

6.6.3 Privacy

Privacy is a right to the appropriate flow of information.

A third area where researchers may struggle is *privacy*. As Lowrance (2012) put it quite succinctly: “privacy should be respected because people should be respected.” Privacy, however, is a notoriously messy concept (Nissenbaum 2010, chap. 4), and, as such, it is a difficult one to use when trying to make specific decisions about research.

A common way to think about privacy is with a public/private dichotomy. By this way of thinking, if information is publicly accessible, then it can be used by researchers without concerns about violating people’s privacy. But this approach can run into problems. For example, in November 2007, Costas Panagopoulos sent letters about an upcoming election to everyone in three towns. In two towns—Monticello, Iowa and Holland, Michigan—Panagopoulos promised/threatened to publish a list of people who had voted in the newspaper. In the other town—Ely, Iowa—Panagopoulos promised/threatened to publish a list of people who had not voted in the newspaper. These treatments were designed to induce pride and shame (Panagopoulos 2010) because these emotions had been found to impact turnout in earlier studies (Gerber, Green, and Larimer 2008). Information about who votes and who doesn’t is public in the United States; anyone can access it. So, one could argue that because this voting information is already public, there is no problem with a researcher publishing it in the newspaper. On the other hand, something about that argument feels wrong to some people.

As this example illustrates, the public/private dichotomy is too blunt (boyd and Crawford 2012; Markham and Buchanan 2012). A better way to think about privacy—one especially designed to handle issues raised by the digital age—is the idea of *contextual integrity* (Nissenbaum 2010). Rather than considering information as public or private, contextual integrity focuses on the flow of information. According to Nissenbaum (2010), “a right to privacy is neither a right to secrecy or a right to control but a right to *appropriate flow* of personal information.”

The key concept underlying contextual integrity is *context-relative informational norms* (Nissenbaum 2010). These are norms that govern the flow of information in specific settings, and they are determined by three parameters:

- actors (subject, sender, recipient)
- attributes (types of information)
- transmission principles (constraints under which information flows)

Thus, when you as a researcher are deciding whether to use data without permission it is helpful to ask, “Does this use violate context-relative informational norms?” Returning to the case of Panagopoulos (2010), in this case, having an outside researcher publish lists of voters or nonvoters in the newspaper seems likely to violate informational norms. This is probably not how people expect information to flow. In fact, Panagopoulos did not follow through on his promise/threat because local election officials traced the letters to him and persuaded him that it was not a good idea (Issenberg 2012, 307).

The idea of context-relative informational norms can also help evaluate the case I discussed at the beginning of the chapter regarding the use of mobile phone call logs to track mobility during the Ebola outbreak in West Africa in 2014 (Wesolowski et al. 2014). In this setting, one could imagine two different situations:

- Situation 1: sending complete call log data [attributes]; to governments of incomplete legitimacy [actors]; for any possible future use [transmission principles]
- Situation 2: sending partially anonymized records [attributes]; to respected university researchers [actors]; for use in response to the Ebola outbreak and subject to the oversight of university ethical boards [transmission principles]

Even though in both of these situations call data are flowing out of the company, the informational norms concerning these two situations are not the same because of differences between the actors, attributes, and transmission principles. Focusing on only one of these parameters can lead to overly simplistic decision-making. In fact, Nissenbaum (2015) emphasizes that none of these three parameters can be reduced to the others, nor can any one of them individually define informational norms. This three-dimensional nature of informational norms explains why past efforts—which have focused on either attributes or transmission principles—have been ineffective at capturing common-sense notions of privacy.

One challenge with using the idea of context-relative informational norms to guide decisions is that researchers might not know them ahead of time and they are very hard to measure (Acquisti, Brandimarte, and Loewenstein 2015). Further, even if some research would violate contextual-relative informational norms that does not automatically mean that the research should not happen. In fact, chapter 8 of Nissenbaum (2010) is entirely about “Breaking Rules for Good.” Despite these complications, context-relative informational norms are still a useful way to reason about questions related to privacy.

