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Research Article

Morality, Ethics, and Reflection: A Categorization of Normative IS Research

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Abstract

Moral views and perceptions, their ethical evaluation and justification, and practical concerns about how to incorporate them all play important roles in research and practice in the information systems discipline. This paper develops a model of normative issues ranging from moral intuition and explicit morality to ethical theory and meta-ethical reflection. After showing that this normative model is relevant to IS and that it allows an improved understanding of normative issues, the paper discusses these levels of normativity in the context of two of the most prominent normative topics in IS: Privacy and intellectual property. The paper then suggests that a more explicit understanding of the different aspects of normativity would benefit IS research. This would leverage the traditional empirical strengths of IS research and use them to develop research that is relevant beyond the boundaries of the discipline. Such broader relevance could be aimed at the reference disciplines. In particular, moral philosophy could benefit from understanding information technology and its role in organizations in more detail. It could, furthermore, inform policy makers who are increasingly called on to regulate new information technologies.

Keywords: Ethics, Morality, Norms, Normativity, Privacy, Intellectual Property.

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1. Introduction

Humans are social beings. Because of their social nature, they need rules, norms, and conventions that allow them to co-exist and collaborate to survive and prosper. The information systems (IS) discipline is interested in the social and organizational role of information technology. Therefore, it needs to take this into account. Discussions of norms, acceptance, and acceptability of rules and conventions are central to understanding phenomena related to technology. They are similarly important if recommendations and policies are developed to influence practice.

However, there are different ways in which IS scholars can take normative issues into account. At a basic level, one rather functional way would be to recognize that attention to normative issues can contribute to user satisfaction and thereby reduce the chance of system failure.

At a higher level of abstraction, one can find normative assumptions in all IS research paradigms: Positivism has its roots in the enlightenment-based attempt to improve the human condition by applying scientific methods to understanding social life (Wynn, 2001); interpretivism implies a significance and equality of the other who is being investigated and has, therefore, been viewed as intrinsically ethical (Walsham, 1995a, 1995b, 1996); critical research has been traced to the ethical attempt to improve the world (Hirschheim & Klein, 1994; Myers & Klein, 2011; Stahl, 2008a).

A further link between normative issues and IS comes from IS practice. Normative issues in a broad sense pervade all social activities, which includes commercial ones. The use of IT for business purposes is closely related to efficiency and effectiveness, which, in turn, touch on how we should live our lives and which goals we should follow.

At the broadest level of abstraction, ethical investigation is related to the use of computing or information and communication technologies (ICT) in social or organizational settings. Many IS studies take place in a business environment. As a consequence, it is of interest not only to IS scholars but also to organizational, management, or business scholars in general. This means that business or economic ethics can be applied to IS. Thus, the business ethics discipline has paid significant attention to ICT's ethical aspects (George, 2002; Grabner-Kraeuter, 2002).

This brief outline shows that there are numerous areas of contact between IS and normative issues. Despite a wealth of work in the area, there have been few attempts to draw a broader picture of normativity in IS research and practice. Therefore, this paper develops a deeper understanding of the role of normativity in IS research.

In order to do this, the paper develops a model of normativity that distinguishes between four different levels: moral intuition, explicit morality, ethical theory, and meta-ethics. After establishing the relevance of the model to IS, the paper discusses pertinent application areas such as privacy and intellectual property. This review points to the main areas of discussion. In addition, it provides a further link between normativity and IS by demonstrating that IS technical developments pose new problems for normative theory and practice and that scholars in the relevant reference disciplines, notably in moral philosophy, can benefit from understanding these issues in depth. The paper concludes by pointing to currently underdeveloped research areas in normativity and IS and by suggesting how such work can contribute to the theoretical and practical relevance of both IS and the normative disciplines.

2. Levels of Normativity

The reader may have noticed that I use the rather unfamiliar term "normativity" rather than the more familiar terms related to norms such as ethics, morality, or law. I chose this terminology because it allows us to draw conceptual distinctions between ethics, morality, law, and other related terms such as values or worth, while retaining an overarching concept, which is that of normativity.

This paper draws on several disciplines and discourses, and each of these define the terms presented here differently in their own right. The main literature body that the paper builds on is that of philosophy or, more specifically, moral philosophy, and even more specifically the part of moral philosophy that deals with technology – ICT in particular. Philosophy is a large and old field, and discourses on normativity in philosophy fill whole libraries. This paper cannot, therefore, do justice to all positions and definitions. As such, the following subsections develop a conceptual framework and underpin it by references to the literature. However, it would be impossible to adequately represent all possible positions.

Despite this non-exclusive nature of the model developed here, researchers and practitioners outside of IS will find it relevant. The paper returns to the problem of the relevance of technical developments for moral philosophy in general, and, in particular, to the importance of the normative model developed here. The argument is that novel technologies raise normative issues that are quantitatively or qualitatively different from previous ones; and novel technologies can open new ways to address these normative issues. The model developed here can help interested parties to conceptualize these issues. However, before I introduce this argument, I need to introduce the normative model. The following figure overviews all four levels of the model – moral intuition, explicit morality, ethical theory, and reflection and meta-ethics – and their relationship one another. The sections below describe these in more detail.

