is also reflected by developments in the single country markets, as shown in figure 1, highlighting the top ten export destinations of Swiss watches as of 2017 and 2018.

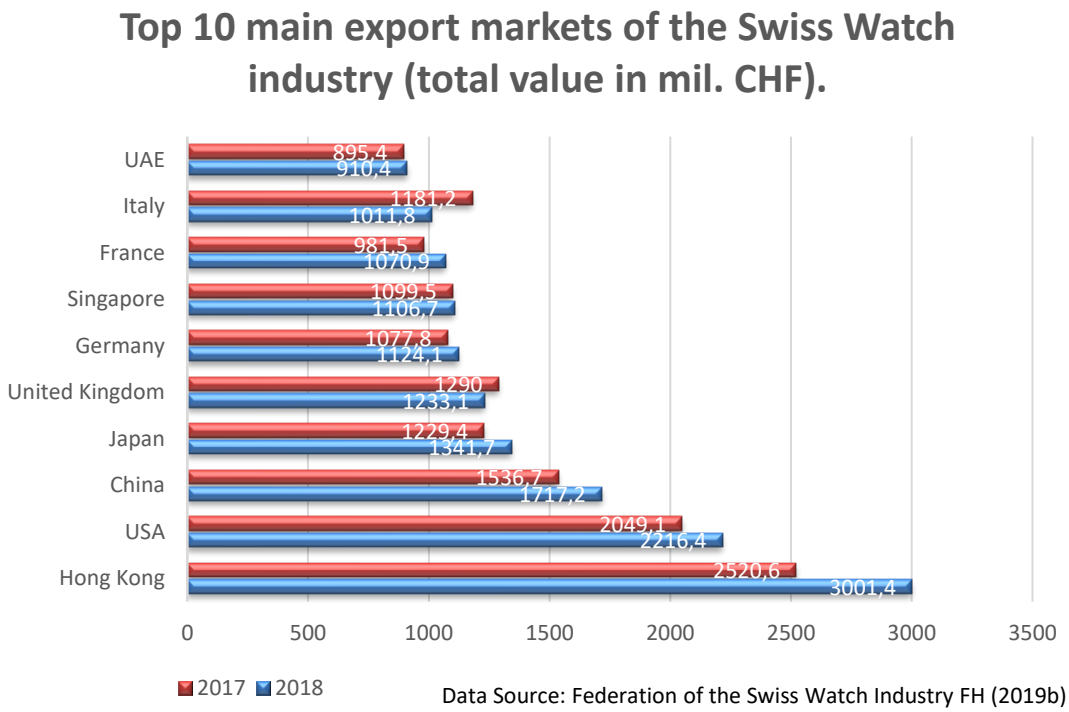

Figure II-1: Top ten export markets of the Swiss Watch industry in 2017/2018.

What becomes most evident from these recent export numbers, is the role of the Chinese market as "[h]alf of all watches sold worldwide end up on the wrist of a Chinese customer" (Jaberg & Nguyen, 2017). China, with its autonomous territory of Hong Kong, represents the most important export destination for Swiss watches. On the one hand, the high demand from Chinese customers can be partially explained by the constant economic growth, allowing an increasing number of people to afford luxury products (Zhan & He, 2012). On the other hand, China is known for a gift-giving culture, whereby luxury goods are often exchanged for business favors (Amatulli et al., 2017). Targeting public corruption involving civil servants, the Chinese government initiated an anti-corruption campaign in 2012, banning inter alia luxury advertising throughout China (Adams, 2012). The campaign had a considerably large impact on the Swiss Watch Industry from which it only slowly recovered (J. Hoffmann, Ramirez, & Lecamp, 2018). Currently, exports to

mainland China are rising very sharply, whereas the exports to Hong Kong are indecline due to the protests and tensions in the autonomous territory (Federation of the Swiss Watch Industry FH, 2019c).

1.2.3 Black and grey markets

Luxury watches are not only sold via official channels but can also be found in black and grey markets. Academic literature defines a black market "as a marketplace created beyond the borders of legality to avoid collecting taxes or respecting price and sanitary controls or other governmental impositions, such as simple prohibition" (Hemsley & Pinho, 2017, p. 252). Black markets, also known as shadow economy, can be divided into two general categories: The first arising from product scarcity and the second emerging from high product prices in the legal market (Boulding, 1947). Luxury watches generally belonging to the latter category, are frequently traded in such clandestine markets, and a distinction is often made between different 'shades of black.' Whereas stolen, fake, or counterfeit watches are typically sold in black markets, authentic watches are increasingly offered by unauthorized sources in so-called grey markets, lacking factory warranties (Vartan, 2009). Grey markets are aimed at avoiding governmental taxation and entail watches that are mainly sourced from overseas, outside the officially controlled retail networks (Koltrowitz, 2017; Vartan, 2009). Lecamp (2013) highlights that timepieces of all price classes are offered in such markets, with discounts reaching up to 50 percent of the listed price. Driven by digital selling platforms, it is estimated that grey markets will continue to flourish, expanding their current share of about 20 percent of the market for watches above CHF 5,000 – a billion-dollar market (Shannon, 2017). Whereas grey markets sales of luxury watches are not clearly illegal and, therefore, in a 'grey zone,' black market trades are against the law in most countries around the world (H. Li, Shao, & Zhu, 2018; Vartan, 2009). Watches offered on a black market are sold without an accounting record to prevent any tracing of its source of origin (Lecamp, 2013). Next to stolen and fake watches the absolute majority of black-market offerings are counterfeits (OECD/EUIPO, 2016).

1.2.4 Counterfeits

The popularity of Swiss watches is also reflected in the number of counterfeits that are produced, totaling more than 35 million pieces every year (Jaberg & Nguyen, 2017). Counterfeits are defined "as products that bear a trademark that is identical to, or indistinguishable from, a trademark registered to another party and that infringe the rights of the holder of the trademark" (Bian, Wang, Smith, & Yannopoulou, 2016, p. 4250).

As shown in a recent OECD report, watches have the highest propensity to be affected by counterfeiting compared to all other products (OECD/EUIPO, 2016). Particularly well-known brands, such as Rolex, suffer from the high amount of illegal replicas that are trying to imitate the original watches manufactured in Switzerland (Bian & Moutinho, 2011). Counterfeiting of luxury watches is no niche phenomenon. The turnover of counterfeit sales is estimated at CHF 1 billion annually (Jaberg & Nguyen, 2017). As the demand for counterfeits is robust and rising, many companies are looking into various applications to counter these practices (Bian et al., 2016).

1.2.5 Digitalization

Digitalization has been claimed to be a game-changer for many industries in recent years, and the luxury watch industry is no exception. Noteworthy in this regard are smartwatches, which initially have been seen as a potential threat to the luxury watch industry (Chuah et al., 2016). However, the luxury watch market appears to be relatively unimpressed by smartwatches, given that prices and utility differ from the luxury segment (Deloitte, 2017). The most expensive smartwatches are priced in a range where the luxury watch segment starts, providing core features such as fitness and health tracking, which substantially differ from the characteristics sought after by luxury watch consumers (Deloitte, 2017; Oakley, 2015). Thus, on the level of product attributes, it appears that the impacts of digitalization are not substantial. However, online social platforms (e.g., Instagram, Facebook, Weibo, Twitter) are becoming increasingly important, given their relevance as initial digital product touchpoints for potential customers (J. Hoffmann & Lecamp, 2015). Social media has become an essential marketing channel for luxury brands, particularly when it comes to reaching younger generations (Deloitte, 2017). The

web presence of luxury brands offers immediate access to product details and allows for direct engagement with consumers who demand in-depth information (Gardetti, 2017; Kapferer & Michaut, 2015). As outlined by Winston (2016), "sustainability and social responsibility are no longer nice-to-have for luxury brands — they are now requirements" and information about these aspects are in rising demand. Consequently, luxury brands are increasingly attentive to consumer demands in this regard. Brands such as Baume or IWC feature particular ethical and sustainable pledges following consumer expectations (Amatulli et al., 2017).

1.3 Blockchain-Based Surveillance And Supply Chain Transparency

As depicted above, the luxury watch industry is continuously evolving: In light of persistent industry challenges and new technologies, opportunities are opening up for luxury watch cooperations to protect the quality of their products, as well as to deliver additional value to consumers via increased product information. In this article, we draw on surveillance theories as a theoretical framework to explore digitalization and distributed ledger technology concerning the luxury watch industry (Dierksmeier & Seele, 2016; D. Lyon, 2007; Whelan, 2019b). Surveillance is thereby understood as 'new surveillance' or 'surveillance as transparency' involving the utilization of technologies to generate or extract information that allows for learning and control (Ball et al., 2012; Bernstein, 2017). In this sense, surveillance relates to increasingly interconnected societies in which surveillance has become a core element (D. Lyon, 2018; Zuboff, 2019). As outlined by Whelan (2019b), it is crucial to distinguish between three main types of surveillance: (1) top-down, (2) bottom-up, and (3) Blockchain-based networked surveillance.

(1) Top-down surveillance is typically associated with more traditional understandings of surveillance with a government or an organization as the central surveillance actor (Ball et al., 2012). This understanding of surveillance often goes along with adversarial notions, such as increased control and the loss of privacy, and is famously conceptualized as Bentham's panopticon (Hong, 2017; D. Lyon, 2006). Top-down surveillance in the corporate sector may take various shapes and generally be aimed at

securing product quality and trademark protection (Whelan, 2019b). Several luxury watch corporations, for example, are known for monitoring the authenticity of their products and spare parts via serial numbers and following-up on counterfeits (Key, Boostrom, Adjei, & Campbell, 2013).

(2) Bottom-up surveillance: Going beyond the panoptical understanding with a central actor, bottom-up surveillance represents a form of surveillance, whereby observer and the observed are switch roles watching from below (S. Mann, Nolan, & Wellman, 2002). Bottom-up surveillance can take the form of sousveillance, which describes an inversion of the panopticon (Ganascia, 2011). Today's digital contexts give consumers a vast room to engage in surveillance themselves. This may manifest in different ways, such as checking the authenticity of a luxury watch or collecting information about a watch brand on the internet, for example, when it comes to raw materials used or manufacturing methods applied (Kapferer & Michaut, 2015; The Watch Register, 2019). In general, such forms of bottom-up surveillance can be used by individuals to protect themselves and their interests from undesirable or unethical practices (Whelan, 2019b).

(3) Blockchain-based networked surveillance refers to distributed ledger technology, which allows for recording and tracking of interactions in a decentralized irreversible public ledger (Dierksmeier & Seele, 2016; Whelan, 2019b). A blockchain represents "a ledger of transactions of digital assets: of who owns what, who transacts what, of what is transacted and when" (Kewell et al., 2017, p. 431). Whereas top-down surveillance relates to a vertical, and bottom-up surveillance to a horizontal information spread, networked surveillance is associated with a distributed or decentralized information cast (Ganascia, 2011; Whelan, 2019b). In this sense, networked surveillance offers a transparent system, protected from manipulation of a single entity, to trace, for example, raw materials up to the finished product and beyond, for example, to verify the items ownership status over time (Hawlitschek, Notheisen, & Teubner, 2018). Overall, networked surveillance stands representative for 'new surveillance' or 'surveillance as transparency,' detached from traditional surveillance understandings (e.g., as a tool of

hierarchical power), thereby delivering a dual benefit of learning and control that arises from data being stored on a public blockchain (Bernstein, 2017; Whelan, 2019b).

Recent developments in the luxury watch industry indicate that networked surveillance in the form of DLT is becoming a major force disrupting and driving the future of the industry. Several luxury watch companies have started to set a closer focus on the potential that these approaches may hold for their businesses and clients. Noteworthy examples include LVMH (Kolesnikov-Jessop, 2019), Arianee (Arianee, 2019), and ChronoBase (ChronoBase, 2018) that are engaging with the ledger technology to address the previously mentioned challenges and to deliver new value to customers.

Given the novelty of DLT and the concept of networked surveillance in general (Dierksmeier & Seele, 2016; Whelan, 2019b), this study aims at exploring networked surveillance in relation to the luxury watch industry as a means for 'new transparency' that goes along with novel opportunities for learning and control (Ball et al., 2012; Bernstein, 2017). Parris et al. (2016, p. 233), define transparency as the "extent to which a stakeholder perceives an organization provides learning opportunities about itself." This indicates that stakeholders may benefit from networked surveillance as a form of transparency that provides new insights into the firm. In addition, corporations may benefit from networked surveillance as a transparency-control instrument, providing new information on business processes as well as products and services in general (Bernstein, 2017). Given the lack of research specifically addressing networked surveillance in relation to the luxury watch industry, and the notions of transparency, learning, and control that go along with the topic, this study strives to follow up on the research question: how are recent developments brought along by distributed ledger technology perceived in the luxury watch industry and what potential do they hold for luxury watch companies and their stakeholders, in light of increasingly interconnected societies and current industry trends?

1.4 Methods

We adopt an inductive research approach to follow up on the research question (Creswell & Clark, 2017; J. C. Greene, 2007; Tashakkori & Teddlie, 2010). This approach is particularly beneficial when it comes to studying new phenomena and combining different data sources that provide different angles on a novel topic (Tashakkori & Teddlie, 2010). In this study, an online survey, followed by semi-structured expert interviews is utilized to shed light on blockchain-based networked surveillance in relation to the luxury watch industry, and how these developments are perceived against the background of recent industry developments. Thus, the inductive approach to data analysis aims here at discovering patterns rather than testing hypotheses (Yin, 2009). Accordingly, data was collected in two phases: in phase I., an online survey among luxury watch industry professionals was conducted in February 2019; in phase II. in-depth interviews (held in March 2019) with luxury watch experts followed, to refine the insights gained from the previous step.

1.4.1 Phase I: Expert Survey

The purpose of the expert survey was to gain a general understanding of current developments and trends in the luxury watch industry concerning distributed ledger technology, and thus broader notions of networked surveillance.

Sampling and participants. Swiss watch manufacturers (as listed in the register of the Federation of the Swiss Watch Industry FH, 2019a), as well as institutions, organizations, and service providers linked to the watch industry, were invited to participate. In contrast to previous industry surveys that focused exclusively on company executives (see, e.g., Deloitte, 2017), the underlying study strives to gain a more holistic understanding of current digitalization dynamics. For this reason, industry professionals with varying professional positions were identified on LinkedIn and invited to participate in the survey. In total, 87 (80.20% male; 19.80% female) industry experts completed the survey. Further, experts with various professional positions within the industry participated, as reflected in table 1, showing a detailed breakdown of the participants' professional background. Almost 60 percent of the experts indicated to have a professional

industry experience of more than ten years, with about 24 experts indicating an experience level exceeding 20 years (see table 2).

Table IV-1: Professional position of survey respondents

	Number of respondents		
	Total	Male	Female
CEO	1	0	1
Communications	5	1	4
Customer Service	2	1	1
General Management	29	25	4
IT	3	3	0
Manufacturing	7	6	1
Marketing	3	2	1
Operations/Supply Chain	4	4	0
Owner	2	2	0
Procurement	3	2	1
Researcher	3	3	0
Retail and Sales	7	5	2
Watch design	3	3	0
Watchmaker	5	5	0
Other	10	8	2
Total	87	70	17

Table IV-2. Luxury watch industry experience off survey participants

	Number of respondents	Percent	Cumulative percent
None	1	1.1	1.1
< 1 year	5	5.7	6.9
1-5 years	11	12.5	19.5
5-10 years	19	21.6	41.4
11-20 years	27	30.7	72.4
> 20 years	24	27.3	100.0
Total	87		

Measures. The online questionnaire began with a brief description of the purpose of the research project. Further, the experts were assured that their data were treated confidentially. We asked the survey participants to rate the importance of the following potential luxury watch industry challenges using a 11-point Likert type scale (0 = "Not at all," 10 = "extremely important"): (1) anti-corruption legislation in China (2) anti-luxury attitude of consumers (3) black markets (4) counterfeits (5) decreasing demand (6) controversies involving luxury watches worn in public (7) smartwatches. To measure experts' opinions about potential countermeasures against black market sales and counterfeits we used again an 11-point Likert type scale (0 = "Not at all," 10 = "extremely important"): "How would you rate the importance of these (future) applications against counterfeits and black-market sales of your products?" (1) Anti-counterfeiting campaigns (e.g., produced by child labor) (2) Blockchain-based ownership registry (3) External investigators (4) Legal countermeasures (5) Nanotechnology (6) RFID technology (7) Serial numbers/barcodes on products. The survey participants were asked to rate the importance of Corporate Social Responsibility for their company using an 11-point Likert type scale (0 = "Not at all," 10 = "extremely important"). In addition, respondents were asked which CSR dimension represents the most important for their business (1) economic (2) social (3) environmental. To determine participants' perception of recent industry developments in relation to digitalization and beyond, an open-ended text entry question was used ("Do you see a change in perception towards luxury watches? By whom?").

1.4.2 Phase II: In-depth Expert Interviews

Following the review of the expert survey, semi-structured expert interviews were utilized to explore recent changes brought along by DLT more in-depth. For this purpose, we looked for experts with long-term industry experience that have also different fields of expertise. Suitable interview partners were searched online and via the professional platform LinkedIn. Before the interview, the experts received a semi-structured interview guideline that we developed based on the responses from the previously analyzed expert survey. In Appendix A the core themes and interview questions are listed in detail. In addition, we made sure that experts were informed about the purpose of the study, that they could opt to leave questions unanswered, and abort the interview if they wanted. We

interviewed five luxury watch experts: a managing director, a historian, a director of a competence center, and marketing and sales managers. The interviews were in English and Italian and ranged from 20 to 60 minutes. Based on the permission of the interviewees, four interviews were recorded. To guarantee the anonymity of the interview partners, quotes that are used in the following paragraphs do not include the name or the professional position.

1.5 Results

Data Analysis

The core of the data analysis rests on an inductive approach aimed at theory advancement (Eisenhardt, 1989). Thus, we iteratively developed categories from the qualitative data that we gained from the expert survey. The qualitative interviews thereby provided the opportunity to explore further the insights we learned from the online survey, particularly the salient and recurring themes that we found in the open-ended questions. In the following, we first present the descriptives from the online survey and then move on to describe the qualitative insights and emerging themes from the open-ended survey question along with representative quotes from the expert interviews.

Table IV-3: How would you rate the importance of potential challenges for the luxury watch?

	Number of respondents	M	SD
Black markets	87	6.46	2.82
Decreasing demand	87	6.40	2.50
Counterfeits	87	6.34	3.01
Anti-corruption legislation	85	6.09	2.57
Anti-luxury attitude of consumers	83	5.41	2.92
Controversies involving luxury watches	86	4.91	2.42

Smartwatches	86	3.99	2.64

Table IV-4. How would you rate the importance of these (future) applications against counterfeits and black-market sales of your products?

	Number of respondents	M	SD
Serial numbers/barcodes on products	84	7.29	2.79
Legal countermeasures	85	6.96	2.31
Blockchain-based ownership registry	84	6.60	2.77
Anti-counterfeiting campaigns	85	6.01	2.55
External investigators	85	5.99	2.46
RFID technology	81	5.69	3.00
Nanotechnology	84	5.49	3.00

1.5.1 Expert survey descriptives

The challenges for the luxury watch industry were judged differently by the luxury watch experts responding to the survey. Rated with almost the same importance, the top 3 three challenges were named as black markets (M = 6.46, SD = 2.82), decreasing demand (M = 6.40, SD = 2.50), and counterfeits (M = 6.34, SD = 3.01).

For an overview of the other challenges, please see table 3. From the applications, respectively future applications against counterfeits and black market sales (as shown in table 4), the survey participants indicated a high importance of serial numbers and barcodes (M = 7.29, SD = 2.79), as a visual identifier for luxury watches, with legal countermeasures rated as the second most important (M = 6.96, SD = 2.31). In addition, blockchain-based ownership registries (M = 6.60, SD = 2.77), were rated by the experts as another highly relevant measure. The results also indicate that Corporate Social Responsibility represents an important aspect for the experts' companies (M = 7.66, SD =

2.37), underlining that the economic (43%) dimension of CSR is deemed proportionally most important compared to the social (32%) and environmental dimension (25%).

Table IV-5: First- and Second-order themes arising from the expert survey and representative data.

