

# Digital Morality and Ethics

D

**Peter Danielson**

*University of British Columbia, Canada*

## INTRODUCTION

While “digital morality” and “digital ethics” may sound strange, the technologies that drive digital government and democracy operate as well in these less formal areas of social regulation. Information technologies can affect morality and ethics at several levels: facilitating compliance with moral rules, altering the formation of norms and rules, and aiding the ethical assessment of rules. This article sketches an account of ethical decision-making which lets us explore some threats and opportunities of the emerging technologies of digital morality and ethics.

## BACKGROUND

The focus of this article is how new communication technology affects ethical decision-making. Since ethics has a large and controversial literature, we will simplify. First, while disagreement about substantive issues is wide-spread, there is greater agreement about the process of ethical decision-making. Most writers on ethics agree on what counts as ethical agents (i.e., most people, with minor disagreement about young children, some animals, and organizations). Further, there is wide agreement on the kind of decision-making broadly characterized as ethical. We summarize this agreement in terms of ethical decision-making having three components: compliance with moral rules, discovery of moral norms, and critical ethics. Second, while ethics has many dimensions, there is broad agreement in the social sciences that morality and ethics are coordination mechanisms. Agents who can discover the local moral norms and use them to govern their behavior can solve the coordination problems endemic to social life. The ability to critically assess alternative moral rules helps to solve the higher-level coordination problem of moral disagreement.

Although the terms, “morals,” and “ethics” are used in a variety of ways, we shall use them to distinguish these two levels, lower and higher, respectively, of coordination and decision-making.

## Rationality and Morality

Moral and ethical agents are a subset of rational agents, whose behavior tracks their values. Rational agents must

be able to consider alternative courses of action and their outcomes, rank these outcomes in terms of relevant values, and select the most valued option. Therefore, moral agents inherit the problems of rationality: uncertainty and time constraints, problems of self-control (Rachlin, 2000), framing and other decision biases (Tversky & Kahneman, 1981). On most accounts, moral agents are distinguished from rational agents by a broader set of pro-social or altruistic values and a commitment to following moral rules. These features bring new problems specific to moral decision-making, such as balancing self and others (Schmidtz, 1998) and hypocrisy.

## Social Morality

In addition, moral decision-making has a distinctly social component. Morality depends on moral norms, a subset of social norms that influence individual decisions. Social norms go under the name “conventions” in some literatures; “social equilibria” in others, and refer to existing institutions, rules, traditions, or practices (Binmore, 2004). All involve some coordination: strategic situations where most agents value doing what (most of) the others are doing. In addition, moral norms involve special motivations. Deviant behavior typically invokes both psychological (shame) and social sanctioning (blame).

The social component of moral decision-making can easily go wrong for lack of information, or due to misinformation. In several well-studied cases—college drinking in the US is most thoroughly documented—behavior is in a mistaken equilibrium (Greenberg, Dodd, & David, 1999; Perkins & Berkowitz, 1986). Believing most other students drink heavily, many drink in excess to comply with the norm. Their beliefs are a self-confirming estimation of the group’s behavior, which should be amenable to new information.

## Ethics

Ethics aims at critically evaluating morality. Obviously, partisans of two competing norms in a society should not simply appeal to what their own norms require. They need to appeal to “higher” standards: human harm or benefit, rights, progress, national solidarity, tradition, or other ideals. Failures in ethical decision-making combine the problems surveyed for rationality and morality. Ethical

decision-making has an ideal element that links it to other normative ideals, such as deliberative democracy.

## COMPUTER-MEDIATED OPPORTUNITIES AND THREATS

Having resolved the field of ethics (broadly considered) into three components, it becomes clearer how computer-mediated technologies can change, perhaps threaten, and hopefully improve each of them.

### Moral Rationality

Computerization can assist rationality in myriad ways—from calculators through spreadsheets and databases—beyond the scope of this article. We will mention a few examples of aids relevant to the rationality of moral and ethical agents.

Visualization software is a major innovation relevant to normative rationality. These programs allow us to see how our values map onto the world. Examples are maps of political preferences and scorecards ranking firms and mutual funds by “ethical” scorecards. Calculators allow us to evaluate our choices in terms of our values. For example, global warming gas emissions calculators help us decide between our energy intensive options and so achieve personal responsibility, if desired (Danielson, 1993). Simulators allow us to think through values and choices in complex technical and social environments. (Epstein & Axtell, 1996) is the most developed academic example of a simulator designed to increase insight into elementary social science. Of course, computer-mediated communication also can threaten moral rationality. New media can add new distractions and sources of poor quality information, especially until our information filters catch up with the technology. Simulators may imbed biases in ways that are difficult to counter. Violent electronic games that give the thrill of combat, aggressive driving, and street crime shorn of all consequences are prominent examples of morally dubious simulators (McCormick, 2001). Some criticize even the more pro-social SimCity series for the weight of entertainment as contrasted with educational values (Starr, 1994).