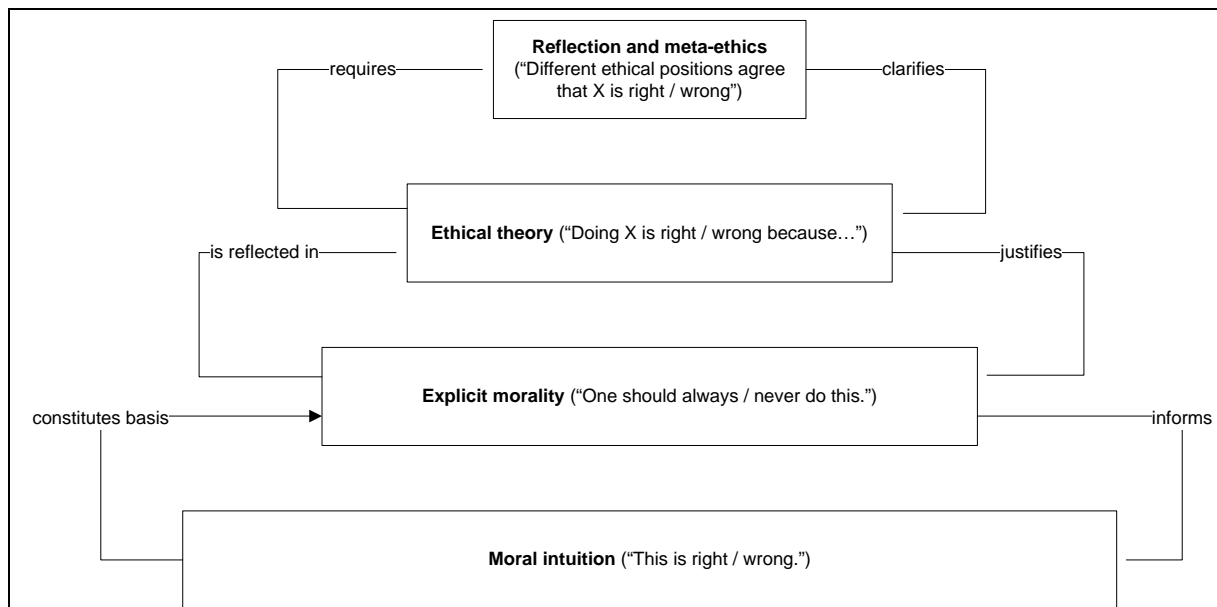


Figure 1. Levels of Normativity

As Figure 1 illustrates, these four levels are mutually dependent and, in practice, often overlap. The distinction is, therefore, analytical in nature, and allows for a richer understanding of pertinent phenomena. In the following discussion of the levels, I start at the bottom of the pyramid with the most ubiquitous aspect of normativity. In the following sections, I first introduce each level in general terms and then relate them to the IS literature.

2.1. Level 1: Moral Intuition

We can define moral intuition as the non-reflected reaction that individuals have when faced with issues that they perceive to be good or bad (Kekes, 1986). This reaction is correlated to almost involuntary utterances such as "this is good" or "that cannot be right". Most human beings have this sort of reaction to a wide range of issues and actions. Moral intuition is a fact of life. We always encounter it; there is no way to avoid it.

In the IS discipline, it is easy to imagine a multitude of situations where moral intuition accompanies particular technologies or development. Examples might be: "It was about time that they got a system to get proper cost control" or "management should not spy on employees using the system".

Moral intuition drives all of us to a large degree, but it may be entirely misplaced. Moreover, it is often not explicitly articulated. We act on it and follow it, but we rarely think it through. One reason why it remains implicit is that it tends to be shared by the local community. Groups, cultures, and nations share moral intuitions; arguably, they are to a large extent defined by them. They simplify the world because they provide an apparently shared view of the world. However, they sometimes lead to problems when they are no longer shared.

2.1.1. Moral Intuition in Information Systems

The strongest and best established tradition of normative research in IS relates to issues of moral intuition, namely whether something is perceived to be right or wrong, good or bad. Such moral intuitions are important for IS because they can have significant impact on the use and success of information systems. They relate to whether technology is conducive to social and organizational goals. It is, therefore, not surprising that a seminal paper on ethics and IS (Mason, 1986) lists four moral issues that many individuals have strong intuitions about: Privacy, accuracy, property, and access. It is interesting to note that Mason's paper, which set the tone for much research that was to follow (and also for some critique – see Fairweather, 2000) was an opinion piece that relied neither on empirical data, nor on the existing literature. Several of these issues have developed separate discussions that span different levels of normativity and that cover other fields beyond IS. I discuss some of these, such as privacy and intellectual property, in more depth below in the section on application areas.

Another concern worth mentioning here has to do with behavior that is widely regarded as immoral, notably the criminal use of IS. This area, too, is related to many other disciplines and can be traced back to times when business use of IS was just developing (Parker, 1983). The interest in criminal misuse of IS is shared with computer security, forensic computing, and computer law, but it is also an ongoing stream of activities in IS (Wareham, Robey, & Chua, 2008). It is related to other types of misuse that do not necessarily have to be criminal in nature, such as plagiarism (Davison & Kock, 2003).

Researching moral intuitions has been a core activity of IS research interested in normative aspects. This type of research has the advantage of being relatively easy to do using established empirical approaches. Moral intuitions can be explored by observing behavior or by interacting with respondents. When direct questions about moral intuitions are asked, these can then change their nature and turn into explicit morality, which the next section outlines.

2.2. Level 2: Explicit Morality

A core problem of moral intuition is that it relies on two sometimes mutually exclusive conditions: internal consistency and external consensus. Moral intuition carries the connotation of consensus with the peer group. It breaks down when this consensus disintegrates (Cushman, Young, & Hauser, 2006). This is where explicit morality sets in. Explicit morality typically has the form of statements that clearly denote what is right or wrong. Examples might be: "Companies can do what serves their bottom line" or "employees do not have to do what employers tell them if it is against their conscience". This type of statement is required when there is disagreement on implicit morality. Is it acceptable for the company to use the system for employee monitoring? Specific stances such as the ones just referred to can be contentious. If they are, then the first step in the attempt to clarify what is acceptable is to state clearly what people already perceive to be acceptable.

Explicit morality is, as the term suggests, something that is open to discussion. It needs to be openly stated. In most cases, it is the attempt to make explicit what individuals perceive to be the shared moral intuition. Moral philosophy knows several terms that refer to explicit morality. One of these is the term "value". Something is a value when it is considered as having worth; when it serves society as a whole. Explicit morality is relatively easy to discern and measure. Thus, it is not surprising that IS focuses attention on explicit morality.

2.2.1. Explicit Morality in Information Systems

Explicit morality has found its way in one of the dominant streams of positivist and quantitative research, namely as “subjective norms” in the theory of planned behavior (Ajzen, 1991). These subjective norms have been shown to have significant influence on the adoption and use of technology and, therefore, now constitute a core element of such research in numerous different areas from the adoption of WAP-enabled mobile phones (Teo & Pok, 2003) to mobile payment services (Schierz, Schilke, & Wirtz, 2010). While this approach demonstrates the relevance of normative issues in IS research and practice, the theory of planned behavior’s particular approach does not specify which and how moral norms affect technology use. Thus, there have been numerous attempts to clearly specify the type of explicit morality and its role in the use of IS.