First-order themes	Second-order themes	Representative data
New consumer generations		
(41.46 % of respondents referred to younger generations)	Younger generations	"A new vague of younger consumers has risen, luxury isn't reserved for elder, rich people. They've therefore become an aim to be reached much quicker by new generations"
		"The luxury watch market has a well-defined and stable customer target, younger generations are interested in these products after 40 years."
	Millennials	"I also see some young people (millennial's) in search of something unique perhaps to symbolize something or for identity or to give them meaning"
		"More accessible / millennial are more interested"
	Female consumers	"For a long time watches has been the sole jewel for men and its importance increased with time and it became one of the jewels for women as well"
		"Women love personalized watches with a meaning"
Higher standards demanded		
(26.83 % of respondents referred to higher standards demanded by consumers)	Ethical and sustainable product attributes	"The challenge is to bring more transparency on the table. Consumers are waiting for that"

		"New generations are more focused on experiential aspects and more incline to make ethical and sustainable consumption choices"
	Higher quality and functionality	"The level of quality and technology required for the Luxury watches is increasing by consumers."
		"Post introduction of smartwatches, perception on luxury watches are changing. Functional aspects are necessarily to be added in the luxury watches."
Personalization beyond products (46.34 % or respondents referred to personalization beyond the luxury watch)	Personalization	"More and more people want to have a personalized watch, they don't want to be like anyone else."
		"[New generations are] considering the watch as a way to express their personality"
	Stories behind the product and experience	"Time, rareness and exceptional experiences are the new luxury. Product itself is not enough anymore"
		"The importance of the ethics questions is growing very quickly, as well as the importance of the stories behind a product."
Digitalization and Innovation (12.20 % of respondents referred to digitalization and innovation)	Online platforms	"Luxury can be "touched" by everybody today thanks to Instagram"
		"Customers and retailers are growing apart. Direct sales from within the companies are emerging"

	Changing sales patterns	“[I]t is worth mentioning Kickstarter as new way to "consume" luxury watches. Many brands and concepts are presented, in opposition to the world of famous brands. Luxury watches brands should spend some extra time to understand what happens here in term of concept, marketing...”
		“Overtime it can be seen that the entry level luxury watch market will have a down turn in sales, as a direct result of digital watches. Nonetheless the upper echelon of the luxury watch market will continue to grow rapidly with the increase of wealth around the World.”

Note. *Percentage are calculated based on N = 41. Not all experts responded given that the open-ended survey question was not required to be answered.*

1.5.2 Changing perception toward luxury watches

The analysis of the responses to the open-ended survey questions followed an open coding approach for analyzing contents (see, e.g., Colquitt, 2001; Fieseler, Bucher, & Hoffmann, 2019). In line with the inductive research approach, we followed an iterative process to identify major patterns or categories in the data. Thus, experts' responses were read in-depth and multiple times by the authors to identify recurring themes. Consequently, we found nine salient second-order themes, which we refined into four first-order themes: (1) new generations (2) higher standards demanded (3) personalization beyond products (4) digitalization and innovation. Table 2 presents all first and second-order themes along with representative quotes from the experts. The results are further elaborated below:

New consumer generations

One recurring theme from the answers is the role of younger generations, namely millennials. About forty percent of the expert's responses referred to the rising importance of this consumer group when it comes to luxury watches. One can thereby observe a generational as well as a gender shift. Whereas previously older generations and male consumers appeared to be core clients for luxury watches, it appears that younger generations, and also female clients are becoming more import.

> *"For a long time, watches have been the sole jewel for men, and its importance increased with time, and it became one of the jewels for women as well" [survey respondent].*

The survey participants see female consumers on the rise, offsetting the dominant gender imbalance, that stemmed from a traditional industry focus on male clients. Reaching these new consumer groups with their novel demands toward the brands and companies is an essential task for watch companies, as the experts indicate.

Higher standards demanded

We found that with the generational shift, higher standards are demanded by luxury watch consumers that may focus on more transparent business processes connected to ethical and sustainable product attributes.

> *"New generations are more focused on experiential aspects and more inclined to make ethical and sustainable consumption choices" [survey respondent]*.

> *"The challenge is to bring more transparency on the table. Consumers are waiting for that" [survey respondent]*.

This is suggestive that corporations are expected to provide novel solutions to target such "transparency" challenges and to adopt new operational mechanisms that give particularly younger generations insights into corporate conduct with respect to CSR related aspects. Moreover, experts indicated that higher quality and functionality are moving in the focus of consumers, requiring luxury watch firms to implement novel customer needs into their products. An interview partner added that also governmental agencies in certain countries require increased insights, and thus transparency when it comes to the ownership of a luxury watch:

> *"Depends on the country. In some countries, it's fine because they pay properly and declare what they have to declare. But in China, or some other countries where the average salary is very low, it can be a challenge." [undisclosed interview partner]*

Another interview partner added:

> *"In China for example, that's true for at least seven or eight years since the new president. No civil servant can wear – officially – the name [of a brand] that is in a list, given to every civil servant, even to top-ranked. You cannot wear Omega, you cannot wear Rolex, they were the two most famous." [undisclosed interview partner]*

Personalization beyond products

Another recurring theme that became evident from the answers of the expert survey is the consumer's demand for more personalization of the products and beyond (referred in about 47% of the responses). Luxury watch consumers are expecting an increased level of customization that makes them stand out, as an expression to be unique and not "like anyone else." What is particularly notable here is the increased consumer demand for information and experiences that go beyond the product itself. The experts highlighted that this shift goes along with the necessity to provide stories behind the product such that the luxury watch can be perceived in new ways.

> *"Time, rareness and exceptional experiences are the new luxury. Product itself is not enough anymore" [survey respondent].*

Digitalization and Innovation

In terms of digitalization and innovation, the experts suggested that online platforms, such as Instagram represent new ways in which watch brands and customers can interact or be experienced, as the following hints:

> *"Luxury can be "touched" by everybody today thanks to Instagram" [survey respondent].*

Through digitalization and novel technologies, new sales channels arise that provide entry points for niche brands that can interact beyond traditional distribution and sales networks. In line with previous studies (see, e.g., Deloitte, 2017; Oakley, 2015), the answers given by the experts indicate that smartwatches are not seen as a particular industry challenge, given that these devices may only affect the entry-level of the luxury watch market.

> *"Over time it can be seen that the entry level luxury watch market will have a downturn in sales, as a direct result of digital watches. Nonetheless the upper*

echelon of the luxury watch market will continue to grow rapidly with the increase of wealth around the World." [survey respondent].

The next section will discuss the potential brought along by networked surveillance in the form of distributed ledger technology in light of the results above.

1.6 Discussion: Surveillance For Good?

In this study, we followed up on the question of how recent developments brought along by distributed ledger technology are perceived in the luxury watch industry, and what potential DLT may hold for luxury watch corporations and their stakeholders, given digitally interconnected societies and current industry trends. In light of this question and the findings that we gained, we discuss the concept of networked surveillance as a form of transparency, which goes along with notions of learning, and control (Ball et al., 2012; Whelan, 2019b).

Building on an inductive approach with quantitative and qualitative data from an expert survey and expert interviews, we gained novel insights into the changing luxury environment against increasingly digitally interconnected societies. We found that black markets, decreasing demand, and counterfeits remain critical challenges for luxury corporations. Also, the overall luxury watch industry is undergoing a broader shift in the unfolding digital age. This transformation is characterized by new consumer generations that demand higher levels of quality and functionality, and particularly insights into ethical and sustainable product attributes. This is in line with recent luxury research underscoring that corporate CSR initiatives and consumers' willingness to buy are positively connected (Amatulli, De Angelis, Korschun, & Romani, 2018). The insights gained from the experts also show that luxury watches are expected to be unique and personalized, which includes the broader experience connected to the luxury item and beyond. Thus, it is not only the physical appearance of the watch but also the stories behind the product that are becoming paramount in an increasingly digital world. Against the background of today's digital societies, online platforms are becoming increasingly important, where luxuries are 'touched' for the first time, which is also highlighted by recent research (J. Hoffmann &

Lecamp, 2015). The changing marketing and sales patterns can be challenging for corporations, yet the digital realms also provide unprecedented opportunities for luxury watch corporations to interact with customers and the broader stakeholder network. From the findings of the survey and interviews, it became clear that the experts are optimistic about technological advancements and their impact on the industry. Particularly block-chain based systems were regarded as a potential game-changer of the industry, which may gradually manifest its full potential over the coming years.

Our findings suggest that broader transformations and changes that are mainly related to DLT have vast potential to reshaping the interactions between luxury watch corporations, their consumers, and the extended network of stakeholders directly or indirectly connected to the firms. Against the background of the depicted findings, we offer a contribution to existing literature describing networked surveillance as transparency means that creates opportunities for learning and control.

1.6.1 Janus-faced surveillance: Enabling ethical luxury through networked surveillance

The Roman god Janus is often depicted with two faces that look in different directions (Brady, 1985). Here, we use the Janus image to stress the double nature of surveillance (D. Lyon, 1994, 2007), where on the one side, there are rather positive connotations, namely surveillance for 'good.' In this sense, surveillance can provide corporations new ways to control their business conduct, enabling desirable outcomes for the firm and its stakeholders and can, therefore, be seen as an ethical approach (Ball et al., 2012; Kewell et al., 2017; Sobczak & Havard, 2014). However, on the other side, more negative connotations about surveillance prevail, in other words, surveillance for 'bad.' From this perspective, surveillance may take shape as an unethical control form, with detrimental effects for the firm and its stakeholders (Bernstein, 2017; Ganascia, 2011).

Janus is also a representation of the middle ground or a bridge between dichotomies. Thus, in this study we use the Janus metaphor to propose the concept of networked surveillance (Whelan, 2019b) as a way to bridge the opposing dichotomies of desirable and undesirable surveillance, to allow for new ways of thinking about the

surveillance concept (Hong, 2017). As Ball et al. (2012, p. xxi) highlight: "[s]urveillance was neither good nor bad, but context and comportment made it so." Using the Janus image, we depict networked surveillance as a concept that acknowledges the presence of these two distinct conditions, while being unbiased toward a specific side. Thus, we argue that networked surveillance in the form of distributed ledger technology goes along with increased transparency and may, therefore, hold benefits for luxury corporations and their stakeholders, potentially resulting in a more ethical luxury (watch) industry. However, this conception of surveillance also acknowledges potentially undesirable aspects, such as customer privacy issues that may arise (Hong, 2017). Consequently, we depict network surveillance as a digital transparency concept (Bernstein, 2017; M. D. Schultz & Seele, 2020; Whelan, 2019b) that provides new opportunities for learning and control along the three key dimensions: (1) black markets and counterfeits, (2) CSR standards and supply chains, (3) and personalization beyond physical products, toward virtual luxury identities. Table 5 lists the key dimensions along with potential benefits for learning and control.

Table IV-6: Networked surveillance and transparency: new opportunities for learning and control

	Networked Surveillance and Transparency	
Dimension	**Learning**	**Control**
Black markets and counterfeits	• Improved knowledge on authenticity of luxury watch • Trust in integrity of information stored on a (public) blockchain	• Safeguarding of luxury watches controlling for stolen, fake or counterfeit watches • Secure ownership registry benefitting consumers and businesses and tracking of property rights • New possibilities for law enforcement and governmental agencies
CSR standards and supply chains	• Comprehensive and verified insights into ethical and sustainable product attributes and production processes • Learning opportunities about nature, quality and origin of materials used	• Corporate control over supply chain and compliance with social and environmental standards • Proof of product and raw material quality • Quality differentiation and locational advantage

Personalization beyond physical products: the virtual luxury identity	• Learning and added value due to unique product story attached to the blockchain • Virtual consumption of the luxury watch	• Controlling for a unique and personalized virtual product identity through additional information • Control over originality of luxury watch, with respect to particular production process, raw materials, and manufacturing • Distinction from competition and strengthening of a brand

Black markets and counterfeits

Concerning learning opportunities, consumers can gain knowledge about the authenticity of a luxury watch offered to them, and thereby rely on the integrity of the information stored on a (public) blockchain. In comparison, corporations can safeguard their products, controlling for stolen, fake, or counterfeit watches that are adversely affecting their business. Moreover, consumers can secure the ownership of their watch, tracking their property rights. These control effects can also be beneficial for law enforcement and governmental agencies that can draw on data attached to a luxury watch blockchain. In this way, also corruption issues can be omitted, or easier detected, such as the one referred to by an interview partner:

> *"The ex-prime minister of Malaysia has been caught in a big scandal (…) they found in his house something like 550 watches and only expensive ones. Obviously a watch is small, easy to carry. So its always been a good tool for money laundering as well" [undisclosed interview partner].*

CSR standards and supply chains

Consumers demanding high levels of quality and the upholding of CSR standards can learn about the nature and quality of their products through information stored on a blockchain. New consumer generations, increasingly concerned with ethical and sustainable product attributes, can thereby gain verified insights about aspects such as production processes, the raw materials that were used; from where these materials originate, and under which conditions they were sourced, etc. Corporations can better control their supply chain, thereby guaranteeing that suppliers are complying with social and environmental standards. Moreover, the increased supply chain control provides corporations potential to differentiate themselves by also underlining existing quality standards, such as referred to by an interview partner:

> *"If you are buying a luxury product, especially made in Switzerland, I wouldn't see anything unethical in terms of the production process (…) in terms of pure ethics of production, paying the salaries and everything, 100 % of the luxury watchmaking business in Switzerland is clean. There is no risk here" [undisclosed interview partner].*

In this way, CSR and supply chain data provided on a blockchain can help corporations building on locational advantages and communicating those to stakeholders.

Personalization beyond physical products: toward virtual luxury identities

Information stored on a blockchain can allow for increased product personalization that may add value for consumers, beyond the physical item itself. The story behind the product can be provided to the consumer via a blockchain registry, depicting a journey from the raw materials up to the final polishing of a watch. Blockchain information can thereby make a luxury watch 'unique' in the sense that a particular production process, the raw materials and their origin, and the ownership history may create a product that cannot be imitated. In today's online environments, the digital product identity, namely the virtual portrayal of a luxury watch, may become likewise crucial along with the physical item. As such, it may be seen as a distinction from the competition, strengthening the brand or corporate image. Further, consumers may consume the luxury item virtually, as a non-depreciable good. However, against the background of increasing amounts of data stored on blockchains, consumer privacy and security needs to be guaranteed (Dierksmeier & Seele, 2019; L. Xu et al., 2017).

1.7 Conclusions and Future Research

Contemporary debates on surveillance often swing between the opposing dichotomies of desirable/undesirable or ethical/unethical surveillance. In this research, we investigated the dual nature of surveillance in the form of distributed ledger technology and blockchain-based product identifiers within the luxury watch industry. Using the Janus image as a representation for the middle ground or bridge between opposing sides, we argue for new ways of thinking about the surveillance concept. Consequently, we outlined *networked surveillance* as a means that provides novel opportunities for learning and control for luxury corporations and their stakeholders, thereby highlighting desirable but also undesirable effects that may go along with increased networked transparency. Our findings from the expert survey and the interviews thus provide new insights into the broader transformations that the luxury watch industry is facing and the potential that networked surveillance has in light of digitally-interconnected societies.

Given the infancy of blockchain approaches within the luxury watch industry, our inductive research design was limited to luxury watch experts that are mainly located in Switzerland as the industry's key location. It would be fruitful for future research to extend this approach in a geographical sense, but also with respect to a broader stakeholder perspective, which may involve alternative methodological approaches. Thus, it would be interesting to look beyond the expert perspective and to consider, for example, luxury consumer views about the topic via focus groups. Further, the applied approach of data collection can raise issues in terms of respondents' subjectivity or bias, which we strived to limit by involving experts with long-term experience and very diverse backgrounds (Payne & Mansfield, 1973).

What goes beyond the scope of this article, is the study of specific limitations connected to a networked surveillance approach based on blockchain technology, mainly related to the technical challenges involved. Distributed ledger technology is still evolving, and issues remain regarding the scalability, the integrity of network users, as well as privacy and security aspects related to encryption (Dierksmeier & Seele, 2016). A fruitful avenue for future research is, therefore, the analysis of potential drawbacks of networked surveillance concerning luxury corporations and consumers, but also related to the more general Janus-faced nature of surveillance. For example, a fully transparent ownership record of luxury watches may not be in the interest of specific consumer groups, the anti-corruption legislation in China is an important aspect in this regard (Adams, 2012). Moreover, potential security leaks may reveal unwanted information about customers to the public, thereby creating reputational risks for the corporation as well as the involved consumers. In addition, from a practical point of view, the complexity of today's supply chains may not allow for all-encompassing surveillance and transparency of every product aspect (Kim & Davis, 2016).

1.8 Appendix

Appendix A. Expert-interview guiding questions

I. Innovation and Technology	Innovations and digital reporting seem to change luxury industries toward more transparency and supply chain tracking. Blockchain technology appears to play a key role in this regard with its dual use of supply chain monitoring and product tracking. 1. Are transparent supply chains an issue for luxury watchmakers? Do you think companies might adopt this technology? 2. How do you evaluate blockchain technology regarding counterfeits? 3. How do you evaluate blockchain technology regarding black market sales?
II. Perceptional changes toward luxury watches	The preliminary results of a survey that we conducted among luxury watch industry experts indicate a certain shift in the perception toward luxury watches. The younger generations seem to have a different understanding of luxury watches compared to older generations. 4. More generally speaking, do you think consumers of 'ethical products' have different value orientations than consumers of luxury products? 5. In your opinion, are younger generations more concerned with ethical or sustainable luxury, respectively luxury watches?
III. Ethical, sustainable consumption	Traditionally, luxury industries have not been associated with the same social and environmental concerns as non-luxury product sectors; this seems to change. Scholarly literature suggests that Corporate Social Responsibility and

	Corporate Sustainability are becoming requirements for luxury brands as opposed to -- ‘nice to have’ -- supplements. 6. Would you agree? What is your understanding of the importance of these aspects?

Chapter V

Conceptualizing data deliberation: The starry sky beetle, environmental system risk, and Habermasian CSR in the digital age

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Chapter V
Conceptualizing Data-Deliberation: The Starry Sky beetle, environmental System Risk, and Habermasian CSR in the Digital Age

Abstract

Building on an illustrative case of a systemic environmental threat and its multi-stakeholder response, this paper draws attention to the changing political impacts of corporations in the digital age. Political Corporate Social Responsibility (PCSR) theory suggests an expanded sense of politics and corporations, including impacts that may range from voluntary initiatives to overcome governance gaps, to avoiding state regulation via corporate political activity. Considering digitalization as a stimulus, we explore potential responsibilities of corporations toward public goods in contexts with functioning governments. We show that digitalization—in the form of transparency, surveillance, and data-sharing—offers corporations' scope for deliberative public participation. The starry sky beetle infestation endangering public and private goods is thereby used to illustrate the possibility of expanding the political role of corporations in the digital sphere. We offer a contribution by conceptualizing data-deliberation as a Habermasian variation of PCSR, defined as the (a) voluntary disclosure of corporate data and its transparent, open sharing with the public sector (b) along with the cooperation with governmental institutions on data analytics methods for examining large-scale datasets (c) thereby complying with existing national and international regulations on data protection, in particular with respect to privacy and personal data.

1.1 Introduction

In recent years, debates on the political understandings of corporations have enriched existing research on Corporate Social Responsibility (CSR). Political CSR (PCSR) theory has thereby evolved with several authors stressing the need to expand the political understandings of corporations and their social responsibilities (Jędrzej George Frynas & Stephens, 2015; Mäkinen & Kourula, 2012; Mellahi et al., 2016; Scherer et al., 2016; Whelan, 2012). Corporations can have varying political impacts, which may stem from diverse political ideals and different political contexts in which corporations operate (Jędrzej George Frynas & Stephens, 2015; Mäkinen & Kourula, 2012; Whelan, 2012). Two broad streams of PCSR literature (see, e.g., Mellahi et al., 2016; Rao-Nicholson, Khan, & Marinova, 2019) deal with the political understandings of corporations: (1) when it comes to corporate conduct under challenging political conditions, when the government is limited in reach and corporations act political by contributing to e.g., the provision of public goods or avoidance of public bads (Ingenhoff & Marschlich, 2019; Scherer, 2018; Westermann-Behaylo, Rehbein, & Fort, 2015); and (2) when corporations act politically, by engaging in political processes to seek favorable regulatory outcomes (Anastasiadis et al., 2018; Lock & Seele, 2016a, 2018).

This study extends the scope of PCSR literature, by exploring whether corporations have potential political responsibilities (beyond responsible lobbying) regarding public goods, in contexts functioning governments. The focus is thereby set on recent digital transformations that are changing business conduct and the political impacts and responsibilities that firms can have. Consequently, we outline that new possibilities in terms of transparency, surveillance, and data-sharing are altering the political influence of corporations going along with risks and benefits for the broader society (Baru, 2018; Etter et al., 2019). Along with the illustrative case of an invasive alien species (aka the Asian longhorned beetle (ALB) or starry sky beetle), we depict how the digital age can alter our political understandings of corporations. The starry sky beetle is a wood-boring insect that facilitated by international trade, has spread worldwide endangering public goods, adversely affecting businesses, society, and the environment (Haack, Hérard, Sun, &

Turgeon, 2010). As outlined by Nowak et al. (2001, p. 116), the worst-case scenario for the United States - a nationwide ALB infestation - can amount to "a loss of 34.9% of total canopy cover, 30.3% tree mortality (1.2 billion trees) and value loss of $669 billion."

We offer a contribution to recent research that has started to conceptualize the political understandings of corporations in the digital age (K. Martin, 2019c; Seele, 2016b; Whelan, 2019b, 2019a; Whelan et al., 2013). In this regard, we outline how corporations can act as active deliberators in functioning state settings, contributing to the provision of public goods, respectively the avoidance of public bads via data-deliberation, which we propose to define as: the (1) voluntary disclosure of corporate data and its transparent, open sharing with the public sector (2) along with the cooperation with governmental institutions on data analytics methods for examining large-scale data sets (3) thereby complying with existing national and international regulations on data protection, in particular with respect to privacy and personal data (see, e.g., Custers, Dechesne, Sears, Tani, & van der Hof, 2018). Data-deliberation thereby goes beyond existing forms of corporate transparency, such as CSR reporting in a pre-digital age (Martínez-Ferrero & García-Sánchez, 2017; Parris et al., 2016), and represents a step to real-time transparency about ethical business conduct (Seele, 2016b). Data-deliberation can thereby provide learning opportunities and collaboration among stakeholders across countries, given the possibility to store data on a public and secure blockchain system (Kewell et al., 2017).