Finally, privacy is an area where I’ve seen misunderstandings between researchers who prioritize Respect for Persons and those who prioritize Beneficence. Imagine the case of a public health researcher who, in an effort to prevent the spread of a novel infectious disease, secretly watched people taking showers. Researchers focusing on Beneficence would focus on the benefits to society from this research and might argue that there was no harm to participants if the researcher did her spying without detection. On the other hand, researchers who prioritize Respect for Persons would focus on the fact that the researcher was not treating people with respect and might argue that harm was created by violating the privacy of participants, even if the participants were not aware of the spying. In other words, to some, violating people’s privacy is a harm in and of itself.

In conclusion, when reasoning about privacy, it is helpful to move beyond the overly simplistic public/private dichotomy and to reason instead about context-relative informational norms, which are made up of three elements: actors (subject, sender, recipient), attributes (types of information), and transmission principles (constraints under which information flows) (Nissenbaum 2010). Some researchers evaluate privacy in terms of the harm that could result from its violation, whereas other researchers view the violation of privacy as a harm in and of itself. Because notions of privacy in many digital systems are changing over time, vary from person to person, and vary from situation to situation (Acquisti, Brandimarte, and Loewenstein 2015), privacy is likely to be a source of difficult ethical decisions for researchers for some time to come.

6.6.4 Making decisions in the face of uncertainty

Uncertainty need not lead to inaction.

The fourth and final area where I expect researchers to struggle is making decisions in the face of uncertainty. That is, after all the philosophizing and balancing, research ethics involves making decisions about what to do and what not to do. Unfortunately, these decisions often must be made based on incomplete information. For example, when designing Encore, researchers might have wished to know the probability that it would cause someone to be visited by the police. Or, when designing Emotional Contagion, researchers might have wished to know the probability that it could trigger depression in some participants. These probabilities were probably extremely low, but they were unknown before the research takes place. And, because neither project publicly tracked information about adverse events, these probabilities are still not generally known.

Uncertainties are not unique to social research in the digital age. When the Belmont Report described the systematic assessment of risks and benefits, it explicitly acknowledged these would be difficult to quantify exactly. These uncertainties, however, are more severe in the digital age, in part because we have less experience with this type of research and in part because of the characteristics of the research itself.

Given these uncertainties, some people seem to advocate for something like “better safe than sorry,” which is a colloquial version of the *Precautionary Principle*. While this approach appears reasonable—perhaps even wise—it can actually cause harm; it is chilling to research; and it causes people to take an excessively narrow view of the situation (Sunstein 2005). In order to understand the problems with the Precautionary Principle, let’s consider Emotional Contagion. The experiment was planned to involve about 700,000 people, and there was certainly some chance that people in the experiment would suffer harm. But there was also some chance that the experiment could yield knowledge that would be beneficial to Facebook users and to society. Thus, while allowing the experiment was a risk (as has been amply discussed), preventing the experiment would also have been a risk, because it could have produced valuable knowledge. Of course, the choice was not between doing the experiment as it occurred and not doing the experiment; there were many possible modifications to the design that might have brought it into a different ethical balance. However, at some point, researchers will have the choice between doing a study and not doing it, and there are risks in both action and inaction. It is inappropriate to focus only on the risks of action. Quite simply, there is no risk-free approach.