In order to clarify the norms involved in adoption and use of technology, IS researchers have explored the moral norms of particular stakeholder groups, which includes students, practitioners, and consumers. Students have been represented in research as important stakeholders whose moral rules and norms should be understood (Couger, 1989). On occasion, such research on students has been used as a proxy to understand employee views (Paradice, 1990). And, not surprisingly, IS scholars are interested in customers’ or consumers’ moral views because these can affect economic decisions (Culnan, 1993).

Interest in stakeholders’ explicit views of morality tends to be directly motivated by functional interests. Infringing moral views can lead to customer rejection or failure to adopt systems. Given the sometimes close relationship between moral and legal issues, there is also an interest in normative issues to limit liability. In the case of research on students, a common explicit motivation is the wish to affect their moral preferences and make them “better” professionals. Understanding employees, for example, can also allow the enforcement of rules and ensuring compliance. Thus, moral views and perceptions have functional relevance for organizations because they can affect their business processes. An interest in this functional aspect of morality in IS has pervaded IS research for decades (Straub & Collins, 1990) and continues to be relevant today (Cavusoglu, Benbasat, & Bulgurcu, 2010)

One further reason why interest in explicit morality is likely to remain high in IS is that such explicit moral rules often mirror a typical approach to professional ethics, namely that of codes of conduct or codes of ethics. The National Machine Accountants Association (NMAA), renamed first into the Data Processing Management Association (DPMA) in 1962 and into the Association of Information Technology Professionals (AITP) in 1986 may have been the first to create an explicit code of ethics in 1951, which, in a modified version, is still in force¹. Further relevant professional bodies include the Association for Computing Machinery², the British Computer Society³, the IEEE Computer Society⁴, and also the Association for Information Systems⁵. This shows that attempts to define shared moral norms have accompanied the development of information technology. Given the prominence of such codes as means to express moral standards, it is not surprising that they have been the subject of IS research (Walsham, 1996) and figure prominently in much of the work discussed in this paper.

Despite such attention on explicit morality, research on normativity does not stop at this level. The fact that implicit morality or moral intuition needs to be made explicit indicates that they are not universally shared. While explicit morality may denote the moral consensus of a group, there is no guarantee that it does so. And even if a particular group agrees on moral issues, there is no guarantee that this agreement is universally shared. Neither is it clear whether the grounds on which it is deemed to be acceptable are generally accepted as valid. To come to an understanding of moral issues, however, there needs to be agreement not only on what is good or bad, but also on why it is good or bad. This is where ethical theory becomes relevant.

¹ Retrieved 27th September, 2011, from <http://www.aitp.org/?page=Ethics&hhSearchTerms=ethics>

² Retrieved 14th March, 2011, from <http://www.acm.org/about/code-of-ethics>

³ Retrieved 14th March, 2011, from <http://www.bcs.org/content/conWebDoc/1587>

⁴ Retrieved 28th September, 2011, from <http://www.computer.org/portal/web/guest/home>

⁵ Retrieved 14th March, 2011, from <http://home.aisnet.org/displaycommon.cfm?an=1&subarticlenbr=15>

2.3. Level 3: Ethical Theory

Where moral statements are contradictory or in conflict, there is a need for a higher level of abstraction. All normative statements imply such a higher level of abstraction, but it is not always clear for what this abstraction and reflection stand.

This paper uses the term "ethics" to denote the abstract and theoretical reflection on moral statements. Ethics asks for the grounds on which moral statements are made. Why do we think something is good, right, or acceptable? Ethics in this sense is one of the main branches of philosophy and has been discussed for millennia. The distinction between morality as social fact and ethics as reflection, while not ubiquitously accepted, is widely recognized (Adam, 2005; Ricoeur, 1990; Siponen & Vartiainen, 2002), even though sometimes slightly different terminology is used (Moores & Chang, 2006).

Prominent ethical theories include consequentialism and (Kantian) deontology. Utilitarianism, the most prominent consequentialist ethical theory, goes back to Jeremy Bentham (2009), James Mill (1829), John Stuart Mill (2002), and others who wanted to render the enterprise of moral philosophy more rational and scientific, which emulates the success of the natural sciences in the 18th and 19th centuries. The main idea of utilitarian ethics is to compare the aggregated utility and disutility of each alternative option. The ethical decision is the one that maximizes overall utility. In essence, this approach concentrates exclusively on the outcomes or consequences of decisions, which is the reason why it is usually called "consequentialist".

Kantian deontology (1986, 1998), on the other hand, takes a fundamentally different approach and evaluates the ethical quality of a decision according to the intention of the agent. Famously linked to the so-called categorical imperative, the ethical evaluation of a maxim depends on whether it can be universalized or imagined as a universal law. An alternative formulation stipulates that a maxim is ethically acceptable if it treats humans as ends in themselves, not merely as means. The approach is called deontological (from Greek *deon*, "obligation, duty") because it concentrates on the duty-bound intention of the agent with little regard for consequences.

A final group of ethical theories often discussed in information systems discounts both the relevance of consequences and of duty, but instead concentrates on the individual. This is the family of virtue ethics, where the theoretical distinction between good and bad is not made on the grounds of external aspects of an action, but instead based on the way in which an action reflects on the character of the individual. This family of ethical theory goes back to classical antiquity – to Plato (1945) and Aristotle (2007) – and finds its current instantiations in contemporary virtue ethics (MacIntyre, 2007).

These three approaches are important because they are the dominant theories currently discussed and they capture much of our moral intuition. At the same time, one needs to see that there is a wealth of other ethical theories that could be considered. Many of these combine aspects of the above theories or try to overcome particular weaknesses (Ross, 2002). Aristotelian and neo-Aristotelian theories of virtue ethics (Bynum, 2006), feminist ethics of care (Adam, 2005), and ethical approaches more specifically aimed at technology, such as disclose ethics (Brey, 2000; Inrona, 2005), are particularly influential in discussions of ethics in computing and information systems. There has also been some debate about the limitations and applicability of traditional ethical theories in the information society (Floridi, 1999; Floridi & Sanders, 2002).

