The Role of Ethics in Digital Transformation
The sources of ethical challenges in digital transformation and how firms cope with them

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Abstract
In recent years, more and more industries have gone through the process of digital transformation. However, extant literature has not explored if and how ethics plays a role during this transformation. Based on interviews with key informants from the publishing industry, complemented with firm documents and online records, this study contributes to the extant literature on the topic of digital transformation by adding an ethical viewpoint to the discussion. It finds that firms face five sources of ethical challenges during digital transformation: (1) new technologies, (2) customer data, (3) contact with customers, (4) competitive environment, and (5) changing employee functions. In addition, this study identifies four strategies used to cope with these sources of ethical challenges: (1) being guided by a mission or code, (2) talking about ethical issues, (3) training, and (4) transparency. Each mechanism is suitable for coping with different sources of ethical challenges. By implementing the appropriate strategy, firms can cope with the ethical challenges they are confronted with during the process of digital transformation. Practically, this study recommends that managers assess the sources of ethical challenges faced by their firm, and subsequently implement the appropriate coping mechanisms.

Keywords: digital transformation, ethics, ethical challenges
Introduction

In 2019, a number of large firms admitted to collecting or sharing user data without permission. For example, Google collected personal data from children using YouTube, in order to target them with personalized advertisements. In 2019, the firm therefore settled with the Federal Trade Commission and New York State for 170 million dollars (NRC, 2019a). Facebook also settled for five billion dollars with the Federal Trade Commission as a result of several privacy scandals, one of these being the Cambridge Analytica scandal (NRC, 2019b). Cambridge Analytica obtained access to private data of tens of millions of Facebook users and used this information to build voter profiles for political campaigns (The New York Times, 2018). Whereas these problems arose in digital firms, others already struggle with ethics in the process of becoming digital. For instance, Verizon Communications, in an attempt to collect more data, created a so-called supercookie to track its customers. Not only were customers not told about this; the firm also made the cookie particularly difficult to erase from web browsers. Only after the Federal Communications Commission found out in 2016 and fined Verizon 1.35 million dollars, the firm changed the supercookie to an opt-in approach (Medium, 2016).

These examples raise the question if and how firms take ethics into account when going through the process of digital transformation. Ethics can be defined as “the science of character of a person expressed as right or wrong conduct or action” (Debeljak & Krkac, 2008, p. 5). A more appropriate definition of ethics in the context of business is offered by Moon and Bonny (2001, p.1): “the idea that businesses should not only behave according to moral standards but also demonstrate a level of social responsibility and accountability to a range of stakeholders that stretches from employees and customers to suppliers and the wider community”. The latter definition will be used in this thesis, as this study specifically considers the role of ethics in a business context.

As illustrated by the examples above, ethics may be especially important in digital firms, and those going through the process of digital transformation. Such firms are characterized by the use of new technologies, that change how they do business (Aral, Dellarocas, & Godes, 2013). Specifically, digital technologies are altering capabilities, relationships, and business strategies (Bharadwaj, El Sawy, Pavlou, & Venkatraman, 2013). Accordingly, there has been an increasing academic interest in digital transformation, which can be defined as “a change in how a firm employs digital technologies, to develop a new digital business model that helps to create and appropriate more value for the firm” (Verhoef et al., in press). Much of the extant research is focused on strategies and success factors for digital transformation (e.g. Westerman, Calméjane, Bonnet, Ferraris, & McAfee, 2011; Hess, Matt, Benlian, & Wiesböck, 2016; Matt, Hess, & Benlian, 2015). A growing body of literature has also recognized drivers of digital transformation (e.g. Verhoef et al., in press) or the role of Chief Digital Officers (e.g. Tumbas, Berente, & Vom Brocke, 2018). Moreover, several authors have researched digital transformation in specific industries, such as healthcare (e.g. Agarwal, Gao, DesRoches, & Jha, 2010; Spiro, 2019) or the oil and gas
industry (Kohli & Johnson, 2011). Some have focused specifically on digital transformation in SMEs (e.g. Li, Su, Zhang, & Mao, 2018) or incumbents (e.g. Sebastian, et al., 2017; Svahn, Mathiassen, & Lindgren, 2017).

Although the process of digital transformation has been widely covered in the extant literature, there has been little investigation into ethical issues in digital transformation. Therefore, Vial (2019) calls for research on this subject, to understand if and how firms take ethics into account during digital transformation. This thesis answers that call by assessing the sources of ethical challenges that firms face during digital transformation, and how they cope with these sources. Therefore, this study fills the research gap pointed out by Vial (2019). Considering the role of ethics in the digital transformation process is important. During this process, firms are likely to face the need to find the right balance between achieving and sustaining performance, and ethics (Vial, 2019). This balance not only impacts the firm, but also society as a whole (Ganju, Pavlou, & Banker, 2016; Majchrzak, Markus, & Wareham, 2016). Moreover, the concept of ethics can aid in examining the understudied aspects of digital transformation (Vial, 2019). Therefore, this study aims to answer the following research question: ‘What are the sources of ethical challenges in digital transformation, and how do firms cope with them?’

Although prior literature has not clearly identified sources of ethical challenges, this study finds that publishers face five sources of ethical challenges during digital transformation: (1) new technologies, (2) customer data, (3) contact with customers, (4) competitive environment, and (5) changing employee functions. Moreover, extant research has not considered how firms cope with ethical challenges. Therefore, this study also identifies four strategies used by publishers to cope with the sources of ethical challenges: (1) being guided by a mission or code, (2) talking about ethical issues, (3) training, and (4) transparency. Some strategies are suitable for dealing with a broad range of sources of ethical challenges, whereas others only help to cope with a few. The appropriate strategy is determined by the specific sources of ethical challenges that a firm faces. Managers should therefore be aware of these particular sources of ethical challenges. They should assess which challenges they face and implement the relevant coping strategies accordingly.

The remainder of this thesis is structured as follows. First, the existing literature on the topic is reviewed. Then, the role of ethics in digital transformation is addressed by conducting in-depth interviews with individuals involved in digital transformation in the publishing industry, and by analyzing supplementary firm documents and online records. Thereafter, the findings and analysis of the results are presented. The discussion of the results follows, to answer the research question. The thesis is concluded by a presentation of the study’s limitations, the avenues for future research, and concluding remarks.

**Literature review**

In this section, a background is provided to two major streams of literature that are key to this research, namely digital transformation and ethics in business.
Digital Transformation
Verhoef et al. (in press) consider digital transformation as a process involving three stages. In the first stage, *digitization*, analog information is turned into digital information. Second, *digitalization* involves the implementation of new digital technologies that advance existing processes. These two stages lead up to a third and final stage, *digital transformation*, which occurs throughout the entire firm and results in new business models. The concept of digital transformation involving the three stages outlined by Verhoef et al. (in press) will be used in this thesis to define digital transformation. The use of new digital technologies is inherent to digital transformation (Matt et al., 2015; Hess et al., 2016). In fact, Hess et al. (2016, p. 123) call the integration and exploitation of these technologies “one of the biggest challenges that companies currently face,” as they affect every firm and every industry.

The literature has recognized the significant impact of new digital technologies. For example, such technologies allow tasks to be carried out across time and distance (Bharadwaj et al., 2013). Moreover, they contribute to the maintenance of social relationships with both consumers and the business network due to social media and social networks (Susarla, Oh, & Tan, 2012). By enhancing organizational agility (Vial, 2019), digital technologies allow firms to quickly adapt to turbulent and dynamic environments (Pavlou & El Sawy, 2010; Fitzgerald, 2016; Günther, Mehrizi, Huysman, & Feldberg, 2017; Hong & Lee, 2017; Huang, Henfridsson, Liu, & Newell, 2017; Kohli & Johnson, 2011). Furthermore, digital technologies change the firm’s business model (Sebastian et al., 2017), value propositions (Barrett, Davidson, Prabhu, & Vargo, 2015), and distribution and sales channels (Vial, 2019). In addition, new digital technologies can improve existing processes, decrease the level of slack resources (Du, Pan, & Huang, 2016), and provide information about new opportunities (Hansen & Sia, 2015). Moreover, they allow the connection of functions and activities (Iansiti & Lakhani, 2014), and enable employees throughout the organization to work on technology-intensive tasks (Yeow, Soh, & Hansen, 2018). However, digital technologies themselves do not offer much value (Kane, 2014). A firm should utilize them properly and in the right context, to find new ways of value creation (Markus & Robey, 1988). Iansiti and Lakhani (2014) propose that digital technologies will transform almost all industries and almost every organization. In fact, Bharadwaj et al. (2013) argue that the digital strategy will simply become the general business strategy; the distinction will disappear.

The existing literature can be categorized into five key changes to traditional business strategies. These changes reflect the dynamic nature of digital transformation. During this transformation, firms will experience (1) increasing speed in business processes, (2) a changing role of customer data, (3) new and extensive social relationships, (4) a changing role of leadership, and (5) more internal collaboration. In the following sections, these changes will be explored.

**The role of speed** The business environment is changing faster than ever (Vey, Fandel-Meyer, Zipp, & Schneider, 2017). Due to this highly dynamic world, traditional strategies need to be quickly accommodated (Hansen,
Kraemmergaard, & Mathiassen, 2011). Gale & Aarons (2018, p. 35) therefore stress that “change is an ever-present element of digital transformation”. As a result, digital transformation strategies require the firm to continuously evaluate and assess the progress made (Matt et al., 2015). Within this process, speed is key. The use of new technologies speeds up decision making, as information no longer has to pass through extensive hierarchies (Bharadwaj et al., 2013). Moreover, technology allows firms to decrease time to market and speed up supply chain orchestration, thus making product launches faster (Bharadwaj et al., 2013; Tabrizi, Lam, Girard, & Irvin, 2019; Earley, 2014). In addition, new technologies enhance efficiency (Tabrizi et al., 2019), increase the speed of processing information (Earley, 2014), and allow for faster data collection (Bélanger & Crossler, 2011).

Speed is not only important in the firm’s internal processes, but also a core aspect of the relationship between a firm and its customers. Customers expect fast service, and responding slowly may even push them away (Piccinini, Gregory, & Kolbe, 2015). The key to serving customers better than competitors is to implement new tools and strategies at a faster pace than others in the market (Earley, 2014). In digital transformation, firms have to exploit first-mover advantages (Friedrichsen & Kamalipour, 2017). Only then, a firm can create differentiated customer value (Earley, 2014). In sum, only if a firm adequately responds to the fast-changing environment, it can succeed in digital transformation (Bharadwaj et al., 2013). In fact, Gale and Aarons (2018) found that those firms that are successful in digital transformation, complete such transformation projects twice as fast as other firms.

Nevertheless, the increasing role of speed raises the question of whether speed can be considered a priority, even if it leads to sacrificing other important issues, such as a sense of ethics. For instance, Juntunen (2010) has studied how the need for speed among journalists may decrease the perceived importance of ethical behavior. Similar concerns are raised by Resnik and Tinkle (2007) in the context of developing nanomedicine. They argue that ethical considerations cannot always keep up with accelerating technologies.