1.2 Theoretical background: the need for an expanded sense of politics and corporations in the digital age

1.2.1 Political Corporate Social Responsibility and Public Goods/Bads

Political Corporate Social Responsibility (PCSR) takes account of profound societal changes that have transformed the political, cultural, and economic domains (Scherer & Palazzo, 2007). PCSR literature argues that this 'postnational constellation' (Jürgen Habermas, 2001) led to a growing influence of the civil society on the political decision-making process, empowering the (self-regulated) business firm with a political mandate (Gonin, Palazzo, & Hoffrage, 2012; Scherer, Palazzo, & Matten, 2014). In this

regard, political is understood as “the activity in which people organize collectively to regulate or transform some aspect of their shared social conditions, along with the communicative activities in which they try to persuade one another to join such collective action or decide what direction they wish to take it.” (Young, 2004, p. 377).

The corporate role as a political actor stands in stark contrast to the traditional division of responsibilities between economic, political, and social domains outlined in instrumental CSR (Friedman, 1962; Jensen, 2002). Challenging this view, several authors have contributed to initial PCSR framings, underlining the need to expand the political understandings and responsibilities of corporations (Jędrzej George Frynas & Stephens, 2015; Hussain & Moriarty, 2018; Mäkinen & Kourula, 2012; Whelan, 2012). Thus, PCSR has been broadly “defined as activities where CSR has an intended or unintended political impact, or where intended or unintended political impacts on CSR exist” (Jędrzej George Frynas & Stephens, 2015, p. 483). The political impacts of corporations can vary and are informed by different political ideals and political contexts, in which a corporation operates (Mellahi et al., 2016; Rao-Nicholson et al., 2019).

Whereas initial framings of PCSR focus on the political ideals of Habermasian theories (see, e.g., Scherer & Palazzo, 2007, 2011), more recent accounts consider PCSR in a broader vein (see, e.g., Mäkinen & Kourula, 2012; Whelan, 2012). In this regard, the limited universal applicability of a single political ideal has been highlighted against diverse world settings and pluralistic systems of norms and values (Ehrnström-Fuentes, 2016; Willke & Willke, 2008). As a result, authors have opened the PCSR spectrum for alternative political underpinnings, by introducing Rawlsian PCSR foundations (Mäkinen & Kourula, 2012), and refining political ideals that previous literature delineates (Whelan, 2012). Given different political ideals and varied political operation contexts, firms can have wide-ranging political influence.

One broad stream of PCSR literature outlines corporate conduct concerning international contexts, in which multinational corporations (MNCs) are often faced with challenging political and social environments (Ingenhoff & Marschlich, 2019;

Westermann-Behaylo et al., 2015). In such instances, MNCs may undertake political responsibilities along with civil society actors to address governance gaps, where national governments play a diminishing role or have a limited reach (Westermann-Behaylo et al., 2015). Scherer et al. (2016, p. 276) outline that in these situations, PCSR encompasses the engagement in public deliberation and collective decision-making processes as well as "the provision of public goods or the restriction of public bads." Political impacts of corporations may thus range from carrying out tasks of political and social regulation, as well as the provision of citizen rights and public goods, along with short-term and long-term policies and activities to reduce political tensions (Ingenhoff & Marschlich, 2019; Moon et al., 2005; Scherer & Palazzo, 2007, 2011; Westermann-Behaylo et al., 2015). In contrast, to the focus on contexts where governments are limited in reach, another rising research stream explores PCSR in functioning states.

This research stream centers on corporate political activity (CPA). CPA refers to situations when businesses operate politically by seeking favorable regulatory conditions (Ahammad, Tarba, Frynas, & Scola, 2017; den Hond et al., 2014; Kamasak, James, & Yavuz, 2019). In this case, the political influence may take shape as rather self-serving political strategy (e.g., lobbying, membership in political advisory committees), when corporations exercise political pressure, striving to influence regulatory processes in their interest (Jędrzej George Frynas & Stephens, 2015). In this vein, den Hond et al. (2014) highlight that PCSR can be misaligned with firms' (P)CSR strategy (Anastasiadis, 2014; den Hond et al., 2014). Hussain and Moriarty (2018, p. 532) therefore caution that corporations should not be perceived as equal deliberators and voters, but as "advisors, providing information and support to the relevant members of the public, viz., citizens and their representatives." At the center of the CPA stream are demands for responsible lobbying (Anastasiadis et al., 2018; Lock & Seele, 2016a, 2018).

Overall, past research provides detailed insights into the wide-ranging political influence of corporations, going along with self-regulatory behavior and voluntary initiatives to overcome governance gaps, or to avoid stricter state regulation via CPA (Anastasiadis et al., 2018; Scherer et al., 2016). Thus, while an expanded understanding

of politics and corporations is well-established in recent research, the political influence, and responsibilities of corporations in functioning states beyond CPA, have received little attention. In other words, insights into how PCSR relates to situations where governments are intact viz., how corporations may contribute to the "provision of public goods or the restriction of public bads" in functioning states, is still under-researched (Scherer et al., 2016, p. 276).

Enderle (2018, p. 621) outlines that the wealth of a society depends on public and private goods, which are strongly interlinked, meaning "that the creation of private goods depends on the availability of public goods, and, in turn, the creation of public goods is dependent on the availability of private goods." This suggests that private organizations, as well as governmental actors, may be equally interested in upholding this wealth. Correspondingly, public and private actors may be likewise concerned about avoiding "negative public goods" or public bads such as shared problems that manifest as epidemic diseases, air pollution, or economic scarcity (Enderle, 2018; Gross & De Dreu, 2019). An expanded understanding of politics and corporations suggests that business firms may contribute to the public good or avoidance of public bads, in form of positive social and environmental impacts – regardless of a context (Zeyen, Beckmann, & Wolters, 2016). Thus, in this article we explore whether corporations may have potential political responsibilities regarding public goods when governments are functioning, which is particularly important against the background of recent digital transformations that are changing business conduct and thus the political impacts and responsibilities that firms can fulfil.

1.2.2 PCSR and Pathways for Transparency, Surveillance, Data Sharing, and Digital Governance

Disruptive changes initiated by ICT and big data are transforming business and society in an unprecedented manner (Floridi, 2014; Zuboff, 2019). This digital era is characterized by smart devices and sensors that continuously collect, trace, sort, and record vast amounts of data (Ball et al., 2012). At the core of this paradigm are increasingly data-dependent societies and corporations that build on ICT and large-scale data sets. This

ongoing digitalization changes the political influences that corporations can have. A noteworthy example in this regard is the Facebook-Cambridge Analytica data scandal and the millions of people's profiles that have been opaquely surveilled and harvested for political purposes (Solon & Laughland, 2018; Zuboff, 2019). The example demonstrates that corporate actions in the digital age can have substantial political impacts, raising new ethical questions (see, e.g., Etter et al., 2019), about the new roles and responsibilities they can adopt (Freeman & Parmar, 2018). PCSR theory started only recently to conceptualize the disruptive transformations of digitalization and to address the political impacts and responsibilities that corporations can have (Etzioni, 2019; K. Martin, 2019c; Scherer et al., 2016; Whelan, 2019a; Whelan et al., 2013). In this regard, digitalization allows for new possibilities in terms of corporate transparency, surveillance, data-sharing, which will be addressed in the following.

1.2.2.1 Transparency

Transparency is often praised as a solution for corporations to reduce corruption and stakeholder distrust, illuminating 'what is left in the dark' (Albu & Flyverbom, 2019; Bernstein, 2017; Parris et al., 2016). As Bernstein (2017) highlights, transparency builds on the logic "that more—and more accurate— awareness of others improves learning and control and therefore improves performance." From a governmental perspective, corporate transparency – in other words the public disclosure of performance indicators – serves as a regulatory (self-disciplinary) tool, to control for sound financial and ethical business conduct, given that learning and positive institutional development are induced by the watchful eye of the public (Doorey, 2011; Flyverbom, Christensen, & Hansen, 2015). Thus, transparency has been defined as the "extent to which a stakeholder perceives an organization provides learning opportunities about itself" (Parris et al., 2016, p. 233). This suggests that digital transparency may serve corporations as a means to create trustworthiness, accountability and improved performance, and thereby yielding benefits for the corporation itself, its stakeholders, and society at large (Parris et al., 2016).

Although transparency can increase the precise awareness of others, its overall effect on learning and control depends on the moderating effect of privacy (Bernstein,

2017). Transparency and privacy stand in critical coexistence, which is particularly relevant for organizational design and the levels of transparency and privacy that define an organization concerning its internal operations and the external disclosure thereof (Bernstein, 2012). As transparency leads to an increased awareness of the observed, the observed is also aware of the observer, which can trigger hiding behavior, discouraging learning, control and overall performance (Bernstein, 2017). Corporations face the risk of being observed and that the observers can abuse the gained knowledge, for instance in the case of false greenwashing accusations (Bernstein, 2017; Parris et al., 2016; Seele & Gatti, 2017).

Transparency in the form of surveillance provides the observer with a holistic real-time understanding of the observed (Bernstein, 2017). In this context, recent developments in digital CSR reporting are about to set new standards for corporate transparency and business legitimacy, also central to PCSR (M. D. Schultz & Seele, 2019; Seele, 2016b). The moral legitimacy underlying the ideals of Habermasian PCSR (see, e.g., Scherer, 2018; Scherer et al., 2016) rests on communicative validity, which is advanced in a deliberative communication process. Thus, corporate transparency as real-time CSR reporting may offer new possibilities for corporations to act responsible. However, digital transparency can render an organizational context into a place of ubiquitous surveillance, risking to outbalance the individual need for privacy (Heath, 2016).

1.2.2.2 Surveillance

With the ongoing technological advancements, the perception of always being watched, while watching over others has become pervasive (D. Lyon, 2018). Surveillance, defined as "the focused, systematic and routine attention to personal details for the purposes of influence, management, protection or direction" has become the success key of leading companies in the global economy, such as Google, Facebook, or Baidu (D. Lyon, 2007, p. 14). These corporations build on the capitalization of behavioral predictions and profound data sets, derived from surveillance (Zuboff, 2019). Shoshana Zuboff coined this novel economic paradigm as "Surveillance Capitalism," which is also enabled by its counterpart, namely a new "Culture of Surveillance" that has become an

essential part of everyday life (D. Lyon, 2018; Zuboff, 2019). Surveillance as a defining attribute of modern society can take very different forms, depending on the observer(s) and the observed. In this article, the focus is set on corporations, as both observers and the observed (see, e.g., Ball et al., 2012; Cavazos, Rutherford, & Berman, 2018). Whereas in the pre-digital era, transactions between strangers might have been too risky due to a lack of trust between the involved parties, today's online firms allow for trust judgments and thus enable transactions between complete strangers (Etzioni, 2019; K. Martin, 2019c). The glue that ties unknown transaction parties together is the "trust in surveillance" (Whelan, 2019b).

As Whelan (2019b) points out, it is necessary to distinguish according to top-down, bottom-up, and networked surveillance. Top-down surveillance is facilitated by a central corporate actor that strives to safeguard quality and control (Whelan, 2019b). In contrast, bottom-up surveillance is associated with individuals engaging in surveillance (watching from below) to shield themselves from unwanted behavior (Fernback, 2013). A third surveillance form is networked surveillance, related blockchain or Distributed Ledger Technology building on a decentralized public ledger (Whelan, 2019b). Socially and environmentally beneficial uses cases of this technology are manifold (see, e.g., Kewell et al., 2017). Concerning PCSR, applications of this technology as supply chain surveillance are of particular relevance allowing a public, secure, and inclusive system for the tracking of materials and goods and their ownership over time (Kewell et al., 2017). Overall, various surveillance practices are present in daily business conduct, which lead to the creation of large scale data sets (Ball et al., 2012).

1.2.2.3 Data-Sharing and Digital Governance

In this article, we emphasize that the digital capacities of corporations and the data sets at their disposal offer new pathways and potential for PCSR contributing to the public good. Corporations can use data not only to create new value for their shareholders and customers, but also to benefit the broader society conjointly emerging e-government systems that offer a scope for public participation (Berry & Moss, 2006; George et al., 2014). Uber Movement, for example, shares anonymized data of two billion trips

contributing to data commons that help urban planning (Uber Technologies, 2017). Similarly, the Google-affiliate Waze allows US cities and municipalities free access to live alerts that help officials to make decisions on traffic flows (Kelly, 2018). Another example is the partnership of the city of Boston and Street Bump, a mobile application company, that developed an app for detecting potholes in streets via the smartphone accelerometer and GPS, thereby reducing the need for city workers to engage in spotting precarious road sections (Harford, 2014). Two important insights can be gained from Street Bump: First, potholes were reported particularly in areas where young smartphone owners were living, highlighting potential biases in big data sets (Harford, 2014). Second, early iteration of the app reported far too many 'false positives' or phantom potholes stressing the need for adequate data science (Simon, 2014). The examples show that surveillance data collected by corporations, and shared with the public, can aid officials in their decision-making and governance processes, helping to better plan, and guide congestion, leading to reduction of environmental pollution, and the maintenance of public infrastructure (Cattaneo, 2018).

Emerging initiatives, such as translational data-science aim, therefore, at responsibly opening the "overflowing treasure chest of big data" benefiting individuals, science, and society, while democratizing the data-science process, providing knowledge and informed discourse among stakeholders (Baru, 2018, p. 464). Large-scale data commons are constructed with democratic oversight and governance in mind, to guarantee and safeguard individual rights (Helbing, 2019; Helbing & Pournaras, 2015). Thus, in line with current research in political science, governance is here understood as "various institutionalized modes of social coordination to produce and implement collectively binding rules or to provide collective goods," which also covers private and governmental entities, as well as hierarchical and nonhierarchical governance modes (Risse & Stollenwerk, 2018, p. 406). In this regard, corporations can contribute to digital governance and data commons that benefit society at large (Helbing & Pournaras, 2015). More generally, digitalization provides corporations with new means and resources to support formal legitimacy and offers corporations a scope for public participation in a deliberative sense (Jürgen Habermas, 1996; Willke & Willke, 2008). In a similar vein, Whelan (2019a) suggests that rather than becoming political actors (see, e.g., Scherer et

al., 2016), organizations of the digital age, such as Google, are born political, with the capacity to switch from a passive governance to active deliberation. New possibilities in terms of transparency, surveillance, and data sharing may, therefore, contribute to an active democratic deliberation mode of corporations, advancing the political understandings of corporations and their social responsibilities.

1.2.3 PCSR and Systemic Challenges

If corporations act on their digital capacities, difficult societal and environmental issues may be better addressed. These issues may be small such as a pothole in the street. Yet, other problems can be systemic and menace the status quo of business and society on a larger scale. The disastrous domino effects of the 2008s banking crisis, for example, highlighted that small local issues could quickly turn into global societal challenges (Faugère & Gergaud, 2017; Pirson, Gangahar, & Wilson, 2016). As recently outlined by Boyd et al. (2018, p. 1237), "the most difficult problems are those such as climate change that spill over into many different societies." Invasive alien species (IAS) are such a problem. In recent decades, the volume, pace, and frequency of global commerce reached new highs, so has the likelihood of introducing IAS (Hulme, 2009). The impacts of these 'unintended' travelers are vast and challenging. Pysek and Richardson (2010) show that the cost associated with managing IAS in Europe can range from €12.5 billion to over €20 billion per year. On a global scale, the costs of roughly 5% of the world's gross domestic product (GDP) are related to forms of biological IAS (Pimentel, 2011). Amongst the 100 most harmful worldwide is the Asian longhorned beetle, which will be used in the following as an illustrator case to reflect upon the political understandings of corporations concerning the previously outlined concepts.

1.3 The political role of corporations in the digital age illustrated by the peculiar case of the starry sky beetle

The starry sky beetle. The ALB has two long antennae and small white spots on the back of its shiny black body, hence the name starry sky beetle (Bulletin OEPP/EPPO, 1999). The wood borer attacks the bark, cambium, and wood body of hardwood trees

(Bulletin OEPP/EPPO, 1999). The beetle is inter alia native to China, where it had caused severe economic and environmental havoc in the 1980s. An explosive increase in its population led to the destruction of over 90 million trees and thus to its classification as a pest (Haack et al., 2010). International trade helped the beetle to conquer new territories. Wherever it appears, strict regulations and eradication measures are adopted to avoid devastating economic, and ecologic damages (Haack et al., 2010). The explicit, as well as implicit costs of the eradication and control, can quickly rise to several million and are borne by the public and companies of an affected area (Bundesamt für Umwelt, 2016). Consequently, the beetle represents a major challenge, in other words, a "public bad" that public and private actors may want to avoid (Enderle, 2018; Gross & De Dreu, 2019).

The fundamental issue of the beetle case can be pinned down to an insufficient commitment to international standards and companies' failure to comply with their duty of care. Contrary to typical examples in (P)CSR literature, the issue is triggered in one country, and the adverse effects manifest or spill over into another (Boyd et al., 2018). The greatest potential to protect public goods in the case of the beetle rests on the cooperation of public and private actors and the adherence to international standards (e.g., International Standards for Phytosanitary Measures No. 15 (ISPM 15) for wood packaging material (WPM)), dedicated to avoiding the spread of IAS.

1.3.1 The Beetle in the Contexts of Germany/Bavaria and Switzerland

Governance and legal frameworks. In following we use Germany (its state Bavaria) and Switzerland as exemplary contexts, in which the beetle appeared as a public bad. The two contexts differ in terms of their political systems and underlying regulatory settings, as well as the political understandings and roles companies adopt in each. In Bavaria, measures against the ALB are based on strict regulations building on an EU Implementing Decision, which classifies the ALB as a quarantine pest that has to be reported and appropriately countered (OJ L, 2015). Switzerland, as a non-EU member-state, has differing regulations, including a particular reporting obligation for companies that import goods associated with ALB introductions (Bundesamt für Umwelt BAFU, 2015). Considering the rigorous regulations and governance mechanisms against the ALB

in Germany and Switzerland, it is import to observe, whether corporations adopt roles and responsibilities that contribute to upholding public goods (safeguarding local tree populations), while avoiding public bads (ALB infestations) (Enderle, 2018; Zeyen et al., 2016).

Protecting Public Goods – ALB infested areas. Currently, authorities in Bavaria are handling the ALB in five infestation areas, authorities in Switzerland are involved in three (European Union, 2016, 2017). In Bavaria, two outbreaks have been reported by companies (LfL Bayern, 2017). This is noteworthy because eradication measures that follow a discovery can impact a company's business and lead to direct or indirect costs, as companies are not compensated for ALB related losses. Quarantine measures are not favorable for companies and implicit financial damages may occur, when regulatory measures restrict business conduct (European Union, 2016, 2017). Surprisingly, the majority of businesses consider them as appropriate and collaborate deliberately with authorities against the broader threat of the ALB (LfL Bayern, 2017). The awareness for the threat can be attributed to educational conjointly public relations work carried out by the authorities (European Union, 2016, 2017). The Swiss Federal Office for the Environment (FOEN) for example developed a national guideline for ALB management by consulting Swiss research centers, cantons, and a large number of industry associations, which can be seen as a broad multi-stakeholder approach (Eidgenössischer Pflanzenschutzdienst EPSD, 2013). Yet, even with national and international norms in place and the attention of corporations for the threat, infested pallets are found on a regular basis (European Union, 2016, 2017).

Avoiding Public Bads – future outbreaks. To counter the risk of future outbreaks, Swiss and Bavarian authorities show each distinct pathways. The Swiss general ruling on ISPM 15, addresses the insufficient realization of the ISPM 15 standard, requires import firms to report in advance about ALB-risk shipments such that control inspections can be performed to incept the ALB (Bundesamt für Umwelt BAFU, 2015). Similarly, in Bavaria where companies are not obliged to pre-announce risky shipments, corporations closely cooperate with public authorities, providing transparent insights into their shipments. In

the domestic harbor of Kelheim - where the beetle was found in 2016 - companies notify authorities about risky shipments so that inspections can be performed (LfL Bayern, 2017). However, the checks in Bavaria and Switzerland are only a form of targeted sampling. The sheer quantities of today's trade flows far exceed current control mechanisms. In conclusion, neither the Swiss nor the Bavarian approach can dispel the risk posed by the ALB. Yet, the above-depicted possibilities offered by transparency, surveillance, and data sharing provide new pathways how the IAS can be better addressed.

1.3.2 How the Starry Sky Beetle contributes to refine the political understandings of corporations in the digital age

We suggest that corporations can live up to PCSRs normative demands and switch to an active democratic deliberation mode through the voluntary, transparent sharing of digital data with governmental actors (Richter & Dow, 2017; Whelan, 2019a). To stress how transparency, surveillance and data sharing can contribute to expanding PCSR theory, we will briefly juxtapose the fields of epidemiology and integrated pest management to highlight the corporate scope for public participation and deliberation.