2.3.1. Ethical Theory in Information Systems

The research described in the last two major sections has shown that moral intuitions and explicit morality are not always consistent and, even where they are, can be opposed to researchers' assumptions or prevailing law. Thus, there have been several attempts to provide sound ethical theories for the use or application in IS. Given the richness of ethical theory outside of IS, such work often takes existing bodies of literature in ethics and imports them into IS. Smith & Hasnas (1999) were among the first to do this. They apply several business ethics approaches to IS. More specifically, they compare the stockholder theory, the stakeholder theory, and the social contract theory to businesses and discuss how these relate to IS.

There are many more ethical theories beyond those of business ethics. Even in business ethics, there are more theories than the three just enumerated. There have been many attempts to apply these or make them usable to the area of IS. However, most such work is done outside the field of IS, notably in the area of computer and information ethics (Brey & Soraker, 2009; Floridi, 2010; Johnson, 2001; van den Hoven, 2008; van den Hoven & Weckert, 2008).

In parallel to a richer discourse on ethical theory and IS or ICT in other fields, one can observe a renewed interest in this topic area in the more bounded field of IS. A recent *Journal of the Association for Information Systems* special issue (Bryant, Land, & King, 2009) explores several ethical approaches. Ethical theory applied to IS includes postmodern ethics (Sarker, Fuller, & Chatterjee, 2009), Habermasian discourse ethics (Mingers & Walsham, 2010), and also novel ethical approaches such as disclosive ethics (Light & McGrath, 2010). The breadth of this debate is increasing with attempts to understand the complexities of ethics' cultural aspects (Martinsons & Ma, 2009). At the same time, one can still observe more instrumental work on ethics as a vehicle of professionalism (Martinsons et al., 2009) or as a means to encourage organizational change (Culnan & Williams, 2009).

A difficult investigational topic is the relationship between ethical reasoning and moral practice. It raises numerous epistemological challenges and has to make strong assumptions about the rationality of agents. Nevertheless, it is important to find out why individuals think that certain acts or rules are morally appropriate and how they construct their relationship between ethics and morality, and, consequently, there has been research in this area (Myrsky, Siponen, Pahlila, Vartiainen, & Vance, 2009).

2.4. Level 4: Reflection and Meta-Ethics

The different ethical theories offer different reasons why something would be considered good or right and may lead to conflicting recommendations. This next higher level for ethics is often called meta-ethics in philosophy (Marturano, 2002; Sayre-McCord, 2007). In this paper, I call it reflection because it is the next higher level of reflection that relates to normative issues.

Meta-ethics can establish relationships between different ethical theories and find ways to mediate between them or allow communication about their differences. Meta-ethical debates attempt to make sense of contradictory or inconsistent ethical positions. They tend to focus on conceptual basics: on what we mean by good, evil, right, or wrong. They explore how ethical theories evaluate and establish their positions on morality. Meta-ethical debates can also cover issues that are pertinent to many or all ethical theories, such as difficult questions concerning who can be a moral subject or why such a subject would want to act morally. Meta-ethics has a dialectical nature and rarely leads to general consensus. Its purpose is to extract disagreements, conflicts, or contradictions with a view to facilitate discourses and, where possible, temporary closure. One reason why meta-ethical reflection is needed is that different ethical theories may evaluate moral norms differently and support different positions or actions. To return to the example of information systems used to collect data on employees, the evaluations from different ethical theories are not easy to predict. For example, a utilitarian analysis, depending on how utilities are measured and compared, may decide that such a use of technology is or is not morally permitted.

Meta-ethics is a philosophical endeavor in which most IS scholars have only a limited interest. There is, however, at least one aspect of meta-ethics that is relevant to IS, namely the reflective exploration of the conditions of application of ethical judgments and moral views. Meta-ethics as the higher level of reflection of ethics has to take into consideration whether and in what way the evaluations and recommendations of ethical theories can be put into practice. If, for example, the moral issue is whether customer data should be collected using an IS, then a utilitarian position may hold that this would be acceptable, whereas a contradictory Kantian view might be that it would be an infringement of human dignity and thus unacceptable. Meta-ethics can now attempt to reconcile these different views, explore their differences, or find another ethical position from which to discuss the issue. Importantly, such a meta-ethical discussion needs to relate the different levels of abstraction discussed so far. This means that we need to consider not only theoretical ideas, but also practices,

local perceptions, and different views. This means that the abstract norm has to be put into a local and practical context, which requires that those who are affected are heard and allowed to influence the eventual outcomes.

2.4.1. Reflection and Meta-Ethics in Information Systems

Engaging with ethical theory has not led to a clear solution of normative dilemmas or diverging intuitions or norms. This is to be expected given the history of philosophical ethics. In light of the multiplicity of ethical theories and moral views and convictions, one way forward is to attempt to find a higher level of abstraction that allows for a broader understanding and contextualization of the different ethical approaches.

One way of engaging in such meta-ethical work is to describe and compare different ethical theories. Indeed, some work on ethical theory includes such meta-ethical analyses (Smith & Hasnas, 1999), while other work concentrates exclusively on it (Bull, 2009). Meta-ethics is a topic of philosophy but not a core concern of the vast majority of IS scholars. It is, nevertheless, important for IS scholars interested in normative topics because it points to a core challenge of such research. The challenge is how to use normative insights and understandings that range from implicit intuitions up to elaborate ethical theories, how to live with their inconsistencies and contradictions, and yet how to use them to improve the status quo. To put it differently, one can ask how one can move from a descriptive understanding of norms to useful and practical prescriptions. Part of the answer is to establish governance arrangements that allow individuals to develop and voice their moral views and to engage with others in ways that are conducive to mutual understanding (Lenoble & Maesschalck, 2010).

