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RESEARCHING ETHICS AND MORALITY IN INFORMATION SYSTEMS: SOME GUIDING QUESTIONS

*Rechercher l'éthique et la moralité dans les systèmes d'information : quelques
questions directrices*

Completed Research Paper

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Abstract

Research on ethical and moral issues in information systems is increasingly recognized as legitimate and important. It raises a number of problems, however, that are often difficult for IS scholars to recognize and address. This paper therefore aims to provide guidance for IS scholars interested in undertaking or evaluating ethics-related research. The guidance is given in the form of questions that should be considered in order to avoid unnecessary mistakes and duplication of efforts. The questions presented cover the concept of ethics, the level of normative engagement, the relationship to prior work within IS and adjacent disciplines, the consistency of different aspects of ethics and the justification of normative conclusions. For each question the central issues under debate are elaborated and then the relevance of the question for IS research is discussed. The set of questions provides a guiding framework that will contribute to the improvement of the quality of ethics-related research in IS.

Keywords: ethics, research, information systems, guideline

Résumé

La recherche sur les dimensions éthiques et morales dans les systèmes d'information est de plus en plus reconnue comme légitime et importante. Elle soulève des problèmes qui sont souvent difficile à traiter pour les chercheurs en systèmes d'information. Le présent document vise à fournir des orientations pour les chercheurs s'intéressant à ces problèmes. Le guide développé ici se présente sous la forme de questions, qui constituent un cadre pour l'amélioration de la qualité de l'éthique dans la recherche en SI.

Abstract in German

Forschung über ethische und moralische Fragen im Bereich der Informationssysteme wird zunehmend als legitim und wichtig anerkannt. Solche Forschung führt zu einer Reihe von Problemen, die für IS Forscher oft schwierig zu erkennen und lösen sind. Dieser Artikel soll als Orientierungshilfe für IS Forscher dienen, die sich für ethische Aspekte der IS-Forschung interessieren. Die Richtlinien, die hier entwickelt werden, haben die Form von Fragen, die einen Rahmen darstellen, der zur Verbesserung der Qualität von IS Forschung in Bezug auf Ethik führen soll.

Introduction

Ethics is increasingly recognized as an appropriate topic of research in information systems (IS). There is a long history of research on ethics and computing going back to the very development of digital computers (Wiener, 1954). Within the field of information systems there are comparatively few examples of papers on ethics but the overall relevance of ethics in IS seems to be rising, as evidenced by the title of the 2008 International Conference on Information Systems ("Ethics, Design and Consequences of IT") but also special tracks (e.g. "Researching Ethics in Information Systems" at the 2008 European Conference on IS) or special issues in top IS journals (e.g. "Researching Ethics in IS" in the *Journal of the Association for Information Systems*, to be published in 2009). The scope of ethics in IS is wide and can include topics such as privacy, intellectual property, employment relationships, design decisions, or the changing role of humans in society. Many or most aspects of IS are either influenced by ethical views or they can have an influence on rights, obligations, or utilities.

The topic of ethics raises ontological, epistemological and normative challenges that other, more established, topics do not necessarily have to contend with. Furthermore, there are issues arising out of the complex relationship between ethics and research. At least three aspects of this relationship are of importance and influence approach and outcomes of research activities: First, there is the ethical intention of the researcher. In many cases researchers interested in ethical issues feel strongly about these and are motivated by their views to do something ethical, which results in the research project. Second, there is research on ethical matters. Such research can be conceptual or empirical, investigating what is or should be good or right or what people do or should do. Third, there are ethical aspects of conducting research on ethical issues. All research on humans can raise ethical questions and there are different ways of addressing these. Research on ethics can be particularly problematic in this respect and require specific attention. Textbooks on IS in general (e.g. Laudon & Laudon, 1999) or on IS research (e.g. Oates, 2006) tend to touch on some aspects of the relationship of IS and ethics but usually do this in a perfunctory fashion.

These different aspects of the relationship of ethics and research in IS are often related, for example where an ethical intention to do the right thing leads to a research project investigating current practices, which is then used to make specific recommendations. The ethics review of such research will then have to take into consideration intention, outcomes, and topic in order to ensure the research itself does not cause ethical issues.

Despite the growing importance of ethics in IS, there is a lack of guidance on how to do research on ethics. There is a wealth of guidance on how to conduct mainstream positivist and quantitative research in IS. Scholars engaged in research approaches that are less widely spread, such as interpretive research (Klein & Myers, 1999) or design science research (Hevner et al., 2004), have attempted to provide guidelines for research in these traditions, which will help researchers create sound research design and which will help reviewers and editors to assess the quality of the work undertaken. Research on ethics does not easily fall into any of the dominant categories or paradigms in IS and thus cannot always profit from existing advice.

Apart from lacking advice with regards to ethics and research, a problem seems to be a general lack of awareness of ethical ways of reasoning among IS scholars. Calls for more attention to ethics in IS have been raised for some time (e.g. Walsham, 1996) but they have not been heeded. One can speculate that reasons for this have to do with reference disciplines from which IS scholars draw, many of which are not particularly close to ethics. The continued dominance of the positivist approach may further cloud some of the interesting aspects of ethics in IS, as will be developed below. Overall, it would be worth investigating why ethics continues to be poorly represented in IS, but this is a question that leads beyond the confines of this paper.

The current paper aims to improve the quality of ethics-related IS research by discussing some of the main and recurring issues. Such guidance is much-needed, in particular because many IS scholars who have an interest in ethics have only limited knowledge of the extensive literature on ethics as moral philosophy. At the same time such work can raise considerable problems in its own right. Among them there are ethical issues arising from potential regulations on research on ethics. The current paper is constructed as a set of questions, rather than an algorithmic piece of advice. Each of these questions requires careful deliberation and explicit reasoning. Most of them are of relevance for research not concerned with ethics but the concept of ethics raises particular angles. Not all of the questions will have to be answered expressly in each piece of research as the answer will in many cases be implicit. This implicit nature on the view of some of these questions can be problematic, however, and I argue that in most cases research will benefit from explicit attention to these questions.

