Morality in a Technological World

The technological advances of contemporary society have outpaced our moral understanding of the problems that they create. How will we deal with profound ecological changes, human cloning, hybrid people, and eroding cyberprivacy, just to name a few issues? In this book, Lorenzo Magnani argues that existing moral constructs often cannot be applied to new technology. He proposes an entirely new ethical approach, one that blends epistemology with cognitive science. The resulting moral strategy promises new dignity for overlooked populations, both of today and of the future.

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Knowledge as Duty

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To my wife, Anna
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Preface

RESPECTING PEOPLE AS THINGS

When my institution, the University of Pavia, was founded near Milan in 1361, women were viewed very differently from the way we see women today. Back then, a woman living in one of the centuries-old houses I pass each day on my way to work here in Pavia would not have been considered as “human” as a man: seven hundred years ago, she would have essentially been property – first her father’s and then, later, her husband’s – and she would probably have had little control over matters concerning her family or her own destiny. There is a very good chance that she would have been illiterate, as were most women and many men in medieval Europe, and she certainly would not have been permitted to attend the city’s then-new university. In the fourteenth century, the centers of learning in northern Italy were among the most advanced in the world, yet even they considered women to be unworthy or incapable of being educated. Indeed, it took nearly 400 years for women to gain admission to the University of Pavia, and not until the eighteenth century was a degree awarded to a woman: Maria Pellegrini Amoretti (who was from a wealthy family, not surprisingly) took a law degree in 1777.

At the institution today, however, women work alongside men as both students and faculty members, and while we must continue to strive for gender equity, the current level of intellectual interaction between female and male scholars would have been unimaginable in the medieval world. Attitudes toward gender roles did not evolve because of some inherent change in women, of course, but because people have learned a great deal more about the human condition since 1361. By what mechanism did this shift occur? What knowledge allowed humankind to change the way it views women? And for the purposes of this book, how can we learn from that transformation so that others may enjoy greater status as well?
Before turning to this book’s central theme of regarding knowledge as duty, it is useful to think about how knowledge can affect an entity’s moral status. In addition to women, many other kinds of entities – both living and nonliving – that were once considered much less valuable than they are today have also acquired a different kind of moral worth: *intrinsic* value, or value as an end in itself. An entity’s intrinsic value, of course, arises not from a change in the thing itself but from changes in human thinking and knowledge; if various acts of cognition can imbue things with new moral value, I submit that certain undervalued human beings can reclaim the sort of moral esteem currently held by some “external things,” like endangered species, artworks, databases, and even some overvalued political institutions.

As the subtitle *Knowledge as Duty* suggests, morality is distributed in our technological world in a way that makes some scientific problems particularly relevant to ethics: ecological imbalances, the medicalization of life, and advances in biotechnology – themselves all products of knowledge – seem to me to be especially pertinent topics of discussion. The system of designating certain animals as endangered, for example, teaches us that there is a continuous delegation of moral values to externalities; this may also cause some people to complain that wildlife receives greater moral and legal protection than, for example, disappearing cultural traditions. I wondered what reasoning process would result in a nonhuman thing’s being valued over a living, breathing person and asked myself what might be done to elevate the status of human beings. One solution, I believe, is to reexamine the respect we have developed for particular externalities and then to use those things as a vehicle to return value to people.

The well-known Kantian tradition in ethics teaches that human beings should not be treated solely as “means” or “things” in a merely instrumental way but should, instead, be regarded as “ends.” I believe, however, that if we rigidly adhere to Kant’s directive, we make it impossible to embrace an important new strategy I propose in Chapter 1: “respecting people as things,” the notion that people must be regarded as “means” (things) insofar as these means involve “ends.” In essence, the idea holds that human beings often can and even *should* be treated as “things,” and that in the process they become “respected as things” that had been ascribed more value than some people. We must reappropriate the instrumental and moral values that people have lavished on external things and objects, which I contend is central to reconfiguring human dignity in our technological world.