The role of customer data New digital technologies have led to major changes in the way firms collect and make use of customer data (Iansiti & Lakhani, 2014). Customers are increasingly connected through social media, allowing firms to communicate and interact with them more often (Berman, 2012). Combined with the emergence of big data, this leads to huge amounts of data to be analyzed (Bharadwaj et al., 2013). To make full use of the collected data, several changes need to be implemented in organizations. For example, Bharadwaj et al. (2013) address the need for capabilities to deal with the large amount of data and knowledge that is produced continuously. Berman (2012, p. 16) also stresses that firms need to implement “powerful business analytics to make sense of the information and take full advantage of it.” To enforce these analytics, firms should implement new structures and processes, and change the way decisions are made (Dremel, Herterich, Wulf, Waizmann, & Brenner, 2017).
These required changes lead to various new business strategies. For example, organizations can become customer centric by basing their decision-making processes on insights from customer data (Berman, 2012). As a result of extensive data analytics, firms can personalize their products, services, and content (Bharadwaj et al., 2013; Berman, 2012). Newell and Marabelli (2015) discuss how algorithmic decision making can facilitate personalization. Algorithms identify patterns in the huge amount of customer data that is collected. As a result, the firm’s offerings can be fitted to each individual.

However, algorithmic decision making also poses ethical challenges. As it personalizes a firm’s offerings to individual customers, freedom of choice of these customers may be limited (Newell & Marabelli, 2014). Pariser (2012) also posits that personalization decreases the variety of news offered to readers, as it only provides articles that are familiar and confirm one’s views. This leads to so-called filter bubbles. Pariser (2012) finds that these negatively affect creativity and innovation. Moreover, algorithms make suggestions while ignoring any underlying reasons. Often, decision makers follow through on these suggestions without considering possible reasons for them (Mayer-Schonberger & Cukier, 2013). According to Boyd & Crawford (2012) however, big data is no longer meaningful when it is taken out of its original context. Therefore, the original reasons for decisions should always be taken into account. Moreover, few people may even know or understand what data is included in the suggestion posed by the algorithm. This data-driven decision making may increase customer discrimination, countering the principle of equal treatment (Newell & Marabelli, 2015). Not only algorithmic decision making, but also the collection of data itself may pose risks. Data of customer activity is not only tracked, but also stored. Because of this, others may be able to use the information for another purpose than was initially planned. Moreover, customers may not even be aware that their information is being tracked (Newell & Marabelli, 2015). Therefore, firms may face the ethical challenge of how much customer data they can collect and use.

In other words, digital transformation revolutionizes the collection and analysis of customer data. To take advantage of this, firms need to change their structure and decision-making process. As a result, they will be able to personalize their offerings through, for example, algorithmic decision making. However, this also poses risks to, for instance, equal treatment of customers and freedom of choice. Moreover, the tracking and storing of data in general may pose the threat that the data will be used for other purposes than intended. This raises the question of how firms can analyze and utilize the increasing amount of customer knowledge without crossing any ethical boundaries. As argued by DeGeorge (2000), such considerations of privacy are shaped by ethical views of the firm and its management.

The role of social relationships Digital transformation is changing the nature of social relationships, both with customers and within the business network (Bharadwaj et al., 2013; Susarla et al., 2012; Orlikowski, 1992; Pagani & Pardo, 2017; Ash & Burn, 2003; Chatterjee, Grewal, & Sambamurthy, 2002). Berman (2012) describes how driving customer and
Community collaboration is a key capability of digital transformation. To create value for customers, the firm should interact with them across all business processes and activities. This often involves digital technologies such as social media or online communities (Berman, 2012). These technologies can be a tool to reach customers and to create a dialogue with them (Hansen & Sia, 2015).

Moreover, coordination with other firms through alliances and partnerships is becoming more and more important (Iansiti & Lakhani, 2014; Bharadwaj et al., 2013). As strategy becomes more digitalized, firms often expand by sharing assets with partners, crossing traditional boundaries (Bharadwaj et al., 2013). This is the case because digital assets are so complex that a single firm cannot provide a complete service to customers. To find the right partners to cooperate with, an increasingly important capability is partnership management (Pagani & Pardo, 2017; Dyer & Singh, 1998; Pigneur, 2002). In addition, new competitors arise as a result of digital transformation (Bharadwaj et al., 2013). As firms shift from their individual industries to a more digital environment, they face new competition from other firms making this shift from other industries (Seo, 2017).

In other words, to succeed in digital transformation, organizations should “design, structure, and manage networks that provide complementary capabilities to what firms have inside their own hierarchies” (Bharadwaj et al., 2013, p. 477). However, this poses several ethical issues. For instance, the large volume of interactions with customers may lead to dilemmas regarding data collection and use. In addition, firms may share customer data with partners, as explained by Thompson (2018) and Trivinos (2019). Moreover, the issue of new competitors raises the question of what actions a firm can ethically take to limit the effect of such emerging competition.

**The role of leadership** Firms coping with digital transformation can only succeed with the right leadership (Gale & Aarons, 2018). The changes that digital technologies bring about require adequate management practices (Matt et al., 2015). However, the role of leadership is changing compared to traditional business strategies (Gale & Aarons, 2018), leading to the creation of new leadership roles (Haffke, Kalgovas & Benlian, 2016; Horlacher, Klarner, & Hess, 2016).

In particular, the position of Chief Digital Officer (CDO) is currently emerging (Haffke et al., 2016; Rickards, Smaje, & Sohoni, 2015). The CDO is responsible for leading and organizing a firm’s digital transformation (Singh & Hess, 2017; Horlacher et al., 2016). Therefore, the main difference between the CDO and Chief Information Officer (CIO) role is the fact that digital transformation is the core of the CDO’s position, not one of many responsibilities (Singh & Hess, 2017). In other words, CDOs “are establishing themselves as new executives at the top management level of firms that go through a digital transformation” (Singh & Hess, 2017, p. 1). According to Vial (2019), the formation of a CDO role gives a clear signal of the importance of digital transformation to the entire firm. In general, the CDO is responsible for the creation, communication, and implementation of the digital business strategy across functions (Haffke et al., 2016; Horlacher & Hess, 2016). The CDO, therefore, seeks to
transform and mobilize the entire organization, not individual departments (Singh & Hess, 2017).

This involves many different tasks, all centered around digital transformation. The first task is to draft the business transformation strategy (Horlacher & Hess, 2016). During this process, the CDO should involve all stakeholders that the transformation process affects (Matt et al., 2015). Furthermore, the CDO should enhance cooperation between IT and business functions (Vial, 2019), meaning that the digital technologies implemented should be aligned with the firm’s goals (Horlacher et al., 2016; Singh & Hess, 2017). During the implementation of the transformation strategy, the CDO is responsible for countering resistance (Horlacher & Hess, 2016). In addition, the CDO seeks to implement a culture of change and innovation throughout the organization (Kane, Palmer, Phillips, Kiron, & Buckley, 2015; Haffke et al., 2016). This involves the realization of a digital mindset in all employees of the organization. Moreover, employees should be trained to cope with the unavoidable disruptions that are experienced as a result of utilizing new digital technologies (Benlian & Haffke, 2016; Hansen et al., 2011).

Creating a CDO position, however, is not sufficient to succeed in digital transformation. It is of utmost importance that top management is involved and supportive of the transformation (Gale & Aarons, 2018; Matt et al., 2015). In fact, one of the key challenges faced by CDOs is a lack of top management commitment (Horlacher et al., 2016). Only when top management fully supports the transformation process, resistance from within the firm can be countered successfully (Matt et al., 2015). Moreover, top management should understand the digital transformation process and be convinced of its benefits (Beige & Abdi, 2015; Chong, Bian, & Zhang, 2016; Johnson, 2010; Li et al., 2018). Furthermore, top management should provide the CDO with sufficient authority to bring about digital transformation (Horlacher et al., 2016; Singh & Hess, 2017). Some authors, however, have recognized that the CDO function may be a temporary role (Singh & Hess, 2017; Vial, 2019). According to Vial (2019), this implies that digital transformation may come to an end state at some point as well.

Leadership and ethics are closely connected. In fact, Kakabadse, Korac-Kakabadse and Kouzmin (2003) find that ethical practices within firms rely on the quality of leadership. Similarly, several other authors also find that leadership is a key aspect of the ethical culture within a firm (Ardichvili, Mitchell, & Jondle, 2009; Treviño, 1990; Brown & Treviño, 2006). An example of this strong link between leadership and ethics is provided by Castille and Fultz (2018), who explain how a court attributed an “intent to deceive, manipulate, or defraud” (Castille & Fultz, 2018, p. 95) to several Volkswagen CEOs after the recent emissions scandal. Moreover, Singh and Hess (2017) argue that one of the tasks of a CDO may be to implement new technologies in a way that is in line with the firm’s culture.

Internal collaboration Digital business strategy involves the alignment, or even fusion, of different functional strategies (Bharadwaj et al., 2013). Digital transformation, therefore, is transfunctional by nature as it connects, aligns and combines
all different functions and departments within the firm (Bharadwaj et al., 2013; Matt et al., 2015; Verhoef et al., in press; Hess et al., 2016; Amit & Zott, 2001). As a result, employees outside the IT department are also able to take on projects involving technology (Yeow et al., 2018).

As digital transformation stretches across functions and involves cross-functional collaboration, significant changes are required in any firm engaging in digital transformation. In particular, this concerns the integration of new digital technologies to the firm’s structure (Matt et al., 2015). In fact, the main reason for failure in digital transformation is the addition of new digital activities without connecting new additions to existing capabilities or functions (Gale & Aarons, 2018). Moreover, the transfunctional nature of digital business strategy requires extensive information exchanges and collaboration between functions (Bharadwaj et al., 2013; Earley, 2014; Maedche, 2016), for example between the IT and business divisions (Dremel et al., 2017). This can be facilitated by digital platforms, both internal and external to the firm (Bharadwaj et al., 2013). Moreover, Dremel et al. (2017) propose the establishment of competence networks and centers that reach across disciplines to facilitate collaboration.

As such, firms should create new, or change existing, structures, strategies and decision-making processes (Burgelman & Grove, 2007; Verhoef et al., in press; Dremel et al., 2017; Matt et al., 2015; Cui & Pan, 2015; Zeng, Chen, & Huang, 2008). These changes should facilitate cross-functional collaboration and consider that the digital business strategy affects the entire firm (Amit & Zott, 2001; Bharadwaj et al., 2013; Earley, 2014; Maedche, 2016).

The increasing level of collaboration between different departments poses several ethical challenges. For instance, Zahay-Blatz (2013) recommends firms increase the shareability of their data, to enable the diffusion of customer data throughout the firm. Similar recommendations are made by Fabijan, Olsson Holmström and Bosch (2016). However, one could ask whether it is ethically responsible to simplify the sharing of information, both within the own firm as well as with other firms.