In the recent past, there have been attempts in IS to engage in this higher level reflection. These attempts explore ethical theories or research approaches that allow for such incorporation of material morality and sound theory. One notable attempt was Mingers & Walsham's (2010) paper that introduces Habermasian discourse ethics (Habermas, 1983, 1991) to IS. Discourse ethics's principal and characterizing aim is for all stakeholders to reach a consensus about the moral evaluation of a situation. Based on Habermas's (1981) theory of communicative action, discourse ethics assumes that an ideal discourse would lead to a consensus on moral matters and to ways of engaging with them. This paper cannot go into discourse ethics in any depth. Suffice to say that discourse ethics seriously considers the fact that people have different moral views and intuitions. It provides a mechanism that allows those individual differences to lead to a collectively acceptable outcome by relying on cooperation of the individuals involved.

A further approach put forward to provide a way to ethical reflection in IS is that of critical research. Several observers have recently noted that critical research requires an explicit normative commitment from its practitioners (Myers & Klein, 2011; Stahl, 2008a). Critical research is based on the normative premise that the world can be improved and that research should contribute to such improvement. The critical approach is furthermore characterized by its self-reflection; that is, its explicit attention to the assumptions on which it is based (Cecez-Kecmanovic, 2001; Doolin & McLeod, 2005; Richardson & Robinson, 2007). This reflexive nature of critical research, combined with its normative basis, requires critical IS scholars to take into account moral positions, to consider how these influence individuals' views of what is desirable, and to critically engage in negotiating these different normative views.

These two related approaches of discourse ethics and critical research give initial pointers toward possibly appropriate ways to move toward a higher level that allows dealing with the cacophony of moral stances without falling prey to simplistic solutions. However, they are far from fully developed. What these examples show is that there are activities in this area in the IS discipline. If IS wants to identify and address ethical issues, then these are promising starting points on which to build further work.

I have now developed the normative model with its four different levels, and Figure 2 can graphically represent its development in IS. Finally, IS scholars have taken initial and tentative steps to explore the next step – that is, how ethical self-reflection can be incorporated into research in IS.

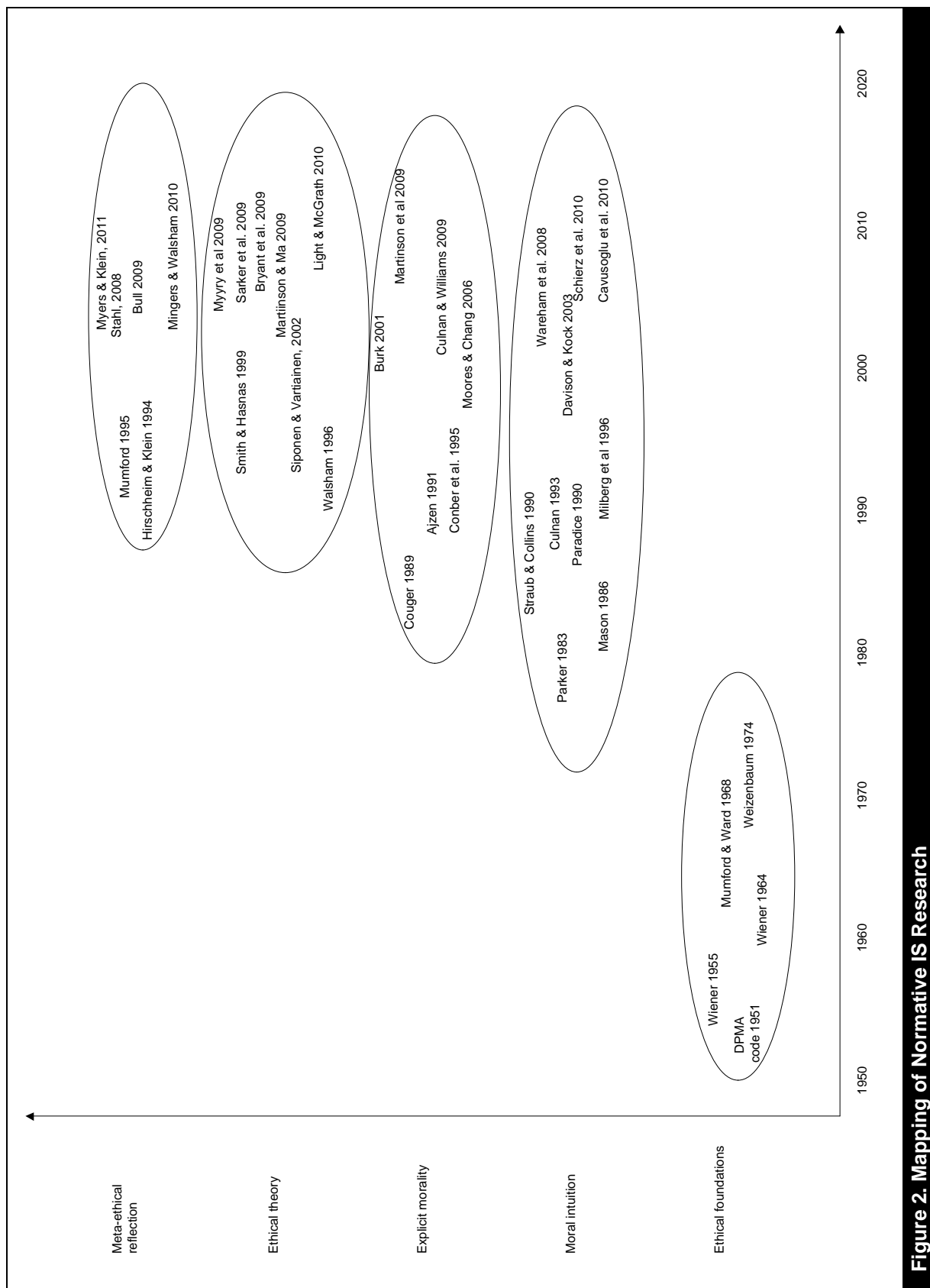


Figure 2. Mapping of Normative IS Research

While Figure 2 cannot claim scientific exactness, and while there may be scope for debate about the exact placing of the different publications, it gives a strong visual indication that there are developments in normative IS research and that there is a trend towards engaging with higher level abstract work. At the same time, research on the descriptive side of morality continues to be undertaken.