The potential benefits of “respecting people as things,” then, undermine Kant’s traditional distinction between intrinsic value and instrumental value, and they are not the only factors to do so: in Chapter 3, I argue that more advanced and more pervasive technology has also blurred
the line between humans and things – machines, for example – and between natural things and artifacts, and that it has become increasingly difficult to discern where the human body ends and the non-human thing begins. We are in a sense “folded into” nonhumans, so that we delegate action to external things (objects, tools, artifacts) that in turn share our human existence with us. It is just this hybridization that necessitates treating people as things and, fortunately, that makes this course of action easier to pursue. Again, my counterintuitive conclusion is that instead of treating people as means, we can improve their lives by recognizing their part-thingness and respecting them as things.

In turn, the concept of “respecting people as things” provides an ethical framework through which to analyze the condition of modern people, who, as increasingly commodified beings, are becoming more and more thing-like anyway. In this book, I will use this construct to interrogate the medicalization of life (Chapter 2), cybernetic factors (Chapter 4), and the influences of globalization (Chapter 5).

MORAL MEDIATORS

I have said that only human acts of cognition can add worth to or subtract value from an entity, and that revealing the similarities between people and things can help us to attribute to human beings the kind of worth that is now held by many highly valued nonhuman things. This process suggests a new perspective on ethical thinking: indeed, these objects and structures can mediate moral ideas and recalibrate the value of human beings by playing the role of what I call moral mediators.

What exactly is a moral mediator? As I explain in Chapter 6, I derived the concept of the moral mediator from that of the epistemic mediator, which I introduced in my previous research on abduction and creative and explanatory reasoning. First of all, moral mediators can extend value from already-prized things to human beings, as well as to other nonhuman things and even to “non-things” like future people and animals. We are surrounded by human-made and artificial entities, whether they are concrete objects like a hammer or a PC or abstractions like an institution or society; all of these things have the potential to serve as moral mediators. For this reason, I say that it is critically important for current ethics to address not only the relationships among human beings, but also those between human and nonhuman entities. Moreover, by exploiting the concepts of “thinking through doing” and of manipulative abduction, we can see that a considerable part of moral action is performed in a tacit way, so to say, “through doing.” Part of this “doing” can be considered a manipulation of the external world in order to build various moral mediators that function as enormous new sources of ethical information and knowledge. I call these schemes of action “templates of moral doing.”
In the cases just mentioned, moral mediators are purposefully constructed to achieve particular ethical effects, but other aspects and cognitive roles of moral mediators are equally important: moral mediators are also beings, entities, objects, and structures that objectively, even beyond human beings’ intentions, carry possible ethical or unethical consequences.

External moral mediators function as components of a memory system that crosses the boundary between person and environment. For instance, when a society moves an abused child into a foster home, an example I use in Chapter 6, it is seeking both to protect her and to reconfigure her social relationships; in this case, the new setting functions as a moral mediator that changes how she relates to the world – it can supply her with new emotions that bring positive moral and psychological effects and help her gain new perspectives on her past abuse and on adults in general. In Morality in a Technological World, I depict these processes as “model-based” inferences, and indeed one way moral mediators transform moral tasks is by promoting further moral inferences in agents at the level of model-based abduction, a concept I introduced in a previous book on abductive reasoning. I use the term “model-based reasoning” to mean the constructing and manipulating of certain representations, not mainly sentential and/or formal, but mental and/or related to external mediators: obvious examples of model-based inferences include building and using visual representations, conducting thought experiments, and engaging in analogical reasoning. In this light, an emotional feeling also can be interpreted as a kind of model-based cognition. Of course, abductive reasoning – the process of reasoning to hypotheses – can be performed in a model-based way, either internally or with the help of external mediators.