Moving beyond the Precautionary Principle, one important way to think about making decisions given uncertainty is the *minimal risk standard*. This standard attempts to benchmark the risk of a particular study against the risks that participants undertake in their daily lives, such as playing sports and driving cars (Wendler et al. 2005). This approach is valuable because assessing whether something meets the minimal risk standard is easier than assessing the actual level of risk. For example, in Emotional Contagion, before the study began, the researchers could have compared the emotional content of News Feeds in the experiment with that of other News Feeds on Facebook. If they had been similar, then the researchers could have concluded that the experiment met the minimal risk standard (M. N. Meyer 2015). And they could make this decision *even if they didn’t know the absolute level of risk*. The same approach could have been applied to Encore. Initially, Encore triggered requests to websites that were known to be sensitive, such as those of banned political groups in countries with repressive governments. As such, it was not minimal risk for participants in certain countries. However, the revised version of Encore—which only triggered requests to Twitter, Facebook, and YouTube—was minimal risk because requests to those sites are triggered during normal web browsing (Narayanan and Zevenbergen 2015).

A second important idea when making decisions about studies with unknown risk is *power analysis*, which allows researchers to calculate the sample size they will need to reliably detect an effect of a given size (Cohen 1988). If your study might expose participants to risk—even minimal risk—then the principle of Beneficence suggests that you should impose the smallest amount of risk needed to achieve your research goals. (Think back to the Reduce principle in chapter 4.) Even though some researchers have an obsession with making their studies as *big* as possible, research ethics suggests that researchers should make their studies as *small* as possible. Power analysis is not new, of course, but there is an important difference between the way that it was used in the analog age and how it should be used today. In the analog age, researchers generally did power analysis to make sure that their study was not too small (i.e., under-powered). Now, however, researchers should do power analysis to make sure that their study is not too big (i.e., over-powered).

The minimal risk standard and power analysis help you reason about and design studies, but they don’t provide you with any new information about how participants might feel about your study and what risks they might experience from participating in it. Another way to deal with uncertainty is to collect additional information, which leads to ethical-response surveys and staged trials.

In *ethical-response surveys*, researchers present a brief description of a proposed research project and then ask two questions:

- (Q1) “If someone you cared about were a candidate participant for this experiment, would you want that person to be included as a participant?”: [Yes], [I have no preferences], [No]
- (Q2) “Do you believe that the researchers should be allowed to proceed with this experiment?”: [Yes], [Yes, but with caution], [I’m not sure], [No]

Following each question, respondents are provided a space in which they can explain their answer. Finally, respondents—who could be potential participants or people recruited from a microtask labor markets (e.g., Amazon Mechanical Turk)—answer some basic demographic questions (Schechter and Bravo-Lillo 2014).

Ethical-response surveys have three features that I find particularly attractive. First, they happen before a study has been conducted, and therefore they can prevent problems before the research starts (as opposed to approaches that monitor for adverse reactions). Second, the respondents in ethical-response surveys are typically not researchers, and so this helps researchers see their study from the perspective of the public. Finally, ethical-response surveys enable researchers to pose multiple versions of a research project in order to assess the perceived ethical balance of different versions of the same project. One limitation, however, of ethical-response surveys is that it is not clear how to decide between different research designs given the survey results. But, despite these limitations, ethical-response surveys appear to be helpful; in fact, Schechter and Bravo-Lillo (2014) report abandoning a planned study in response to concerns raised by participants in an ethical-response survey.

While ethical-response surveys can be helpful for assessing reactions to proposed research, they cannot measure the probability or severity of adverse events. One way that medical researchers deal with uncertainty in high-risk settings is to perform *staged trials*—an approach that might be helpful in some social research. When testing the effectiveness of a new drug, researchers do not immediately jump to a large randomized clinical trial. Rather, they run two types of studies first. Initially, in a phase I trial, researchers are particularly focused on finding a safe dose, and these studies involve a small number of people. Once a safe dose has been determined, phase II trials assess the efficacy of the drug; that is, its ability to work in a best-case situation (Singal, Higgins, and Waljee 2014). Only after phase I and II studies have been completed is a new drug allowed to be assessed in a large randomized controlled trial. While the exact structure of staged trials used in the development of new drugs may not be a good fit for social research, when faced with uncertainty, researchers could run smaller studies explicitly focused on safety and efficacy. For example, with Encore, you could imagine the researchers starting with participants in countries with strong rule of law.