The argument will be presented as follows: In the next section, seven guiding questions that pertain to different aspects of ethics and IS research are explored. In each case the central philosophical issues are discussed and the

relevance of the question to IS research is subsequently explored. The conclusion reiterates the interconnection of the question and the importance of paying simultaneous attention to all of the questions for IS research to be academically and philosophically tenable.

Guiding Questions for Research on Ethics in IS

This section will list and discuss the questions that require specific attention in research on ethics in IS. The questions cover conceptual issues, questions of research aim and design as well as questions of consistency of approach, paradigm, methodology etc. For each question, the content of the question will be discussed first and some salient problems arising from a lack of attention to the question will then be flagged up.

Which Concept of Ethics is Used?

The question of the concept of ethics is arguably the most important one that any research on ethics needs to clarify. The problem here is that ethics is a widely used term and most individuals have a relatively clear view on what they believe to be ethical. At the same time scholars need to be aware of the fact that ethics or moral philosophy as one of the main branches of philosophy has been discussed for millennia and the literature on philosophical ethics is too extensive to allow anyone a comprehensive understanding. The complexity of ethical debate creates the temptation for IS researchers to ignore moral philosophy and work with a common sense concept of ethics, where behaviors or views are accepted as ethical if respondents perceive them as ethical. Such an approach is not tenable and will not stand up to scrutiny from ethicists. This is of course an ongoing problem of IS research, which often borrows terms or theories from other disciplines, appropriates them out of their original context and then runs the risk of working with misunderstandings or outdated ideas.

Central Issues

Most research on ethics in IS offers a definition of ethics. This is typically confined to a description of the main ethical theories, i.e. utilitarianism and (Kantian) deontology. Utilitarianism is an ethical theory going back to Jeremy Bentham (1748), James Mill (1806), John Stuart Mill (1809) and others who wanted to render the enterprise of moral philosophy more rational and scientific, emulating the success of 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 decision. The ethical decision would be the one that maximized 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 (1785, 1795), 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*, duty) because it concentrates on the duty-bound intention of the agent with little regard to consequences.

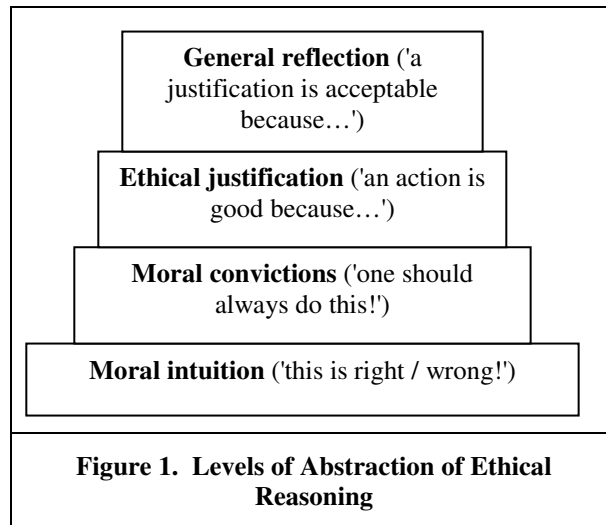
These two approaches are important in that they are clearly the two dominant theories currently discussed and they capture much of our moral intuition. At the same time, one needs to see that there is a wealth of other ethical theories around that could be considered. Influential with regards to computing and information systems are Aristotelian and neo-Aristotelian theories of virtue ethics (Adam, 2008) feminist ethics of care (Adam, 2005) or ethical approaches more specifically aimed at technology, such as disclosive ethics (Introna, 2007). There has also been some debate of the limitations and applicability of traditional ethical theories in the information society (Floridi, 1999; Floridi & Sanders, 2002).

One particular issue caused by limiting the scope of ethics to the main theories has to do with the level of abstraction under consideration. It is easy to see that the term 'ethics' refers to different levels of thought. On the most basic level, humans have ethical intuitions which leads them to believe that something is good or bad. Such ethical intuitions in many cases guide our behavior but they can become problematic. There may, for example, be inconsistencies of different moral intuitions (e.g. 'intellectual property in this software should be protected' and 'students in our local school should have free access to the software'). In such a situation we will often recur to more general ethical rules to allow us to compare our options (e.g. 'stealing is bad' or 'giving to the poor is good'). Where these general rules, which are typically derived from experience or socialization, raise problems, the next level of

abstraction refers to ethical justifications of rules. This is the level where one can find theories such as the aforementioned utilitarian or deontological ethical theories. This level of abstraction can inform us on limitations or conditions of moral rules. A utilitarian analysis might for example point out that intellectual property protection is only ethically desirable where it leads to the maximization of overall utility and reflect on the conditions under which this may be the case. On an even more abstract level, ethical reflection will consider the differences between ethical theories and their implications. It is conceivable, for example, that intellectual property protection finds different justifications and different limits in utilitarian and deontological thinking. General reflection then compares and discusses the different ways of reasoning.

In order to avoid some of the problems caused by these different levels of abstraction it is useful to distinguish between the concepts of 'ethics' and 'morality'. Elsewhere (Stahl, 2008), I have shown that there are different ways of defining this distinction in the literature on moral philosophy. Following what I term the 'German tradition', one can see morality as the set of factual social rules or norms that are accepted within a certain group or society whereas ethics is the reflection and justification of such rules or norms. This bipartition does not do complete justice to the more complex levels of abstraction. Figure 1 shows a more fine-grained approach to the concept of ethics. The broadest concept of ethics, shown at the bottom of the pyramid, refers to moral intuitions, which most of us have when considering some ethically relevant issue. Such moral intuitions, when challenged, need to rely on a more general level of abstraction, which I have called "moral conviction". Such moral convictions represent our general perceptions on what is right and wrong. Moral convictions are still relatively idiosyncratic and require more general ethical statements, here called "ethical justifications." Such ethical justifications are of a general nature and explain the reasons for which moral convictions should be held. On an even higher level of abstraction an agent may require recourse to principles of "general reflection." Such principles explain the reasons according to which ethical justifications are deemed to be acceptable. The circle of justification could, of course be continued *ad infinitum*. I believe, without being able to argue the point conclusively here, that at least these four levels can be observed in everyday practice and literature on ethics. They are clearly related but not identical. Distinguishing between them can help avoid some problems arising due to the confusion of social norms and their justification, of acceptance and acceptability of norms and values.