**Ethics in Business**

Ethics can be described as “the obedience to the unenforceable” (Moon & Bonny, 2001, p. 2). This implies that there are no fixed standards to determine what is right or wrong. In fact, right and wrong vary among circumstances. Ethics, therefore, is a fuzzy concept (Moon & Bonny, 2001) and different definitions have been proposed in the literature. In general, ethics goes beyond conforming to standards set by laws or firm rules. It involves “keeping promises and commitments and abiding by general principles like fairness, truth, honesty and respect” (Moon & Bonny, 2001, p. 2). A somewhat more specific definition of ethics in the business context is proposed by Schwartz (2017, p. xviii): “business ethics can generally be understood as addressing business practices and behavior in terms of moral right and wrong.” He adds that in practice, ethics is therefore concerned with assessing how stakeholders are affected by business activities. This definition is somewhat similar to that offered by Moon and Bonny (2001,
who describe ethics in business as “the idea that businesses should not only behave according to moral standards but also demonstrate a level of social responsibility and accountability to a range of stakeholders that stretches from employees and customers to suppliers and the wider community”.

Ethics in business has been widely researched. For instance, Arnold and Bowie (2003) argue that multinational corporations are responsible for how their suppliers and subcontractors treat their employees, whereas Friedman (1970) famously argued how a firm’s single responsibility is to enhance profits, as long as no legal boundaries are crossed. Moreover, Ferrell, Harrison, Ferrell and Hair (2019) find that consumers’ attitudes towards brands are strongly shaped by the firm’s approach towards ethics. Others have focused on ethics in family firms (Vazquez, 2018), ethical issues relating to bribery (Weber & Getz, 2004) and lobbying (Brooke Hamilton & Hoch, 1997), or ethics in leadership (Brown & Treviño, 2006; De Cremer, Van Dijk, & Folmer, 2009).

However, ethics may not be as simple as it might sound. Over three decades ago, Carr (1986) assessed whether bluffing in business can be considered ethical or not. Similar to Friedman (1970), he concluded that, in order to succeed, bluffing is considered acceptable or ethical in business situations, as long as no legal boundaries are crossed. In line with Carr’s (1986) research, De Cremer and De Bettignies (2013) observe two ways in which ethics is treated in business. First, firms and their employees seem to believe that, as long as the law is not broken, pushing ethical boundaries is acceptable. Second, they observe how firms do not take responsibility, because ethics is hard to define, or “about grey zones” (De Cremer & De Bettignies, 2013, p. 65). The authors propose that, to counter this type of behavior, controls are only a short-term solution, Rather, awareness of one’s morality is key for the long term (De Cremer & De Bettignies, 2013). This is supported by Smith (2002), who asserts that even though rules can be imposed on employees, individuals decide on their own norms and standards.

Prior research has discussed several ways in which firms attempt to diffuse ethical values among their employees as a way to induce ethical behavior. These strategies serve as a starting point for the investigation of mechanisms firms use to cope with the sources of ethical challenges. Moreover, the extant literature has considered what type of firm decisions are ethical decisions and has outlined several emerging ethical challenges faced by firms. Understanding the major challenges firms encounter is important in identifying the key sources of ethical challenges. The diffusion of ethical values, ethical decision making, and new ethical challenges faced by firms will be discussed in the remainder of this section.

**Ethical values** Ethical behavior cannot easily be enforced (Moon & Bonny, 2001; De Cremer & De Bettignies, 2013; Smith, 2002). Adherence to principles such as honesty and fairness, therefore, cannot be effectively regulated by rules, regulations, and compliance. Because of this, firms should diffuse certain ethical values throughout the entire firm and all of its members. This requires a vision, a reason for existence, that is shared by all employees. Moreover,
employees should share the same beliefs on what qualifies as acceptable or unacceptable behavior. Another way to spread ethical values throughout the firm is the implementation of an ethics program. However, simply enforcing such a program does not suffice. Similar to how top management support is crucial for succeeding in digital transformation, a firm's management also plays a vital role in the effectiveness of ethics programs. For example, employees should perceive management as committed to the program and to the issue of ethics itself. Furthermore, executives should 'walk the talk': their words should be followed by adequate actions. To succeed, the ethics program itself should be fair and enable employees to talk openly about ethical issues. Finally, ethical behavior should be incentivized and employees should be rewarded when engaging in such behavior. Examples of such ethics programs include codes of conduct, ethics training, and individuals or business units with specific responsibility for ethics (Moon & Bonny, 2001; Moriarty, 2008).

Firms introduce these programs for three main reasons. First, they may seek to protect or boost their reputation. Second, firms want to comply with corporate governance guidelines. Third, firms implement ethics programs as a response to an increased focus on values. If an organization is seen as ethical, this positively affects its value. Moreover, employees working for firms considered ethical are happier. Another benefit of the implementation of ethical values is the fact that it reduces the risk of breaking the law or damaging the firm’s reputation (Moon & Bonny, 2001). In addition, when a sense of ethics is installed throughout a firm, it can serve as a guide for behavior in specific situations and thus help to decrease uncertainty (Paliwal, 2006).

**Ethical decision making** A decision involves ethics when two requirements are satisfied. First, the decision must affect others. Second, the decision-maker should be in the situation to make a choice (Velasquez & Rostankowski, 1985; Jones, 1991; Schwartz, 2017). However, it can be argued that any decision affects other individuals one way or another. Therefore, Paliwal (2006) posits that all strategic decisions involve ethics. Individuals in a firm are continuously confronted with ethical issues and must take such decisions every day (Schwartz, 2017). A decision is considered ethical when it “is both legal and morally acceptable to a larger community” (Jones, 1991, p. 367). Following the same logic, a decision is unethical when it “is either illegal or morally unacceptable to the larger community” (Jones, 1991, p. 367). As summarized by Schwartz (2017, p. xviii), the main aim of ethics is to “avoid unnecessary harm”.

We can differentiate between ethical issues and ethical dilemmas. Whereas an ethical issue involves a decision to determine what action is morally right, an ethical dilemma is somewhat more complicated. In such a dilemma, each alternative will cause some to benefit, and others to be harmed. The task of the decision maker in this situation is, therefore, to determine which action is most right or, alternatively, least wrong (Schwartz, 2017). Depending on the nature of the ethical issue or dilemma presented, different decisions are taken. Specifically, Jones (1991) identifies six characteristics of the issue at hand that determine behavior. First, the
magnitude of consequences concerns the benefits or damages caused to those involved. Second, social consensus determines whether society as a whole believes something is right or wrong. Furthermore, probability of effect involves both the likelihood of the issue taking place and the likelihood of the issue causing benefits or damages. Fourth, temporal immediacy considers the amount of time between the present time and the results of the decision. Then, proximity determines how close the decision-maker perceives him- or herself to those who are affected by the decision. Finally, the concentration of effect concerns how many people will be affected by the decision. The aggregate of these six factors is called moral intensity, and determines the decision taken in response to a certain ethical issue or dilemma (Jones, 1991).

New ethical challenges In recent years, new ethical challenges in business have emerged as a result of digital business models, new activities, and the use of technology (Nunan & Di Domenico, 2013; Palmer, 2010; Berawi, 2018). For example, the increase in the collection of data by firms raises the question of how this information is gathered. More and more data, for instance, are collected passively through cellphones and facial recognition. As a result, people can no longer control what information is collected about them. Moreover, organizations may collect information without a specific purpose. This data could be put to currently undefined uses in the future. As outlined by Nunan and Di Domenico (2013), one of these uses could be the selling of data to make a profit. An additional challenge is the fact that the digital environment is becoming a crucial part of individuals’ lives. Even though people can ensure that no data about them is collected, this may lead to social exclusion in this environment (Nunan & Di Domenico, 2013).

Even when a firm seeks to behave ethically, it can be challenging to engage employees. After all, imposing controls on individuals is only beneficial in the short run. To truly spread ethical behavior among employees, they should be aware of their individual morality (De Cremer & De Bettignies, 2013). In other words, firms not only face the challenge of how to behave ethically in the light of their new business models; they are also confronted with the question of how to diffuse ethical values throughout the firm. Therefore, Quinlan (2017) asserts that an ethical transformation is underway: more and more firms are prioritizing ethics.

The role of ethics, however, has not yet been studied in the context of digital transformation. Nevertheless, the increased use of digital technologies and the shift towards digital business models poses several ethical challenges. The increasing role of speed may negatively affect the perceived performance of ethical behavior when speed is prioritized over other issues. Moreover, algorithmic decision making and personalization of offers may threaten the equal treatment of customers, and their freedom of choice or creativity. Furthermore, data collection and storage enabled by new technologies may pose the threat that customer data is used for other purposes than initially intended. This problem may be further exacerbated when firms share customer data throughout the firm or with partners. This research assesses the sources of such ethical challenges in digital transformation.
Moreover, this study examines how firms cope with these challenges.

**Methodology**

**Research Design**

The sources of ethical challenges faced by firms in digital transformation, and their coping mechanisms, have not yet been addressed in research. Therefore, an exploratory qualitative study is appropriate (Maxwell, 2008). Interviews are the most suitable means of collecting data in qualitative studies (Creswell, 2007). Therefore, this research uses interviews as the primary way of data collection, which is in line with other management studies (e.g. Gilbert, 2006; Shepherd, Patzelt, Williams, & Warnecke, 2014). Specifically, semi-structured interviews were used, because such interviews allow for eliciting conversation and additional information, and simultaneously enable the researcher to narrow down the focus area of the interview (Rabionet, 2011). The interviews centered around the topics of digital transformation and ethics. Interviewees were asked questions about, among other things, the general challenges in digital transformation, the personalization of products and services, the collection of customer data, and ethical challenges faced by the firm. The full interview guide can be found in Appendix A. The interview data was supplemented by firm documents and online records to achieve triangulation, which will be discussed in the next section.

The research is set in the publishing industry. This industry is in the middle of its digital transformation (Karimi & Walter, 2015). For example, new technologies are shifting how content is spread and accessed, leading publishers to offer new online services and build new business models. According to Friedrichsen and Kamalipour (2017), these new business models are likely to engage consumers more and more. Therefore, the authors argue, the importance of long-term relationships between firms and customers is increasing. In addition, technology allows media firms to collect a great amount of data on user behavior, as users access content from many different devices. This allows for personalization of advertisements and recommendations (Friedrichsen & Kamalipour, 2017), but also involves ethical concerns (Nunan & Di Domenico, 2013). Publishers also face fundamental issues, as their revenue sources, such as subscriptions and physical sales, are diminishing. In order to survive, innovative digital business models have to be created (Murschetz & Friedrichsen, 2017). For example, Murschetz and Friedrichsen (2017) propose that diversifying into online video may be a way of compensating for the loss of printed newspaper sales. Hence, the publishing industry provides a relevant context for gaining a detailed understanding of the issue at hand.

**Data Collection**

This research mainly makes use of primary data that was collected through semi-structured interviews. These interviews allowed for gaining detailed insights into the role of ethics in digital transformation (Creswell, 2007). Twelve interviews were conducted with thirteen individuals. Before conducting those twelve interviews, an exploratory interview was conducted with an individual active in publishing to gain a greater understanding of the industry. The interview
The interview data was collected in January and February 2020. The interviews were conducted face-to-face, or through video calling when face-to-face interviews were not possible. The interviews were conducted in the interviewee’s native language as this allows them to express themselves most clearly. Interviews typically took between 30 and 60 minutes. To increase the credibility of this research, all interviews were recorded and transcribed. Moreover, notes were taken during the interviews. The combination of recording, transcribing, and note taking, rather than using just one approach, allows for better data management (Tessier, 2012). Furthermore, interviewees were asked to sign an informed consent form stating the purpose of the interview and their agreement to being recorded. The consent form can be found in Appendix B. Table 1 shows the interviewee’s function, the size of the publisher they work at, and the duration of the interview. Interviewees were given a hypothetical name to ensure their anonymity.

