

# Chapter 5

## Rational Ethics

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**Abstract** An effort, originating from an invited talk on “ethics and computers”, to re-found ethics on the rules of logical reasoning, from three concrete principles (Goodness, Truth, Fairness) and two meta-principles (Restraint and Importance).

### 5.1 Introduction

In the attempt to address the assigned theme for this contribution, ethics and computers, it became clear that while the second term is well defined the first is not. What kind of behavior qualifies as ethical? The established works on ethics, from Aristotle to Spinoza, Kant and modern moral philosophers, lack precise definitions of the concepts they discuss. They bring to mind C.P. Snow’s *Two Cultures* thesis that instead of berating scientists for not reading Dickens we might ask writers and philosophers to explain the second law of thermodynamics.

Of the two cultures, the humanities indeed have as much to learn from science and technology as the other way around. The latter’s advantage comes from three fundamental characteristics of scientific discussions. First, they devote great care to defining precisely the concepts under consideration. Second, to draw conclusions from principles, they use simple and firmly grounded laws of reasoning, rather than appeals to emotion or authority. Third, all their propositions are subject to refutation through objective criteria (of which the most practical is that a *single* counter-example suffices to refute a proposition of the universally quantified kind, such as “all French women are red-haired”).

Ethics is one of the parts of the humanities that has the most to gain from the scientific method of reasoning. The present article proposes a rational basis for ethics.

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After discussion and polishing, it could serve as a basis for a second part addressing the original theme of ethics and computers.

The proposed basis for ethics consists of five principles. Three are concrete rules of behavior:

- Principle of Goodness: help the weak; in particular, do not harm.
- Principle of Truth: do not lie.
- Principle of Fairness: treat others fairly.

The others are meta-principles, governing the application of the first three:

- Principle of Restraint: only apply ethical considerations to cases of a demonstrably ethical nature.
- Principle of Importance: if concrete principles lead to conflicting conclusions, rank their relevance.

Section 5.2 briefly reviews why some classical approaches to ethics do not help. Section 5.3 distinguishes ethics from other forms of behavior prescription: religion, law, politics and reason. The next five sections, complemented by one on the fundamentals of rational thinking and another on the concept of relativism, detail the proposed principles of ethics. The last section is a short conclusion.

## 5.2 Classical Ethics

In trying to derive laws of ethics, the prestigious traditional contributions are of little practical use. Kant, for example, is famous for the “categorical imperative” which, in a simplified version, states that one should make each decision through a rule that could become universal. The immediate objection is that such a principle solves no problem of ethics, but simply pushes the problem: how are we to know that a rule is universally applicable? There is an even more fundamental impossibility: any non-trivial case admits no single generalization. Difficult ethical situations are difficult precisely because they are specific.

A recent, much publicized legal case provides an illustration. A wife killed her husband; was that right? The categorical imperative tells us that it is not. But wait, he had abused her for 30 years! Is not self-defense acceptable? Yes, it is permitted to kill in self-defense.<sup>1</sup> But wait, he was not threatening her at that particular moment; she killed him in cold blood. Then it was not permissible. But wait: was it not self-defense after all, given all these years of beating and humiliation? Self-defense does not necessarily mean an immediate threat if the victim knows the threats are going to start again. But wait. . . And so on. Any proper discussion leads to restricting the context repeatedly until it comes to encompass only the case at

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<sup>1</sup>The categorical imperative does not rule out all cases of killing, as evidenced by Kant’s acceptance of the death penalty and even of the “annihilation” of bastard children.

hand; then one is left where one started, with no other guides than generalities and preconceived ideas. Surely we are entitled to expect more from ethical theories.

The Categorical Imperative can lead to such absurd conclusions (such as the injunction not to lie to a would-be murderer) that it is better to consider it as an elegant intellectual exercise on Kant's part, rather than a rule intended for practical use.

Also disturbing to someone trained in scientific reasoning is the Kantian use of intentions to judge the morality of actions. Rational thinking needs objectively assessable criteria. Results are subject to objective assessment; intentions are not.