The literature, even in moral philosophy, often fails to clearly delineate the different uses of terms related to ethics. In order to minimize this confusion but remain within the accepted use of terms, I will continue to use the distinction between ethics and morality according to Stahl's (2008) definition for the remainder of the paper.



Relevance of the Question

The different views on the definition of ethics, ethical theories and levels of abstraction complicate any attempt to research ethics in IS. In practice they are closely linked and difficult to keep apart. Ignoring these differences, however, can have disastrous consequences for research. It can lead to the choice of a methodology which is incapable of capturing the phenomenon in question or it can lead to recommendations which are not warranted by the approach.

A researcher who wishes to undertake research on ethics in IS will need to be clear on these issues. This does not mean that she or he has to be an expert on philosophical ethics and be aware of all current debates in moral philosophy. But it does mean that the researcher's awareness of these issues must be sufficient to allow them to clearly describe the limits of their knowledge and thus of the chosen approach.

It is arguably important that the researcher owns up to his or her view on ethics. By understanding the intellectual provenance of the author, the reader will find it easier to contextualize the research and to infer the legitimacy of approach and conclusions. Clearly stating one's view on ethics in general and with regards to the research question in particular can also be seen as a sign of intellectual honesty, which can be viewed as a moral virtue and ethically desirable from a number of ethical positions. However, such ethical reflection of the author can also cause problems. In some cases the author may not have an explicit view or the view may change subject to the research. In other cases, for example where there are joint authors, the authors may disagree among each other on their ethical views. In such cases a description of the lack of clarity or nature of disagreement would further the comprehensibility of argument and approach. These issues are closely related to the next guiding question:

Which Level of Normative Engagement is Required by the Research Question?

The research question is a central aspect of any research project and should therefore be spelt out in detail in all research publications. There are, however certain aspects of the research question which influence the scope of ethical issues under investigation and the type of argument that can be developed. These strongly influence appropriate research approaches or methodologies as will be discussed below.

Central Issues

As briefly indicated earlier, research in ethics can be distinguished in descriptive, normative, and meta-ethical. In this paper these different types of research on ethics are termed "levels of normative engagement" because they delimit fundamentally different claims that can be raised as a result of the research. They also require different ethical commitments by the researcher. On the descriptive level researchers do not need to make any ethical commitment at all and can remain agnostic or skeptical with regards to their research findings. This is not possible when undertaking normative research where the researcher has to take a stance on the desirability or otherwise of certain norms or values.

The vast majority of scientific and other scholarly research refers to purely descriptive research questions. Most scholars are therefore familiar with the idea of descriptive research but they often overlook the fact that ethical research can also address the two other aspects. Descriptive research, as the name suggests, aims to describe a phenomenon. Normative work in ethics aims to provide justification for moral norms and values. Research on meta-ethics aims at a higher level conceptual view of the ethical question. Metaethics can be defined as "the attempt to understand the metaphysical, epistemological, semantic, and psychological, presuppositions and commitments of moral thought, talk, and practice" (Sayre-McCord, 2007).

This distinction between different levels of reflection is related to, but by no means identical with the earlier distinction between ethics and morality and the four levels of abstraction developed in figure 1. Descriptive research can be undertaken with regards to all levels of abstraction. One can describe moral intuitions, moral convictions, ethical justifications, or general reflective considerations. Taking the example of employee surveillance (Nye, 2002; Lyon, 2002; Introna, 2003), one could imagine research that tries to capture the employees gut reaction to surveillance (moral intuition), their more general view on such matters (moral conviction), their view on the general acceptability of surveillance measures (ethical justification), or views on the merits or disadvantages of different strategies of justification (general reflection). Such descriptive research is characterized by the aim to remain as close to the perception of respondents as possible.

Normative research, on the other hand, does not primarily aim at the description of perceptions or their reflections, but at the justification of certain moral convictions. To stay within the example of employee surveillance, normative work could argue that such practices are legitimate because they uphold organizational efficiency, because they are based on voluntary acceptance of contractual rules, or because the legal framework facilitates them. Normative research on surveillance could of course just as well argue against its legitimacy on the grounds of a disregard of human dignity through surveillance, the lack of trust it epitomizes or the psychological burden it may create (for a range of such arguments, see Weckert, 2005). Beyond the justification of existing moral norms or values, normative

work can also aim to develop new ones. One could, for example, put forward a completely new moral approach to technologies and argue in support of the ethical acceptability of such a new norm. In the area of IS such work can gain relevance where new technologies raise new moral problems that defy the application of extant norms.

The incomplete list of possible normative arguments that could be raised with regards to employee surveillance indicates the role of meta-ethical research. Meta-ethics as the attempt to elucidate the conceptual foundations of ethical thought has a role in IS research where it helps compare and contrast different ethical views and arguments.

The different types of ethics build on one another but do not necessarily need to be done in the same piece of research. One can, for example, do a completely satisfactory piece of descriptive research without engaging in normative arguments. Similarly one can develop a normative argument without looking in detail at the actual perceptions or comparing the argument with others on a meta-ethical level. Meta-ethical work requires familiarity with normative figures of thought but can build on these as given facts without itself engaging in the justification or development of norms.

Relevance of the Question

The level of normative engagement is a central question that all work on ethics in IS needs to consider and make explicit. Researchers and audiences need to understand that there are different ways in which scholars can relate to moral or ethical matters and that these reflect a particular research question. Often, research on ethics is seen as a means of promoting good behavior (De George, 1999). One needs to recognize that this is a possible and legitimate role of research on ethics but not a necessary one. Moreover, it is an aim that raises problems that IS scholars are typically not accustomed to dealing with.