Specific attention was paid to ensuring reliability and validity in this research. As defined by Maruster and Gijsenberg (2013), reliability in qualitative research refers to the ability of other researchers to replicate the study, leading to the same results. In qualitative research, reliability is usually ensured through two approaches. First, the research process should be transparent and well explained (Maruster & Gijsenberg, 2013). This transparency was achieved by providing an interview guide, as can be found in Appendix A, and by providing elaborate and detailed descriptions of the research process. Second, the interpretation of the data should be checked among researchers (Maruster & Gijsenberg, 2013). This was achieved by regular discussions of the findings with another researcher. Validity in qualitative research refers to whether the tools and processes used are appropriate to the study (Leung, 2015). In qualitative research, validity can be achieved by ensuring saturation (Fusch & Ness, 2015) and triangulation (Carter, Bryant-Lukosius, DiCenso, Blythe, & Neville, 2014). This research satisfies both the criteria of saturation and triangulation, as will be discussed next.

Several criteria can be used to assess whether a qualitative study has reached saturation. For
instance, O’Reilly and Parker (2012) propose that there should be sufficient information to enable other researchers to replicate the research. In other words, the study should be transparent in how data was collected. This research enables replication through the use of an interview guide and the extensive description of the data collection process. According to Guest, Bunce and Johnson (2006), data saturation in qualitative research is reached when additional interviews result in relatively little new codes and themes. In this study, only 1.25 percent of the codes appeared for the first time in the last interview. In other words, 98.75 percent of the codes resulted from the first eleven interviews. This indicates that additional interviews contribute relatively little to the themes, in line with the conclusions drawn by Guest et al. (2006). Finally, triangulation directly results in data saturation, as it allows for the inclusion of various perspectives and methods, and leads to richer data (Fusch & Ness, 2015). By supplementing the interview data with firm documents and online records, this study therefore reaches saturation.

The interview data were supplemented by firm documents and online records to achieve triangulation. Triangulation involves using multiple sources of information to establish a complete understanding of the issue studied (Patton, 1999). Therefore, method triangulation (Carter et al., 2014) was achieved by considering publishers’ websites, missions, codes, privacy statements, enriching the data retrieved from the interviews. All publishers have a website. The mission of the firm of seven interviewees is explicitly published on their website. Four more imply having a mission in the text on their website, but do not explicitly call it a mission. All of these implicit and explicit missions have been analyzed. One of the publishers has published their codebook on their website, with others either not having one or sharing it internally only. All publishers have a privacy statement on their website. These documents have all been collected and analyzed as well.

<table>
<thead>
<tr>
<th>Interviewee 1</th>
<th>Function</th>
<th>Publisher size</th>
<th>Interview duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interviewee 1</td>
<td>Director</td>
<td>&lt;50 employees</td>
<td>1:08:21</td>
</tr>
<tr>
<td>Interviewee 2</td>
<td>Manager Content Marketing</td>
<td>100-300 employees</td>
<td>35:10</td>
</tr>
<tr>
<td>Interviewee 3</td>
<td>Head of Digital</td>
<td>300-500 employees</td>
<td>44:45</td>
</tr>
<tr>
<td>Interviewee 4</td>
<td>Head of News Data</td>
<td>&gt;5000 employees</td>
<td>39:26</td>
</tr>
<tr>
<td>Interviewee 5</td>
<td>ICT Manager</td>
<td>51-100 employees</td>
<td>37:44</td>
</tr>
<tr>
<td>Interviewee 6</td>
<td>Head of Content</td>
<td>100-300 employees</td>
<td>1:00:31</td>
</tr>
<tr>
<td>Interviewee 7</td>
<td>Director</td>
<td>&lt;50 employees</td>
<td>28:21</td>
</tr>
<tr>
<td>Interviewee 8</td>
<td>Project manager customer data &amp; insights</td>
<td>100-300 employees</td>
<td>44:18</td>
</tr>
<tr>
<td>Interviewee 9</td>
<td>Team leader data &amp; insights</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interviewee 10</td>
<td>Marketing, sales &amp; digitalization</td>
<td>&lt;50 employees</td>
<td>59:23</td>
</tr>
<tr>
<td>Interviewee 11</td>
<td>Digital Director</td>
<td>&gt;5,000 employees</td>
<td>35:24</td>
</tr>
<tr>
<td>Interviewee 12</td>
<td>CMO</td>
<td>100-300 employees</td>
<td>36:44</td>
</tr>
<tr>
<td>Interviewee 13</td>
<td>Marketing Director</td>
<td>501-1000 employees</td>
<td>43:08</td>
</tr>
</tbody>
</table>

Table 1: interviewee characteristics
Data Analysis

After conducting the interviews, each interview was transcribed. This resulted in 94,841 words of interview data. In line with Creswell (2007), data analysis followed Strauss’s (1987) theoretical coding approach, where the interview transcripts lay the foundation for the development of codes and themes. The coding process included constant data comparison to enhance reliability (Leung, 2015). Theoretical coding consists of three main steps (Strauss, 1987). First, during open coding, themes were derived from the interview transcripts. Segments that were deemed relevant to the research questions were coded during this first step. This led to a total of 399 open codes. For example, the phrase “Only those people who need to access it [data] can access it” (interviewee 10) was labeled no unnecessary access to data. Second, during axial coding, these themes were linked to each other to form categories. In other words, open codes that could be grouped were combined into axial codes. For instance, open codes data analysts can access data and no

<table>
<thead>
<tr>
<th>Number of open codes</th>
<th>Axial code</th>
<th>Selective code: source of ethical challenges</th>
<th>Coping mechanisms</th>
</tr>
</thead>
<tbody>
<tr>
<td>41</td>
<td>Technology</td>
<td>New technologies</td>
<td>Mission and code</td>
</tr>
<tr>
<td>12</td>
<td>Recommender systems</td>
<td></td>
<td>Talking</td>
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<tr>
<td>19</td>
<td>Use of algorithms</td>
<td></td>
<td>Transparency</td>
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<tr>
<td>12</td>
<td>Personalization</td>
<td></td>
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<tr>
<td>5</td>
<td>Use of AI</td>
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<tr>
<td>58</td>
<td>Data collection</td>
<td>Customer data</td>
<td>Mission and code</td>
</tr>
<tr>
<td>38</td>
<td>Data access</td>
<td></td>
<td>Talking</td>
</tr>
<tr>
<td>28</td>
<td>Data insights</td>
<td></td>
<td>Training</td>
</tr>
<tr>
<td>16</td>
<td>Partnerships</td>
<td></td>
<td>Transparency</td>
</tr>
<tr>
<td>5</td>
<td>Customer contact</td>
<td>Contact with customers</td>
<td>Mission and code</td>
</tr>
<tr>
<td>6</td>
<td>Differentiation</td>
<td></td>
<td>Talking</td>
</tr>
<tr>
<td>8</td>
<td>Advertising</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Speed</td>
<td>Competitive environment</td>
<td>Mission and code</td>
</tr>
<tr>
<td>7</td>
<td>Fake news</td>
<td></td>
<td>Talking</td>
</tr>
<tr>
<td>33</td>
<td>Spreading ethical values</td>
<td></td>
<td>Changing employee functions</td>
</tr>
<tr>
<td>16</td>
<td>Ways of working</td>
<td></td>
<td>Training</td>
</tr>
<tr>
<td>62</td>
<td>Business model</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Transparency</td>
<td></td>
<td></td>
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<tr>
<td>14</td>
<td>Responsibility</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>People</td>
<td></td>
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</tbody>
</table>

*Table 2: analysis*
Findings
This study aims to identify the key sources of ethical challenges during digital transformation, and firms’ strategies of coping with these challenges. Five sources of ethical challenges and four coping strategies were identified, which are presented below. All firms considered in this research conduct their business in the publishing industry and are currently in the process of digital transformation as defined by Verhoef et al. (in press). Digital transformation in the publishing industry manifests itself in the shift from a focus on printed content to a focus on digital content. This results in the addition of new technologies. Whereas firms in the industry are used to creating and distributing printed magazines, newspapers, and books, they are now adding apps, websites, and podcasts to their portfolio. Most publishers agree that printed and digital content will coexist. In fact, they are seen as complements. Digital content offers speed, ease of access, and fast updates, whereas printed content provides a certain experience:

“Digital is volatile. And easy. And timeless. And print is time on the sofa, time for yourself. Cup of tea.” (Interviewee 7)

Even though printed and digital content complement each other, all interviewees agree that the focus is shifting towards digital. Process developments, new products, and new technologies are usually aimed at digital content, and many publishers seek to increase revenues from digital subscriptions. The increasing digitalization leads to changing business models, where digital content is key. However, this digital transformation leads to several ethical challenges. Five sources of such ethical challenges were identified, along which the interviewees characterized the ethical challenges they face: (1) new technologies, (2) customer data, (3) contact with customers, (4) competitive environment, and (5) changing employee functions.

Many interviewees acknowledged to be struggling with these challenges. Nevertheless, publishers have implemented mechanisms to cope with them. Most publishers have used the past years to not only define their digital strategy and create a new business model, but also to define mechanisms that help them to cope with ethical challenges. Specifically, four approaches can be identified that publishers use to cope with ethical challenges: (1) being guided by a mission or code, (2) talking about ethical issues, (3) training, and (4) transparency.

The sources of ethical challenges faced by publishers, and the mechanisms they have implemented to cope with these challenges, will be presented in the next sections. The summarized sources and their related ethical challenges, and the mechanisms used to cope with them, can be found in table 3.

The Sources of Ethical Challenges During Digital Transformation
New technologies To facilitate the shift in focus from printed content to digital content, publishers have to adopt new technologies. These technologies may range from the use of apps and websites for distributing digital content to the implementation of artificial intelligence to provide personalized content for customers. Some of these new technologies form the source of ethical challenges. Specifically, new technologies are
the source of two key ethical challenges. First, as new tools can be put to use in several ways, firms have to find the right purpose for each new technology. Second, publishers face the challenge of whether recommender systems influence customers’ creativity or freedom of choice.