Together, these four approaches—the minimal risk standard, power analysis, ethical-response surveys, and staged trials—can help you proceed in a sensible way, even in the face of uncertainty. Uncertainty need not lead to inaction.

6.7 Practical tips

In addition to high-minded ethical principles, there are practical issues in research ethics.

In addition to the ethical principles and frameworks described in this chapter, I’d also like to offer three practical tips based on my personal experience conducting, reviewing, and discussing social research in the digital age: *the IRB is a floor, not a ceiling*; *put yourself in everyone else’s shoes*; and *think of research ethics as continuous, not discrete*.





6.7.1 The IRB is a floor, not a ceiling

Many researchers seem to hold contradictory views of the IRB. On the one hand, they consider it to be a bumbling bureaucracy. Yet, at the same time, they also consider it to be the final arbitrator of ethical decisions. That is, many researchers seem to believe that if the IRB approves it, then it must be OK. If we acknowledge the very real limitations of IRBs as they currently exist—and there are many of them (Schrag 2010, 2011; Hoonaard 2011; Klitzman 2015; King and Sands 2015; Schneider 2015)—then we as researchers must take on additional responsibility for the ethics of our research. The IRB is a floor not a ceiling, and this idea has two main implications.

First, *the IRB is a floor* means that if you are working at an institution that requires IRB review, then you should follow those rules. This may seem obvious, but I’ve noticed that some people seem to want to avoid the IRB. In fact, if you are working in ethically unsettled areas, the IRB can be a powerful ally. If you follow their rules, they should stand behind you should something go wrong with your research (King and Sands 2015). And if you don’t follow their rules, you could end up out on your own in a very difficult situation.

Second, *the IRB is not a ceiling* means that just filling out your forms and following the rules is not enough. In many situations you as the researcher are the one who knows the most about how to act ethically. Ultimately, you are the researcher, and the ethical responsibility lies with you; it is your name on the paper.

One way to ensure that you treat the IRB as a floor and not a ceiling is to include an ethical appendix in your papers. In fact, you could draft your ethical appendix before your study even begins, in order to force yourself to think about how you will explain your work to your peers and the public. If you find yourself uncomfortable while writing your ethical appendix, then your study might not strike the appropriate ethical balance. In addition to helping you diagnose your own work, publishing your ethical appendices will help the research community discuss ethical issues and establish appropriate norms based on examples from real empirical research. table 6.3 presents empirical research papers that I think have good discussions of research ethics. I don’t agree with every claim by the authors in these discussions, but they are all examples of researchers acting with *integrity* in the sense defined by Carter (1996): in each case, (1) the researchers decide what they think is right and what is wrong; (2) they act based on what they have decided, even at personal cost; and (3) they publicly show that they are acting based on their ethical analysis of the situation.

Table 6.3: Papers with Interesting Discussions of the Ethics of their Research

Study	Issue addressed
Rijt et al. (2014)	Field experiments without consent
	Avoiding contextual harm
Paluck and Green (2009)	Field experiments in developing country
	Research on sensitive topic
	Complex consent issues
Burnett and Feamster (2015)	Remediation of possible harms
	Research without consent
	Balancing risks and benefits when risks are hard to quantify
Chaabane et al. (2014)	Social implications of research
	Using leaked data files
Jakobsson and Ratkiewicz (2006)	Field experiments without consent
Soeller et al. (2016)	Violated terms of service

6.7.2 Put yourself in everyone else’s shoes

Often researchers are so focused on the scientific aims of their work that they see the world only through that lens. This myopia can lead to bad ethical judgment. Therefore, when you are thinking about your study, try to imagine how your participants, other relevant stakeholders, and even a journalist might react to your study. This perspective taking is different than imaging how *you* would feel in each of these positions. Rather, it is trying to imagine how these *other people* will feel, a process that is likely to induce empathy (Batson, Early, and Salvarani 1997). Thinking through your work from these different perspectives can help you foresee problems and move your work into better ethical balance.