One important reason why the choice of normative engagement is of central importance is that, to a large part, it determines appropriate research methodology, approach, and possible outcomes. This is particularly relevant with regards to empirical research. The academic field of IS is located strongly in the empiricist tradition of science and scholarship. This means that empirical research, in whichever form or tradition, is usually deemed to be valuable (if conducted correctly) and that the results of empirical data collection and analysis are useful contributions to knowledge. With regards to research on ethics one needs to state clearly that such an empiricist position is not generally tenable. Scientific research is incapable of given certain types of answers (Postman, 1992). With regards to descriptive research, empirical work will usually be appropriate. For normative or meta-ethical work, the value of empirical contributions is much less clear. A central issue is that normative conclusions cannot be deduced from descriptive premises. This is sufficiently important a point to warrant dedicating an entire subsection to it, which will be done under the question of the justification of normative conclusions.

On a practical level, this means that researchers need to check whether their research question is compatible with the normative engagement they are willing to commit themselves to. If the question is purely descriptive, then no normative engagement is required and most existing research approaches can be used. However, if the research question is normative or meta-ethical, then corresponding consequences for the normative engagement and research approaches must be considered. If the question requires a higher level of engagement than the researcher is willing to commit himself or herself to, then there is the chance of inconsistency, which can render the research results questionable.

The most pressing problem with regards to these issues is, however, that researchers are not aware of the different levels of engagement and therefore conflate them. The choice of a research topic with ethical relevance is in itself often an indicator that the researchers feel strongly about the issue and that they hold moral and ethical views that motivate their research. This 'knowledge interest' (Habermas, 1973) needs to be made explicit in order for the audience to understand and contextualize the research question and findings. More importantly, the knowledge interest may require a level of normative engagement that the researcher can find difficult to sustain. Coming back to the surveillance example, it is conceivable that a researcher is motivated by the idea that employee surveillance is morally repulsive and should be banned. Such an intuition includes a normative aspect, however, this leads to a range of problems to be discussed below. This brings us to the question of how work on ethics is linked with existing discourses in IS.

How does the Project Relate to Existing IS Discourses?

On the basis of the above distinction of concepts of ethics, levels of abstraction, and levels of normative engagement, a researcher interested in ethics in IS can categorize the research project in terms familiar in IS. This can help the audience understand and evaluate the research. There are numerous internal debates in IS which can have some bearing on ethical research. The two debates that are most obvious of importance to work in ethics and that can help researchers develop their research design and outcomes are the ones on paradigms and methodology.

Central Issues

The paradigm debate in IS has been sparked by Burrell and Morgan's (1979) famous distinction of four different paradigms in sociological research. Loosely based on Kuhn's (1996) understanding of paradigms as worldviews that shape the shared perception of reality and therefore the theory and practice of scientific investigation, the idea of paradigms has been very popular as a means of explaining different research approaches. Burrell and Morgan's four paradigms (functionalism, interpretivism, radical humanism, radical structuralism) were applied to IS research by Hirschheim & Klein (1989). The humanist and structuralist paradigms are often collapsed into one paradigm, leaving us with the probably more widely used distinction of positivism, interpretivism, and critical research (Chua, 1986; Orlikowski & Baroudi, 1991), which has been applied in various aspects of IS (Iivari, Hirschheim & Klein, 1998; Goles & Hirschheim, 2000; Dhillon & Backhouse, 2001)

The debate on paradigms is complex and I cannot do it justice in this brief paper. The debate itself is contentious and some scholars argue that it introduces more problems to the field of IS than it solves (Weber, 2004). It is nevertheless of relevance for the current argument because it partly maps onto ethical issues. At the same time, the choice of a certain paradigm may facilitate some research approaches in ethics and rule out others. It is thus important to briefly consider the content of paradigms.

For Burrell & Morgan, paradigms are based on four sets of assumptions related to ontology, epistemology, human nature, and methodology. All of these constituent aspects are of relevance for research concerning ethical issues. Ontology, the study of being, is concerned with the nature or essence of being (Oxford English Dictionary, www.oed.com). Ontological questions are often disregarded by IS scholars, either because of their lack of philosophical training or because there seems little disagreement on them (where the former arguably causes the latter). Ontology nevertheless raises considerable issues for ethics. One question is the ontological status of moral norms and values. Are these objectively given, can they be discovered by humans, or are they constituted through social practice. This is an important question in the context of the debate about relativism in ethics (Moor, 2004), which, in turn, affects the nature of moral actions (Blasi, 1983).

Views on the nature of human beings are a similarly important component of paradigms. Moral actions will look different and require different ethical justifications depending on whether humans are seen as fundamentally harmonious social beings or as utility maximizing individuals. The view of humans that underlies a piece of research will have considerable influence on possible and useful research questions. This is not a fundamental problem but it needs to be made explicit which views the researcher holds. Researchers should also realize that there is no unanimity in these questions among ethicists either. Neither the ontological nature of moral rules nor the nature of human beings are generally agreed upon in ethics. However, different aspects of these are discernible in different theories, thus rendering certain ethical theories more appropriate for certain paradigms than others. An important aspect of this debate has to do with the relationship between researcher and respondent. In interpretive and critical research, it is generally recognized that this relationship is of crucial importance for the research findings (Klein & Myers, 1999). It is important to note, however, that there are ethical issues with regards to the researcher's intention but also research conduct which are affected by this relationship.

Epistemology and methodology are two further important aspects of paradigms that are relevant to research on ethics in IS. I have already alluded to the fact that empiricism, understood as the epistemological position that the source of all knowledge is experience (Gergen, 1999), raises problems with regards to some conceivable research on ethics. But even within the empiricist view of research, different research methodologies are amenable to different types of research on ethics. A main dividing line is that of quantitative and qualitative research. A simplistic view is that there is a direct correspondence between quantitative and positivist and qualitative and interpretive research. This view has been rejected as the paradigms are richer than such a simple dichotomy would suggest (Walsham, 1995). One could also argue that the perceived distinction between quantitative and qualitative is spurious as both

use different types of symbols to signify meaning, which needs to be interpreted by an audience. The quantitative / qualitative divide is nevertheless important with regards to ethics.