(1) For each new technology, publishers must find the right use. They have familiarized themselves with several digital technologies, such as apps and websites. The use of these is – for most publishers – rather straightforward. However, for each new technology that emerges, firms face the challenge of finding the right purpose. This is seen as an ethical challenge by interviewees, as technologies can serve different purposes, some of which are seen as unethical. According to several employees, an example of such an unethical use of technologies is the use of algorithms to push people into filter bubbles. One interviewee clearly summarized this ethical challenge by comparing new technologies to knives. Both are tools, and both can serve different purposes. Firms are responsible for finding the right purpose for each new tool. In other words, publishers should carefully consider the use of new technologies to ensure they are put to use ethically:

“In the end, you decide what you use it [the knife] for. Do you make a sandwich, or do you stab someone? [...] In fact, every technology is a new tool. What will you use it for?” (Interviewee 6)

(2) For publishers, the key new technology that is resulting in ethical challenges is the use of algorithms. Five of the interviewees stated to make use of algorithms at the moment, and three more named algorithms as a technology they seek to adopt in the future. A main use of algorithms for publishers is the personalization of content through the use of recommender systems. In practice, this means that a customer is offered content based on what they have read before:

“We call this the recommender; more and more personalization based on your reading behavior.” (Interviewee 13)

However, publishers recognize that such recommender systems may have their limitations. A key ethical challenge caused by this new technology is the limitation of freedom of choice or creativity resulting from personalized content. Interviewees express the concern that people are only served content that is similar to their individual beliefs and values. This may result in the continuous support of their own ideas, as they are exposed to a limited variety of content:

“Our main concern is that the danger exists that we start pushing people into a bubble, and keep them there.” (Interviewee 6)

Nevertheless, it must be noted that not all interviewees agree with this viewpoint. One interviewee argued that the limitations in freedom of choice offer ease and help to customers. In addition, some argue that filter bubbles resulting from extensive personalization are not a significant threat:

“Those algorithmic filter bubbles exist, they have some impact, but that is only small, especially when compared to the self-selection that people impose on themselves.” (Interviewee 4)
In sum, new technologies are the source of two key ethical challenges for publishers. First, firms must consider how to use these emerging technologies. Currently, algorithms pose the most challenges for publishers. This leads to the second ethical challenge. Publishers must assess whether recommender systems shape customers’ freedom of choice and creativity.

**Customer data** Digital transformation has enabled firms to collect and utilize more customer data than ever. Moreover, changing business models require firms to collect new or different types of data. The use of data, however, is the source of three types of ethical challenges: (1) those related to data collection, (2) those related to data access, and (3) those related to data insights. First, the ethical challenges regarding data collection involve the question of how much data to collect and the question of how to collect this data. Second, the ethical challenges related to data access regard the level of access individuals and departments get to customer data. Third, the challenges regarding data insights involve the level of data analysis, approaching customers based on data insights, and decision making based on these insights. The challenges are clearly summarized by one of the interviewees:

“We are collecting more and more data on individuals. That is an ethical issue. Because what type of data do we want to store? Or know? Or use? Apart from what is allowed.” (Interviewee 6)

(1) The first type of challenge regarding customer data involves the collection of this information. Specifically, this involves two ethical challenges. First, firms have to decide how much customer data to collect. Second, they have to determine how to collect this information. Publishers make different decisions regarding the volume of customer data that is collected. Some base their decision on the principle “as little as possible” (interviewee 3). Many interviewees, therefore, claim to only gather necessary information:

“In fact, we only collect the information we need.” (Interviewee 1)

Any information needed to deliver the firm’s services is seen as necessary data. For instance, publishers need a customer’s name and home address to send printed content. To access digital content, customers usually have to submit an email address. Moreover, publishers need customers’ financial data to collect payments, both for printed and digital content. However, this highlights the first ethical challenge relating to data collection: the question of how much customer data to collect. Several publishers argue that more information is needed to deliver their services. Besides delivering content, they also view the improvement of their offers as part of their service. This means that data on, for instance, reading behavior, is also collected:

“Of course, we collect address, […] phone number, email address, password, before they [customers] get digital access. And behind the scenes, of course, we monitor what people read, how much people read, the intensity of use. To draw conclusions about those who may terminate.” (Interviewee 13)

The following interviewee clearly illustrates this first challenge regarding data collection.
Whereas it may be legal to collect more data than strictly necessary, firms need to assess whether they believe it to be ethical to do so:

“Do we go as far as the law allows us to? Or do we say, at an earlier point: ‘no, this is not necessary, so we will not do it’?” (Interviewee 9)

This viewpoint is supported by the mission of this interviewee’s firm published on its website, which emphasizes responsibility. A second challenge regarding the collection of customer data is the method used to collect this information. Interviewees described several ways to collect customer data. For instance, firms can simply ask customers to provide their information, they can provide a form to fill in when customers subscribe to their product or service, they can organize a contest, or they can track customers online. However, some means to gather data are viewed to be more ethical than others. Simply asking customers for their information is considered to be the most ethical method:

“There are several ways to get there, of course. But I think the most straightforward way is to just ask the customer: what do you want? And I believe that to be the fairest way because it is so straightforward.” (Interviewee 6)

This viewpoint is corroborated by the information required when subscribing to a product on the firm’s website. For an online subscription, all information one needs to fill in is a name and email address. Nevertheless, simply asking customers for their information is not the only strategy used by firms to collect customer data. For instance, forms filled in by customers when subscribing to a product or service may contain both required and nonrequired fields. The required fields may ask for information such as name and address. Nonrequired fields may ask for data that is not strictly necessary to deliver the service, such as one’s date of birth. Even though these fields are not required to be filled in, customers tend to fill in all fields anyway:

“If we would add a field ‘fill in your address here’, I think nine out of ten people would do it. Even though it is not a required field, but people do it anyway. I think that is an ethical dilemma. Of course, you ask for the information explicitly, people know they fill it in themselves. It is not a required field. But you put people in a position in which you cannot know for sure that everyone will make an informed decision.” (Interviewee 6)

Another way of data collection viewed as debatable by interviewees is the online tracking of customers. Tracking allows firms to see, for instance, what webpages were visited by customers and what articles those webpages contained. Customers have to give explicit permission to be tracked. Nevertheless, several interviewees agree that tracking is not an ethical way to collect customer data. Their main argument is that even though customers have given their permission, they are often annoyed by online tracking:

“I am [...] not a big fan of tracking, because it bothers me. And I think a part of our target audience would also be very annoyed by it.” (Interviewee 10)

A final way to gather customer data is by organizing a contest or a giveaway. For
instance, one of the interviewees gave the example of a contest for children. Children could enter the contest to win a prize. Their parents were asked to send their home address, so participating children could receive their prize. A similar strategy is the organization of a giveaway. When customers would like to enter this giveaway, they are required to provide their address to be able to receive the prize. This information can then be stored and kept by the firm:

“If we want to know more, we can. For instance, imagine you want to know a home address. There are ways to get that. You can organize a giveaway, where people can win a book about their town or city. They have to fill out their home address, otherwise they cannot receive it. According to privacy laws, we can ask that, because it is functional. [...] And we can store it. That is a way to collect more data.” (Interviewee 6)

In general, most interviewees argue that only those who need to use the data have access to the database:

“All those people who need to access it [data] can access it.” (Interviewee 10)

However, publishers seem to have various definitions of necessary access. This poses the ethical challenge of how to decide what individuals and departments should access data. On the one hand, several interviewees argue that only one department, such as the data analysts, can access customer data. On the other hand, several interviewees state that multiple departments can access customer data. For instance, sales, marketing, IT, and customer service are often mentioned. However, this does not mean that all of these departments can see all data. In fact, many publishers allow different departments to access different types of data:

“Editors cannot access customer data. Just like customer service cannot access editorial systems [...]. The advertisement department deals with business, so they only need to access business relationships, not customer data. Customer service needs access to a lot of standard data because you can call them. If you say your zip code, address, or phone number, they can check to see if you have had complaints, etc. But they do not need access to the newsletter. Marketing can access most data.” (Interviewee 5)

Besides individuals and departments from within the organization, partnering firms may also seek to access customer data. Publishers partner with a wide variety of firms, from competitors in the industry to discuss best
practices, to technological partners that build and maintain websites and apps. Therefore, firms face the ethical challenge of having to decide on the extent of access partner firms get to customer data and firm content. Several interviewees stated that partners get access to certain types of customer data. According to the interviewees, such access is always guarded by strict agreements:

“If we engage in partnerships with other parties, with other firms, who also collect our customers’ data, we create a processing agreement in which we agree that they have to take good care of the data, and cannot spread it, that kind of issues.” (Interviewee 2)

This statement is supported by the website of this interviewee’s firm, where the conditions for data access by partners are highlighted. Some other publishers are even stricter. They claim that data always remains within the company, and others only share the results of data analyses. Nevertheless, several interviewees acknowledge that partners often desire to access at least some data. This means that publishers face the ethical challenge of deciding which individuals, departments, and partners need most access to customer data. Even though some may benefit from accessing this information, it may not be strictly necessary.

(3) The final ethical challenge resulting from customer data concerns the use of such information. Here, three issues play a key role: the level of analysis, approaching customers based on insights, and decision making based on data insights.

The first ethical challenge relating to data insights is the level of analysis. Most interviewees agree that data analysis should not consider individual customers. Rather data analysis usually considers customer segments. Customers are combined in larger segments, consisting of thousands, or sometimes even millions, of people. This way, publishers can draw conclusions based on customer behavior while ensuring customer privacy. However, some interviewees acknowledge that data analysis may be able to generate insights on individual customers:

“At some point, one could infer from someone’s behavior, or at least make an estimation, to which church someone belongs.” (Interviewee 8)

If such individual insights can be generated, interviewees struggle with the appropriate behavior. This leads to the second ethical challenge relating to data insights: whether customers can be approached on the results from data analysis. It may be interesting to approach a customer with a new or revised offer based on insights from data analysis. However, interviewees view this as an ethical challenge. On the one hand, approaching a customer with a better offer may improve the fit between the customer and offer, and thereby enhance customer satisfaction. On the other hand, however, this may jeopardize an individual’s privacy. This challenge is clearly illustrated by the following interviewee:

“To what extent can we approach people because they have read a certain article, and we assume that they are interested in this topic? [...] And can we confront them with what we have seen?” (Interviewee 2)
The third challenge concerning data insights is decision making based on such insights. Most interviewees state that decisions are based on data analysis. For instance, when many online customers read about a certain topic, a publisher may look into the development of a newsletter on that topic. Alternatively, when a certain category does not attract many readers, a publisher may decide to change the layout or style of writing for this particular category. However, interviewees have different views on whether the reasons behind the outcome of data analyses should be considered before basing decisions on them. On the one hand, some interviewees state to consider such underlying reasons. They argue that considering the reasons that shaped the outcome of the data analysis play a crucial role in improving their products or services: “If it does not score, why doesn’t it? And what can we do about it?” (Interviewee 6)

On the other hand, some argue that underlying reasons do not have to be considered. They believe that data insights, for instance, based on algorithms, enable easy decision making. Rather than looking for the underlying reasons and trying to understand them, firms should simply base their decision on the outcomes of data analysis, they argue:

“The algorithm is there because we cannot understand what happened. We only know that the answer is usually correct.” (Interviewee 12)

In sum, in relation to data insights, publishers face the ethical challenge of whether to generate insights on individual customers, and whether these customers can be approached. An additional challenge is whether the reasons behind the outcomes of data analyses should be considered before basing decisions on them.