Epidemiology and digital infectious disease control. Central to infectious disease control, are surveillance systems that help to track diseases and pathogens (S. Bansal, Chowell, Simonsen, Vespignani, & Viboud, 2016). Disease surveillance systems are "recognized as one of the most important tools to assess, predict, and mitigate infectious disease outbreaks" (Salathé, 2016, p. 399). With the advent of big data and growing computing power, the field of epidemiology started adopting new digital-based monitoring and forecasting methods (Simonsen, Gog, Olson, & Viboud, 2016). Epidemiologists have labeled the strategy of data-guided disease management 'precision public health' (Dowell, Blazes, & Desmond-Hellmann, 2016). The key to applying this disease surveillance method is the availability of detailed and timely primary data (S. Bansal et al., 2016; Simonsen et al., 2016). Such data does not solely stem from doctors and health institutions but also makes use of social data streams, including social media, search engine queries and crowdsourcing (E. C. Lee et al., 2016). Primary surveillance data and computer analytics are used to track and visualize the spread of diseases and to apply appropriate

countermeasures (Dowell et al., 2016). Surveillance data that contains additional geographic information even allows for real-time forecasts and risk mapping (Camacho-Collados & Liberatore, 2015). Thus, digital infectious disease control builds on data from multiple sources, to analyze which populations are at risk, where outbreaks originated, and where future epidemics might occur (E. C. Lee et al., 2016).

Integrated pest management. Integrated pest management has similar goals for controlling IAS. However, primary surveillance data is limited and relies mainly on monitoring efforts of authorities. To benefit from computer analytics and outbreak forecasting like digital infectious disease control, integrated pest management, requires a higher amount of primary data, predominantly trade data from firms. The prevention of outbreaks depends on intercepting high-risk shipments. Trade data that includes information about a shipment's origin, transport route, and the type of packaging material used, would allow for targeted surveillance, enabling authorities to intercept IAS more efficiently and to track down the source of an outbreak timelier. From a PCSR perspective, the voluntary provision of such data stands in line with PCSR's normative demands of transparency and accountability going beyond 'government firm surveillance' as a form of coercive or normative pressure (Bernstein, 2017; Scherer & Palazzo, 2007). In fact, the examples from Switzerland and Bavaria show that corporations are willing to give transparent insights into trade data and would support forms of governmental or networked surveillance that contribute to addressing the ALB.

Thus, the sharing of accurate data can be perceived as a deliberative communication process to gain moral legitimacy, similar to the ideals advanced in Habermasian discourse ethics and deliberative democracy (Jürgen Habermas, 1987; Scherer, 2018). Corporate transparency as real-time data sharing, therefore, offers new possibilities for corporations to act (politically) responsible in the digital age, supporting plant health organizations to gain a holistic understanding of infestation risks, thereby safeguarding public goods, while avoiding public bads (Bernstein, 2017; Seele, 2016b). Moreover, given the possibility to share corporate trade data (including information about a shipment's origin, transport route, and the type of packaging material etc.), on a

blockchain (distributed ledger), enables a public, secure, and inclusive cross-border system that can allow authorities of different countries to intercept IAS more efficiently (Kewell et al., 2017). Addressing the ALB threat better, depends on multiple actors, public and private. Therefore, transparency, surveillance, and data-sharing – may empower corporations with new possibilities to fulfill political roles and responsibilities in the digital age.

1.4 Discussion and contribution

Past research has underlined the need to expand our political understandings of corporations and their political social responsibilities (Anastasiadis, 2014; Jedrzej George Frynas et al., 2017; Jędrzej George Frynas & Stephens, 2015; Mäkinen & Kourula, 2012; Scherer et al., 2016; Whelan, 2012). The literature thereby provides detailed insights into ways in which corporations may contribute to the "provision of public goods" when national governments are limited in reach, leaving potential corporate responsibilities regarding public goods in functioning states unaddressed (Scherer et al., 2016, p. 276), Against the background of progressing digitalization, the political impacts and roles that corporations may fulfill in society, are changing. Digitalization opens new pathways for surveillance, transparency, and data-sharing. We suggest that in situations where national governments are intact, the political role of the business firm is not condemned to remain passive (Scherer et al., 2016). In line with Whelan (Whelan, 2019a) highlighting that technology companies such as Google are "born political," and can switch their political operating mode from passive governance to active democratic deliberation, we argue that digital capacities of corporations may thereby enable firms to address difficult societal challenges, which demand the attention of both, public and private actors to protect public goods.

The starry sky beetle case, as a threat to both the environment and society, illustrates the way in which digital capacities give corporations new opportunities to act responsibly, safeguarding public goods along governmental entities. The ALB poses a significant threat to entire ecosystems and the entities living in it, including business and

society at large. Thus, the ALB reflects a systemic threat to public goods, that can adversely affect multiple contexts worldwide (Boyd et al., 2018; Haack et al., 2010). Such highly complex issues may become even more prevalent in today's interconnected global markets. Demonstrated by IAS and their adverse impact on the natural environment or the shockwaves of the financial crisis that exposed the vulnerability of the financial system, such systemic risks arise in a single context and can quickly spread, challenging public goods around the globe. If not addressed appropriately, they intensify and transform into global challenges (Whiteman et al., 2013). Thus, new governance and regulatory gaps arise, giving room for corporations to switch to an active pro-social political operating mode. We suggest that difficult problems such as systemic risks may be better addressed when private and public actors collaborate. Or as Gross and De Dreu (2019) put it, shared problems are more effectively tackled via cooperation and coordination as opposed to individual solutions that are often insufficient given the scale of the issue at hand.

1.4.1.1 Toward Data-Deliberation

With the ongoing transformation of advanced industrial societies toward the digital sphere, corporations and governments have new possibilities to cooperate and coordinate. Thus, digitalization empowers corporations with additional means and resources for supporting formal legitimacy, which are necessary to overcome potential governance gaps (Willke & Willke, 2008). The Habermasian PCSR literature underlines that discourse ethics and deliberative democracy strive to find novel forms of democratic will formation (Jürgen Habermas, 1996; Scherer & Palazzo, 2011). In this sense, the digital space opens up a new forum for public participation and corporations to carry out an active political role, via democratic deliberation (Whelan, 2019a).

Data disclosure and cooperation with authorities can be interpreted as an active deliberative action, going beyond passive normative compliance and stakeholder demands. From a Habermasian perspective, *data-deliberation* can contribute to arriving at the 'best argument,' leading to good overall decisions that are favorable for society at large. It can trigger public debates and contribute to democratic processes providing novel possibilities to better address difficult societal and environmental challenges.

We propose to define the political role of corporations in *data-deliberation* as the (1) voluntary disclosure of corporate data and its transparent, open sharing with the public sector (2) along with the cooperation with the public sector on data analytics methods for examining large-scale data sets (3) thereby complying with existing national and international regulation on data protection, in particular with respect to privacy and personal data (see, e.g., Custers et al., 2018). Thus, via data-deliberation, corporations may contribute to providing public goods, respectively the avoidance of public bads in contexts with functioning governments (Enderle, 2018; Gross & De Dreu, 2019). In this regard, we perceive corporations not as equal deliberators and voters, but as "advisors, providing information and support to the relevant members of the public, viz., citizens and their representatives" (Hussain & Moriarty, 2018). This conception of data-deliberation goes beyond the mere provision of historical information often associated with corporate transparency in a pre-digital age (Parris et al., 2016). Rather, it represents a "time-ontological shift" from past to real-time transparency about ethical business conduct (Seele, 2016b). Data-deliberation can thereby provide learning opportunities about corporations that can also lead to industry-level efficiency gains (Parris et al., 2016). Notably, the combination of data from different corporations could create positive synergy effects and benefits for multiple actors within- and also across national borders given the possibility to store data on a public and secure blockchain system (Kewell et al., 2017; Whelan, 2019b).

1.5 Outlook, limitations and future research

In this paper, we outlined an expanded understanding of politics and corporations in the digital age (Jędrzej George Frynas & Stephens, 2015; Mäkinen & Kourula, 2012; Scherer & Palazzo, 2007; Scherer et al., 2016; Whelan, 2012). Given the disruptive changes brought along by digitalization, we highlighted that corporate political impacts can change in the digital age, giving corporations room to adopt new roles and responsibilities. Highlighting the role of transparency, surveillance, and data sharing, we used the illustrative case of an invasive species to show that corporations have new possibilities contributing to the wider society in addressing difficult systemic challenges.

Introducing the concept of *data-deliberation,* we depict how coporations can act as active deliberators in democratic settings, contributing to the provision of public goods, respectively the avoidance of public bads (Whelan, 2019a).

Within the limited space of this article, we have presented data-deliberation as an additional form of corporate legitimacy creation in support of already established formal governance in a democratic country setting. Thus, we are aware that the concept does not represent a universal panacea. We used Habermasian political ideals to outline the data deliberation concept. As Ehrnström-Fuentes (2016) notes, drawing on a single political philosophy poses the risk of being understood as a unilateral approach. Future research may, therefore, go beyond this conception, looking into different political philosophies, for instance an approach that may be informed by another political ideal and diverse country contexts.

What goes beyond the scope of this article is the question to what extent firms are willing and able to share data with authorities and other stakeholders, and whether collaborations are contingent on other aspects. Using Uber Movement and Waze as an example, Cattaneo (2018) highlights that corporations often possess significantly more data than they are willing to provide to the public. Besides, limited corporate resources or the need to comply with data privacy laws and regulations might prevent data sharing (Floridi, 2018). Management structures and procedures might also need adjustments to allow and coordinate data-flows. Thus, future research needs to investigate what factors trigger data-deliberation, and which aspects moderate or mediate it. Further, is necessary to investigate the transparency power nexus in this regard (Albu & Flyverbom, 2019; Flyverbom et al., 2015).

Chapter VI
Mapping the Ethicality of Algorithmic Pricing: A Review of Dynamic and Personalized Pricing

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Chapter VI
Mapping the Ethicality of Algorithmic Pricing: A Review of Dynamic and Personalized Pricing

Abstract

Firms increasingly deploy algorithmic pricing approaches to determine what to charge for their goods and services. Algorithmic pricing can discriminate prices both dynamically over time and personally depending on individual consumer information. Although legal, the ethicality of such approaches needs to be examined as often they trigger moral concerns and sometimes outrage. In this research paper, we provide an overview and discussion of the ethical challenges germane to algorithmic pricing. As a basis for our discussion, we perform a systematic interpretative review of 315 related articles on dynamic and personalized pricing as well as pricing algorithms in general. We then use this review to define the term algorithmic pricing and map its key elements at the micro-, meso-, and macro-levels from a business and marketing ethics perspective. Thus, we can identify morally ambivalent topics that call for deeper exploration by future research.

Keywords: Ethical Pricing, Algorithmic Pricing, Dynamic Pricing, Personalized Pricing, Discrimination

1.1 Introduction

Would you pay more for a Coke on a hot day? As early as 1999, Douglas Ivester the CEO of Coca-Cola discussed the potential introduction of temperature-sensitive vending machines that adjusts the price according to the outside temperature (Phillips, 2005). For him, the answer was clear: *"Coca-Cola is a product whose utility varies from moment to moment. In a final summer championship, when people meet in a stadium to enjoy themselves, the utility of a chilled Coca-Cola is very high. So it is fair it should be more expensive. The machine will simply make this process automatic."* (Phillips, 2005, p. 302).

In the public outcry that followed Ivester's remarks, Coca-Cola faced accusations of gouging and consumer exploitation, as people firmly rejected the idea of such a machine (Leonhardt, 2005). 20 years after, the temperature-sensitive vending machine remains a rumor. However, where until recently, fixed and uniform prices seemed to be the pillar on which the capitalist edifice rested, algorithms are now in charge to observe customers and set prices dynamically and even personalized according to identified customer features (N. Chen & Gallego, 2019; Q. G. Chen et al., 2016; Koh et al., 2017). Today's algorithms are far more advanced than any beverage vending machine one could think of decades ago. The capacities of this new generation of algorithms, we hold, are not mere technicalities to be silently passed over. Rather, they constitute potentially a thoroughgoing revolution in how humans and algorithms interact commercially, online as well as offline. Although research on algorithmic pricing has substantially increased in the last decade (Ajorlou, Jadbabaie, & Kakhbod, 2018; Q. G. Chen et al., 2016; Peura & Bunn, 2015; Spann, Fischer, & Tellis, 2015), a comprehensive ethical understanding of the expanding subject is still lacking (Buhmann, Paßmann, & Fieseler, 2019; Calvano, Calzolari, Denicolò, & Pastorello, 2019; Elegido, 2011, 2015; K. Martin, 2019a, 2019b; Mercier-Roy & Mailhot, 2019). Our article wants to make a first step in the direction of closing this lacuna.

By a systematic review of the literature from a business and marketing ethics perspective, we offer a first chart of the topical territory, clarifying the underlying concepts and structures of algorithmic pricing and showing where major ethical problems arise. In

what follows, we examine research literature on pricing algorithms in general, ethical and legal issues, pricing policies, personalization models, inventory management, and electronic retail. By mapping the micro, meso, and macro levels of algorithmic pricing, we discuss how ethical aspects of algorithmic pricing relate to individual and aggregate agency within society. Adducing arguments from deontology, teleological, consequentialist ethics, social contract theory, and utilitarianism, we conclude with suggestions of how these major schools of ethical thought would characterize the morally relevant aspects of algorithmic pricing. While by no means exhaustive, this list of schools is to serve as a first approximation to the subject. Future research would, of course, have to amend our endeavor both by delving deeper into each of the surveyed schools and by augmenting the list with further ethical theories (such as for instance, care ethics[1]).

Overall, we contribute to the literature by making accessible to researchers and practitioners the current state of relevant marketing, law, economic, management, and computer science literature about algorithmic pricing. By delimiting such aspects that can without controversy be deemed morally good or bad from concerns still requiring deeper exploration, we show where research gaps exist and opportunities for future research lie. One core contribution of the review is a refined and ethically informed definition of algorithmic pricing (for details on a comparison with alternative definitions see chapter "Concepts and Definitions below"): *Algorithmic pricing is a pricing mechanism, based on data analytics, which allows firms to automatically generate dynamic and customer-specific prices in real-time. Algorithmic pricing can go along with different forms of price discrimination (in both a technical and moral sense) between individuals and/or groups.*

[1] "For a definition of care ethics, see *https://www.iep.utm.edu/care-eth/*" and additionaly Gössling and van Liedekerke (2014); in recent years, care ethics has developed beyond its context of origin in feminist ethics so as to encompass the specificities brought on by starkly asymmetrical situations (helping / helpless person; adult / child; healthy / incapacitated subject, etc.); a good intro into and survey of the field is given by: Held, Virginia. *The Ethics of Care*. New York, NY: Oxford University Press, 2006."

As such, it may be perceived as unethical by consumers and the public, which in turn can adversely affect the firm. Further, we strive to connect to ethical debates on algorithmic accountability and algorithmic governance so as to highlight practical implications and the use of algorithmic pricing mechanisms.

1.2 Literature Review

1.2.1 Research Method

Since a host of differing methods are available to review and synthesize academic literature, a few words are in order concerning our proceedings. In this study, we follow an interpretive review approach (Suddaby et al., 2017). Interpretative reviews build on a thematic or inductive method to make sense of a literature body that is generally diverse in nature, consisting of qualitative, quantitative, and conceptual studies (Suddaby et al., 2017). In contrast to integrative reviews which are generally used to summarize and analyze quantitative literature with data similarity and well-specified constructs (e.g., via a meta-analysis F. L. Schmidt & Hunter, 2014), interpretative reviews are particularly valuable when there is less cohesion between the reviewed studies and thus, less construct, variable, and term clarity (Suddaby et al., 2017). Consequently, as the dynamic and personalized pricing literature is highly heterogeneous (i.e., qualitative, quantitative, and conceptual) with low construct clarity, stretching along multiple research fields, we adopt an interpretive approach (details below) to review the most relevant publications concerning Business and Marketing Ethics.

Scope and Limitations

Algorithmic pricing is based on different forms of computer-assisted real-time pricing mechanisms (Angel & McCabe, 2018; Calvano et al., 2019; Q. G. Chen et al., 2016; Faruqui & Sergici, 2013). In this study, we focus on the two major types of algorithmic pricing, that is, dynamic and personalized pricing. The two pricing types are characterized and interpreted differently within scientific communities, as they stand at the frontier of and overlap with several research fields, predominantly Marketing, Operations Research/Management Science, Economics, Law and Computer science and

not least Business and Marketing Ethics (Angel & McCabe, 2018; Bar-Gill, 2019; Cosguner, Chan, & Seetharaman, 2018; den Boer, 2015; Elmaghraby & Keskinocak, 2003; Gal, 2019; Kummer & Schulte, 2019; Mercier-Roy & Mailhot, 2019; Obermiller, Arnesen, & Cohen, 2012). Dynamic pricing (sometimes also known as surge, yield or real-time pricing) generally refers to the practice of dynamically adjusting prices in order to achieve revenue gains, while responding to a given market situation with uncertain demand (Aviv & Vulcano, 2012; N. Chen & Gallego, 2019; Q. G. Chen et al., 2016). Personalized pricing is referred to as first-degree price discrimination, customized, or targeted pricing, and represents a pricing strategy "whereby firms charge different prices to different consumers based on their willingness to pay" (Choudhary, Ghose, Mukhopadhyay, & Rajan, 2005, p. 1120). Although the two types substantially overlap and often apply in combination, we conducted two separate literature reviews on either type of algorithmic pricing. This is for genealogical reasons, as, from a technological point of view, dynamic pricing appeared considerably earlier than personalized pricing. Second, the two types vary in the degree of price discrimination, which, from a business and marketing ethics perspective, warrants two separate literature assessments. Lastly, the generic title algorithmic pricing, summarizing different forms of big data and computerized pricing mechanisms, only emerged recently with the rise of algorithms as a key component of digitalization (Bar-Gill, 2019; Calvano et al., 2019; L. Chen, Mislove, & Wilson, 2016; Ettl, Harsha, Papush, & Perakis, 2019; UK Competition and Markets Authority, 2018). To account for technicalities of pricing algorithms in general, an additional targeted review was conducted, as algorithms represent the core of this pricing mechanism. Eventually, we synthesized the separate reviews to give a survey on the ethicality of the technology and its use. *Figure 1* outlines the research design of this study.

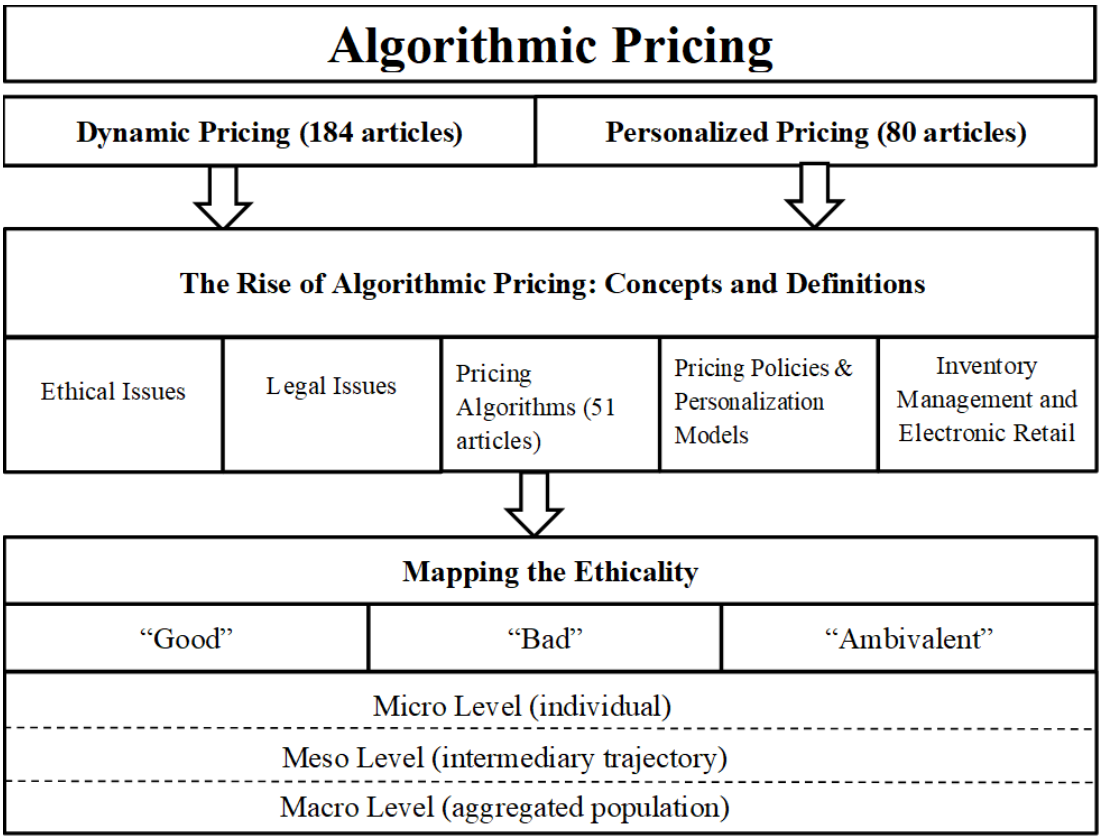

Figure VI-1. Research Design

Data collection and selection criteria

We searched for relevant literature in four major electronic databases (Business Source Premier, Communication and Mass Media Complete (CMMC), Social Science Research Network (SSRN), Clarivate Analytics Web of Science). Given the novelty and interdisciplinary nature of the topic of algorithmic pricing, we decided for openness of the sample and against formal sample inclusion criteria like top-tier-journals of a specific field. Also, many articles from informatics on pricing algorithms were published in informatics conference proceedings that we would have missed otherwise. The search for relevant articles included the following terms "*dynamic pricing*", "*personalized pricing*",

"*personalised pricing*" , "*customized pricing*" , and "*customised pricing*" "*algorithmic pricing*"; "*pricing algorithm*" appearing in the title, abstract, subject terms, or keywords. The search timespan was not restricted, and the focus was set to articles published in English language. Table 1 provides an overview of the data collection and selection criteria.