In addition to the various debates surrounding paradigms, ontology, or epistemology, an important aspect to consider is how ethics can affect the relationship of IS with other disciplines. There has been discussion whether IS could count as a reference discipline (Baskerville & Myers, 2002) and what the intellectual nature of the field is (Paul, 2002). Such questions are influenced by the competent use of scholarly achievements from other fields and ethics can be seen as an aspect of such debates.

Relevance of the Question

Extant discourses on paradigms, methodologies etc. are of relevance for research on ethics because they influence the design and eventual success of research. This does not mean that there is a simple link between certain paradigms of methodologies and research on ethics. However, the different positions in terms of paradigms or methodologies have a bearing and thus need to be considered from a particular angle when undertaking research on ethics.

Descriptive research on ethics in IS can use quantitative or qualitative methodologies. It is clear, however, that these are not equally suited for all types of research. One can, for example undertake quantitative survey-oriented research on moral intuitions or convictions. It may also be conceivable to do quantitative studies on ethical arguments, but it is hard to see how such research would come to an understanding of the phenomenon in question, namely the justification of moral norms or values. Research that aims come to an understanding of the phenomenon from the respondents point of view, be it moral, ethical, or reflective, will need to employ qualitative methodologies.

A similar distinction can be made with regards to paradigms. If interpretivism is about understanding and positivism is about describing, as has been suggested (Lee, 1994), then it is clear that positivist research may be useful for descriptive research on social phenomena such as moral intuitions or positions. But even descriptive research on more general moral principles will profit relatively little from positivist quantitative approaches, which, by definition, neglect the richness of individual arguments. Understanding ethical arguments or following meta-ethical debates requires a depth of understanding that quantitative research cannot offer.

An important related question is whether the paradigms carry any ethical implications per se. It has recently been argued (Stahl, 2008) that there is an intrinsic link between ethics and critical research. If critical research is about promoting emancipation, then it needs to rely on a normative premise, which needs to be grounded in some sort of ethical assumption. Critical research is thus immediately of an ethical nature, but the community of critical researcher does not seem to have developed a consensus on what exactly the ethical premise is that the paradigm is based on.

One can argue that there is an affinity of ethics and interpretive research, which is based on the role of the respondent. Interpretive research takes the respondent seriously and attempts to develop a coherent account of actions that allows the audience to understand the situation in question. This implies a relationship between researcher and respondent which is characterized by mutual respect and recognition. The conditions of communication under which such research is possible are thus sufficiently similar to the ideal discourse situation described by Habermas (1981) to warrant the assertion that interpretivism has ethical implications. A related argument could rely on the acceptance of the other in this type of research situation, which is open to an interpretation from the French existentialist tradition of ethics, where the other plays a central role (Ricoeur, 1990).

The case for an intrinsic link between ethics and a paradigm is probably most difficult to construct in the case of positivism. Given the ostensive value-neutrality of positivist research, one can argue that ethics has little relevance for positivism, except where it becomes an object of research. Such a view would fail to take into account the history of positivism. The aim of finding objective descriptions of reality, which are commensurable with approaches in the natural sciences can only be appreciated with reference to the conditions of development of positivism. The early positivists, most notably Comte, hoped that their scientific approach would help achieve the perfection of society by overcoming poverty, illiteracy and disease (Wynn, 2001). Positivism should furthermore be seen as part of the movement of Enlightenment that tried to leave behind obscurantism and oppressions in the name of traditional social arrangements (Marcuse, 1964).

One can thus argue that there are ethical foundations to all of the main paradigms discussed in current IS research. This raises the question whether researchers interested in ethics are free to choose them as they like. This question

refers us to one of the central issues of the paradigm debate in IS and beyond, namely the question of commensurability. At issue here is whether one can combine or mix different paradigms or aspects thereof. This is a pervasive question in the paradigm debate (Landry & Banville, 1992; Mingers, 2001). There have been several attempts to categorize the different possible positions in this question (Fitzgerald & Howcroft, 1998; Walsham, 1995). This paper does not aim to add to these views but to underline that the question of ethics complicates the question even further. Ethics may raise issues in terms of aims of research, conceptualization of ontology, epistemology, or human nature, which go beyond what IS researcher currently consider. I cannot offer a general solution to the problem but would like to reiterate Robey's (1996, p. 417) point that "IS researchers bear the responsibility for justifying their choices of research aims, theoretical foundations, and research methods and for communicating the rationale for their choices to the research community." The contribution of this section is to add the concept of ethics and its implications to the list of issues to be reflected.

How is the Project Related to Research Undertaken in Adjacent Disciplines?

The preceding section has highlighted the relevance of IS discourses for research on ethics. Such questions need to be addressed, partly because they are of relevance for the consistency of the research, and partly because the acceptability of the work to scholars from the discipline depends on it. Where research on ethics is undertaken by IS scholars, it typically displays a high degree of awareness of such questions. The same cannot be said with regards to work done in other but related disciplines. There are areas of scholarly activity which concentrate exclusively or predominantly on moral or ethical questions with regards to technology and even information and communication technology. There is much work that specifically addresses such issues that are typically taken to be of moral relevance in IS and that explore normative and meta-ethical questions concerning ICT. The visibility of such work in IS publications is relatively limited, which raises the problem of duplication of efforts and of ignorance of established states of debate.

Central Issues

In the first guiding section, I have argued that a familiarity with ethics as a philosophical discipline is imperative for IS scholars interested in ethics. I now want to go beyond this position and argue that there are discourses specifically on ethics and morality with regards to ICT which have developed new lines of thought that IS scholars should not ignore.