Contact with customers Publishers are more and more in touch with their customers. In addition, publishers are using an increasing number of platforms to facilitate this contact. Email, websites, apps, online communities, and social media platforms are just a few of the many possibilities. However, the increasing levels of customer contact are the source of two ethical challenges: the automation of customer contact and the volume of customer contact.

(1) Several interviewees discuss the automation of customer contact as an ethical challenge. On the one hand, automation of such contact can be beneficial as it may reduce waiting times for customers and the cost of labor for firms. On the other hand, however, it may negatively affect the relationship between the firm and the customer, as human contact is largely eliminated. This poses an ethical dilemma for publishers, as some see automated customer contact as impersonal, which is viewed negatively. The following interviewee clearly illustrates the dilemma between the digitalization of customer contact and the importance of humans in contact with customers:

“We still love human contact. [...] We do have an ASR. An automated response system. For example, if your newspaper was not delivered, you only have to say your zip code and street number. So, that is the only automated part. [...] If we go a little deeper, it is human contact right away [...] . One of our core values is to be
there for the customer experience, customer feelings. It is very important to keep doing that with humans.” (Interviewee 3)

This publisher’s website indeed demonstrates this balance between automation and personal contact. The website clearly states that customers can get in touch by filling in a form on the website, but also via telephone, email, or WhatsApp.

(2) A second ethical challenge relating to customers is to determine the volume of customer contact. It becomes easier for customers to reach out to publishers, and publishers have access to simpler ways to reach customers. Therefore, publishers may be tempted to use all of these different platforms to connect with their customers. They may use social media such as Facebook, Twitter or LinkedIn to post content, send newsletters using tools such as MailChimp, and send push notifications from apps or websites. However, this poses the ethical challenge of how much customer contact is ethical. Whereas a firm may benefit from sending a large volume of messages to customers, this may not be in the best interest of these customers. According to the following interviewee, publishers must be careful not to overwhelm customers:

“[We want] to make sure we do not bombard them with mailings they do not want to receive.” (Interviewee 7)

In sum, the increasing levels of customer contact lead to two ethical challenges. Not only are firms facing the challenge of whether to automate customer contact; they should also make sure to prevent overwhelming their customers, despite the availability of easy contact.

Competitive environment Speed is a key characteristic of the competitive environment surrounding publishers in digital transformation. In fact, several interviewees state that speed is one of the main changes resulting from digital transformation:

“The biggest change? I always say that is only one, actually: speed.” (Interviewee 3)

This interviewee’s firm’s mission, published on its website, also emphasizes the volatility of today’s environment. In this fast-paced environment, competitors are quickly emerging. This is the source of two ethical challenges. First, it poses the question of whether publishers can bring themselves to the fore at the expense of competitors. Second, some competitors publish fake news, leading to the ethical challenge of how to deal with such fake news.

(1) Digital transformation has allowed large technological firms to distribute content and strongly compete with more traditional publishers. Platforms such as Facebook and Google serve as a way to easily share content, thereby jeopardizing the business model of publishers. Not only do they allow the distribution of content; they also excel in personalizing content for individual users. This results in strong competition between publishers and such technological platforms:

“Our competitors are completely different types of firms, such as Google. Google News, or Apple News, whatever, they do not simply offer
news: they offer news for you. So, personalized news.” (Interviewee 4)

“The competition is changing. Whereas [another newspaper] was our main competitor before, Facebook is our main competitor now.” (Interviewee 11)

These large technology firms are not the only new competitors in the industry. Due to digital transformation, anyone can publish their own content via social media platforms or websites. This leads to the emergence of many small competitors, such as bloggers distributing their own content, or small news websites maintained by individuals:

“Especially the technology that simplifies the publishing of articles may be a threat. [...] The fact that it is so simple to create a news website, and maintain it for a very low price. New competitors rise and emerge that we did not have in the past. [...] The same technology that allows us to reach digital customers, creates its own competitors.” (Interviewee 8)

The main ethical challenge that arises in regards to new competitors, is whether a firm can promote itself at the expense of another firm. On the one hand, publishers wish to share that they are most capable of producing valuable content. On the other hand, however, some interviewees express that this poses an ethical challenge. They doubt whether they can put themselves to the fore, at the expense of other firms:

“In the Netherlands, not many firms say ‘buy our product, because it is better than the other’. [...] I think that is an ethical issue. Do you do that, or don’t you do that? Are you going to bring yourself to the fore at the expense of another? We debate about that.” (Interviewee 10)

(2) A second challenge in the competitive environment is the distribution of fake news. Individuals or other publishers may spread such fake news via large technological platforms such as Facebook and Google, but also via individual blogs or websites. Therefore, it becomes increasingly difficult for customers to distinguish between real and fake news:

“Competition is not just [another newspaper], but also some kind of vague blog that spreads hate or fake news.” (Interviewee 11)

However, most interviewees do not see fake news as a threat. Rather, fake news has boosted the publishing industry, as publishers are viewed as a reliable source of news and other content. As a result, publishers perceive the responsibility to be a truthful and reliable source. They also feel the pressure to maintain this status, by ensuring that their content is verified and checked:

“Fake news causes people to value verified news. So, it offers an opportunity.” (Interviewee 6)

“We have to pay attention to the information we receive, so our journalistic principles are even more important than before. Check, check, doublecheck, so to say.” (Interviewee 9)

In sum, publishers face the challenge of whether to bring their own firm to the fore, at the expense of new competitors. Moreover, publishers are confronted with the ethical
challenge of distributing reliable content in the face of fake news.

**Changing employee functions** As digital transformation reshapes the entire firm, publishers are experiencing changing employee functions as a result. Interviewees mention how individuals and departments within the firm are required to communicate and collaborate more and more. In addition, more traditional roles might disappear and new roles may emerge, leading to shifts in responsibilities. For instance, posting content on social media may be new to employees, or their usual processes may be digitalized or accelerated. These changes in the work and activities of employees are the source of one ethical challenge: inclusivity. This regards the ethical issue of including both those employees who are far ahead in digital transformation and those employees who are left behind.

Several interviewees state that people are the greatest challenge in digital transformation. This is mainly caused by the fact that not all employees can keep up with digital transformation at the same pace as others. Whereas some prefer to continue their job in the traditional way, others seek to implement new developments as fast as possible. This leads to large gaps and differences between employees within the firm. Publishers face the ethical challenge to find a balance between helping those who lag behind and supporting those who lead the way:

“There is the old guard of course, who feels like: ‘[...] let me write my thorough articles.’ [...] On the other hand, younger people often ask whether they can make a video, or embed multimedia in an article. That is a difference.” (Interviewee 5)

“Inclusivity is a challenge [...]. To make sure no groups are excluded.” (Interviewee 3)

**Coping with Ethical Challenges During Digital Transformation**

**Mission and codes** Several interviewees say to be guided by their mission in coping with ethical challenges. A mission is a formal statement that defines a firm’s purpose and ideals (Salem Khalifa, 2012). These are often distributed throughout the firm and regularly repeated, to stimulate shared ethical values among employees. For instance, one interviewee explained how the firm had recently published a new mission. According to the interviewee, the mission was carefully formulated, extensively distributed internally, and the firm is working on posters to put up in the office.

“To make sure people constantly realize: ‘alright, this is our mission, this is what we stand for.’” (Interviewee 5)

The mission published on this interviewee’s firm’s website clearly highlights how the publisher informs its target group from a religious background. Several other interviewees state that their ethical values are combined in a formal code. Some call it an editorial code, focusing on specific journalistic values. Others have a social media code, defining ethical behavior on social media. Another interviewee explained how all principles have been combined in a common codebook. Such codebooks outline the principles of a publisher. Some are more
specific than others, but they all aim at providing a foundation for decision making. Decisions can therefore be based on the values outlined in such a code. Not only did the following interviewee mention the codebook; this codebook was also found online:

“We have a codebook..., which includes the rules of the game. Based on the code, we decide whether we do something or not.” (Interviewee 3)

The key goal of a mission is to spread a sense of ethical values throughout the firm. In addition, the use of a code mainly aims at providing a foundation for decision making. Therefore, being guided by a mission or code, or combining the two, enables firms to cope with four specific sources of ethical challenges by serving as a basis for decision making. First, a mission or code shapes decision making regarding new technologies. For instance, a shared ethical sense enables a firm to determine what a new technology should be used for. Second, a mission or code allows firms to make decisions regarding customer data. Decision makers use the predefined standards in the code as the foundation for

### Table 3: sources of ethical challenges, resulting key ethical challenges, and appropriate coping mechanisms outlined by interviewees

<table>
<thead>
<tr>
<th>Source of ethical challenges</th>
<th>Description</th>
<th>Key ethical challenges</th>
<th>Coping mechanisms</th>
</tr>
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</table>
| New technologies            | The adoption of novel technologies | 1) How to use new technologies  
2) Do recommender systems influence freedom of choice or creativity? | Mission and code  
Talking  
Transparency |
| Customer data               | Collecting, accessing and generating insights from customer data | 1) Data collection  
- How much customer data to collect  
- How to collect customer data  
2) Data access  
- Access from within the firm  
- Access by partners  
3) Data analysis  
- Level of analysis  
- Approaching customers based on data insights  
- Making decisions based on data insights | Mission and code  
Talking  
Training  
Transparency |
| Contact with customers      | Increasingly being in touch with customers | 1) Automation of customer contact  
2) Volume of customer contact | Mission and code  
Talking |
| Competitive environment     | The fast-paced competitive surroundings of publishers in digital transformation | 1) Bringing oneself to the fore at the expense of other firms  
2) Coping with fake news | Mission and code  
Talking |
| Changing employee functions | New tasks and responsibilities for employees | 1) Inclusivity | Training |
determining what data to collect and use. Third, a mission or code drives decision making regarding customer contact. Again, it serves as a foundation to decide on, for instance, the extent of automation of contact. Finally, a mission or code allows a firm to cope with its competitive environment. For example, some missions stress that the publisher aims at reliability, therefore enabling the firm to cope with fake news. The following interviewee clearly highlighted how the mission serves as a way to diffuse ethical values throughout the firm and as a foundation for decision making:

“We have a mission [...]: we aim at improving the quality of living and working [...].” (Interviewee 13)

This aim is indeed stressed in the publisher’s mission on its website, which seeks to improve people’s living environment. In sum, a formal mission and code enable the diffusion of a shared sense of ethics and serve as the foundation for decision making. This allows publishers to cope with four sources of ethical challenges: new technologies, customer data, contact with customers, and the competitive environment.