In order to avoid undue criticism, it should be repeated that this is not an exclusive model or that it does not claim to cover all aspects of normativity. The model shows four important aspects of normativity that can be found in IS research. Another important aspect is that, while the model suggests a sort of hierarchy, this should not be seen as an evaluation. Ethical theory is not more important or "better" than moral intuition or explicit moral statements. The hierarchy refers to the frequency in which such issues arise as well as the level of abstraction involved. The four different levels refer to one another and are often present simultaneously.

A final cautionary remark is that this model does not lend itself to produce "right" answers. Normative questions tend to be contested and complex. They involve a difficult mix of descriptive and non-descriptive aspects. There is no algorithmic way to come to clear prescriptions on what should be done. This statement does not imply a moral relativism (which, in terms of this paper, would be a position in the category of "ethical theories"), but instead points to the fact that normative issues are always enacted and permanently subject to change due to different contributions to pertinent discourses.

3. Application Areas

On the basis of this abstract conceptualization of the role of normativity in IS, this paper now proceeds to look at particular application areas. This demonstrates the usefulness of the normative models by exploring some well-known issues in more depth. Before proceeding to the areas of privacy and intellectual property, the section briefly explores the degree to which any of the ethical issues treated in IS are relevant and of interest to moral philosophy more generally.

3.1. The Relevance of IS to Ethics

Thus far, this paper takes ideas from moral philosophy and develops a model of normativity that is then applied to IS. It is legitimate to ask whether this constitutes a sufficient contribution to knowledge. There is a long-standing tradition in IS that argues that output from the IS discipline should be a contribution to the reference discipline and should be publishable in the reference discipline (Keen, 1980). The present paper adopts aspects of this position by using the term "reference disciplines" even though this idea of parent-child relationship between the reference disciplines and IS is problematic (Baskerville & Myers, 2002).

Nevertheless, it is useful when assessing the present narrative's relevance to ask whether scholars who focus on moral philosophy would benefit from engaging with the model developed in this paper. The normative model developed above can be seen as a unique contribution to ethical theory that does not exist in its current form in the literature, even though it is of course built on similar categorizations. It addresses conceptual shortcomings in previous empirical research on normative issues. It explores the relationships between IS, technology, organizations, and ethics more generally. Put differently, is there anything in technology or modern organizations that raises normative issues that existing approaches to ethics cannot solve? This is a difficult question that has been discussed extensively in similar forms in all fields of applied ethics such as business ethics or bioethics. It has spawned a debate in computer ethics around the concept of uniqueness (Tavani, 2002). The present paper does not require a strong position on this issue but agrees with the view that modern technology and its organizational use raises issues that older approaches to ethics and morality did not have to deal with. Examples of such issues with relevance to IS include the discussion about whether novel technologies may create new types of entities that may have moral values or responsibilities, such as autonomous agents (Allen, Smit, & Wallach, 2005). Some authors suggest that information (Capurro, 2008; Floridi, 2006) may have moral value. On a more practical level, one can observe or predict changes to individual or collective behavior caused or affected by hitherto unknown quantities of information and ways of processing it. As such, the following subsections explore privacy and intellectual property to see how the field of IS has dealt with them.

3.2. Privacy

Privacy is an important aspect of interpersonal relationships, and concerns about privacy are probably as old as humanity. The technical capability of storing one's image without one's consent as afforded by the camera led to the initial legal codification of privacy as an aspect of a broader "right to be let alone" (Warren & Brandeis, 1890). Privacy was recognized as an important concern in information technology at approximately the same time that IS began to emerge as a recognizable entity (Westin, 1967). Not surprisingly, it was the first concept in Mason's (1986) PAPA (Privacy, Accuracy, Property, Accessibility) acronym and has played an important role in normative IS research ever since.

Moral intuitions about privacy as well as explicit morality can be easily researched. This is reflected in research on privacy in IS; for example, Straub and Collins (1990) look at the possible liability that arises from piracy, proprietary databases, and privacy. Measuring privacy perceptions by individuals remains a strong stream of IS research (Culnan, 1993; Smith, Milberg, & Burke, 1996).

As a ubiquitous moral issue, privacy is subject to a range of different ethical interpretations. Thus, it is not surprising that a rich landscape of theoretical descriptions has developed (Tavani, 2008). What is interesting to note is that much of this theoretical reflection and justification of privacy is done outside of the field of IS. Even where individuals who could be counted among IS scholars do conceptual work on privacy, such as Introna (2003), they tend to publish in outlets outside of mainstream IS. Such more abstract debates are nevertheless of core importance to IS because they inform us about the relevance and consistency of moral positions. Without an ethical and theoretical grounding of privacy it is impossible to come to a well-grounded position on, for example, whether privacy is an absolute value or a relative one, whether it is related to ownership in data, or whether it is a human right. Each of these have practical implications for the use of IS for data collection and, thus, for individual privacy.

Privacy concerns have long been established and, as a consequence, they have developed into parallel discourses in other fields. Privacy has led to significant legislative activities around the globe, which has resulted in much research from different angles such as sociology and legal studies. Legal concerns with privacy are typically expressed in data protection legislation; for example, the European Directive 95/46/EC, which obliges all EU Member States to legislate strict data protection. There are numerous scholarly journals that deal exclusively with privacy concerns. Some of this activity is then reflected back in mainstream IS work (Culnan & Williams, 2009; Smith et al., 1996).

On the last level of abstraction, the level of meta-ethics and reflection, one can find much work on privacy. Tavani (2008) and others offer summary accounts of different ethical positions. Meta-ethical considerations are crucial for understanding data protection legislation because one can argue, for example, that the different data protection regimes in the US and EU are at least partially a consequence of different ethical positions (Stahl, 2008b). What is largely missing in the IS discipline, however, is the ethical reflection on the meaning of the more prevalent description of morality. While meta-ethical discussions are sometimes referenced in normative IS work, they are generally not in the centre of attention.

A similar picture can be observed in the second field of application – intellectual property – which I discuss in Section 3.3.

3.3. Intellectual Property

Electronic data and information raises a number of interesting legal and ethical issues that are far from solved. Topics of debate include the moral evaluation of user activities, such as content downloading, as well as ownership in data, information, content, or software.