Given that the field of information systems is itself an amalgamation of different academic disciplines, sometimes called reference disciplines, it is no surprise that there is considerable overlap in terms of research questions and approaches with other disciplines. Moral and ethical questions arising from technology and ICT with a particular emphasis on organizational issues are of interest to sociology, computer sciences, philosophy, and legal studies to name just a few. There has been intensive debates on a range of issues which has led to the development of scholarly communities which concentrate on such issues. These communities notably include those of computer and information ethics, computer law, but also philosophy or sociology of technology.

An important question that has been debated in this respect is whether traditional ethical theories as outlined earlier are capable of doing justice to the moral issues that arise due to ICT. The question whether ICT requires new ethical theories has been hotly debated (Floridi & Sanders, 2002). It is not necessary to choose sides at this stage but it is important to note that the debate exists and that, accordingly, an eclectic choice of an established ethical theory and its application to moral questions in IS may be considered generally questionable.

It is also important to realize that there are developments in ethical theory that specifically aim to provide foundations or are uniquely suited for the problems of ICT. One such novel development is that of information ethics (Mathiesen, 2004). There are several directions in information ethics, but they seem to share the assumption that information is something that is worthy of moral considerations *per se*. The possibly most widely discussed version of information ethics is that of Luciano Floridi (1999, 2007), who deems each information entity worthy of moral respect qua information entity. This approach, which is clearly contentious (Capurro, 2006), should nevertheless be of interest to IS scholars because it can shed a new light on the concept of ethics. Unlike much research on ethics and morality which concentrates on relatively simple decision situations of ICT professionals, such a conception of ethics requires a completely different framing of ethical issues. The way information is treated in this theoretical view is of ethical importance, no matter the further consequences or intentions. IS scholars and

professionals will often find it difficult to accommodate such views but need to view them as challenges to expand their arguments.

A very different but nevertheless highly relevant approach to ethics and technology has been developed under the name "disclosive ethics" (cf. Brey, 1997). The idea of disclosive ethics is to reveal ethically relevant decisions or implications that are embodied in technology and determine its affordances. This is based on the observation that technological systems are often opaque and that the user is rarely able to understand the detailed workings of technology that force him or her to act in certain ways. At the same time, technology is not an autonomous system that develops independent of human intervention. The conclusion drawn by disclosive ethics is that the black box of technology needs to be opened and made subject to critical scrutiny to expose moral assumptions and consequences and to facilitate alternative conceptions and technologies (Introna, 2007).

In addition to such foundational debates about appropriate theoretical underpinnings of research, there is a wealth of work on particular questions and issues. These include the big and obvious topics of interest to IS scholars such as privacy, data protection, or intellectual property (see, for example: Bynum & Rogerson, 2004; Himma & Tavani, 2008; Floridi, 2009). Work undertaken in adjacent disciplines covers descriptive, normative and meta-ethical angles on all levels of abstraction. Topics under investigation go beyond the relatively obvious and predictable ones and cover questions related to the nature of ICT and its influence on individuals and societies and the nature of the relationship between humans and technology.

Relevance of the Question

It is fairly easy to see why IS scholars (or anybody else, for that matter) find it difficult to draw from all of the theoretical and practical work undertaken in adjacent disciplines. First, it is a matter of pure volume. So much work has been published in areas of relevance to ethics and IS that any individual would be hard pressed to keep up with all of it. In many cases it will even be difficult to simply identify in which community a particular problem has already been discussed and what the results of the discussion have been.

An added complication is the fact that the disciplinary structure of academic publishing does not reward cross-disciplinary awareness. Reviewers in a discipline are likely to be aware of the work in this discipline but less likely to read beyond it. A paper on ethics in IS should thus contain references to those works that are considered pivotal in the same discipline as the reviewers are likely to be aware of it. The search for relevant work beyond the discipline is unlikely to be rewarded and thus constitutes a poor investment of resources.

It is easy to see why this is a problematic state of affairs. On the one hand, there is the possibility of the duplication of efforts where similar research is not known. Worse, there is the possibility of committing serious errors or even fundamental fallacies because of a lack of awareness of pertinent issues. The most common example of such a fallacy in IS research on ethics will be discussed in the last question below under the heading of "naturalist fallacy". This means that IS work on ethics may be unaware of established problems and possible solutions. As a result, such research may fail to live up to standards and expectations in the disciplines it draws from. To some degree such situations may be impossible to avoid in a multi-disciplinary area as IS. On the other hand, the interdisciplinary nature of IS may also be taken as a reason to be particularly vigilant about the ability to be current with regards to the expectations from other disciplines.

Are Different Aspects of Ethics and Research Treated Consistently?

Most of the discussion in this paper so far has concentrated on moral or ethical questions as subject of the research. There are, however, other ways in which ethics can influence research in IS and the different parallel relationships between ethics and IS research need to be considered together in order to ensure that the overall research approach is consistent. The two main aspects that need to be considered are the moral intention and ethical issues arising from undertaking research.

Central Issues

Researchers interested in moral or ethical issues are often motivated by their own moral convictions which they seek to test, promote, or develop. Such moral motivations can be conservative (e.g. to uphold current intellectual property regulations) or revolutionary (e.g. overthrowing intellectual property regimes in the name of freedom of

information). In any event, moral beliefs and assumptions are important motivators in choosing a research question and they are also likely to influence research strategies and outcomes.

One can plausibly argue that there is a direct link between the moral interest and motivation of the researcher and the content of the research. The concepts of ethics and morality used in the research, the level of normative engagement, the choice of research question and approach as well as the perusal of pertinent literature are all likely to be affected by the starting intuitions and intentions of the researcher.

A further aspect that is much less obviously linked to the two above is that of ethics of undertaking research. There seems to be a general move towards ethical review of research projects across disciplines in many countries. This is certainly true for the UK where funding councils increasingly insist on explicit ethical evaluation of projects. Such scrutiny of research with a view to uncovering and possibly avoiding ethical problems has been well established in many disciplines, most notably in those related to medicine and healthcare. They are much less well established in other disciplines, such as disciplines related to engineering and technology. As the field of IS cuts across those disciplines, there will be scholars who are familiar with ethics review processes and others who are much less so.