A traditional idea often proposed as the key to ethics is the "Golden Rule": treat others the way you would wish them to treat you. While useful, it is clearly insufficient, and not always applicable. For a soldier who sees an enemy taking aim, making sure to shoot first is not unethical, but contradicts the golden rule since he most likely does not *wish* the other soldier to do the same unto him. More fundamentally, the rule's naïve assumption of symmetry does not hold in most cases and leads to hypocrisy. A man discussing the ethics of abortion cannot possibly understand the procedure's potential effect on *him*, and would be dishonest if he pretended otherwise; ditto for a young adult discussing the ethics of policies for the old, or a billionaire discussing the ethics of unemployment compensation.

Another example of traditional approaches to ethics is Spinoza's treatise. It deserves praise for its emphasis on human freedom and for attempting mathematical-style deductions—mathematical, however, in style only.

A satisfactory system of ethics requires fresh thinking.

### 5.3 Distinctions

It seems to be a universal feature of human societies that they consider some behaviors, aside from the immediate benefit or harm they cause, as inherently "good" or "bad". The role of ethics is to codify this innate sentiment into rules of conduct.

To develop sound principles of ethics, the first task is one of delimitation from other endeavors which also seek to regulate behavior: religion; law; politics; reason.

*Religion* is often mentioned in connection with ethics and played a role in the progress of ethical values in European history. If, however, we take a contemporary perspective, no discernible connotation exists between ethics and religion. There is no evidence, for example, that religious people behave more ethically, or less, than agnostics and atheists. If we wanted to run an experiment that *might* evidence some correlation, we could immerse a country for a sufficiently long time in a religious culture with ethical ambitions, then see how it reacts to an ethical challenge. The country might be France; the sufficiently long time could be a millennium; the ethical challenge could be whether to take a stand about a crime of unprecedented proportions against humanity; and the people we test could be the dignitaries of the religion that had dominated the country for those 1000 years. We do not need to run the experiment, it ran itself: out of about a 100 French bishops in World War II, six

(six heroes, some of whom paid dearly) took a public stance against the treatment of the Jews. Such an example suffices to dispel any hope of correlating religion with ethics.

A connection with *law* exists, but it is indirect. Not all that is legal is ethical; you can take advantage of what your mother taught you about how she runs her business to start your own competing company and drive her to bankruptcy, all within the framework of the law, but hardly ethical. Not all that is ethical is legal, as in the case of people helping illegal immigrants against the law but out of ethical concerns. The more tyrannical the regime, the more examples there will be of ethical behaviors that are illegal. A definition of the ideal democracy might be that it is the place where every ethical behavior is legal.

The relationship with law is interesting in two more respects, leading to both of the meta-principles, Importance and Restraint. First, law gives us useful terms to *talk* about ethics. We mock lawyers and their “on the one hand, on the other hand” style of reasoning, but many legal modes of thinking are effective for ethics, for example the practice of assessing which is the lesser of two evils. Often in ethics as in law there is no perfect solution, but we have to choose the least bad, as expressed by the Principle of Importance. Second, ethics can benefit from more law. In many debates, partisans of one of the two sides unfairly tilt the discussion by asserting that they are defending good against evil. Handing over the decision to rules of law simplifies the discussion and lessens the role of emotions. A typical example is prostitution, which is not an ethical matter once we remove confusion by not commingling it with issues of child abuse and human trafficking, on which all sides agree; if it were an ethical issue, countries with a similar ethical culture, such as Canada and the US, would not treat it in opposite ways, regulation versus interdiction. Ethical considerations bring little to the debate. Better to resolve it through legislation after a pragmatic discussion of the benefits and disadvantages of both approaches. (In 2008 the governor of the state of New York, elected in part because of his staunch moral crusade against prostitution, was exposed as a valued customer of a high-class prostitution ring. He might have avoided having to resign in shame if he had earlier stated his position through arguments of public policy rather than proclamations of his high-minded ethics.)