Table VI-1: Data collection and selection criteria

Search terms	"*dynamic pricing*" ; "*personalized pricing*" ; "*personalised pricing*" ; "*customized pricing*" ; "*customised pricing*" ; "*algorithmic pricing*"; "pricing algorithm"
Language	English
Time frame	No limitations
Databases	Business Source Premier, Communication and Mass Media Complete (CMMC), Clarivate Analytics Web of Science, Social Science Research Network (SSRN),
Inclusion	From journal or database, primarily related to dynamic/personalized pricing, accessible in full text
Exclusion	Letters to the editor, commentaries, tutorials, conference abstracts, opinions, viewpoints, as well as studies without direct relation to dynamic / personalized pricing were excluded.

The final dataset consisted of 315 articles[2] from over 80 different journals spanning a time period from 1980 to 2019 (184 articles about dynamic pricing and 80 about personalized pricing, 51 about pricing algorithms in general). The articles on dynamic and personalized pricing were reviewed and coded separately along emergent, and relatively salient clusters (Table 2 and 3). In several consensus sessions, these clusters were discussed to refine and derive the ultimate themes that structure the following paragraphs. As the clusters of the individual reviews are largely identical, we combined the resulting themes of the dynamic and personalized pricing literature. Thus, the current state of discussion in the academic literature is provided along the four major themes of: (2.)

[2] The full list of articles is provided as supplementary file (see Appendix). The list was updated in September 2019 to account for the latest discussion on algorithmic pricing including the article DOIs for immediate access.

Ethical Issues: Consumer Behavior and Marketing Ethics (3.) Legal Issues (4.) Pricing Policies and Personalization Models (5.) Inventory Management. In addition, the first theme, informed by a targeted review of pricing algorithms, provides a general introduction to pricing algorithms that are used for both, dynamic and personalized pricing: (1.) Pricing Algorithms in general.

Table VI-2. Dynamic Pricing: themes with key publications

Theme/Cluster	Journal	Author	Year	Title	Type of Algorithmic Pricing
Ethical issues	Journal of Marketing Research	Bolton et al.	(2010)	How Do Price Fairness Perceptions Differ Across Culture?	Dynamic
	MIS Quarterly	Hinz et al.	(2011)	Price Discrimination in E-Commerce? An Examination of Dynamic Pricing in Name-Your-Own Price Markets	Dynamic
	Journal of Consumer Research	Haws and Bearden	(2006)	Dynamic Pricing and Consumer Fairness Perceptions	Dynamic
	Journal of the Academy of Marketing Science	Weisstein et al.	(2013)	Effects of price framing on consumers' perceptions of online dynamic pricing practices	Dynamic
Legal issues	Communications of the ACM	Gal	(2019)	Illegal pricing algorithms	Dynamic
	Journal of Competition Law & Economics	Schwalbe	(2018)	Algorithms, Machine Learning, and Collusion	Dynamic
	Harvard Business Review	Stucke and Ezrachi	(2016)	How Pricing Bots Could Form Cartels and Make Things More Expensive	Dynamic

	Minnesota Law Review	Mehra	(Mehra, 2016)	Antitrust and the robo-seller: Competition in the time of algorithms	Dynamic
Pricing Policies	Manufacturing & Service Operations Management	Maglaras and Meissner	(2006)	Dynamic Pricing Strategies for Multiproduct Revenue Management Problems	Dynamic
	Marketing Science	Kopalle et al.	(1996)	Asymmetric Reference Price Effects and Dynamic Pricing Policies	Dynamic
	Operations Research	Araman and Caldentey	(2009)	Dynamic Pricing for Non-Perishable Products with Demand Learning	Dynamic
	Journal of Political Economy	Bergemann and Välimäki	(2006)	Dynamic Pricing of New Experience Goods	Dynamic
Inventory Management	Operations Research	Besbes O and Zeevi A	(2009)	Dynamic Pricing Without Knowing the Demand Function: Risk Bound and Near-Optimal Algorithms	Dynamic
	Management Science	Elmaghraby and Keskinocak	(2003)	Dynamic Pricing in the Presence of Inventory Considerations: Research Overview, Current Practices, and Future Directions	Dynamic
	Management Science	Feng	(2010)	Integrating Dynamic Pricing and Replenishment Decisions Under Supply Capacity Uncertainty	Dynamic

Operations Research	Song et al.	(2009)	Optimal Dynamic Joint Inventory-Pricing Control for Multiplicative Demand with Fixed Order Costs and Lost Sales	Dynamic

Table VI-3. Personalized Pricing: themes with key publications

Theme/Cluster	Journal	Author	Year	Title	Type of Algorithmic Pricing
Ethical issues	Marketing Science	Chen and Iyer	(2001)	Consumer Addressability and Customized Pricing	Personalized
	Management Science	Choudhary et al.	(2005)	Personalized Pricing and Quality Differentiation	Personalized
	Journal of Consumer Psychology	Barone and Roy	(2010)	The effect of deal exclusivity on consumer response to targeted price promotions: A social identification perspective	Personalized
	MIS Quarterly	Koh et al.	(2017)	Is Voluntary Profiling Welfare Enhancing?	Personalized
Legal issues	Theoretical Inquiries in Law	Caplan and Stringham	(2008)	Privatizing the Adjudication of Disputes	Personalized
	Economics Letters	Zenger H.	(2012)	The Marginal Price Effects of Antitrust Rules Against Price Discrimination	Personalized
	Journal of Consumer Policy	Zuiderveen	(Zuiderveen Borgesius	Online Price Discrimination and EU Privacy Law	Personalized

			& Poort, 2017)		
Pricing Policies and Personalization Models	Operations Research	Aydin and Ziya	(Aydin & Ziya, 2009)	Personalized Dynamic Pricing of Limited Inventories	Personalized
	Marketing Science	Rust and Chung	(2006)	Marketing Models of Service and Relationships	Personalized
	Management Science	Wu et al.	(2008)	Customized Bundle Pricing for Information Goods: A Nonlinear Mixed-Integer Programming Approach	Personalized
	Management Science	Ray et al.	(2005)	Tailored Supply Chain Decision-Making Under Price-Sensitive Stochastic Demand and Delivery Uncertainty	Personalized

1.2.2 The Rise of Algorithmic Pricing

The practice of algorithmic pricing emerged out of the concept of dynamic pricing, which became mainstream in the 1980s, after its successful use by American Airlines. Although the underlying mathematical concepts and models of dynamic pricing date back to the mid-twentieth century (see, e.g., Kincaid & Darling, 1963), the more recent scientific and practitioner interest was triggered by seminal articles in the late 1980s and early 1990s (Belobaba, 1987a, 1987b, 1989; Gallego & van Ryzin, 1994). Given that pricing algorithms haven been around for quite some time, growing academic literature is not the only reason for their diffusion (Ajorlou et al., 2018; Q. G. Chen et al., 2016; Peura & Bunn, 2015; Spann et al., 2015). Algorithms depend on data and their effectiveness grows in tandem with an increase in data input (Fisher, Gallino, & Li, 2018; Miklós-Thal & Tucker, 2019).

Algorithmic pricing therefore benefits substantially from the development of a whole new ecosystem, entailing rapidly advancing information and communication technologies and e-commerce systems (Cohen, 2018). The shift to online retailing provides customers with easy access to their preferred goods and services out of their living room; having a global market at the fingertips with the possibility to compare prices and offers at any time of the day. Yet, the online environment also empowers companies to follow-up on the digital traces left behind so as to collect fine grained consumer information. Enabled by continuous advancements in computing power and algorithmic complexity, this digital ecosystem is itself exemplary of a new type of data capitalism (F. Xia, Chatterjee, & May, 2019; Zuboff, 2019). In this environment driven by ‘big data,’ companies have to act and respond quickly to constantly changing market conditions, adjusting their strategies based on available information and with the help of automated algorithms (Cohen, 2018). One of the most crucial and effective variables that companies

can manipulate to adjust to the market is the price, which can be technically altered in an online environment at close to zero cost[1] (G. Bitran & Caldentey, 2003).

Algorithmic pricing has spread into multiple industries and is now considered a highly advanced business approach and key driver of business success in terms of increased profits (Cosguner et al., 2018; Fisher et al., 2018; Spann et al., 2015). Electricity and gasoline markets (Balmaceda & Soruco, 2008; Faruqui & Sergici, 2010), online retailing (Fisher et al., 2018) , and even the sports and entertainment industry have implemented algorithmic pricing approaches (Bouchet, Troilo, & Walkup, 2016; M. Chen & Chen, 2015). Moreover, when it comes to the pricing of professional graduate programs, financial, or insurance products, and services, or information goods, individual prices are already a common practice (Feldman, Trzcinka, & Winer, 2015; Waldfogel, 2015). With technology firms such as Google, Microsoft, and Amazon, offering algorithmic pricing solutions out of the box, there are no obstacles for the widespread use of the pricing strategy, even for smaller sized companies (Calvano et al., 2019; F. Xia et al., 2019). In a recent study on the adoption of algorithmic pricing on Amazon Marketplace, it was uncovered that over 500 sellers had adopted an algorithmic pricing approach (L. Chen, 2017; L. Chen et al., 2016).

Algorithmic pricing is also migrating into and spreading within the offline world. With recent advancements in camera technology and machine learning, grocery stores and other offline contexts are about to become even larger fields of application. Amazon's "Go" store or the Chinese BingoBox track movements and facial expressions of their customers and can make personalized offerings in the shop (Soo, 2017). Similar steps are taken by retailers in the UK and Switzerland, testing other forms of in-store tracking such as beacons, which can offer a level of personalized pricing similar to online shops

[1]It is important to note that indirect, not monetary costs to changing prices may occur, such as increased attrition, or opportunity costs. Further, switching from one overall pricing modality to another can also lead substantial monetary costs for a firm (Adida & Özer, 2019; Ellickson, Misra, & Nair, 2012).

(Gratwohl, 2019; PYMNTS, 2018). Consequently, algorithmic pricing is rapidly spreading both online and offline, fueled by technological progress and an unprecedented amount of (personal) data.

1.2.3 Concepts and Definitions

Algorithmic pricing—in its most recent stage—is a pricing strategy that builds on computer algorithms, which set prices for goods and services dynamically at either the aggregate or individual level. Generally, described as "a sequence of computational steps that transform the input into the output," algorithms are automated tools that solve previously specified problems (Cormen, Leiserson, Rivest, & Stein, 2009, p. 5). Pricing algorithms process input data about markets and actors, accounting for numerous factors such as competitors' prices, consumer demand, or personal behavior and characteristics (such as gender, age, educational background etc.) to determine the output price in relation to the highest (i.e., profit-maximizing prices) achievable revenue (Cohen, 2018; Fisher et al., 2018; Keskin & Zeevi, 2014; J. Zhang, 2011). Different use case scenarios require different types of pricing algorithms, which can be broadly categorized as adaptive algorithms (first generation), and learning algorithms (second generation) (Calvano et al., 2019). The levels of complexity may thus range from simple if-then procedures (e.g., if the temperature is above 20°C, the price of the Coke goes up) to artificial intelligence (AI), machine learning and neuronal networks (Calvano et al., 2019). Recent literature highlights machine learning approaches focusing on behavioral patterns to predict future demand and forecast individual willingness to pay (Ettl et al., 2019; Miklós-Thal & Tucker, 2019; F. Xia et al., 2019). Algorithms that build on reinforcement learning can even further develop on their own when adjusting to changing market conditions, not requiring a programmer to rewrite the underlying code (Calvano et al., 2019; F. Xia et al., 2019).

A wide range application of algorithmic pricing is said to benefit businesses and consumers alike, yet, at the same time, firms excitement is met by consumer concerns (N. Martin, 2019; Schechner, 2017). From a research perspective, discussions on the ethicality of algorithms in general and pricing algorithms in particular are still limited (Elegido,

2011, 2015; K. Martin, 2019a, 2019b; Mercier-Roy & Mailhot, 2019). As outlined by Martin (K. Martin, 2019b) and Mittelstadt et al. (2016), algorithms are inevitably "value-laden" as opposed to neutral decision tools. Value-laden thereby entails that an algorithm reflects the values of the engineers and users (Mittelstadt et al., 2016). Designing an algorithm value-neutral is practically not feasible, given for example the large size teams that are usually necessary to write the code. As a consequence, the algorithm comes with certain value-judgments baked in that reflect the designers and user preferences for some values over others (Kraemer, van Overveld, & Peterson, 2011). Often, the underlying values of an algorithm remain hidden, until a controversy reveals the values embedded in the code.

Regarding the two major types of algorithmic pricing analyzed here, we find both pros and cons from a business and marketing ethics perspective, as well as moral ambiguities. Price discrimination as such does not have to be unfair (Elegido, 2011). From an economic and technical perspective, price discrimination represents first and foremost a neutral concept without inherent negative connotations that the common understanding of the word 'discrimination' would suggest (Steppe, 2017). However, the reviewed literature indicates that particularly first-degree price discrimination and group-specific price discrimination do, in fact, pose ethical challenges well deserving closer attention from researchers and regulators. Particularly controversies surrounding personalized pricing have revealed hidden values in the code that tend to be perceived as unfair, asymmetric, or even as inhumane (e.g., Uber taxis charging exorbitant fares during terrorist attacks). When price discriminatory effects are perceived as adverse, they may entail adverse consequences for corporations, especially when found to be ethically problematic on close inspection. These ethical challenges of algorithmic pricing arise from data analytic capacities to identify personal and group characteristics that allow for sophisticated behavioral price discrimination (Elmaghraby & Keskinocak, 2003).

Given the fundamental novelty of the concept, the search for a comprehensive definition of algorithmic pricing (comprising dynamic and personalized pricing) turned out to be challenging. In reviewing the extant literature, we came across several definitions

which differ in their level of clarity and precision. Previous definitions predominantly focus on the technical aspects of the phenomenon which conscribe technical characteristics while leaving ethical considerations aside (Bar-Gill, 2019; Calvano et al., 2019; L. Chen et al., 2016; UK Competition and Markets Authority, 2018). In table 4 the extant definitions are listed. What becomes clear from the table, there are neither ethically informed definitions, nor definitions relating directly to business and marketing ethics, accounting for the challenges involved in algorithmic pricing, as described above. The core themes of existing definitions in table 4 highlight the role of data which lets automated algorithms divide consumers in fine-grained (sub)categories, up to the assessment of an individual's willingness to pay, to set prices according to a value maximizing function of the firm.

Table VI-4: Concepts and definitions referring to Algorithmic Pricing

Author	Year	Title	Concept / Definition
Calvano et al.	(2019, p. 156)	Algorithmic Pricing What Implications for Competition Policy?	"Firms' pricing decisions are increasingly delegated to software programs that incorporate the latest developments of artificial intelligence."
Bar-Gill	(2019, p. 243)	Algorithmic Price Discrimination When Demand Is a Function of Both Preferences and (Mis)perceptions	"Algorithmic price discrimination occurs when sellers gain information about each consumer's individual WTP and set a personalized price equal to that consumer's WTP. "Fueled by big data, algorithmic price discrimination enables sellers to parse the population of potential customers into finer and finer subcategories—each matched with a different price."
UK Competition and Markets Authority	(2018, p. 7)	Pricing algorithms	"[T]he use of algorithms in firms' pricing decisions, such as setting the market-wide price or offering personalised prices to individual consumers."
Chen, Mislove, Wilson	(2016, p. 1339)	An Empirical Analysis of Algorithmic Pricing on Amazon Marketplace	"The rise of e-commerce has unlocked practical applications for algorithmic pricing (sometimes referred to as dynamic pricing algorithms or Revenue/Yield Management)."

Oxera Consulting LLP	(2017, p. 5)	When algorithms set prices: winners and losers	"When it comes to price-setting, algorithms are computer programs that set prices in an automated way"
Karr	(2018)	How to Use Algorithmic Pricing to Maximize Profits	"Our automatic self-learning algorithms will help you maximize your profit margins for your private label products, ultimately accelerating your private label business growth"

Given the current definitions, we believe there is a need for a more comprehensive definition of algorithmic pricing that builds on the existing research, while accounting for previously omitted ethical considerations. Consequently, we propose the following definition incorporating the ethical dimension:

Algorithmic pricing is a pricing mechanism, based on data analytics, which allows firms to automatically generate dynamic and customer-specific prices in real-time. Algorithmic pricing can go along with different forms of price discrimination (in both a technical and moral sense) between individuals and/or groups. As such, it may be perceived as unethical by consumers and the public, which in turn can adversely affect the firm.

1.2.4 Pricing Algorithms in General

Broadly defined, an algorithm is a "process or set of rules to be followed in calculations or other problem-solving operations" (Oxford Dictionary, 2019). In the context of revenue and yield management, algorithms are used to maximize revenues and profits by calculating the optimal allocation of goods and adapting the prices accordingly. This strategy of using algorithms or software in general to determine prices has been coined "algorithmic pricing" (see, e.g., Calvano et al., 2019). With this tactic, prices can be adapted dynamically according to algorithmic formulas taking complex and volatile market conditions into account.

Algorithmic pricing is used predominantly in domains with limited goods which are short-term or perishable (Elmaghraby & Keskinocak, 2003; Ettl et al., 2019). The most prominent example is the airline industry with many fluctuating market factors (Brumelle & McGill, 1993; van Ryzin & McGill, 2000). The tactic of flexibly adapting prices is also increasingly introduced in other domains such as in the e-commerce market or for personalization (L. Chen et al., 2016; Ettl et al., 2019).

In the traditional dynamic pricing research, adaptive algorithms for optimization and estimation of prices are used to calculate models in which prices are optimized under varying market conditions, e.g., whether the firm is a monopolist or whether consumers

are price-sensitive (Aydin & Ziya, 2009; G. R. Bitran & Mondschein, 1997). Such models use and combine different parameters and algorithms such as stochastic approximation algorithms (Robbins & Monro, 1951) and Fibonacci algorithms (see, e.g., G. R. Bitran & Mondschein, 1997). Others include principles of Bayesian decision theory and apply it to pricing strategies (Green, 1963). Another widely used approach is to use different forms of learning algorithms with or without reinforcement learning. These algorithms actively change parameters with respect to varying external conditions. Sub-forms of reinforcement learning algorithms are Q-learning algorithms such as naïve Q-learning, multi-agent Q-learning, zero-sum games and MinMax Q-Learning, general-sum games and NashQ-Learning (Ittoo & Petit, 2017). They can, for instance, be used to solve Markov and semi-Markov decision problems (MDP, Gosavi, 2004b)[1] One algorithm from this kind is proposed by Gosavi (2004a). It is a model-free and asynchronous algorithm that applies a nearest-neighbor approach to solve MDP in the pricing context. Other learning algorithms use R-learning (A. Schwartz, 1993) or SMART and Relaxed-SMART algorithms (Das, Gosavi, Mahadevan, & Marchalleck, 1999). The latter group of algorithms are all based on some form of value iteration.

Depending on the pricing domain, complexity, and specific requirements of the setting, many different algorithms could theoretically be used to optimally calculate prices and the best performance has to be identified. For example, Ettl et al. (2019) compared the performance of different approximation algorithms for setting the prices of personalized project bundles while similarly taking the inventory management into account. The algorithms tested were, e.g., exponential multiplicative algorithms, separable-item algorithms, myopic heuristic algorithms to name only a few. Therefore, when firms delegate pricing decisions to algorithms as opposed to the traditional approach of defining a specific price for a certain good, this approach of algorithmic pricing can theoretically

[1] MDPs are a group of problems in which a decision maker shall find the optimal solution in several states of a system in order to optimize performance metrics.

apply a broad variety of algorithms using several different factors and parameters and integrating different types of algorithms in order to dynamically calculate and adapt prices.

1.2.5 Ethical Issues: Consumer Behavior and Marketing Ethics

Dynamic Pricing

Thus far, ethical concerns about dynamic pricing have received only scant attention. The most critical points have been raised about the modeling of pricing policies and potential effects on consumer behavior (F. Lee & Monroe, 2008). In a study of price fairness in relation to dynamic pricing, Haws and Bearden (Haws & Bearden, 2006) conclude that negative effects can arise when customers become aware of price differences. Consumers typically perceive dynamic pricing as unfair, as soon as the inherent price discrimination is detected (Garbarino & Lee, 2003; Haws & Bearden, 2006). Price discrimination as such, however, does not necessarily have to be seen as unfair (Elegido, 2011). Dynamic pricing can be detected when the stated price substantially differs from an internal or external reference price of the consumer (Garbarino & Lee, 2003). Prices can be framed, however, in ways to mitigate such potentially negative perceptions, for instance, by providing external reference prices that make the stated price appear more attractive, or by offering an additional cash coupon or a gift (F. Lee & Monroe, 2008; Weisstein et al., 2013). In online environments, highly popular sites such as Ebates or MrRebates build on cash back models, offering two asymmetric prices thereby making use of promotions and price discrimination at the same time (Ho, Ho, & Tan, 2017). Ho et al. (2017, p. 2), warn in this regard from the "cash-back paradox," meaning that "[u]nder some conditions, all consumers will end up suffering from higher prices compared with the uniform price they would have faced if the merchant did not price discriminate."