Moreover, I can use manipulation to alter my bodily experience of pain; I can, for example, follow the behavior template “control of sense data” described in Chapter 6, during which I might shift – often unconsciously – the position of my body. Through manipulation I can also change my body’s relationships with other humans and nonhumans experiencing distress, as did Mother Theresa, whose rich, personal moral feeling and consideration of pain were certainly shaped by her physical proximity to starving and miserable people and by her manipulation of their bodies. In many people, moral training is often related to the spontaneous (and sometimes fortuitous) manipulation of both sense data and their own bodies, for these actions can build morality immediately and nonreflectively “through doing.”

Artifacts serve as moral mediators in many situations, as in the case of certain machines that affect privacy. Chapter 4 addresses the fact that the internet mediates human interaction in a much more profound way than do traditional forms of communication like paper, the telephone, and
mass media, even going so far as to record interactions in many situations. The problem is that because the internet mediates human identity, it has the power to affect human freedom. Thanks to the internet, our identities today largely consist of an externally stored quantity of data, information, images, and texts that concern us as individuals, and the result is a “cyborg” of both flesh and electronic data that identifies us. I contend that this complex new “information being” depicts new ontologies that in turn involve new moral problems. We can no longer apply old moral rules and old-fashioned arguments to beings that are simultaneously biological and virtual, situated in a three-dimensional local space and yet “globally omnipresent” as information packets. Our cybernetic locations are no longer simple to define, and increasing tele-presence technologies will exacerbate this effect, giving external, non-biological resources even greater powers to mediate ethical endowments such as those related to our sense of who and what we are and what we can do. These and other effects of the internet – almost all of which were unanticipated – are powerful motivators of our duty to construct new knowledge.

I believe that in the context of this abstract but ubiquitous technological presence, certain moral approaches that ethics has traditionally tended to disparage are worth a new look. Taking care of both people and external things through personal, particular acts – a moral orientation often associated with women – rather than relating to others through an impersonal, general concern about humanity has a new appeal. The ethics of care does not consider the abstract “obligation” as essential; moreover, because it does not require that we impartially promote the interests of everyone alike, it allows us to focus on those who most need assistance.

In short, a considerable part of morality occurs in an implicit way, so to say, “through doing,” and part of this “doing” features manipulating the external world in order to build various external “moral mediators” that can provide vast amounts of new information and knowledge, transform ethical features and effects, and sometimes, of course, generate unethical outcomes.

MORAL REASONING

In this book, I will consider numerous ethical issues related to technology: ecology, biotechnology, the hybridization of human beings, cyberprivacy, bad faith, globalization, and the unethical effects of external systems and technologies in general. Each of these discussions underscores the importance of producing and exploiting appropriate ethical knowledge and reinforces my argument that knowledge is a duty. If, as I contend, new ethical, scientific, and other kinds of understandings must be
developed and implemented, then cognitive concerns also become fundamentally important. In Chapters 6 and 7, I closely examine the cognitive aspects of moral mediators and of other methodological problems related to ethical reasoning and moral deliberation.¹

Not only are ethical knowledge and reasoning expressed at the verbal/propositional level, they can also involve model-based (visual, for example) and manipulative “through doing” aspects: for example, an important component of ethics is imagination, which is – together with analogy, visualization, simulation, the thought experiment, and so on – a form of model-based reasoning. Creativity is also important, for through it human beings expand knowledge and create new perspectives. To explain morality “through doing,” I will illustrate manipulative ethical reasoning using a list of invariant behaviors that I call “moral templates,” which represent embodied patterns of possible moral behavior, either preexisting or newly created in people’s mind-body systems, that enable a kind of moral “doing.” I also think it is useful to cognitively compare moral deliberation to diagnosis, a strategy that reveals the logical details of the intrinsic “incompleteness” of knowledge in ethical inferences.

Using a cognitive and epistemological approach to the concept of abduction and model-based reasoning, as I am proposing here, produces an important and valuable side effect: an integrated view that forms a unique framework through which to study the multiple aspects of moral reasoning, including those that are verbal/propositional, model-based, distributed (“moral mediators”), and embodied (“templates of moral doing”).