Producing legislation is the work of *politics*. The actual role of ethics in politics is tenuous. Most politicians would have us believe otherwise, draping their ambitions in ethical clothes, with the usual heart-rending declarations of devoting oneself to the good of one’s country. Such ethical motives do exist, but only as an adjunct to the politician’s primary drive, the drive for power. (Witness the ever-repeated saga of the heroic freedom fighter who, the minute he topples the previous regime, becomes the new tyrant.) Desiring power is not unethical, but it would be refreshing to see a candidate proclaiming: “vote for me because I badly, badly want the decision power and the limousine and the deference of office-seekers and the TV crews outside my house eagerly awaiting my next pronouncement”.<sup>2</sup> This drive

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<sup>2</sup>Brilliantly expressed by Don Magnifico’s aria “Già mi par che questo e quello” in *La Cenerentola*.

is always present, and often dominant, in the mindset of *every* candidate; *no* candidate ever states it. From the Principle of Truth, the first one who did would, on purely ethical grounds, deserve our vote.

In a stable democratic regime, most political decisions are of a pragmatic rather than ethical nature. Is it better to route landing airplanes through the Western or Southern route? Fuel costs being the same, the question is whether to harm Jürg in the Western suburbs or Hans on the South side; neither solution is more ethical than the other, and the question will simply be which of the two camps has more political clout. The presence of a strong ethical component in a political decision is usually a sign of crisis, for example when a people rises against a tyrannical power, or in times of peace when the president and congress of the USA collude to take away health care from the country's entire lower class, in clear violation of the Principle of Goodness.

The last concept against which to assess the role of ethics is *reason*, in the sense of rational processes for solving problems, as used in science and engineering. Rational thinking is indeed at the basis of the approach to ethics developed in this discussion. But rational thinking alone does not suffice. In countries that do have a universal health care system, a strictly rational policy would be to stop health care benefits at, say, 65, since older people account for a disproportionate share of health costs. Deficits gone, financial problem solved! The argument for not following this route is entirely ethical. The constraints of reason are not sufficient to guide ethical decisions. The concept of good and bad is the driver.

This observation is worth emphasizing, if only to avoid misunderstanding the term "rational ethics" as implying that ethics should entirely follow from reason. The confusion is all the more possible that reason does go a long way to justify ethical rules. The ethical injunction not to kill is a good example of a principle that one can sustain through rational arguments: if we could all kill each other without restraint, humankind would either not last long, or, for those few of its members that survived, not lead pleasant lives. While such a rational argument supports the corresponding ethical principle, it does not constitute all of it. It does not, for example, rule out the death penalty, which in normal circumstances has no quantitatively significant population consequences; and yet civilized people have come to reject that practice as unethical. Something else than pure reason is at play: an independent notion of distinguishing between good and bad.

While not sufficient, the constraints of reason on ethics are necessary. The corresponding principles of rational thinking deserve a few more comments in the following section.

## 5.4 Rules of Reason

The logical method of reasoning is the basis for mathematics, science, technology and much of the progress in human history. (A common retort is that logic is not everything or, in Pascal's terms, "the heart has its reasons, to reason unknown". All

well and good, but to broadcast such appeals to emotion, for example from your smartphone, you are taking advantage of centuries of advances in mathematics, physics, electronics and computer science. Astrologists need YouTube just as much as astronomers do. A politician's most rousing appeals to instinct reach no one without correctly modulated electrical signals. Even back then in the savannah, the most mystical of our ancestors needed logical thinking to keep the predators at bay.)

Section 5.1 listed three fundamental rules of reasoning: precise definitions of the terms of any discussion; reliance on a small number of precisely defined schemes of logical deduction; and a simple technique for disproving universal ("for all") statements through exhibiting a single counter-example. (In epistemology this second rule is known as falsifiability; in computer science it corresponds to the fundamental rule of software testing, expressed in Dijkstra's famous pronouncement.)

Two other rules of rational thinking are also essential: proof by contradiction, and limits on the reach of theories.