An added difficulty is that established ethics review procedures tend to have a strong emphasis on compliance and a much weaker link to ethics as a philosophical discipline. In the UK, for example ethics review typically checks whether issues of privacy and data protection are sufficiently addressed to do justice to the Data Protection Act 1998 and related legislation. A current emphasis in much UK ethics review practice has to do with the use of human tissues in research, because the Human Tissue Act 2004 has created a strong obligation on research establishments to comply with its regulations. While there will be some research in IS that uses human tissues, the vast majority does not. More traditional IS research, including research on ethics and morality, can still raise a number of concerns that are difficult to address. One such problem has to do with the consequences of research. Proper ethics review of research should arguably take into account the consequences of the research undertaken. A complete evaluation of research consequences is impossible due to the epistemological impossibility of knowing all consequences of an action, including research. However, it would be conceivable to undertake an ethical review of stated project aims and evaluate them from an ethical point of view. This, again, would raise problems, for example those of the choice of ethical viewpoint. It would nevertheless not be fundamentally impossible to do so, as for example medical research ethics committees demonstrate. For IS researchers such ideas tend to be unfamiliar. Where they are voiced they are often met by the (justifiable) suspicion that they can raise levels of bureaucracy.

Relevance of the Question

A consistent treatment of the different ethical aspects of research is a requirement of many ethical theories which assume universal applicability of moral norms. Consistency is furthermore a hallmark of good research and reflects on the quality of the project. Scholars embarking on research on ethics in IS should thus ensure that their moral intentions, the contents of their research and the process of doing the research are all guided by consistent ethical principles. A piece of research that sets out to achieve a moral aim (e.g. show that employee surveillance is immoral) but does not use a clear concept of ethics, fails to make explicit its normative aims, chooses an unsuitable research approach, and does not treat respondents with respect will fail to be convincing.

While this may be convincing on an intuitive level, it is not clear how consistency of ethical can be guaranteed practically. There is no algorithmic way of guaranteeing the consistency of the different aspects but one general rule can be that of openness and reflection. Researchers need to be open about the different ethical aspects, their personal motivations and choices. I will return to these issues in the general conclusion. There is one more important question to be asked before we proceed to there.

How are Normative Conclusions Justified?

The question concerning the ethical justification of normative conclusions has direct links with several of the aforementioned questions. It has implicitly been touched on above. However, it is such a central question of ethics and at the same time a typical problem of IS ethics research that it warrants being discussed separately.

Central Issues

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 (1948). 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". An example of research on ethics in IS that commits the naturalistic fallacy would be 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. On the basis of the idea of the naturalist fallacy, one could say that the conclusion is not tenable and the research flawed.

The status of the naturalist fallacy in moral philosophy is contentious. Some have argued that the strong distinction of facts and values that it implies is part of a particular philosophical tradition, which is not universally applicable. Hongladarom (2005), for example, argues that in Buddhism is and ought are fundamentally thought to be a unity, which cannot be torn apart. Similarly, there is a long philosophical tradition, which underlines the fact that all "ought" must be grounded in "is", that without being, there could be no obligation. Bynum's (2006) conception of flourishing ethics, which purports to offer an alternative grounding for information ethics based on Aristotle's concept of flourishing, is based on the premise that all being should flourish. Floridi's (1999) account of information ethics is also a naturalist ethics, which means that being is seen as the basis of goodness. Jonas (1984) principle of responsibility deduces a first obligation for all ethics from the requirement that there be human beings who can be responsible.

Having said this, it should be clear that all of these examples of ethical approaches that seem to infringe the naturalist fallacy are in fact avoiding it by explaining the basis of their normative conclusions. They clearly present the premises required to come to norms. These premises may in themselves be contestable, but at least they satisfy the requirement that normative conclusions require explicit normative premises. Even naturalist ethicists will admit that a direct normative conclusion inferred from pure observation and description is fallacious.

Relevance of the Question

This raises a few fundamental problems for research on ethics in general. What is the value of empirical research and does it imply that no empirical research on moral and ethical matters should be undertaken? It is clearly simplistic to reject all empirical research on ethics. Awareness of people's moral intuitions and beliefs or knowledge of dominant forms of accepted ethical reasoning are important influencing factors for forming balanced opinions and making reasonable ethical arguments. However, even complete unanimity of views on ethics or morality does not guarantee their ethical or meta-ethical acceptability. This difference between acceptance and acceptability is a crucial one for researchers to keep in mind.

Awareness of the naturalistic fallacy can help researchers avoid fundamental problems with their arguments. There is a tendency among scholars interested in ethics but not familiar with the intricacies of ethical reasoning to commit the fallacy and thereby invalidate their work. The topic thus links back to the question of familiarity with work undertaken outside of the discipline. Such familiarity and in particular knowledge of the naturalist fallacy is imperative for research on ethics in IS to stand up to critical scrutiny. Traditional standards of reasoning, in particular based on Hume's ideas have been rediscovered for the field of IS (Lee & Baskerville, 2003) and it is worth extending this to include the naturalist fallacy.

Conclusion

This paper set out to develop and explain a set of guiding questions that support research on ethics and morality in IS. It is based on the recognition that these topics are gaining legitimacy in the field but that there is no clear guidance on how to address them. The aim is to provide guidance for researchers as well as those who evaluate research (reviewers, editors) on the specific issue of this type of research.

Figure 2 offers a graphical representation of the questions discussed here including some follow-up questions and some possible answers. The main questions are printed in bold in the centre of the figure. Representing the main points of the paper graphically has the advantage that it reflects the complexity of the issues to be discussed. The figure does not claim to include all relationships between the different aspects. Most of them were expressly omitted

to ensure that the figure remain comprehensible. The figure should also not be read to imply that the questions need to be addressed in the order presented.