The issue of how intellectual property and its moral status are perceived can intimately affect the interests of organizations and it is, therefore, no wonder that of IS scholars have shown an interest (Conger, Loch, & Helft, 1995). This is particularly true for new developments that can change business models, such as with the open source movement (Agerfalk & Fitzgerald, 2008; Koch, 2005; Sharma, Sugumaran, & Rajagopalan, 2002; Stewart & Gosain, 2006).

While attitudes towards intellectual property are important to understand, they need to be linked to a conceptual understanding of the justification of property in general and the influence that information technology has on this. Briefly, property in general can be defined as a “bundle of rights” (Velasquez, 2002, p. 433), which includes the rights to exclusive use, to sell, to trade, or to generate income. This raises the question of the origin of the right and different positions in this regard posit different ethical theories. Utilitarian justifications of property hold that the overall state of society is better because of the attribution of rights; others hold that property rights are intrinsically linked to the individual who created the property.

While matters of physical property are largely settled in democratic societies, there are significant differences between physical and intellectual property, and information technology changes numerous important aspects (Spinello & Tavani, 2004). Intellectual property is non-exclusive, which means that one person’s use of it does not exclude another person’s use. Its cost structure is vastly different from physical property with the marginal cost of additional copies being negligible compared with the cost of original production. These differences between physical and intellectual property lead to diverging ethical evaluations of the various ways of dealing with them. This can explain to some extent the fact that intellectual property and physical property are treated differently with numerous users being willing to infringe intellectual property regulations who would not do so for physical property.

The different ethical positions lend themselves to meta-ethical analysis, and much work on IT and intellectual property has focused on such meta-ethical and conceptual issues that arise from the justification of intellectual property and its practical implementation and use. Just as in the case of privacy, this topic is so important that it has led to a raft of legislation that includes innumerable international treaties and conventions. There are numerous journals that deal, mostly from a legal angle, with intellectual property. Meta-ethical analyses influence legal scholars as much as they do philosophers. And, again, just as is true for privacy, an understanding of the meta-ethical perspective is required to understand and evaluate not just ethical theories but also moral views and intuitions.

Table 1 briefly summarizes some of the literature this paper discusses. The table’s purpose is to show the distribution of normative work in IS, which then allows for a discussion of current shortcomings and future research agendas in the area of normativity and IS. For each paper, the table contains the short reference, the topic, an indication of the normative level, the research approach, and the paper’s key message. The table contains only those papers that are clearly located in the field of IS and purposely excludes papers from other disciplines or such publications that precede the field of IS as defined above.

Table 1. Key Papers on Normativity and IS

Reference	Topic	Normative level	Research approach	Key message
(Mason, 1986)	Privacy, Access, Property, Accessibility	Explicit morality	Conceptual, research commentary	Emphasis on the moral problems associated with IT and the information society, awareness raising.
(Straub & Collins, 1990)	Liability, IP, privacy	Explicit morality	Conceptual analysis, vignettes	Provides recommendations for IS managers to avoid legal liability.
(Culnan, 1993)	Privacy perceptions	Moral intuition / Explicit morality	Survey	Measures consumer attitudes related to secondary use of personal information.
(Smith et al., 1996)	Attitude to organizational privacy practices	Moral intuition / explicit morality	Survey	Development of an instrument for measuring individual privacy concerns.
(Smith & Hasnas, 1999)	Business ethics application in IS	Ethical theory	Conceptual, application to published case	Explores the application of stockholder theory, stakeholder theory and social contract theory to problems in IS.
(Stewart & Gosain, 2006)	The role of values in Open Source	Moral intuition / explicit morality	Quantitative and qualitative survey	Ideologies, including embedded values and beliefs, have a strong influence on the success of open source projects.
(Stahl, 2008a)	The role of ethics in critical research	Moral theory / meta-ethical reflection	Conceptual	Critical research is based on and embeds strong normative assumptions that require explicit reflection.
(Martinsons et al., 2009)	Ethics in IT professionalism	Explicit morality / ethical theory	Survey	Cross-cultural comparative study of morality of IT professionals based on Kohlberg's theory of moral development.
(Sarker et al., 2009)	Ethics in IS development	Ethical theory / meta-ethical reflection	Conceptual, demonstrated by case	Application of postmodern ethical theory based on Bauman to IS development.
(Culnan & Williams, 2009)	Ethics and privacy	Explicit morality	Conceptual, demonstrated by case	Review of privacy regulations, embracing ethical roots of privacy can help organizations comply.
(Mingers & Walsham, 2010)	Discourse ethics	Ethical Theory	Conceptual, applied to published cases	Argues for the relevance of Habermasian discourse ethics, supports the argument by application to case.
Myers & Klein, 2011)	Principles for critical research in IS	Meta-ethical reflection	Conceptual, use of published studies	Demonstrates normative basis of critical research; reflects on implementation via the concept of emancipation.
(Introna & Hayes, 2011)	Sociomaterial approach to normativity	Explicit morality / ethical theory / meta-ethical reflection	Conceptual, interpretive	Explores a sociomaterial account of morality to understand how moralities are enacted in different contexts.

4. Discussion and Conclusion

This paper develops a model of normative research in IS based on four levels: moral intuition, explicit morality, ethical theory, and reflection and meta-ethics. It shows that all of these levels of normativity are relevant and can be found in the IS literature.

Looking at the examples of privacy and intellectual property one can see, however, that the higher levels of normative research tend to be undertaken outside of the field of IS. The relevance of IS is thus confined to providing data for other researchers. This is not only unsatisfactory in terms of the standing of the field, but it is also problematic because it neglects significant contributions to some normative issues that IS has already made over a long period of time. One particular area of relevance relates to the meta-ethical reflection on how ethical principles can be implemented into organizational morality. There are numerous possible views on this, but one that appears to have gained momentum is to broaden the democratic and participative input into research and technology development. In the European context, this is currently being promoted under the heading of "responsible innovation" (European Commission, 2011; Kjolberg & Strand, 2011; Owen & Goldberg, 2010). While the debate on responsible innovation is just beginning, it is clear that the IS discipline has an enormous wealth of experience in this area of participative work (Adams & Blandford, 2005; Cecez-Kecmanovic & Janson, 2009; Hirschheim & Klein, 1994; Mumford, 1995, 2003; Mumford & Henshall, 1978; Olphert & Damodaran, 2007). The challenge is to explicitly link these approaches back to ethical theories and moral practice. Generally, previous work in these areas, even the conspicuously named ETHICS methodology developed by Mumford and her collaborators, lacks a strong grounding in ethical theory and fails to undertake meta-ethical reflection (Stahl, 2007). Once this conceptual lacuna is filled, IS researchers could make important contributions by empirically exploring whether and in what way such participation meets normative expectations.