In response to the increased use of dynamic pricing, some consumers have started to become more strategic in their online shopping behavior (Kremer, Mantin, & Ovchinnikov, 2017; Q. Liu & van Ryzin, 2008). For instance, they often plan their purchases (Q. Liu & van Ryzin, 2008) or check prices and inventory information ex-ante

(Cho, Fan, & Zhou, 2009), to form a strategic response to the dynamic pricing of a firm. Yet, from a consumer perspective, it remains a challenging task to recognize price changes and to make correct predictions about future price developments (Radner, Radunskaya, & Sundararajan, 2014). Garbarino and Maxwell (2010) argue that adverse consumer reactions to dynamic pricing, such as lower future purchase intentions, decreased trust, or willingness to complain, are also subject to cultural norms. These authors stress that price discrimination between groups is widely accepted (Garbarino & Maxwell, 2010). Dynamic pricing, though, remains only an approximation – a precursor – of what is to be discussed next: personalized pricing building on personal preferences and individual behavior.

Personalized pricing

Contrary to dynamic pricing, ethical issues of personalized pricing have triggered a broader public and scholarly debate (see, e.g., Amazon's experiments with personalized pricing as the most publicized negative example in the year 2000, C. Choe, King, & Matsushima, 2018). Personalized pricing goes beyond demand estimations of groups toward the demand of the individual (Obermiller et al., 2012). Digital tracking via 'cookies' and 'digital breadcrumbs' allow firms to analyze consumer behavior data and to decipher personal characteristics and preferences, to implement (almost) perfect price discrimination by identifying a customer's reservation price, the individual willingness to pay (G. Bitran & Caldentey, 2003; Ezrachi & Stucke, 2016). What remains invisible for the eye of most consumers, is the fact that their online behavior creates a long data trace consisting of personal characteristics such as location data, browsing and purchasing history, social media posts and 'likes,' and so on (Ayadi, Paraschiv, & Rousset, 2017). In sum, these personal characteristics allow firms to build fine-grained profiles about individual purchasing preferences, tastes, and habits that often also reveal a customer's income or health status (Steppe, 2017). Building on the data, pricing algorithms can estimate consumers' willingness to pay or as Xu and Dukes (2019) state, gain "superior knowledge" by understanding consumer preferences better than themselves. For instance, the knowledge about a consumer's brand preference is being used to charge higher prices

(Esteves, 2014). Similarly, a low smartphone battery is taken by Uber to indicate that a customer might be more likely to accept a surge price (Dakers, 2016). Thus, the key ethical challenge of personalized pricing lies in the accumulation and analysis of individual behavioral data and the power asymmetries that arise between consumers and firms which possess detailed behavioral profiles of them (Hinz et al., 2011; Koh et al., 2017; K. D. Martin & Murphy, 2017).

Price fairness plays a key role in any pricing system (L. Xia, Monroe, & Cox, 2004). Thus, whether or not personalized pricing is seen as discriminatory, lies mainly in the consumer's fairness perception (Elegido (2011). This fairness perception is formed by numerous factors (see, e.g., Richards, Liaukonyte, & Streletskaya, 2016). In relation to personalized pricing, interpersonal price differences, the perceived violation of social norms, and price framing are particularly relevant. When personalized pricing is unveiled and it is brought to the attention of consumers that they are paying a substantially higher price than their peers, the practice is perceived as unfair or manipulative, and trust, as well as demand, can decrease (Zuiderveen Borgesius & Poort, 2017). Similar reactions are triggered, when personalized pricing is supposed to violate social norms, such as charging a lower price to a new customer (Maxwell & Garbarino, 2010). Maxwell and Garbarino (2010) caution that this may be culture-dependent, with reference to an Indian delivery service that with apparent impunity charges individuals up to 50 percent more if they are located in a wealthy neighborhood. Lastly, price framing is a decisive element whether a price is perceived as fair or not. Several authors demonstrate that firms can successfully counter peer-induced fairness concerns by obfuscating prices to impede interpersonal comparisons and to raise the chances that consumers accept the prices offered (Allender, Liaukonyte, & Richards, 2016; Gu & Wenzel, 2014; Kalaycı, 2016). In this manner, personalized prices can be framed as explicit personal offerings, such as exclusive deals and are therefore more likely to be accepted (Barone & Roy, 2010).

1.2.6 Legal Issues

Dynamic Pricing

Dynamic pricing mechanisms have recently moved in the focus of competition law authorities around the globe, given their potential to form illegal price-fixing cartels (Gal, 2017, 2019; Schwalbe, 2018; Stucke & Ezrachi, 2016). Noteworthy in this regard is the Topkins price-fixing case from 2015, where the U.S. Department of Justice prosecuted against an illegal price-fixing cartel that shared dynamic pricing algorithms for the sale of posters on the Amazon Market place (Gal, 2019; Stucke & Ezrachi, 2016). Competition law generally does not allow "agreements among market players to restrict competition, without offsetting benefits to the public" (Gal, 2019, p. 18). Authorities are thus confronted with the question whether existing legal frameworks and tools are sufficient to monitor such algorithmic behavior and enforce competition law in an automated online environment (Schwalbe, 2018). Particularly, as recent research has shown that reinforcement learning algorithms may autonomously lead to tacit collusion, blurring the lines to explicit collusion (Ittoo & Petit, 2017; Van Uytsel, 2018).

Personalized pricing

As personalized pricing is expanding into ever more areas of life, it also raises legal questions, particularly with regard to price discrimination and privacy (Koh et al., 2017). Whereas non-linear pricing policies that are universally applied to all customers are usually not in breach of existing law, discriminatory non-linear pricing schemas, such as personalized two-part tariffs, have attracted the attention of anti-discrimination and antitrust law in several countries (Zenger, 2012). However, it has been shown that existing law is often inept and even counterproductive when it comes to protecting consumers from potential power asymmetries. In an attempt to improve consumer privacy, the Dutch government issued a law in 2012 requiring website owners to inform users about tracking, profiling and personalization practices before the visit (Helberger, 2013). As a result, the majority of websites made use of a 'cookie wall' that allowed the user only to consume the content, if they agreed to the personalized tracking practices, which, in fact, were decisively more invasive than the previous default settings. Regulatory intervention against personal data collection may be counterproductive, only yielding advantages when

consumers are naïve, and the market is characterized by limited competition and price discrimination (F. Hoffmann, Inderst, & Ottaviani, 2013; Koh et al., 2017).

In relation to online shops, Zuiderveen and Poort (Zuiderveen Borgesius & Poort, 2017) argue that European data protection law applies to personalized pricing insofar as personal data are processed. As online services tend to personalize prices via the usage of cookies for identification, tracking, and categorization of customers, it can be inferred, that the European General Data Protection Regulation applies in most online shop cases. Consequently, a firm that is applying a personalized pricing scheme in the European Union must inform its customers about the purpose of the personal data processing. A practical compromise that bridges the gap between proponents and opponents of personalized pricing in this context is the possibility to "opt-in" to or "opt-out" from personal profiling, which may also serve in contexts where the existing data protection law is limited (Koh et al., 2017).

1.2.7 Pricing Policies and Personalization Models

Dynamic Pricing

At the center of most dynamic and personalized pricing schemes stands the principle of profit maximization (Besbes & Zeevi, 2015). The objective function of a dynamic pricing policy aims at increasing the overall revenue or profit for a given firm by choosing the optimal price for a good or service (N. Chen & Gallego, 2019). Dynamic pricing policies can be designed in different ways, depending on the variables the policy should take into account. They typically build on differing mathematical approaches, which can be broadly categorized according to Bayesian, (Gallego & Talebian, 2012), and non-Bayesian methodologies (see, e.g., Ramsey-Boiteux, Hamilton-Jacobi-Isaacs (HJI) equation, Taylor's discrete model)[2]. Generally, these mathematical approaches strive to

[2] Computational and modeling advancements have paved the way for Bayesian approaches. In marketing, Bayesian hierarchical models go beyond standard hierarchical approaches, allowing for greater flexibility, modularity,

find an answer to uncertainty problems between the price and expected demand of an item (good/service) in a given period (den Boer, 2015), as will be further explained below.

The demand side of a policy equation is typically characterized by fluctuation over time or static demand situations, where the inventory level (see inventory management) causes pricing dynamics. Demand needs to be specified for a certain time horizon (L. Feng, Zhang, & Tang, 2015). Products or services are usually time-sensitive, meaning that they can only be sold within a finite selling season, itself comprised of selling periods (M. Chen & Chen, 2015). Thus, finite time approaches (Y. Levin, McGill, & Nediak, 2008) can be distinguished from two-period (T. Li, Sethi, & He, 2015) or multi-period models (Cohen, Lobel, & Perakis, 2018). Whereas some of the earlier models treated the demand as completely known to the firm, contemporary – and more realistic – approaches consider uncertain demand situations (Besbes & Zeevi, 2015) and learning effects on the part of the seller (den Boer, 2015). As modern technology and in particular neuronal networks have evolved, more recent dynamic pricing policies can account for multiple scenarios adaptively adjusting to and predicting the behavior of competitors and consumers alike (Calvano et al., 2019; F. Xia et al., 2019).

Personalized Pricing

From a corporate perspective, personalized pricing aims at the same objective function as dynamic pricing policies – revenue maximization over the long run. Similar to dynamic pricing, the mathematical models typically build on Bayesian or game-theoretic approaches (Amaldoss & He, 2019). Central to constructing an effective personalized pricing model is the analysis of a customer's individual purchase history or recent behavior (Amaldoss & He, 2019). The policies are framed at learning from past and present

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and, in essence, give the ability to calculate to what extent any a prior given belief should be revised vis-à-vis new data (Rossi, Allenby, & McCulloch, 2012: Bayesian Statistics and Marketing). Thus, Bayesian models make a statement about what can be reasonably assumed about a hypothesis, in light of data.

customer behavior and at turning the acquired information into additional revenue (Amaldoss & He, 2019; Ettl et al., 2019).

Customer information is a valuable revenue source, as it can help firms to identify individual preferences and personalize the price (C. Choe et al., 2018; Cohen, 2018). Equipped with such detailed profiles, firms can, for instance, manipulate customers via personalized emotional pitches to increase their consumption and willingness to accept a certain price (Amaldoss & He, 2019; Townley, Morrison, & Yeung, 2017). Contrary to conventional wisdom, lower search costs for prices on the internet do not go along with reduced prices. Chen and Sudhir (Y. Chen & Sudhir, 2004) outline how personalized pricing can counter lower search costs such that average costs remain high. Firms can use this knowledge and charge high prices for loyal customers and low prices for the price sensitive segments (Y. Chen & Sudhir, 2004). A noteworthy moderator for the effectiveness of personalized pricing is the customers' permission to allow firms to collect data and send personalized offers, such as emails (Y. Chen & Sudhir, 2004). In the market for smartphone applications, the trade-off between low prices and more privacy is also becoming increasingly important, as apps are offered at low prices, when customers confirm with the collection of personal data (Kummer & Schulte, 2019). Overall, consumer welfare can increase, although, privacy-sensitive consumers may be left out of the market (Y. Chen & Sudhir, 2004; Kummer & Schulte, 2019).

1.2.8 Inventory Management

Pricing policies can also substantially vary based on the context they are used in. Inventory management is a critical business function for many firms, given that marginal improvements can lead to substantial savings (Tan, Paul, Deng, & Wei, 2017). In short, an inventory-based dynamic pricing policy needs to correspond with ordering and supply decisions, production control and safety stock to hedge potential demand uncertainty (S. Li, Zhang, & Tang, 2015). The limited life cycle of the products, fluctuating procurement costs, and demand uncertainty are some of the key issues in this regard (Xiao, Yang, & Zhang, 2015). Dynamic pricing is an instrument to manage and control inventory efficiently and to react to market demand at the same time (S. Li et al., 2015).

Traditionally, prices for an item can be increased, when the inventory decreases. Contrary, once a product is overstocked, price discounts (e.g., fire sales) can trigger a reduction in stock (Dilmé & Li, 2019). Appropriate inventory levels are critical when a firm wants to utilize the benefits of dynamic pricing as costs for holding inventory are usually substantial and the question, whether or not a product can be replenished, are important aspects to consider (M. Chen & Chen, 2015; Y.-S. Huang, Hsu, & Ho, 2014). Thus, firms are often faced with a tradeoff between overstocking and understocking applying markdown programs or low pricing strategies as a way to balance the two sides (Y.-S. Huang et al., 2014; Özer & Zheng, 2016; Y. Zhang, Mantin, & Wu, 2019). Overstocking, sometimes referred to as 'inventory waste,' creates costs for holding inventory and accounts for lost sales (Y.-S. Huang et al., 2014; Tan et al., 2017). In this regard, Liu and Van Ryzin (2008) analyze deliberate understocking, which creates rationing risk and is bound to incentivize buyers to purchase earlier and at higher prices. However, Adida and Özer (Adida & Özer, 2019) highlight that potential stockouts can risk consumer regret. Thus, frequency and depth discounting or the more uncommon everyday low pricing modalities are ways to handle over and understocking (Adida & Özer, 2019; Danziger, Hadar, & Morwitz, 2014).

Demand uncertainty and algorithms

An increasing amount of literature deals with uncertain demand situations (see, e.g., Besbes & Sauré, 2014). Moreover, strategic consumers might anticipate a pricing strategy and postpone a purchase, waiting for lower future prices (Zhou & Chao, 2014). Thus, firms are often faced with a tradeoff between generating revenues from current demand while accounting for unknown prospective demand (Besbes & Sauré, 2014). Adaptive dynamic pricing algorithms help firms to deal with this demand uncertainty. They can learn 'on the fly' and optimize pricing accordingly. Dynamic pricing algorithms can be designed in different ways, for example, by building on heuristic models (Bront, Méndez-Díaz, & Vulcano, 2009) or by taking 'hybrid' forms (Xiong, Li, & Fernandes, 2010), depending on the demand type, they are meant to decipher and predict. Some make direct use of emerging demand data or learn from historical sales pricing and inventory decisions and can also serve as a decision tool for risk-averse mangers (Cohen et al., 2018).

1.3 Mapping the Micro, Meso, and Macro Levels of Algorithmic Pricing

The relevance of algorithmic pricing to business and marketing ethics stems from its centrality to business in market economies. In terms of microeconomics, prices are said to have the function of steering firms to produce what customers are most willing to pay for, thereby prompting them to reduce scarcity in the very goods and services that people want dearest. At the same time, firms will use prices (and the scarcity of resources that they communicate) for monitoring their costs, which, in terms of macroeconomics, leads them to employ resources with thrift and ingenuity. As a result, unregulated prices are central to two conventional legitimations of market economies: They allow – or so the story goes – for individual economic freedom while at the same time assuring that this freedom, coupled with rational maximization behavior, leads to the overall most efficient use of societal resources. Given this pivotal economic role, any substantial change in the way how prices are set is bound to be of significance from a business and marketing ethics perspective; especially when decisions on pricing are automated via algorithms and do not require human input anymore (Angel & McCabe, 2018; Miklós-Thal & Tucker, 2019).

In the following analysis, we build on a social sciences approach rooted in evolutionary economics to outline the ethical challenges connected to algorithmic pricing for the micro, meso, and macro levels of society (Dopfer et al., 2004). The strength of this analytical framework lies in differentiating between individual (*micro level*) and aggregated population perspectives (*macro level*), whereby organizations and structures are represented by the intermediary trajectory (*meso level*) that connects and affects both the micro and macro levels. In our ethical assessment of algorithmic pricing that is to follow, we draw on major streams of ethical thinking, namely deontology, teleological and consequentialist ethics, social contract theory, and utilitarianism to mark and classify instances where algorithmic pricing would surely be approved (*moral goods*), or rejected (*moral bads*) by most ethical schools (for a similar approach in a different context see Dierksmeier & Seele, 2016). In a third category (*moral ambiguities*), we gather those instances where the ethical evaluation varies according to the moral perspective and does

not allow for an unequivocal ethical classification. Applying this categorization to the micro, macro, and meso levels, we can derive a heuristical matrix that provides a structured overview and permits for identifying critical research gaps and future challenges related to algorithmic pricing (*see Table 5*).

Table VI-5. Overview of ethical assessment on micro, meso, and macro levels. Topics discussed are highlighted in bold, topics omitted in italics.

	GOOD	BAD	AMBIVALENT
MICRO	• **Possible gain in consumer surplus** • **Psychological rewards from bargain hunting (price surprise, price emotion)** • *Enhanced personalized services*	• **Possible loss in consumer surplus*** • **Privacy loss*** • *Potentially higher prices for consumers* • **Decrease in price certainty and thus, low planning security and uncertainty for consumers** • *Lower price transparency* • *Increase in price complexity*	• **Surge pricing*** • *Focus on price only* • **Perceived fairness und control*** • *Eroding trust*
MESO	• **Relative increase in revenue and profit** • *Possible increase in profits (at fiscal level)* • *Utilization optimization* • **Fewer waste of resources**	• **Higher operational requirements (IT investment)** • *Erosion of price image* • *Loyalty challenged* • **Difficulty to plan on the corporate and civil society level**	• **Increase in competition? Race to the bottom (price war)** • *Short term Profit vs. long term customer relation* • *More difficult to defend premium prices for products which are socially and ecologically sustainable?*

			Trend toward segmentarization of prices? Eligibility of price/service elements?
MACRO	• **Reduction in global footprints through more efficient capacity utilization** • *Higher quality of life through increased access to goods and services* • **Higher profits (and taxes)**	• **Undermines human rights of non-discrimination (gender, age, health, status)** • *Increased externalities through market growth* • *Higher societal costs and stress though more intense competition in labor markets* • *Increase in price wars enforces shift from value to price in societal communication about goods and services*	• **Securing employment / potential job losses** • *Customization of products and services enhanced in tandem with increased dynamism of prices?*

*Elements marked with an asterisk are largely related to personalized pricing

1.3.1 The Micro Level[1]

Moral Goods: Consumer surplus

Public opinion suggests that corporations are profiting from algorithmic pricing at the expense of consumers. With this in mind, firms are often reluctant to introduce a dynamic or personalized pricing scheme. Chen and Gallego (2019) reveal that the consumer backlash or negative press is not necessarily substantiated given that not only firms but also consumers can benefit. The outcomes may range from lower market prices to positive consumer responses and an increase in consumer surplus (Faruqui & Palmer, 2011). Additionally, on a psychological level, dynamic or personalized pricing can hold rewards for those looking for a bargain (price surprise) and increased customer satisfaction, when the algorithmic pricing policy goes along with an increase in the quality of the product or enhanced personalized services (P. Choe & Wu, 2015; Rayna, Darlington, & Striukova, 2015). Given that potential consumer gains are threatened by personalized pricing policies that may increase corporate profits by capturing a larger share of the consumer surplus, the assessment as to whether dynamic pricing helps or hinders customer satisfaction needs to be made on a case-by-case basis. *Table 6* provides an overview of the ethical assessment on the micro level, highlighting a selection of key topics and articles.

[1] It is important to note that discussions on the ethicality of algorithmic pricing on the micro level are predicated on the general moral acceptance of the overlying levels. A rejection of the free market foundations and the value maximizing precept would render ethicality discussion on the micro level obsolete.

Table VI-6. Micro Level: ethical assessment with example articles

Ethical assessment	Topic	Author	Year	Title	Type of Algorithmic Pricing
Good	Consumer surplus	Chen and Gallego	(2019)	Welfare Analysis of Dynamic Pricing	Dynamic
Bad	Behavioral discrimination	Ezrachi and Stucke	(2016)	The Rise of Behavioural Discrimination.	Personalized
	Privacy loss	Helberger	(2013)	Freedom of Expression and the Dutch Cookie-Wall	Personalized
Ambivalent	Perceived fairness	Weisstein et al.	(2013)	Effects of price framing on consumers' perceptions of online dynamic pricing practices	Dynamic

Moral Bads: First-degree price discrimination

First-degree price discrimination or so-called perfect price discrimination increases the firms' benefits by skimming consumer surplus. In a data-driven economy, first-degree price discrimination evolved from a theoretical concept to real-world practice. To be successfully applied, it is necessary to estimate with sufficient accuracy the consumer's reservation price – the maximum price a person is willing to pay for a given unit – and to install an individual negotiation process between the consumer and the seller. In the past, high negotiation costs, as well as limited knowledge about consumers typically outweighed the potential benefits of first-degree price discrimination. New technologies help firms to get closer to that theoretical construct. At the same time, Ezrachi and Stucke (2016) warn about the increasing personalization and the rise of behavioral discrimination driven by algorithms. Self-learning algorithms build on consumer data so as to recognize

patterns which reveal the price-sensitivity or willpower, amongst other individual details (Ezrachi & Stucke, 2016). Thus, a consumer's reservation price can be predicted and iteratively refined through novel observations to increase the prediction accuracy and adjust future prices. In a recent example, the British Digital Minister Margot James condemned some airlines for the use of "exploitive" algorithms to identify passengers travelling together and splitting them up, if they do not pay additionally for being seated together (Coffey, 2018). Increasing consumer data on the corporate site thus goes along with decreasing anonymity of the individual. Online and offline tracking, profiling, and personalizing is becoming ubiquitous, leaving less and less room for consumers' privacy (Kummer & Schulte, 2019; D.-J. Lee, Ahn, & Bang, 2011). Since such intrusiveness is unwelcome to customers, many companies mask this feature of their sophisticated and opaque algorithmic pricing structures with lengthy privacy disclaimers. Further, the decrease in price certainty and the concomitant erosion of the price image lead to lower planning security on the micro, but also on the meso and macro levels of society.