The first is (like falsifiability) a technique for *disproving* propositions.<sup>3</sup> It encourages us to examine the consequences of an assumption with the specific intent of reaching a contradiction. If we succeed, then we can reject the assumption. Tolstoy's *Kreutzer Sonata* provides an example in ethics. After a dissolute youth, the novelist decided that carnal love was evil and should be renounced. To people who pointed out that following this principle would soon put an end to the existence of humans, he replied that he was only prescribing it as an ideal behavior and that not everyone would apply it. Even ignoring the strangeness of the immediate consequences in this specific case (is it desirable to restrict future generations to the progeny of the *unethical* members of current humankind?), it makes no sense to promote an ethical theory subject to the condition that that not everyone will follow it. *Reductio ad absurdum* is as useful a reasoning technique in ethics as elsewhere. It does make discussions more messy, by taking us away from the comfort of pondering grand principles, such as "thou shalt not kill", purely in the abstract. Sound reasoning, however, requires that we consider their consequences. As with an experiment in science and a test in software development, a positive result only provides a minute increment of trust, but a negative result forces us to change our assumptions.<sup>4</sup> It also helps us, in applying the Principle of Importance, to assess the respective merits of other principles: the flight attendant's injunction to "put on your own oxygen mask before that of children traveling with you" only seems to contradict the Principle of Goodness until we consider the consequences of not applying it. (If you are unconscious, you cannot do much good for your child.)

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<sup>3</sup>The scientific method has a distinct Mephistophelic ("*ich bin der Geist, der stets verneint*") component.

<sup>4</sup>An example is an illustration, a counter-example is a disproof. This observation imposes a strict intellectual discipline (which the present article strives to apply) on the use of examples and counter-examples to support arguments.

The other rule, which we may call “acceptance of inherent limits”, is one of the major discoveries of twentieth-century science. Incompleteness and undecidability results in logic, mathematics and computer science force us to accept that for sufficiently complex problems no complete theory can even exist. They have echoes in other disciplines, physics in particular with the uncertainties of quantum mechanics, and even in the humanities with Isaiah Berlin’s emphasis on favoring local, specific political solutions over all-encompassing schemes. The echo in ethics is the realization that not all dilemmas have a satisfactory solution. The fashion in moral philosophy in the past few decades has been to brood over the trolley problem<sup>5</sup> and other riddles of that kind. The likely answer in such cases is that a satisfactory solution is as impossible as Russell’s barber, or a definition of “heterological” in the Grelling-Nelson paradox, or a C compiler that guarantees termination of the generated code. More important than these intellectual games are the many cases, arising every day in the world around us, of clearly right and clearly wrong actions, which moral philosophers should delineate for the rest of us.

Giving logical reasoning the central role in discussions of ethics has another benefit: it decreases their *ad hominem* component. We cannot completely discard that component; it is natural in particular to take a skeptical view of ethical exhortations proffered by a scoundrel. The more serious risk arises in the opposite situation: being taken in by holier-than-thou types who proclaim their own perfection, using the pretense of ethics as a cover for the advancement of their own goals. The US population seems to be a particularly frequent prey for televangelists who build a business empire by hectoring sinners, until some mishap reveals them as abusers and crooks. (An advantage of having gone to school in France is that around the age of twelve you go through *Tartuffe*, where a self-advertised saint spends five acts berating everyone else until officers of the King come onto the stage and arrest him for fraud and racketeering. This early vaccination makes people wary of grandiose proclamations. Real saints do not typically go around advertising their own sainthood.) Setting aside the extreme examples of scoundrels and saints, we should try as readers to separate the message from the messenger. As authors we are correspondingly permitted to write about ethics as we would write about any other topic deserving rational discussion, without making any claim of moral superiority, or any personal claim of morality at all. “Do as I say, not as I do” is hypocrisy, but a condition of sane discussions is to focus on what we say, not what we do.

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<sup>5</sup>A cable car is running into five people; do you pull the switch to divert it to a track where it will kill just one person?

## 5.5 The Principle of Restraint

We start our review of the five principles by one that *limits* the use of ethics. The Principle of Restraint states that we should only apply ethical criteria to issues of a demonstrably ethical nature, defined as issues of deciding between good and evil.