**Talking** Whereas a mission and code are formally stated and distributed, several interviewees stated that they simply often discuss the topic of ethics to cope with ethical challenges. Similar to having a mission, talking about ethics is seen as a way to diffuse ethical values throughout the firm. Some publishers have formalized these discussions about ethics. For instance, one interviewee explained to have monthly meetings to spend time on ethics. Other publishers have privacy officers, data officers, or confidants, with whom employees can share the ethical challenges they face:

“Especially among editors, we often have discussions about ethical issues.” (Interviewee 6)

“For example, we have debriefings [...] every other week [...], where certain themes are simply discussed with the entire editorial staff.” (Interviewee 3)

Discussing ethical issues occurs in both formal and informal ways. Both strategies are perceived by interviewees to facilitate the diffusion of ethical values throughout the firm. Similar to having a formal mission or code, talking about ethics enables publishers to diffuse ethical values among employees. These values then serve as a foundation for decision making. Therefore, this coping strategy has similar effects as being guided by a mission or code. In other words, talking about ethics is used by publishers to provide a foundation for decision making to cope with four sources of ethical challenges: new technologies, customer data, contact with customers, and the competitive environment. For instance, one interviewee stated how discussions on the topic help to spread ethical values and provide this foundation for decision making. Another interviewee highlighted how informal talk about ethics is seen as crucial for spreading ethical values throughout the firm:

“[We spread ethical values] via the [meeting] each month.” (Interviewee 7)

“We talk about it, together [to spread ethical values].” (Interviewee 1)
Training Several interviewees explain to have a training that considers ethical issues, usually for new employees. Even though the number of publishers that have implemented training is significantly lower than the number of publishers that have a mission or talk about ethics, interviewees still view it as an important strategy to cope with ethical challenges. This is even the case for some interviewees whose firms have no or only little training. This strategy can therefore be viewed as one that may be improved or implemented in the future. This view is highlighted by one interviewee who argued that ethical training should be refined, as they are more extensive and stricter in the United States and the United Kingdom than in the Netherlands:

“We are less strict here, so I think there is room for improvement.” (Interviewee 11)

The main goal of such training is usually to familiarize new employees with technologies and data use. For example, firms use training to set standards and guidelines for the sharing and accessing of customer data. In addition, such training is used to familiarize employees with new technologies:

“We mainly have training on how to deal with data. How to avoid data leaks [...]. We have developed a test for that purpose, which every new employee has to take. It considers issues such as: how would you deal with this situation? What would you do if you receive this?” (Interviewee 12)

Using training as a strategy enables firms to cope with two sources of ethical challenges. First, several trainings focus on the use of customer data. For instance, guidelines on the internal sharing of data can be provided. Therefore, this strategy allows publishers to cope with challenges resulting from customer data, by setting predefined guidelines and standards. Second, training for new employees familiarizes them with the technologies used by the firm. This allows a firm to decrease the gap in knowledge between different employees, thereby coping with the challenges resulting from the changing functions of employees.

Transparency Many interviewees point to the importance of transparency in coping with ethical challenges. Transparency centers around the concepts of openness, visibility, and disclosure of information (Palanski, Kahai, & Yammarino, 2011; Turilli & Floridi, 2009).

The issue of transparency is often discussed in relation to the collection of data. Specifically, many publishers seek to be transparent in the collection and use of data. Interviewees argue that transparency regarding customer data is achieved when customers are fully aware of what data is collected, stored, and used, and why this is the case:

“It needs to be very clear why you want to store data.” (Interviewee 5)

“We have to be aware to clarify what we do and why we do it. Our visitors can then understand why we need something, or why we have decided to not do something.” (Interviewee 9)

These viewpoints are also supported by the privacy statements of all interviewee firms, which are published on their websites. These statements explicitly describe the collection, storage, and use of customer data. Moreover,
transparency is an important issue when a firm makes use of algorithms. Transparency in the use of algorithms is achieved when the outcome of the algorithm can be traced back to the inputs. One interviewee explained how every algorithm should have a cookbook. In other words, an algorithm’s path should always be clear:

“I want to have a cookbook for each algorithm. [...] How do you make a recipe? So, how does the algorithm work? [...] If something is too salty, it can say that there were four scoops of salt in the cookbook.” (Interviewee 3)

Transparency allows a firm to cope with two sources of ethical challenges. First, it considers the ethical challenge of customer data by requiring the firm to disclose the details of data collection and use to customers. Second, transparency enables publishers to understand the outcomes of algorithms, allowing them to cope with the ethical challenges regarding algorithms resulting from new technologies.

**Discussion**

This study aims to answer the following research question: ‘What are the sources of ethical challenges in digital transformation, and how do firms cope with them?’ In answering this research question, this study makes three important contributions to existing literature. First, the findings show that publishers face five main sources of ethical challenges: (1) new technologies, (2) customer data, (3) contact with customers, (4) competitive environment, and (5) changing employee functions. These sources of ethical challenges have not been categorized in prior literature. Second, this study finds that firms adopt one or more of four key mechanisms to cope with the identified sources of ethical challenges: (1) being guided by a mission or code, (2) talking about ethical issues, (3) training, and (4) transparency. Third, this research contributes to the extant literature by showing that the mechanisms implemented are contingent on the sources of ethical challenges faced by the firm.

In line with Matt et al. (2015) and Hess et al. (2016), the findings show that the use of new technologies is a key aspect of digital transformation. Furthermore, these new technologies are the source of two ethical challenges. First, publishers have to find the right and ethical purpose for each new technology. Hess et al. (2016) already called the implementation of new technologies one of the major challenges faced by firms. This study adds, however, that this challenge is not only one of practical matters, but also one that requires ethical considerations. Second, publishers face the ethical challenge of whether recommender systems affect the creativity or freedom of choice of customers. This study finds that publishers have different opinions on the use of such recommender systems. Whereas some believe that pushing customers into filter bubbles is a significant threat, others argue that the effect of such filter bubbles is virtually nonexistent. This is also reflected by prior literature. On the one hand, Pariser (2012) argues that filter bubbles negatively affect creativity and innovation. On the other hand, however, Flaxman, Goel and Rao (2016) find that, even if filter bubbles exist, their effects are limited. Therefore, this study confirms the prior literature by showing the different opinions on recommender systems. Whereas some believe that such
systems cannot influence creativity or freedom of choice, others argue that recommender systems create filter bubbles for consumers.

The second source of ethical challenges faced by publishers is the use of customer data. This poses the first challenge of data collection. In line with Bharadwaj et al. (2013), publishers have the ability to gather and analyze much information. Therefore, they have to decide on the volume of data they find ethical to collect. Another ethical challenge regarding data collection is the way of collecting such information. Publishers argue that some strategies are more ethical than others. This is in line with findings by Newell and Marabelli (2015), who purport that customers are not always aware of the fact that their information is being tracked. This study adds, however, that this may be a reason for firms to choose a data collection strategy that is perceived to be more ethical. An additional ethical challenge regarding customer data is the question of who can access the data. This study contributes that, besides the challenge of sharing data with partners, as outlined by Smith (2017), access by internal individuals and departments is also an ethical issue faced by publishers. Finally, this study highlights the ethical challenge publishers face regarding data insights. Whereas Berman (2012) recognizes the ability of firms to conduct extensive data analysis, this study finds that publishers face the challenge of whether it is ethical to act on the insights from this analysis.

Third, customers face ethical challenges regarding customer contact, specifically the automation and volume of such contact. Several authors, such as Cheung, Chan, Kwok, Lee and Wang (2006) as well as Lallement and Fox (2000), consider strategies for automating customer contact. However, in line with Castelluccio (2019), this study finds that publishers question whether such an approach is appropriate, as it is sometimes considered impersonal or unethical. Moreover, publishers face the ethical challenge of how much customer contact to pursue. This is in line with Soteriou and Chase (1998) as well as Froehle and Roth (2004), who find that some volumes of customer contact are more appropriate than others. This study adds that this is not only a practical challenge but also an ethical one. This means that firms do not only have to decide on the volume of customer contact that leads to the best performance, but also on the most ethical volume. In other words, even though sending dozens of emails a week may lead to more sales, this study contributes that firms question whether such an approach is ethical towards customers.

The fourth source of ethical challenges is the competitive environment. In line with Vey et al. (2017), speed is a key component of the environment of publishers in digital transformation. This leads to the fast emergence of new competitors in the publishing sector. For publishers, this poses the ethical challenge of whether they can bring themselves to the fore at the expense of other firms. This is an interesting finding, as much of the prior literature focuses on how firms can outperform other firms. For instance, Earley (2014) argues that implementing new tools and strategies at a faster pace than competitors is key in serving customers better than competitors, and Friedrichsen and Kamalipour (2017) propose how firms should take advantage of first-mover advantages.
Therefore, this study adds an ethical consideration to the challenge of outperforming others: that of whether a firm should want to bring itself to the fore at the expense of competitors. Even though this approach may lead to better performance, some firms doubt whether they should do so if this harms others. In turn, some smaller firms believe that it is most ethical when larger firms give them the opportunity to survive. An additional ethical challenge regarding the competitive environment is how publishers deal with fake news. The concept of fake news has been widely discussed in the prior literature, for instance by Lazer et al. (2018) and Allcott and Gentzkow (2017). This study adds how firms face the ethical challenge of distributing reliable content when competitors may publish fake news. This is of particular concern to publishers, as they are seen – both by customers and by themselves - as the most reliable source of news. The distribution of reliable content, therefore, is key to their survival. As a result, they pay extra attention to checking and confirming their sources.

Finally, publishers face the ethical challenge of including all employees in the process of digital transformation; both those who lag behind in digital transformation and those who are transforming quickly. Riordan (2014) also argues that inclusion should be a main priority for firms. This study contributes that, besides factors such as age, gender, and nationality, publishers also face the challenge to include those employees that cope with digital transformation at a slower or faster pace than most others in the firm. Some employees have difficulties with the process of digital transformation and with their changing functions, whereas others would like to digitalize as much as possible. Even though this may be related to other demographic factors, such as age (Niehaves & Plattfaut, 2014), the differences in employee adaptation to digital transformation have not been recognized in prior literature. This study also adds that firms face the challenge to bring together the viewpoints regarding digital transformation of all employees.

To cope with the discussed sources of ethical challenges, publishers have implemented four strategies. The first strategy is the implementation of a mission or code. This is in line with research by King, Case and Premo (2010), who find that mission statements are increasingly focused on ethics. Being guided by a mission or code allows firms to cope with four sources of ethical challenges. It shapes decision making regarding new technologies, customer data, customer contact, and a firm’s competitive environment. Much of the existing literature focuses on the effect of having a mission on firm performance (Williams Jr., Morrell, & Mullane, 2014). However, this study adds that besides affecting firm performance, missions and codes also shape ethical behavior. A mission or code provides a basis for decision making when firms are faced with ethical challenges. Ethical decisions are based on predetermined standards that are outlined in the firm’s mission or code.

Publishers regularly talk about ethics within the firm, which is a second strategy of coping with the sources of ethical challenges. Some firms plan regular meetings, whereas others rely on more spontaneous discussions on the topic of ethics. Similar to being guided by a code or mission, discussing the topic of ethics
allows firms to cope with four sources of ethical challenges, as it provides a basis for decision making regarding new technologies, customer data, customer contact, and a firm’s competitive environment. This is in line with Wulfson (1998), who finds that communication at work helps to avoid ethical misconduct. A similar argument is made by Wainryb and Recchia (2014), who find that discussing right and wrong with children is a key means for parents to teach them a sense of ethics. Paliwal (2006) has also argued that a sense of ethics can serve as a guide for behavior. This study extends this conclusion to the digitally transforming workplace and finds that frequent discussions on the topic of ethics may not only help to avoid ethical misconduct, but also allow employees to explicitly focus on making the most ethical decisions.