Overall, the average consumer remains unaware that personal behavioral characteristics are logged and analyzed allow for prediction of, for example, income and health status, and give detailed insights into habits, preferences, and tastes. As a consequence, pricing algorithms can employ the firm's informational advantage and silently sort consumers into segments so as to offer individual prices based on factors that remain opaque to the individual.

Moral Ambiguities: Fairness and surge pricing

Is it fair to charge a different price for the same product? Price fairness rests in part on the consumers' assessment of a given price in relation to the price of a comparative party, such that a difference or lack therof is judged whether the price is justified, reasonable, and acceptable (L. Xia et al., 2004). What is perceived as fair in one context might be judged differently in another; and algorithmic pricing literature reveals that price framing tactics can mitigate the (un)fairness perception and thus the customer's level of trust towards a firm (Haws & Bearden, 2006; F. Lee & Monroe, 2008; Weisstein et al.,

2013). Particularly targeted coupons shown as form of discount are known to be an effective framing tactic, masking personalized pricing (Tanner, 2014). The ethical challenge lies in assessing the quality of such price framing tactics and in evaluating whether or to what extent they are used to mislead or manipulate the consumer.

Also resisting a clear-cut good or bad classification are surge prices. Surge prices are the algorithmic response to a rapid demand increase, representing the logic of equilibria building in a market. From a libertarian perspective, there is nothing wrong about this technology, as demand determines supply and customers are at liberty to reject the firms' offers. Uber's surge pricing during hostage and terror situations, highlights, however, that adverse externalities for individuals may arise (Cox, 2017; Decker & Saitto, 2014). Customers may come to rely on a certain service, only to then be faced with almost prohibitively expensive prices so as to end with the equally unattractive options of either foregoing an essential service or paying an exorbitant price. This phenomenon is also described as acquisition and transaction utility stemming from monetary value of the transaction object and particularly the psychological value of a deal (Thaler, 1985). Even if the eventual consumer decision will be voluntary (in a libertarian sense), many may no longer consider it free (in a more quotidian sense of the term). Given that the protection and enhancement of economic freedom, however, is key for the legitimation of market societies, this observation could herald the beginning of a broader debate as to whether the state could or should intervene in algorithmic markets in an ordoliberal sense in order to protect the autonomy of individuals and society at large? Ought not the "quantitative freedom" of certain forms of commerce at times be restricted in the interest of the "qualitative freedom" of all (Dierksmeier, 2016, 2018)?

1.3.2 The Meso Level

Moral Goods: Revenue and profit increase along with efficiency gains

The literature corroborates a high potential for revenue and profit increases on the firm level (Fisher et al., 2018; Waldfogel, 2015). In a perfectly competitive environment, these gains would be passed on to consumers eventually. But even where in real-life

contexts this effect is merely ephemeral, some of these benefits are still likely to extend beyond the firm by way of rising tax revenues for local and state governments. For that reason alone, algorithmic pricing policies are certainly more than merely a corporate revenue maximization tool.

Firms can also benefit from enhanced control over their service and product sales and gain from cost savings and reduced resource waste. Faruqui and Hledik (2009) show that electricity corporations can improve their economic efficiency and reduce peak capacities. Similarly, Huang et al. (2014) stress the potential for cost reduction related to inventory holding and possible waste reduction, which is a particular concern for perishable products that could end up as waste if not sold in time. Here again, wider pro-social effects can be appreciated.

Of course, enhancing price efficiency can be considered as an unmitigated good only if the ethicality of efficient market mechanisms as such is accepted as a premise rather than rejected, say, because of the inequalities of income distribution that often go along with such processes. For our purposes here, this debate is, however, tangential, insofar as it should suffice to say that given the acceptance of the premise of efficient markets as moral goods, any further advance in said efficiency should be valued positively. Table 7 provides an overview of the ethical assessment on the meso level, highlighting a selection of key topics and articles.

Table VI-7. Meso Level: ethical assessment with example articles

Ethical assessment	Topic	Author	Year	Title	Type of Algorithmic Pricing
Good	Revenue and profit increase	Fisher et al.	(2018)	Competition-Based Dynamic Pricing in Online Retailing: A Methodology Validated with Field Experiments	Dynamic
Bad	High operational requirements	Bergen et al.	(2003)	Shattering the Myth of Costless Price Changes: Emerging Perspectives on Dynamic Pricing	Dynamic
Ambivalent	Increased competition	Chen and Chen	(2015)	Recent developments in dynamic pricing research: Multiple products, competition, and limited demand information	Dynamic

Moral Bads: Switching costs and new operational costs

Potential revenue and profit gains, as well as the assumption that adaptation costs are low, make algorithmic pricing very appealing for many firms (Matsumura & Matsushima, 2015). Bergen et al. (2003) call this the 'myth of costless price changes,' which overlooks the necessity of an in-depth assessment of customers, the supply chain, and firm structures, before any new pricing policy can be rolled out. Within the organization, physical costs incur related to the installation and maintenance of IT infrastructure. The electricity sector is a suitable example in this regard, showing that investments in smart metering and IT systems can in fact be astronomic (Faruqui & Sergici, 2010). Moreover, managerial costs arise through information collection, decision making, and the communication of a new pricing policy (Bergen et al., 2003). Customers, suppliers, and the competitive environment need to be continuously analyzed and evaluated to uphold optimal outcomes for the firm. From a corporate perspective, these vast investments are detrimental whenever they do not lead to the desired outcome in the

long-run – and from a macro level perspective the selfsame result would appear as objectionable on account of the negative cost/benefit-ratio in terms of societal inputs and opportunity costs versus (insufficient) pro-social outcomes.

Moral Ambiguities: Competition and price wars

Opponents of algorithmic pricing warn against a potential race to the bottom or a 'price war,' in which firms compete for customers by automatically lowering prices to outperform their competitors, creating a vicious cycle of undercutting. Free market advocats, on the contrary, will argue that open competition and the widespread use of non-static pricing policies are beneficial to customers, given that the increased access to goods and services may lead to an overall higher quality of life (N. Chen & Gallego, 2019). The ambiguity here is both on the descriptive and on the normative front. It is unclear what really will be the long-term effects of a broad employment of algorithmic pricing (descriptively), and how to evaluate (normatively) these effects in light of varying ethical criteria. For example, if a higher degree of material comforts can be had for lower prices but, at the same time, only at the cost of increased insecurity and anxiety on part of customers, adherents of different moral schools of thought may well come to diverging assessments. Social contract theorists might end up welcoming such a development, for instance, whereas virtue ethicists would rather tend to deplore such a result. Utilitarians would ponder the commensurability (or lack thereof) of personal sentiments and interpersonal bargains, whereas deontologists might try to tease out which algorithmic pricing mechanisms, if any, meet suitable standards of universalization such that their employment could be endorsed by all those affected by them.

1.3.3 The Macro Level

Moral Goods: Reduction in global footprints

Firms' efficiency gains on the meso level can reduce carbon footprints benefitting societies at large. Studies by Faruqui and Sergici (2010, 2013) show that households respond to time-of-use pricing, lowering their demand during peak times when prices are dynamically raised. Thus, the problem of over and under consumption can be more

successfully managed, thereby lowering the need for additional infrastructures, such as combustion turbines (Faruqui & Palmer, 2011). When it comes to the reduction of food waste, the start-up Wasteless provides a dynamic pricing algorithm for supermarkets, which sets prices dynamically based on the product expiry date (Rochelle, 2019). The practical application of the algorithm by a Spanish retailer let to a food waste reduction of one-third, while increasing revenues by 6.3% (Rochelle, 2019). Additionally, Wolak (2016) outlines pathways for nonlinear pricing plans for water utilities that are linked to demand variations and demographic household characteristics, helping to achieve revenue along with water conservation goals to the benefit of society and the environment; an outcome that virtually all ethical schools would endorse. *Table 8* provides an overview of the ethical assessment on the macro level, highlighting a selection of key topics and articles.

Table VI-8. Macro Level: ethical assessment with example articles

Ethical assessment	Topic	Author	Year	Title	Type of Algorithmic Pricing
Good	Reduction in global footprints	Faruqui and Sergici	(2013)	Arcturus: International Evidence on Dynamic Pricing	Dynamic
Bad	Algorithmic discrimination	Huang K	(2010)	Equilibrium Market Segmentation for Targeted Pricing Based on Customer Characteristics	Personalized
		Bock	(2016)	Preserve personal freedom in networked societies	Personalized
Ambivalent	Employment	Chen and Sheldon	(2016)	Dynamic Pricing in a Labor Market: Surge Pricing and Flexible Work on the Uber Platform	Dynamic

Moral Bads: Algorithmic discrimination of specific groups

With the growth and availability of consumer data, firms can target consumer groups and individuals with increased precision. Based on the input data, modern pricing algorithms achieve high accuracy in market segmentation such that distinct customer groups are served with specific prices (M. Chen & Chen, 2015). This practice bears the risk of treating certain consumer groups less favorably. Algorithmic price segments directly or indirectly reflect customer demographics (M. Chen & Chen, 2015; Ettl et al., 2019; K. Huang, 2010). As a result, the generated price can particularly disfavor minorities

and disadvantaged groups. Algorithmic discrimination based on gender, ethnicity, level of education, wealth, or disability might not be readily apparent or purposefully coded, but the result of (biased) machine learning, arising even without bad intention on part of programmers or firms (Bock, 2016). As a consequence, Bock (2016) argues for strong anti-discrimination laws to counter such practices and to guarantee personal freedom in a digitalized market place. This is well in line with the standard schools of business ethics which all concur in denouncing such types of discrimination.

Moral Ambiguities: Employment opportunities and challenges

A fundamental question whether algorithmic pricing will find widespread social acceptance lies in its prospective consequences for the labor market. A common argument holds that the widespread application of algorithmic pricing will destroy jobs and lead to higher societal costs, such as stress, due to an increase in competition and intensity of the labor market. While these predictions might be accurate to a certain extent, future flexible labor markets – in particular, the sharing economy – could also benefit from algorithmic pricing and increased customization of products and services and the possibility of workers to switch to other tasks (M. K. Chen & Sheldon, 2016). More profound attention is thus necessary to study the way in which dynamic and personalized pricing might impinge upon the labor force and society at large. In other words, job losses in one place might be balanced out, or not, by the creation of new employment opportunities in another.

1.4 Conclusion

1.4.1 Pathways for Future Research

Only time can tell whether algorithmic pricing will live up to all that it is made out to be. What we can do at this point already, though, is balance the promised benefits against the foreseeable detractions of the technology. On the upside, we note cost savings and revenue gains on the micro, meso, and macro level as quantitatively more and qualitatively finer honed equilibria between supply and demand can be accomplished. Along with these better calibrated deals comes a decrease in waste of the resources and

time employed in producing, marketing, and storing wares. Not only customers and firms, but also society and environment, stand to benefit from this effect.

Yet, material gains in terms of efficiency and choice may well come at an immaterial cost. While the downsides of dynamic and personalized pricing cannot necessarily be as easily quantified as its upsides, it seems clear that the increased amount and specification of private choice brought along by algorithmic pricing changes the matrix of individual and institutional decision-making: stress, uncertainty, ambivalence, the feeling of having been duped or snubbed are sentiments that more often than not will go along with the novel technologies. As a result, enhancing the quantitative freedom of many may come at a loss of the qualitative freedom of all (Dierksmeier, 2018). Depending on which school of thought one embraces, this observation will lead to contrary evaluations.

Utilitarians and contractarians might be prone to give the new technology their blessings thanks to the greater efficiency and the larger realm of choice that it affords. Deontologists and virtue ethicists might beg to differ. Their focus on the intrinsic rather than instrumental nature of the inputs as well as the outputs of market transactions suggests a more complicated view. As to the inputs, deontologists would question whether economic freedom can be reduced to customer choice whereas virtue theorists would ponder how each particular choice contributes, or not, to the development of character. As to the outputs, deontologists cannot merely look to aggregate increases in efficiency and material well-being but must scrutinize the distribution of these effects from the perspective of person-specific justice. Similarly, virtue ethicists will examine the allocation of the prosperity gains with a view to their contribution to personal flourishing. From either perspective, the endorsement of algorithmic pricing may thus be much more cautious than from the aforementioned schools.

On a broader level, future research may need to reconnect to debates on justice and fairness in pricing (Elegido, 2009; Monsalve, 2014). If a fair price of a good or service is one equal to its value (Elegido, 2015), how can such value equivalence be discerned in the

age of algorithmic pricing? Moreover, the current market price might not always be fair. In light of surge pricing, as in the example of Uber and the terrorist attacks in London (Cox, 2017), future research may revisit literature on price gouging (Snyder, 2012; Zwolinski, 2008, 2009). Current pricing algorithms but also the organizations that are using them, appear to be unprepared when it comes to emergency situations or natural disasters that trigger sudden demand peaks. How do pricing algorithms account for the unforeseen and how can companies avoid potential public outcry?

Another field of engagement awaiting further discussion is the ambit of privacy. Through highly personalized information gathering and by way of the individualized nudges that such data sets allow for, algorithmic pricing can be quite an invasive technology. Schools of thought that pride themselves for defending private freedom from outward intrusion, such as libertarians and contractarians, should find this problematic. Deontologists might join them in this assessment, especially when the respective information is garnered stealthily or in a way that, for all practical purposes, customers cannot evade. Other camps of thought, notably those that have forever been skeptical of an all-too-schematic private/public-bifurcation, such as utilitarians and the virtue ethicists, might instead concentrate their assessment on the practical consequences of the employment of nudges based on personalized data. Thus, future research may follow-up on algorithmic memory and the right to be forgotten, which is also an important aspect to consider for algorithmic pricing (Esposito, 2017).

As these precursory remarks show, there is a great need for further ethical reflection on algorithmic pricing. At present, the entire realm of pertinent issues cannot yet be conscribed and so our brief list of normative controversies must necessarily be incomplete. What we do hope, though, is that having pointed out these controversial assessments, we have indirectly provided an additional argument for what we stated directly at the outset of this paper, i.e., that it is high time that business and marketing ethicists pay more attention to the realities and future potentialities of algorithmic pricing.

1.4.2 Practical Implications

As computer technologies rapidly evolve, so are pricing algorithms independently deciding over prices. Decisions made by pricing algorithms are often invisible, outpacing any human actor and carry intentional or unintentional consequences; thus, the notion of algorithmic accountability is becoming increasingly important for firms, managers, and the public (K. Martin, 2019b; Mittelstadt et al., 2016). Johnson (2015) highlights this issue, calling it the *responsibility gap* that may arise when an artificial agent, such as an algorithm takes on roles and makes decisions independently and without direct human control.

In cases where an algorithmic decision leads to markedly adverse outcome for consumers, questions about corporate responsibility are asked, and how to avoid such adverse effects in the future (Cox, 2017). Consequently, there have been calls for algorithmic transparency starting from the design process, which could lead to increased accountability (de Laat, 2018; K. Martin, 2019b; Zerilli, Knott, Maclaurin, & Gavaghan, 2018). In this regard, the call to publish all algorithms after a certain period – just as is already the case with patents – might come to mind (Helbing & Seele, 2018). Yet, such an approach would reveal potential algorithmic misconduct only years after its occurrence, if at all. Moreover, such approaches in relation to pricing algorithms run contrary to current market logics and firm policies, closely guarding the "secret recipes." Further practical issues may also arise in this regard. A programmer designing the algorithm, and the company selling it, might neither know the exact data the algorithm processes nor can they fully control the output (Esposito, 2017). Additionally, an algorithm responsible for some form of misconduct cannot be questioned like a human person; likewise, from a technical point of view, second-generation algorithms that build on reinforcement learning, can individually develop their code such that their developers might not even be able to decipher how the algorithm arrived at a certain decision (Calvano et al., 2019; F. Xia et al., 2019). Thus, the disclosure of the code of pricing algorithms might not be very helpful and from a consumer point of view very difficult to interpret. Not to mention, it will not give consumers insights in the way in which the algorithm is using (personal) data and how it arrived at given prices.

On the downside, an all-encompassing regulation or direct prohibition against adverse effects of pricing algorithms, might neither be feasible or miss the target in a society that has already become algorithm dependent (Bar-Gill, 2019; Zerilli et al., 2018). Thus, practitioners need to consider proactive approaches of giving consumers and authorities in supervising authorities the possibility to inspect algorithms and their use of personal data *in situ*, such that an impact based assessment becomes possible. Such algorithmic auditing might go along with an algorithm certification system as well as a certification of algorithm developers, taking codes of ethics into account (Béranger, 2018). In this regard, there might be a need for staffing algorithm development teams with representatives of society, and/or implementing an ethics board for oversight (K. Martin, 2019b, 2019a). To avoid negative press, consumer backslash or legal consequences, companies could also think of a proactive forms of algorithmic reporting (similar to CSR reporting), providing information that explains the types of algorithms they use and the kind of tasks they are supposed to perform. Particularly competition authorities will be increasingly interested in monitoring such information against the background of algorithmic price fixing and spontaneous or tacit collusion (Gal, 2019).

1.5 Appendix Electronic supplementary material to Chapter VI

Below is the link to the electronic supplementary material featuring the full set of reviewed articles. Supplementary material 1 (XLSX 73 kb).

Discussion and Conclusions

The digitalization represents a fundamental and challenging transformation that has started to reshape businesses, governments, and societies worldwide. This thesis set out to explore implications brought along by the new digital technologies against the background of CSR and business ethics. From a theoretical perspective, the thesis has thereby drawn on theories and concepts from business ethics, management, political science, surveillance studies, as well as digital and information ethics, with a particular focus on political approaches to CSR. Based on six chapters, the dissertation attempted to shed light on challenges and opportunities that the digital transformation brings along and to offer a contribution to the field of business ethics and CSR in general, and political CSR in particular. The six chapters of this dissertation, with their key findings, are summarized in the following.

1.1 Summary of the Chapters

1.1.1 Summary of Chapter I

Chapter I provided a discussion on the foundational background of CSR and corporations as political actors as outlined in the extended theoretical conception of corporate citizenship of Dirk Matten, Andrew Crane, and Jeremy Moon. The chapter thereby introduced the corporate citizen metaphor, given its theoretical roots in Marshall's as well as Carter and Stoke's foundations of democratic citizenship theory (Carter & Stokes, 2002; T. H. Marshall, 1950). Thus, a twofold perspective was adopted to discuss the corporation as a political actor: first in terms of corporations acting as quasi-governmental entities when taking over governmental tasks and responsibilities in providing citizenship rights. Second, when engaging in a political community as participants of political decision-making processes. These two perspectives were discussed in light of the issues that can arise when corporations take on such extended roles and responsibilities in society. Consequently, the chapter reflected on the core critique that has been raised in the literature concerning the corporate citizenship approach

of Matten, Crane, and Moon, delineating the main issues related to the scope of corporate engagement, voluntariness, selectivity, and legitimacy.

1.1.2 Summary of Chapter II

Chapter II reflected the concept of legitimacy as it is established in the extended business ethics literature. After a short discussion of the major streams of ethical thinking that have served previous research as an analytical basis for moral legitimacy issues, Habermasian discourse ethics was identified as a communication-driven approach of business legitimacy and a cornerstone of the political CSR framework: "corporate legitimacy as deliberation" (Palazzo & Scherer, 2006). Stressing the legitimacy struggles that modern corporations encounter, the chapter took the greenwashing and corporate political activity concepts to illustrate how greenwashing accusations and astroturf lobbying can undermine the credibility of a firm and, thus, lead to a corporate legitimacy crisis. Analogous to the previous examples, the chapter showed that legitimacy can be gained or regained through credible communication of CSR commitment (Wagner & Seele, 2017) as well as via deliberative lobbying as a credible and responsible form of corporate political activity that is in line with the corporation's CSR approach (Lock & Seele, 2016a). The chapter closed with a description of the limitations associated with the communication-driven approach of "corporate legitimacy as deliberation" and, thus, the framing of the political role of corporations in the idealized Habermasian political CSR approach. However, the outlook of the chapter also suggested that the digital transformations connected to ICT bring along new pathways for Habermasian political CSR in the digital age, and thus new possibilities for moral legitimacy creation through digital transparency, standardization, and accountability.

1.1.3 Summary of Chapter III

Chapter III engaged with the digital transformations brought along by sharing economy platforms, as this new digitally-enabled exchange platform reshapes institutional contexts and adopts new roles and responsibilities in society to gain legitimacy (Uzunca et al., 2018). Taking political CSR theory as a reference point, the chapter provided novel insights into the transformations that are connected to business conduct that explicitly

builds on ICT and big data. Thus, in focusing on SEPs institutional strategies with their digitally-driven corporate conduct, the chapter identified and discussed five key dimensions through which SEPs have potential to contribute to a sustainable economy and the society at large: 1) emergency situations (2) security and safety 3) transparency and reporting 4) data commons 5) common good and the welfare state. These findings reveal that existing institutional frameworks and the lines between SEPs, markets, and governments become increasingly blurry, with the consequence that information and power asymmetries, and thus, a legitimacy deficit arises (Rosenblat & Stark, 2016; Sundararajan, 2016). As political CSR represents an approach, which strives to go beyond a strict division of moral labor between the public and private sectors, the chapter suggested a democratization of SEPs based on Habermasian and Rawlsian political CSR notions to overcome the legitimacy void.