KNOWLEDGE AS DUTY

Chapter 4 is dedicated to explicitly clarifying the motto “knowledge as duty.” In our technological world, it has become critically important for us to produce and apply ethical knowledge that keeps pace with the rapid changes around us. We are no less obligated to pursue this knowledge than we are to seek scientific advances; indeed, to neglect the ethical dimension of modern technology is to court disaster. Recent advances have brought about consequences of such magnitude that old policies and ethics can no longer contain them, and we must be willing to approach problems in wholly new ways. Our technology has, for example, turned nature into an object of human responsibility, and if we are to restore and ensure her health, we must employ clever new approaches and rich,

¹ These chapters are largely autonomous and can usefully be read before the other chapters or independently. They are “twins” of a kind and complementary, because they systematically treat similar methodological issues from an epistemological and cognitive perspective (Chapter 7) as well as from a moral perspective (Chapter 6).
updated ethical knowledge. The scope and impact of our current technological abilities have handed human beings the responsibility for, say, “nature” and “the future,” which were previously left to God or to fate. Consequently, I declare early in the book—Chapter 3—my hope for knowledge that maintains and enhances our endowments of intentionality, consciousness, and free-will choices; that strengthens our ability to undertake responsible action; and that preserves our ownership of our own futures. To offer a personal example, while I respect new objects or artifacts that integrate my cognitive activities, I believe it is imperative to explore the moral implications of such devices before embracing their use.

Indeed, basic aspects of human dignity are constantly jeopardized not only by human mistakes and wrongdoing but also by technological products. Constant challenges also come from natural events and transformations, both ordinary ones, like the birth of one’s first child, and extraordinary ones, like epidemics, tsunamis, and hurricanes. I think that preserving and improving the present aspects and characteristics of human beings depends on their own choices about knowledge and morality, and I believe strongly that knowledge is a primary duty that must receive much greater emphasis than ever before and that the knowledge we create must be commensurate with the causal scale of our action. I propose that one way to achieve this and other goals is by accepting “knowledge as duty” and by using disciplines like ethics, epistemology, and cognitive science to rethink and retool research on the philosophy of technology.

What are ethical “reasons”? What is moral progress? What is the role of principles, rules, emotions, and prototypes in ethical reasoning? What is the role of inconsistencies in moral reasoning? Is there a morality “through doing”? These are some of the further issues addressed in the book, along with the practice of casuistry and an analysis of abduction as a form of hypothetical reasoning that helps to clarify processes of “inferring reasons.” The book also discusses the problem of free will and examines the role of objects, structures, and technological artifacts as moral carriers and mediators. What all of these topics have in common, though, is that they in some way support the idea that knowledge is our duty. Nearly every thought we have, nearly every action we take, is dictated by the knowledge available to us. In short, if we truly want to effect changes in the world, if we are committed to improving the lives of countless human beings who suffer for a variety of reasons, we must understand that it is only greater knowledge that will allow us to do so.

I started work on this book in 2001, while I was a visiting professor at the Georgia Institute of Technology in Atlanta. In addition to my work here in Italy, I further reshaped the manuscript in 2003 as a Weissman
Distinguished Visiting Professor at the City University of New York, which provided an excellent work environment, and during visits to the Department of Philosophy of Sun Yat-sen University in Guangzhou (Canton), China, where I am currently a visiting professor.

I am grateful to some of my colleagues and collaborators for their helpful suggestions and much more over the last few years, as well as to the two reviewers who read an early draft of the book and whose comments and suggestions helped me greatly as I worked on the final version. I also wish to thank Beth Lindsmith, a freelance editor who enhanced my written English and helped me to frame my ideas in a clearer way.

I discussed many parts of this book with my wife, Anna, to such an extent that I can say we wrote those sections together. This book is dedicated to her, in honor of her idea that ethics are things that help us to become happy.

Pavia, Italy
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