These observations suggest that there are areas where engagement with normativity in IS is currently underdeveloped, which leads to the implications for the field discussed in Section 4.1.

4.1. Implications for IS

Not every IS researcher is explicitly interested in normative issues. Information systems research largely takes place in profit-oriented organizations, and many IS scholars may sympathize with Milton Friedman's (1970) dictum that it is the social responsibility of business to increase its profits. This would seem to imply that IS could legitimately ignore issues of normativity. Such a position would miss the important point, however, that normativity is an integral aspect of any social interaction, and scholars and practitioners ignore it at their peril. Technology acceptance and adoption, to name a topic widely researched in IS, depends on numerous issues, but moral perceptions and their ethical justification play an important role. The business world is part of greater society and has to conform to existing expectations of behavior. One could argue that the constitution of market economies is based on moral principles (Smith, 2008).

Moreover, there is an intrinsic link between research and normativity. All research aims to create new knowledge. Such new knowledge, whether applied or fanciful, is generally perceived to be a (morally) good thing that is open to varying ethical justifications. It may be good because it leads to economic growth and prosperity, or just because it helps us to understand the world. In many cases, research is funded by public resources and should, therefore, consider public interests. While there are thus a number of normative principles involved in research, one can state that most, if not all, research has some sort of moral relevance and, thus, requires the researcher involved in it to be able to reflect on its moral position. This means that the researcher needs to be aware not only of the different moral intuitions and explicit moral views, but also of ethical theories and meta-ethical reflection.

In addition to this general awareness of normativity, IS scholars engaged in research on normative issues need to have a deeper knowledge of approaches, methods, and theories. While some research on moral intuition or explicit morality does not differ much from any other empirical research describing respondents' views and perceptions, work on normative issues raises some problems that social scientists do not normally encounter. One such problem arises from the relationship of norms

and facts. The justification of normative statements must be drawn from normative premises and cannot be deduced from observation. This is an idea that is usually linked to Hume (2004) and Moore (1999). Drawing a normative conclusion from descriptive research is often called the "naturalistic fallacy". A different way of saying this is that "ought" cannot be deduced from "is" (the is-ought problem). The interplay of facts and norms is more complex than can be developed here. To give an example of research on ethics in IS that commits the naturalistic fallacy, one could imagine a project that investigates people's attitudes to employee surveillance and, based on the findings that the majority of respondents involved find the practice acceptable, would conclude that it is morally permitted. Such conclusions can still be found in IS research and they demonstrate that there is insufficient awareness of the complexity of normativity.

4.2. Further Research

This paper argues that one can observe an increasing amount of sophistication in the engagement of the IS field with regards to normative issues. At the same time, this analysis supports the contention that the IS community has not reached its potential in this regard and that a further development of the way in which normative issues are addressed is now in order. This refers in particular to work on higher levels of abstraction. It is no longer good enough to just study given moral preferences. These need to be studied in conjunction with the underlying ethical theories. The IS community has started to explore the rich body of ethical thinking and to look for ways of making such theories relevant for IS research and practice. Some research areas that are important to examine and that require further research are listed below:

- **Shared ethical positions across IS:** It is unlikely that, in a pluralistic modern society, we will converge on moral intuitions and explicit moralities as debates surrounding privacy and intellectual property indicate. This does not mean, however, that the only remaining option is moral relativism. Instead, engaging with ethical theory and meta-ethics may point ways towards what Rawls (1987) calls "overlapping consensus"; that is, shared views or shared ethical perspectives. An important aspect is that of the overall role of IS research. The vast majority of IS research is functional in that it takes for granted the socio-economic system in which organizations use technology and does not question the justification of distributions of resources and power. While this position has long been challenged by critical scholars, the present paper suggests that it may also be problematic from a normative position and that such a normative position may extend to other, non-critical work.
- **Governance, implementation, relevance:** The importance of meta-ethical reflection in the overall scheme of normative work suggests that scholars interested in normative aspects need to go beyond description of morality and its theoretical review. Reflecting on normativity implies the implementation of moral positions are important. Does a particular IS reflect moral views and allow for ethical justification? What are the governance structures that govern the system and how do they reflect moral preferences? Which moral views are relevant, how are they reflected in the system and the organization, and how does this relate to the technical and organizational underpinnings? Such questions are theoretically important and practically shape all aspects of IS.
- **Policy, law, and responsibilities:** While the preceding points mainly deal with IS in organizations, this final recommended research area looks at the larger societal context of IS. Novel technologies are developed and implemented in existing social and legal frameworks, which affects numerous aspects of normativity. Both privacy and IP are good examples of this. IS researchers tend to take this framework for granted and either fail to engage with it at all or accept it as given. However, the detailed empirical insights into the use of technology, in conjunction with a deeper understanding of normativity, would allow them to go beyond this and influence policy makers, drive policies, and define responsibilities. Their specific insights should make them sought-after partners in policy development and active shapers rather than passive observers of the larger socio-cultural environment of IS.

Overall, the present analysis of normativity in IS shows that the topic is of central importance the discipline and that the understanding of such normative issues in the IS community is developing. While IS research is strong in those areas of normativity that are open to established empirical methods, there is no strong understanding yet on how theoretical insights gained through such normative research can be translated back into IS practice. By developing the normative model, this paper contributes to a theoretical framework that is both philosophically sound and practically relevant in IS. It can contribute to a deeper understanding of normative issues and thereby stimulate research in the areas outlined above. This should strengthen the field as a whole and lead to more normatively sensitive, and thus more acceptable, uses of information systems in all application areas.

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