There are limitations to the paper. It must be stressed that it does not provide an algorithm that will allow scholars to tick a set of boxes which will then lead to good research. To underline this, the main points were formulated as questions rather than statements. Figure 2 takes the form of a flow chart but that does not mean that one can simply follow it in an algorithmic way. Moreover, this paper needs to be understood in conjunction with other comparable papers. As argued above, in many cases interpretive and qualitative research will be of more interest with regards to ethics than positivist and quantitative research. In such cases the standards of interpretive research (e.g. Klein & Myers, 1999) need to be considered in conjunction with this paper. Positivist research on ethics and morality will similarly have to adhere to the standards of good positivist research.

A next step in the analysis will be to investigate how published work on ethics in IS relates to the questions raised here. Existing guidance papers such as Klein & Myers (1999) and Hevner et al. (2004) undertake a detailed analysis how the principles they raise have hitherto been addressed. This could not be done for the present paper due to space constraints but it will be a major task in developing the argument.

This still leaves open the question how the questions raised here can be answered in a satisfactory manner. If taken seriously, they put a considerable onus on the researcher. Awareness of ethical theories and traditions, explicit addressing of normative commitments and knowledge of debates in adjacent disciplines require a considerable amount of work. The majority of IS scholars do not have a background in moral philosophy and the body of work in ethics is too extensive for anybody to completely master in the first place. It would be unreasonable to expect IS scholars to grasp all the niceties of such debates.

There are ways of addressing these problems. One of these is openness and explicit attention of the researcher to the questions raised here. Most of these are incapable of being comprehensively answered in any event. There is no "right" ethical theory or level of commitment. By owning up to their own assumptions and beliefs, researchers can avoid unnecessary criticism. A related way forward is reflexivity. By explicitly reflecting on the research and the questions, some of them, notably the issue of consistency, are likely to be covered.

Openness and reflexivity will not solve the problems but they will contribute to the problems being open to scrutiny and thus to development. All of this will help ensure that research on ethics in IS leads to a morally better and ethically reflected use of IS, whatever this may mean in any given case.

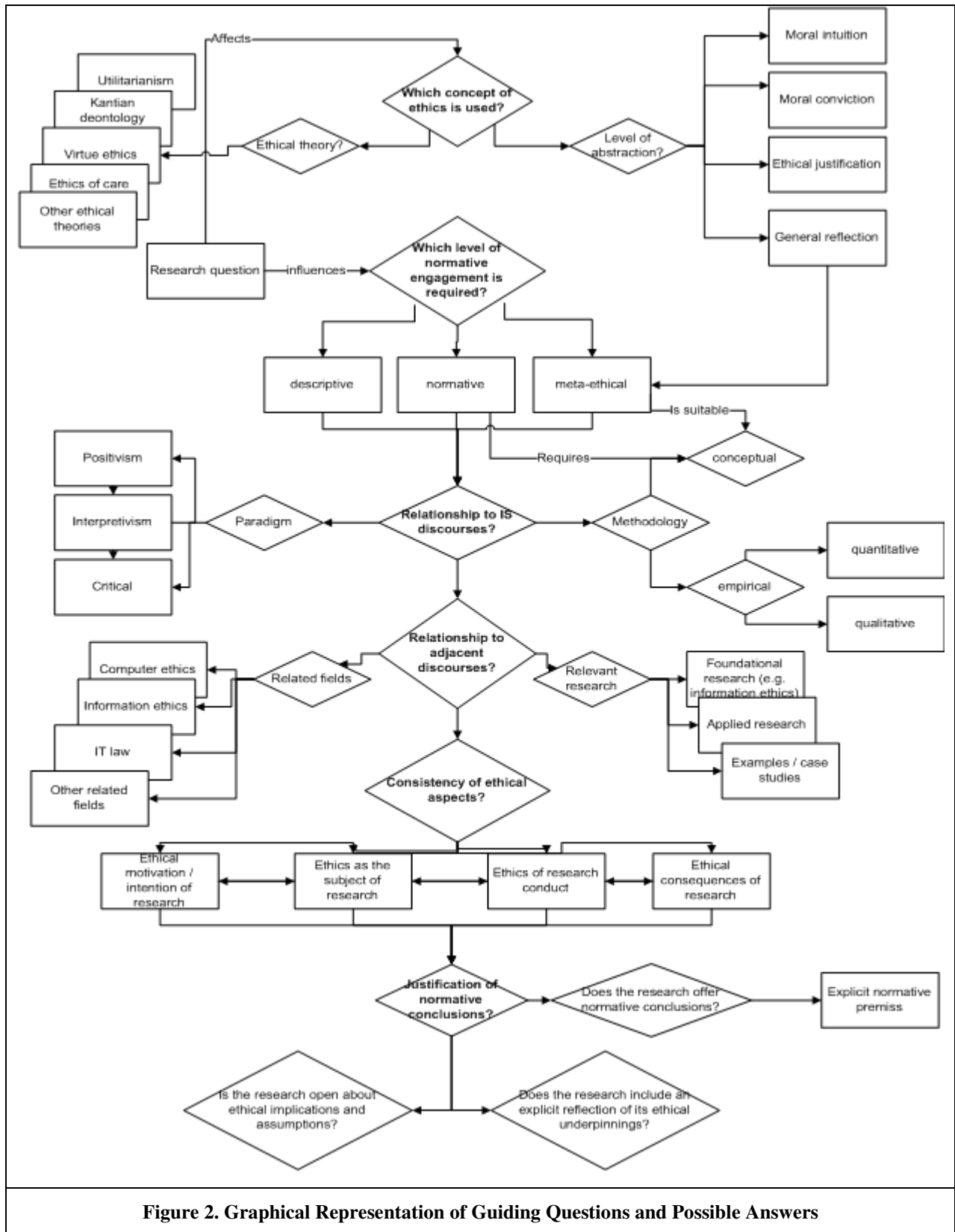


Figure 2. Graphical Representation of Guiding Questions and Possible Answers

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