Third, publishers use training to cope with sources of ethical challenges. They mainly use such training for new employees, to familiarize them with technologies and ethical values. This is in line with research by Watts et al. (2017), who find that ethics training is beneficial for scientists, and Taylor (2013), who finds similar conclusions for accounting students. This study contributes to their findings that training allows firms to cope with two specific sources of ethical challenges. First, it allows the firm to set guidelines and standards for dealing with challenges resulting from customer data. Through training, firms can shape the ethical decision-making capabilities of their employees. Second, this study adds that training allows new employees to get familiar with the firm’s technologies, thus decreasing the gap in technological knowledge between different employees. This enables firms to cope with challenges resulting from the changing functions of employees. The importance of training to include all employees has also been highlighted by McGuire and Bagher (2010). This study adds, however, that this also involves inclusion on the level of employees’ digital abilities.

A final means to cope with the sources of ethical challenges is transparency. This requires firms to be open about their activities and allows them to cope with two sources of ethical challenges. First, transparency requires firms to disclose the details of data collection and data use. Therefore, it helps them to cope with ethical challenges resulting from customer data. This is in line with findings by Morey, Forbath and Schoop (2015), who recommend firms to be transparent towards customers about the collection and use of their data, as this positively influences customer trust. However, this study adds that increasing customer trust is not the only reason to be transparent about the collection and use of customer data. Rather, this study finds that firms also seek to behave ethically in their data collection and use. Second, transparency enables firms to understand the results of algorithms, allowing them to cope with ethical challenges regarding algorithms resulting from new technologies. This finding is in line with Mittelstadt (2016) and Carlson (2017), who also highlighted the importance of transparency in the use of algorithms. This study stresses that such transparency does not only have practical reasons but also involves ethical considerations.

Overall, this research answers the call by Vial (2019) to examine the role of ethics in digital transformation. Specifically, this study contributes to the existing literature by
identifying five sources of ethical challenges faced by firms in digital transformation: (1) new technologies, (2) customer data, (3) contact with customers, (4) competitive environment, and (5) changing employee functions. These sources are the cause of several ethical challenges that firms need to cope with. In addition, a key contribution of this research is the classification of four mechanisms to cope with the identified sources of ethical challenges: (1) being guided by a mission or code, (2) talking about ethical issues, (3) training, and (4) transparency. Specifically, this study contributes to the existing literature by identifying which mechanisms are deemed most appropriate by publishers to cope with each source of ethical challenges. The research shows that several of these mechanisms allow firms to cope with multiple sources of ethical challenges, whereas others are only suitable to cope with two challenges at most. For instance, a mission and code are widely applicable and help to cope with all sources of ethical challenges except changing employee functions. On the other hand, training can only be utilized to cope with ethical challenges resulting from customer data and changing employee functions. Therefore, some mechanisms may be implemented to specifically resolve a particular issue, whereas others may be implemented to cope with multiple sources of ethical challenges at the same time.

Limitations and Avenues for Future Research
The findings of this study must be seen in light of several limitations. First, because this study takes a qualitative approach, it is generalizable to only a limited extent (Myers, 2013). This limitation is partially addressed by including different types of publishers within the industry in the sample, and by triangulating interview data with online records and firm documents. Therefore, future research should validate the findings of this study through quantitative research. Second, this study focuses on publishers operating in the Netherlands only. Since ethical viewpoints differ among cultures (Liu & Chen, 2012), the findings may be unique to the Dutch business environment, limiting the study’s generalizability. Similar research spanning several countries is thus recommended. Moreover, future research could consider which strategy is most effective to cope with each source of ethical challenges. For instance, having a mission or code may be more effective in countering ethical challenges resulting from customer data than talking about the topic of ethics, or vice versa. Finally, future research could investigate whether certain combinations of different strategies are more or less effective than using an individual strategy. For example, future research can identify whether or not the combination of training and transparency is more effective than any other combination, in coping with a certain source of ethical challenges.

Managerial Implications
In addition to its theoretical contributions, this study makes significant managerial implications. Managers in firms facing digital transformation should be particularly aware of the ethical challenges stemming from new technologies, customer data, contact with customers, their competitive environment, and changing employee functions. To cope with the challenges resulting from these sources, they should implement the appropriate strategies. Depending on the
source of ethical challenges, this study suggests that managers should consider to create and distribute a mission or code, to have regular discussions on the topic of ethics, to implement ethics training, to ensure transparency in the firm’s operations, or to combine multiple approaches.

Conclusion
This study has identified the sources of ethical challenges publishers face in digital transformation. Moreover, the strategies used to cope with these sources of ethical challenges have been uncovered. Not only does this research contribute to the limited existing literature on the role of ethics in digital transformation, but it also enables managers to find the right approach for dealing with ethical challenges.
Bibliography


Medium. (2016, October 10). 5 companies that have been caught violating their customers’ privacy. Retrieved from https://medium.com/bestcompany/5-companies-that-have-been-caught-violating-their-customers-privacy-9cfe660ea3eb


Niehaves, B.; & Plattfaut, R. (2014). Internet adoption by the elderly: employing IS technology
acceptance theories for understanding the age-related digital divide. *European Journal of Information Systems*, 23(6), 708-726.


Appendices

Appendix A

Interview guide

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<th>Questions</th>
<th>Follow-up</th>
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<tr>
<td><strong>Introduction</strong></td>
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<tr>
<td>My name is Anne Clerx and I am currently writing my thesis for the MSc. Strategic Innovation Management. My research considers the role of ethics in decision making during digital transformation. Specifically, I am conducting this research in the publishing industry because this sector is in the middle of digital transformation.</td>
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<td>Digital transformation in this research considers a change in the use of digital technologies by a firm, in order to develop a new business model that helps to create and appropriate more value to the firm.</td>
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<tr>
<td>1. What does digital transformation mean to your firm?</td>
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<td>2. When did digital transformation start in your firm?</td>
<td>And how?</td>
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<td>3. How do you feel about the process in digital transformation at your firm so far?</td>
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<td>4. What are the main challenges in digital transformation in the industry?</td>
<td>And in your firm specifically?</td>
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<td><strong>Digital technologies</strong></td>
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<td>5. What new digital technologies have you started using as a result of digital transformation?</td>
<td>How do you use digital technologies (e.g. social media) to connect with your customers?</td>
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<td>Do you make use of communities where customers interact?</td>
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<td>What internal processes have been modified?</td>
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<td>6. What digital technologies do you see as an opportunity?</td>
<td>Why?</td>
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<td>7. What digital technologies do you see as a threat?</td>
<td>Why?</td>
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<tr>
<td><strong>Strategy</strong></td>
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<td>8. What are the main changes caused by digital transformation in the industry?</td>
<td>And in your firm?</td>
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<td></td>
<td>Why?</td>
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<td>9. How does your firm respond to these changes?</td>
<td>Does this involve cooperation with other firms?</td>
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<td><strong>Responsibility</strong></td>
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<td>10. Who is responsible for the digital strategy?</td>
<td>Separate role or added responsibility?</td>
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<td>CDO?</td>
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<td><strong>Involvement</strong></td>
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<td>11. How do employees feel about the digital strategy?</td>
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<td>12. How do different functions collaborate as a result of digital transformation?</td>
<td>Have you implemented any collaboration platforms?</td>
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<td><strong>Data</strong></td>
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<td>13. What customer data do you collect?</td>
<td>Why?</td>
</tr>
<tr>
<td>--------------------------------------</td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>14. How is this data collected?</td>
<td></td>
</tr>
<tr>
<td>15. How is this information stored?</td>
<td></td>
</tr>
<tr>
<td>16. To what extent are customers aware of the fact that information about them is collected?</td>
<td></td>
</tr>
<tr>
<td>17. Who has access to the customer data?</td>
<td>Do more people gain access when you collaborate with other firms?</td>
</tr>
<tr>
<td>18. How are decisions based on customer data?</td>
<td>Are the underlying reasons considered?</td>
</tr>
<tr>
<td></td>
<td>Algorithms?</td>
</tr>
<tr>
<td><strong>Products &amp; services</strong></td>
<td></td>
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<tr>
<td>19. What kind of personalized products or content do you offer?</td>
<td></td>
</tr>
<tr>
<td>20. Do you make use of recommender systems?</td>
<td>How do you think this influences customers’ freedom of choice?</td>
</tr>
<tr>
<td></td>
<td>How do you think this influences customers’ creativity?</td>
</tr>
<tr>
<td>21. How are you moving from physical content to digital content?</td>
<td>Does digital content take over physical content?</td>
</tr>
<tr>
<td></td>
<td>Is it an addition to your activities?</td>
</tr>
<tr>
<td><strong>Ethics</strong></td>
<td></td>
</tr>
<tr>
<td>22. What ethical challenges do you face?</td>
<td></td>
</tr>
<tr>
<td>23. What kind of discussions take place about what you can and cannot do?</td>
<td></td>
</tr>
<tr>
<td>24. What boundaries do you face in what you should and should not do?</td>
<td></td>
</tr>
<tr>
<td>25. What measures do you take to diffuse ethical values throughout the organization?</td>
<td>Ethical training, code of ethics, vision, mechanisms to report unethical behavior</td>
</tr>
<tr>
<td>26. How do you deal with fake news?</td>
<td></td>
</tr>
<tr>
<td><strong>Conclusion</strong></td>
<td></td>
</tr>
<tr>
<td>27. Is there anything else you would like to discuss?</td>
<td></td>
</tr>
</tbody>
</table>
Appendix B

Consent form

This study is carried out by Anne Clerx, a student of the MSc Strategic Innovation Management at the University of Groningen. This study seeks to gain detailed insights into the role of ethics in decision making during digital transformation. The thesis is supervised by dr. E. Smailhodzic. In return for your participation, you will get access to the final results.

In order to be able to analyse the insights from the interviews, the interviews will be audio recorded and transcribed. Moreover, notes will be taken during the interview. The audio recorded interviews, the notes and the transcripts will be stored on a secured Google Drive that is only accessible by the researcher. The data will not be shared beyond the research team. All information will be anonymized.

If you seek to withdraw from the study, you can do so at any time by sending an email to *****@gmail.com. You do not have to provide any reason.

Please tick the appropriate boxes

Taking part in the study

☐ I have read and understood the study information above, or it has been read to me. I have been able to ask questions about the study and my questions have been answered to my satisfaction.

☐ I consent voluntarily to be a participant in this study and understand that I can refuse to answer questions and I can withdraw from the study at any time, without having to give a reason.

☐ I understand that taking part in the study involves the audio recording and transcription of the interview.

Use of the information in the study

☐ I understand that information I provide will be used for Anne Clerx’s MSc thesis.

☐ I understand that personal information collected about me that can identify me, such as my name, my function, or where I work, will not be shared beyond the study team.

☐ I agree that my information can be quoted in the MSc thesis.

Signatures

_____________________________  ______________________  ______
Name of participant          Signature           Date

I have, to the best of my ability, ensured that the participant understands to what they are freely consenting.

_____________________________  ______________________  ______
Researcher name          Signature           Date