Moral decision-making is based on moral rules. Compliance is difficult when the rules are complex, unclear, and various. Research ethics provides a good example of this problem and the promise of digital technology to mitigate it. Human “gene banks” are collections of genetic data (or tissue samples), clinical data, and environmental data. Genomic scientists see great promise in research linking this data across large populations. Unfortunately, the moral rules governing who can access which data vary

across jurisdictions and are often unclear (Maschke, 2005). Note that this problem arises in spite of the relatively formal nature of the rules and their institutionalization by ethics review boards. Recent work by bioinformaticians involves applying digital technology to this problem. Wilkinson (2003) suggests that “ethics ontologies” can allow automated “agents” to navigate the rules governing access to various sources of data. This computer-mediated resolution of moral uncertainty yields the direct benefit of allowing researchers to access only the data they morally ought to be permitted to use. Indirectly, it may allow research subjects deciding between granting or withholding consent to a particular use better to understand the consequences of their decisions.

### Moral Norms

As the most social of our three factors, morality is the most subject to change due to the introduction of new computer mediated technologies. We consider three ways.

1. **Knowledge of Norms:** Most obviously, Web technology has made simple polling very easy. For example, a Victoria, Canada, radio news station runs a different public affairs poll every day on its Web site. These polls attract about 275 responses a day. Notice that polls like this are likely to serve as moral convention amplifiers rather than ethical instruments, for several reasons. First, the poll page displays a tally of previous responses, so participants’ answers are not independent. Answers are subject to an information cascade effect that reinforces the power of existing norms (Hirshleifer, 1995). Second, participants are self-selected, inviting interested parties to skew the sample. Third, Web surveys collect superficial “top of head” opinions. However, we need not restrict ourselves to simple polls. More sophisticated computerized surveys allow us to support more complex moral decision-making (Danielson, Ahmad, Bornik, Dowlatabadi, & Levy, in press). Since moral norms, as social equilibria, are a function of agents’ knowledge and expectations, new information can change norms. Recall the example of campus drinking. Were students to realize that most others are not drinking excessively, they may drink less. In this case, more information weakens the force of the norm that supported drinking.
2. **Changing Social Networks:** Computer-mediated communication can change the social basis of norms by facilitating non-spatial social networks. Consider the example of “apotemnophilia”—an attraction to the idea of being an amputee” leading to

3 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage:

[www.igi-global.com/chapter/digital-morality-ethics/11532](http://www.igi-global.com/chapter/digital-morality-ethics/11532)

## Related Content

---

### Harnessing Interagency Collaboration in Inter-Organizational Systems Development: Lessons Learned from an E-government Project for Trade and Transport Facilitation

Thayanan Phuaphanthong, Tung Bui and Somnuk Keretho (2010). *International Journal of Electronic Government Research* (pp. 42-56).

[www.irma-international.org/article/harnessing-interagency-collaboration-inter-organizational/45740](http://www.irma-international.org/article/harnessing-interagency-collaboration-inter-organizational/45740)

### AJAX in Development of Web-Based Architecture for Implementation of E-Governance

Dilip Kumar Sharma, Gopalji Varshneya and Ashwani Kumar Upadhyay (2007). *International Journal of Electronic Government Research* (pp. 40-53).

[www.irma-international.org/article/ajax-development-web-based-architecture/2034](http://www.irma-international.org/article/ajax-development-web-based-architecture/2034)

### Augmented Reality and Virtual Reality in E-Governance: An Immersive Technology Applications and Its Challenges

Aswini J., Malarvizhi N., Siva Subramanian and Gayathri A. (2023). *AI, IoT, and Blockchain Breakthroughs in E-Governance* (pp. 138-153).

[www.irma-international.org/chapter/augmented-reality-and-virtual-reality-in-e-governance/323762](http://www.irma-international.org/chapter/augmented-reality-and-virtual-reality-in-e-governance/323762)

### Understanding Technology Acceptance of Government Information Systems from Employees' Perspective

Mitja Deman (2015). *International Journal of Electronic Government Research* (pp. 69-88).

[www.irma-international.org/article/understanding-technology-acceptance-of-government-information-systems-from-employees-perspective/147645](http://www.irma-international.org/article/understanding-technology-acceptance-of-government-information-systems-from-employees-perspective/147645)

### A Guide to Online Applications for User Involvement in Living Lab Innovation

Asbjørn Følstad and Amela Karahasanovic (2013). *Information Systems and Technology for Organizations in a Networked Society* (pp. 34-52).

[www.irma-international.org/chapter/guide-online-applications-user-involvement/76530](http://www.irma-international.org/chapter/guide-online-applications-user-involvement/76530)