1.1.4 Summary of Chapter IV

Chapter IV described the advent and implications of the surveillance concept in the form of distributed ledger technology (DLT) and blockchain-based product identifiers, starting to reshape the Swiss luxury watch industry. Against the background of industry challenges and trends, the chapter built on an inductive approach to collecting and analyzing data. Through a survey and in-depth interviews with luxury watch industry professionals, experts' perceptions of recent transformations in the industry were explored. The findings reveal salient industry challenges (such as black-market sales and counterfeits) and four main themes that are distinctive for current industry transformations. These include (1) the rising importance of younger consumer generations, (2) demands for higher standards in terms of quality and ethical and sustainable product traits, (3) a personalization that goes beyond the (physical) product, and (4) digitalization along with innovation. Drawing on these findings, the chapter proposes the concept of networked surveillance as a form of digital transparency. Highlighting the Janus-faced nature of surveillance, the proposed conception of networked surveillance strives to bridge the frequently dichotomous perceptions of 'good' or 'bad' surveillance, underlining potential benefits for learning and control (Bernstein, 2017; Brady, 1985; Ganascia, 2011). Thus, the chapter strives to provide insights for an ethical-

informed luxury watch industry concerning the three realms of (1) black markets and counterfeits, (2) CSR standards and supply chains, (3) as well as personalization aspects that move beyond physical products, toward virtual luxury identities.

1.1.5 Summary of Chapter V

Chapter V generated new insights into political CSR theory and the shifting political impacts of corporations in the digital age, by concentrating on an illustrative case of a systemic environmental threat and the multi-stakeholder approach to addressing it. Against the background of the case, the theoretical reflections on digitalization and the related concepts of transparency, surveillance, and data-sharing demonstrated that the digital sphere opens new possibilities for corporations to engage in public deliberation when public goods are endangered. Hence, the chapter proposed a conceptualization of data-deliberation, highlighting that the political role of corporations located in contexts with functioning governments can go beyond (responsibly) seeking favorable regulatory outcomes or remaining inactive in light of a systemic challenge (Anastasiadis, 2014; Lock & Seele, 2016a). Consequently, the chapter indicated that corporations can become deliberators in a Habermasian sense (Jürgen Habermas, 1996; Scherer & Palazzo, 2011), when acting on the proposed conception of data-deliberation (Baru, 2018; Enderle, 2018; Gross & De Dreu, 2019; Scherer et al., 2016). Table 1 summarizes the key concepts presented in the chapter along with the political CSR approach.

Discussion and Conclusions Table 1. Overview of key concepts in relation to political CSR

Concept	Description	Potential responsibilities and impacts of corporations in the digital age
Transparency	The "extent to which a stakeholder perceives an organization provides learning opportunities about itself" (Parris et al., 2016, p. 233)	Corporate transparency as real-time CSR reporting offers new possibilities for corporations to act (politically), providing transparent insights into their business conduct.
Surveillance	The "focused, systematic and routine attention to personal	Blockchain (Distributed Ledger Technology) as networked supply

	details for the purposes of influence, management, protection or direction" (D. Lyon, 2007, p. 14).	chain surveillance allows a public, secure, and inclusive system for tracking materials and goods and their ownership over time and across national borders (Kewell et al., 2017).
Data Sharing and Digital Governance	Initiatives, such as translational data-science aim, at opening the "overflowing treasure chest of big data" in a responsible manner benefiting individuals, science, and society, while democratizing the data-science process, providing knowledge and informed discourse among stakeholders (Baru, 2018, p. 464).	Data collected by corporations, and shared with the public, can aid officials in their decision-making and governance processes. Thus, corporations can contribute to digital governance and data commons (Helbing & Pournaras, 2015).
Systemic Challenges	"[T]he most difficult problems are those such as climate change that spill over into many different societies and require people from societies that share few norms or political institutions to create new norms." (Boyd et al., 2018, p. 1237)	Public and private actors cooperating to avoid public bads ("negative public goods") as shared problems that manifest as epidemic diseases, air pollution, or economic scarcity (Enderle, 2018; Gross & De Dreu, 2019).
Data-deliberation	Data-deliberation as the: (1) voluntary disclosure of corporate data and its transparent, open sharing with the public sector (2) along with the cooperation with the public sector on data analytics methods for examining large-scale data sets (3) thereby complying with existing national and international regulation on data protection, in particular with respect to privacy and personal data (see, e.g., Custers et al., 2018).	Via data-deliberation, corporations may contribute to providing public goods, respectively, the avoidance of public bads in contexts with functioning governments (Enderle, 2018; Gross & De Dreu, 2019). Data-deliberation contributes to public discourse and governmental efforts to address better governance gaps, such as (systemic) societal challenges. Positive synergy effects of data-deliberation can manifest across national borders, given the possibility to store/share data on a public, secure blockchain (Kewell et al., 2017; Whelan, 2019b).

1.1.6 Summary of Chapter VI

Chapter VI. Algorithmic pricing promises significant benefits to corporations, and more and more companies are seduced by its call, implementing this practice to set prices for their products and services. To find out more about the ethical challenges involved, the algorithmic pricing territory was mapped, by gathering and reviewing 315 scientific articles about dynamic and personalized pricing, as well as pricing algorithms in general. As the pricing strategy touches on diverse scientific fields, the review covered work stretching across Marketing, Operations Research/Management Science, Economics, Law and Computer science, and not least Business and Marketing Ethics. Chapter VI mapped the algorithmic pricing territory, according to micro-, meso-, and macro-levels of society. In this way the chapter provided and an approximation of ethically relevant challenges as well as topics that deserve closer attention from future research (Dopfer et al., 2004).

Chapter VI found that algorithmic pricing holds great potential for companies and society. The pricing strategy can go along with an increase in revenue and profits, as well as cost savings and resource optimization. A noteworthy example in this regard are supermarkets, using algorithms to manage their inventory while setting prices dynamically, thereby accounting for aspects such as the product expiry. The application of this strategy successfully increased firm profits while reducing food waste (Rochelle, 2019). However, although legal, the deployment of algorithmic pricing comes with ethical pitfalls.

Companies that leave consumer perceptions aside risk their reputation and consumers' trust and the overall firm performance. The utilization of algorithms to set prices can create the impression that the company is profiting at the expense of consumers. This can be particularly challenging when consumers get the feeling that a company is misleading or manipulating them to accept a specific price. If consumers become aware that their personal characteristics are purposefully targeted, algorithmic pricing can backfire. As a result, consumers may refrain from future purchases but also backslash via negative press. The more complex a pricing approach gets, the harder it becomes informing customers and gaining as well as sustaining their confidence and trust.

Algorithmic pricing may be perceived as fair in a specific context and moment in time, but these perceptions may also change. Thus, the chapter provided a first approximation of the subject of ethical issues involved in algorithmic pricing, indicating issues that deserve closer attention from future research, as well as drawing practical implications concerning the debates on algorithmic accountability and algorithmic governance.

1.2 Discussion and theoretical implications

This thesis contributes to CSR and the broader field of business ethics by engaging in the digital transformations reshaping business and society relations. Although recent research in the field started to tackle implications brought along by ICT (Etter et al., 2019; Etzioni, 2018, 2019; Flyverbom et al., 2019; K. Martin, 2019c; Scherer et al., 2016; Whelan, 2019b, 2019a; Whelan et al., 2013), these efforts are still in a rather early stage given the rapid pace of technological advancements over the past decade. In light of this background, it is not surprising that current research still lacks conceptual depth in terms of the implications that digital technologies bring along for the roles and responsibilities of corporations. This dissertation, therefore, engages with the conceptual development of CSR theory by also drawing on theoretical insights from related fields (Floridi, 2013; see, e.g., D. Lyon, 2007).

As digital technologies, such as algorithms, are increasingly used by companies, these technologies are transforming the impacts that firms can have on stakeholders and the wider society. In the corporate quest for automation and efficiency gains, the introduction of such new technologies can often represent a substantial advantage over competitors (Lanzolla et al., 2018). Chapter VI demonstrates that pricing algorithms are a particularly noteworthy case in this regard, with companies often rushing for their introduction, although the full scope of potential impacts and related ethical challenges are usually not evident beforehand. Therefore, this thesis demonstrates that business ethics research, with its various conceptual lenses, provides the possibility to shed new light on a complex topic that carries high importance for business and society. Moreover, given the novelty of algorithmic pricing, and the limited literature body in the field of CSR and

business ethics, this thesis indicates that academia and business ethics practice are reacting with different speeds to the digital transformation. Thus, Chapter VI also stressed the need for future research that provides corporate decision-makers with deeper insights into the most challenging aspects related to pricing algorithms and their governance, where managers might need to weigh different societal expectations against internal corporate interests.

The findings obtained from Chapter IV demonstrated that the digital transformation in the form of blockchain technology is about to trigger a profound shift in the luxury watch industry, which may impact not only manufacturers but also firms along the supply chain as well as end customers in the years to come. Whereas blockchain technology is often exclusively associated with cryptocurrencies (Dierksmeier & Seele, 2016), this dissertation highlights its broader potential (Kewell et al., 2017). By taking up the concept of networked surveillance, Chapters IV and V demonstrate that the surveillance concept can thereby become a viable theoretical lens for future CSR and business ethics theory development. In contrast to previous research (Whelan, 2019b; Zuboff, 2019) that gives valuable insights into adversarial aspects of surveillance utilized in corporate contexts, this thesis provides evidence of beneficial outcomes of surveillance in corporate contexts. Here particularly about the central CSR research topic of responsibility in supply chains, where this dissertation points to future pathways for corporate reporting and transparency (Bernstein, 2017; Dierksmeier & Seele, 2019; Kewell et al., 2017; Millington, 2009; Seele, 2017).

Given that current CSR reporting is often critically perceived by stakeholders and the general public (Lubin & Esty, 2014), this thesis indicates that future approaches to corporate reporting that build on decentralized trust disintermediation systems, hold potential for corporate efficiency gains while providing comparable and transparent insights into corporate conduct, relevant for stakeholders (Kewell et al., 2017; Zyskind, Nathan, & Pentland, 2015). Further, the insights gained from Chapter III and V underline that digital technologies alter the political influence of corporations, changing the roles and responsibilities they can adopt. Thus, digitalization technologies enable new

possibilities for responsible corporate conduct, such as increased transparency, pro-social surveillance, and open data sharing, which can help to better tackle systemic challenges (Enderle, 2018; Gross & De Dreu, 2019).

Against the background of the findings summarized above, theoretical implications arise, particularly for political CSR theory and the conception of the corporation as a political actor. Political CSR has only recently started to explore and conceptualized the transformations brought along by the digital age (K. Martin et al., 2019; Scherer et al., 2016; Whelan, 2019a; Whelan et al., 2013), and remains still rather isolated from research on corporate political activity in this regard. Habermasian political CSR (Scherer & Palazzo, 2007, 2011) has mainly left aside that corporations are not 'depoliticized' in the first place but have long been key actors in the public policy sphere, utilizing CPAs to prompt favorable policy outcomes. This dissertation, therefore, contributes to recent research that underlines the political role of corporations in the digital age, yet cautious about the role of the corporation as a public deliberator (Whelan, 2019a).

Consequently, the conception of data-deliberation developed in this dissertation underlines the need for functioning governmental background institutions supporting CSR initiatives (Aßländer & Curbach, 2017; Mäkinen & Kasanen, 2015). This is particularly important, given that the main proponents of political CSR advocate a transfer of the idealized political role to real-world contexts of global governance (Baur & Palazzo, 2011; Mena & Palazzo, 2012) arguing that legitimacy as deliberation can establish the democratic accountability of corporations in global contexts (Palazzo & Scherer, 2006; Scherer & Palazzo, 2007, 2011; Scherer et al., 2016). However, the idealized Habermasian political CSR framework may not live up to the complexity of global governance, particularly in contexts that are characterized by vast power asymmetries between corporations and their stakeholders. Consequently, political CSR and related fields that are studying the political role of the corporation in the digital age can benefit from a down-to-earth conception of the corporate political role that recognizes the corporation as a value maximizer, putting away the quixotic Habermasian theory lenses, to open the research

agenda for a more pragmatic analysis of the social responsibilities of corporations embedded in increasingly digital societies.

1.3 Managerial Implications

The insights from this dissertation provide several implications for practice as firms are increasingly integrating digital technologies into their daily business conduct. Digital technologies may have differing relevance for diverse corporations and sectors (Kronblad, 2020). Hitherto, ICT is typically introduced to increase efficiency and to automate processes as well as in combination with novel business strategies (Lanzolla et al., 2018). In this regard, this dissertation can provide several insights for practitioners also beyond a specific context or corporate setting. For practitioners, CSR, and business ethics issues arising with the introduction and utilization of ICTs are highly relevant. Digital technologies such as blockchain may thereby have a profound impact on CSR practice given the vast opportunities to track resources and products throughout their life cycle, in a transparent manner. These benefits may even extend to other business units, as outlined in chapter IV.

However, practitioners also need to exercise caution, as shown in chapter III and VI. Business models and strategies which build on digital technologies may be legal, however, they can raise serious concerns and adversely affect customer and stakeholder trust. Thus, if not carefully designed and implemented, digital technologies can backfire on the firm. An excellent example in this regard are sharing economy platforms, which build on digital platforms and AI to efficiently link service providers and customers. If the the digital platform and AI are well implemented by the SEP, coordination, communication, and transaction costs related to their business can be kept to a minimum while increasing business efficiency and even opening avenues for contributing to the larges society, as shown in chapter III (Baldwin, 2012). However, an AI system implemented by a sharing economy platform can quickly become a surveillance or control instrument, raising concerns of users that provide their service on the platform (Kellogg, Valentine, & Christin, 2020).

Similarly, and related to the issue of algorithmic pricing, the sharing economy platform Uber knows that a dying battery increases customers' willingness to pay for a ride (Dakers, 2016). From a purely economic point of view, making use of this knowledge would be comprehensible. However, once consumers become aware that such personal characteristics are purposefully targeted, such a pricing strategy may be less efficient as it seems, given the harm it can cause to corporate reputation.

Consequently, on a more general level, once a corporation makes use of a particular digital technology, and this technology fails, leads to unforeseen outcomes, or creates outcomes that are perceived as unethical by stakeholders, adverse implications may follow for the firm. In this case, managers have to provide explanations about the business conduct and cannot pass the responsibility (K. Martin et al., 2019). This aspect will become even more important in the future, as autonomous systems take over more and more safety-critical tasks.

1.4 Implications for Public Policy

From a public policy perspective, the findings from this dissertation can provide beneficial insights. As discussed in the introduction, law can be seen as the codification of ethics (M. S. Schwartz & Carroll, 2003). Thus, CSR and business ethics issues related to digital technologies require close attention from policymakers when drafting future legislation. New digital technologies are becoming increasingly sophisticated as they rapidly develop. Thus, given the pace and complexity of their development, as well as the speed with which firms implement them in their daily operations requires sustained attention from policymakers. For public policy, the digital transformation represents a challenge as well as an opportunity, and requires careful navigation:

On the one hand, public policy needs to stay attentive to critical issues, such as in situations when corporations tap into legal grey zones or unregulated space to expand their new digital business models or introduce new ICT systems that may impact on the wider society. Particularly tricky in this regard are algorithmic systems that can lead to undesirable outcomes even without any human intervention, such as in the case of

collusive outcomes of pricing algorithms (Calvano et al., 2019). Antitrust authorities that have previously dealt with humans might increasingly face digital cartels of algorithms instead. Thus, the example shows that conventional policy tools may need to be revised in light of new technologies.

On the other hand, governments face digital technologies introduced and used by corporations not only as a governance challenge but as an opportunity. Digital capabilities of corporations can substantially benefit society, particularly when it comes to corporate data that can help to address societal and environmental issues (Baru, 2018). In this regard, policymakers may need to adjust policy tools to enable seamless cooperation with the private sector, as outlined in chapter V, and may expand support for CSR initiatives.

1.5 Limitations and Research Outlook

With the thesis consisting of six individual chapters, specific limitations and avenues for future research are outlined in the final sections of each chapter. More general limitations pathways for future inquiry are addressed in the following.

The primary focus of this thesis was set on the conceptual advancement of CSR theory in light of the digital transformation that is reshaping business, government, and society relations. As noted by Vu (2018), CSR is a concept that is relatively mature in many countries of the West, whereas in developing nations, it is often perceived as a form of luxury given resource and institutional constraints. Thus, a general limitation of this thesis can be seen in the narrow focus on the digital transformation and CSR as it is discussed in Western country contexts (Pisani et al., 2017). Chapter IV and Chapter V approached the CSR, particularly from a perspective of European contexts. It is, therefore important to expand this research also in terms of the geographical scope, which may provide new insights conceptually and empirically. Accordingly, future research could expand the work brought forth in this dissertation, and focus for example, on Eastern country contexts, where the CSR debate has recently gained new traction, such as in India (Gatti et al., 2019).

From a theoretical perspective, the dominant focus on Habermasian political CSR can also be seen as a limitation. Going beyond the Habermasian discourse ethical approach of 'legitimacy as deliberation,' future research could discuss a range of alternative theoretical and philosophical underpinnings of the corporate political role in regard to digital technologies. As indicated, in Chapter III, advancing a Rawlsian conception of political CSR might be highly relevant and further add to more pluralism in the debate (Mäkinen & Kourula, 2012; Whelan, 2012). Also, Utilitarian and Deontological theories can further enrich the ground for discussing the political roles and responsibilities of corporations, thereby providing new perspectives (see, e.g., Gao, 2008; Gustafson, 2013). Additionally, Joshua Greene's (2014) description of Moral Tribes builds the bridge between the aforementioned ethical approaches and modern neuroscientific knowledge in the form of a 'meta morality' that is based on dual-process theory and evolutionary psychology. Thus, by exploring such diverse theoretical and philosophical underpinnings, the management discussion of the multisided political role of the corporation in the digital age can gain new traction, particularly against the backdrop of diverse global operating contexts.

Additionally, in the light of recent global challenges related to the coronavirus pandemic (COVID-19), it will be interesting to expand on the findings of this dissertation given the pandemic challenges and how they may impact on corporate conduct in terms of political impacts and shifting roles and responsibilities of corporations. Against the background of recent layoffs of the sharing economy platforms Airbnb and Uber, a New York Times article asked, "Has Covid-19 Disrupted the Disrupter?" (Glusac, 2020; Pham, 2020). Thus, how sustainable ist he business model of sharing economy platforms and their related CSR approaches in times of crisis?

Moreover, the coronavirus pandemic showed that several corporations changed in light of the crisis to new pro-social business conduct, and set-up corporations and new forms of data-sharing. Noteworthy in this regard are examples, such as French luxury goods company LVMH producing hand sanitizer instead of luxury perfumes (Agenc France-Presse, 2020), Dyson famous for its vacuum cleaners making ventilators for

hospitals, and epidemiologists, universities and technology companies joining forces to track and trace the virus via phone data (Covid-19 Mobility, 2020). Thus, in light of these developments and against the background of this dissertation, new research avenues for CSR and business ethics open-up.

1.6 Final Remarks: Learning Experience

When I started the Ph.D. research, a friend described the doctoral studies to me as "strangely enjoyable and painful path." After following this path for almost four years, I can now better understand what he meant and have to admit that his honest description is quite fitting. The Ph.D. research is an incredibly enriching learning process from both a personal and professional perspective, which comes with many valuable experiences and new insights, but also has its peculiarities that one needs to get used to.

Shortly after starting my studies, I had the opportunity to present at an academic conference. This quick start into the academic cosmos was a delightful experience as I got the chance to listen to key scholars in the field that I had previously encountered only on the front page of an article. Thus, meeting them and listening to their presentations motivated me in my studies, but also showed me how much it takes to craft a scientific article and defend the ideas in front of a crowd of scholars.

One of the most peculiar aspects of academia one cannot learn from a book is the blind reviewing process. I guess as many Ph.D. students before me, I have struggled with harsh reviews and sometimes discouraging comments. However, my supervisor, and also co-authors that I had the chance to collaborate with helped me to adopt a much more pragmatic approach to reviewer comments, also when it comes to the art of responding to them. In this way, I learned to step back from taking reviews personally and instead started to deal with critique constructively. In this regard, changing the perspective and evaluating the work of other researchers also taught me the value of the knowledge creation process and the substantial efforts that flow into conferences and journals to uphold high standards.

Overall, it is incredibly enriching to study such a diverse field as business ethics and to focus, approach, and analyze a subject from multiple angles. The research process and my supervisor have thereby exposed me to countless different theories and diverse literature ranging from philosophy to computer science, surveillance studies, and law. Thus, a body of knowledge much more extensive than I could have imagined. In light of all the valuable experiences and insights I have gained over the years, I am very grateful that I had the opportunity to follow this strangely enjoyable path.

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