Further, when imagining your work from the perspective of others, you should expect that they are likely to fixate on vivid worst-case scenarios. For example, in response to Emotional Contagion, some critics focused on the possibility that it might have triggered suicide, a low-probability but extremely vivid worst-case scenario. Once people’s emotions have been activated and they focus on worst-case scenarios, they may completely lose track of the probability of this worst-case event occurring (Sunstein 2002). The fact that people might respond emotionally, however, does not mean that you should dismiss them as uninformed, irrational, or stupid. We should all be humble enough to realize that none of us have a perfect view of ethics.

6.7.3 Think of research ethics as continuous, not discrete

Debate about the ethics of social research in the digital age frequently happens in binary terms; for example, Emotional Contagion was either ethical or it was not ethical. This binary thinking polarizes discussion, hinders efforts to develop shared norms, promotes intellectual laziness, and absolves researchers whose research is labeled “ethical” from their responsibility to act more ethically. The most productive conversations that I’ve seen involving research ethics move beyond this binary thinking to a continuous notion about research ethics.

A major practical problem with a binary conception of research ethics is that it polarizes discussion. Calling Emotional Contagion “unethical” lumps it together with true atrocities in a way that is not helpful. Rather, it is more helpful and appropriate to talk specifically about the aspects of the study that you find problematic. Moving away from binary thinking and polarizing language is not a call for us to use muddled language to hide unethical behavior. Rather, a continuous notion of ethics will, I think, lead to more careful and precise language. Further, a continuous notion of research ethics clarifies that everyone—even researchers who are doing work that is already considered “ethical”—should strive to create an even better ethical balance in their work.

A final benefit of a move toward continuous thinking is that it encourages intellectual humility, which is appropriate in the face of difficult ethical challenges. The questions of research ethics in the digital age are difficult, and no single person should be overly confident in her own ability to diagnose the correct course of action.



6.8 Conclusion

Social research in the digital age raises new ethical issues. But these issues are not insurmountable. If we, as a community, can develop shared ethical norms and standards that are supported both by researchers and the public, then we can harness the capabilities of the digital age in ways that are responsible and beneficial to society. This chapter represents my attempt to move us in that direction, and I think the key will be for researchers to adopt principles-based thinking, while continuing to follow appropriate rules.

In section 6.2, I described three digital-age research projects that have generated ethical debate. Then, in section 6.3 I described what I think is the fundamental reason for ethical uncertainty in digital-age social research: rapidly increasing power for researchers to observe and experiment on people without their consent or even awareness. These capabilities are changing faster than our norms, rules, and laws. Next, in section 6.4, I described four existing principles that can guide your thinking: Respect for Persons, Beneficence, Justice, and Respect for Law and Public Interest. Then, in section 6.5, I summarized two broad ethical frameworks—consequentialism and deontology—that can help you with one of the deepest challenges that you might face: when is it appropriate for you to take ethically questionable means in order to achieve an ethically appropriate end. These principles and ethical frameworks will enable you to move beyond focusing on what is permitted by existing regulations and increase your ability to communicate your reasoning with other researchers and the public.

With that background, in section 6.6, I discussed four areas that are particularly challenging for digital-age social researchers: informed consent (section 6.6.1), understanding and managing informational risk (section 6.6.2), privacy (section 6.6.3), and making ethical decisions in the face of uncertainty (section 6.6.4). Finally, in section 6.7, I concluded with three practical tips for working in an area with unsettled ethics.

In terms of scope, this chapter has focused on the perspective of an individual researcher seeking generalizable knowledge. As such, it leaves out important questions about improvements to the system of ethical oversight of research; questions about regulation of the collection and use of data by companies; and questions about mass surveillance by governments. These other questions are obviously complex and difficult, but it is my hope that some of the ideas from research ethics will be helpful in these other contexts.