Ethics is about serious, often difficult cases of such decisions. It is inappropriate—and may occasionally be unethical—to appeal to ethical considerations in cases that do not justify it.

Sometimes such overreach is harmless. Many professional organizations have “codes of ethics” which are really rules of serious professional behavior, only some of which have an ethical character. In the IFIP codes of conduct for authors and referees,<sup>6</sup> the injunction not to submit a scientific paper simultaneously to two different conferences or journals is not a matter of good and evil, simply a way to make the publication system efficient. Purely rational considerations suffice here; we do not need to devalue ethics by invoking ethical principles unnecessarily.

More harmful effects arise when people artificially bring ethics into a discussion to make their side look good and the other side look bad. We saw an example in the case of prostitution. Another one, from information technology, is the attempt to position open-source software as a moral crusade. As illustrated in my 2000 article *The Ethics of Free Software*,<sup>7</sup> the leaders of the movement, self-proclaimed saviors of humankind, switch to savage attack mode the minute they feel one of their colleagues is taking undue credit for their contributions. (For a while, the creator of GNU, unhappy that Linux, which used many GNU tools, was getting all the credit, lobbied to have the system renamed “Lignux”.) This observation removes nothing from the value of open-source software—it simply shows that these brilliant programmers are also normal humans—but does suggest staying away from ethical considerations when discussing such matters as the respective merits of commercial versus open-source software. The article’s conclusion was that open source is not an ethical stance but a business model. Pretending otherwise is hypocrisy.

A similar confusion, with worse consequences, has now arisen in the world of scientific publication. Riding on the popularity of open-source software, many publishing companies have embraced *open-access* publishing. Open-source software is, at least, “free” in the economic sense: you can get it at no cost (paying only for associated services). While some open-access journals (such as the Journal of Object Technology, [jot.fm](http://jot.fm)) are indeed free to both authors and readers, the more common “gold” model of open access simply means that authors pay to publish, rather than readers to read. Not only is the move to such a model based on economic rather than ethical considerations, but the ethical implications are actually onerous, since a number of disreputable publishers have taken advantage of the new fashion

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<sup>6</sup>[bit.ly/2j18Lby](http://bit.ly/2j18Lby) and [bit.ly/2j18ghD](http://bit.ly/2j18ghD); I was the main author of these documents. Another important example is the carefully designed ACM code of ethics.

<sup>7</sup>*Software Development*, vol. 8, no. 2, pages 32–36, [se.ethz.ch/~meyer/publications/softdev/ethics.pdf](http://se.ethz.ch/~meyer/publications/softdev/ethics.pdf)

to swindle naïve authors. (See the many descriptions of the phenomenon such as [bit.ly/2iwGTQ5](https://doi.org/10.1007/978-1-4939-9875-5_21) in *The Scientist*.) Predatory publishers take advantage of ethical arguments to achieve purely selfish aims. Ethically, their behavior is all the more repulsive that it breaches the Principle of Goodness by preying on the weak.

Pretexting ethical reasons to further one's own interests is the precise definition of hypocrisy. Overuse of ethics always raises its danger. The Principle of Restraint decreases this danger by enjoining us to restrict the application of ethics to cases of an undisputed ethical character: decisions that demand a crucial distinction between good and evil. For everything else, use any arguments that you think will work, but keep the ethical pretense out.

## 5.6 The Principle of Importance

Many ethical fallacies arise when someone considers a problem according to a single criterion, ignoring others that are more important. The danger already exists in Aristotle's list of virtues including "temperance" (moderation) and "courage" (the ability to face danger with thoughtful deliberation) with the implication that they are at a comparable level of importance. The famous Milgram experiments suggest that temperance has an unfortunate tendency to supersede courage. When applied to making practical decisions, these principles often lead to different directions; the conflict arises most vividly for people facing tyrannical regimes, when temperance suggests conforming and courage suggests revolt.

The Principle of Importance states that we must recognize such conflicts between different ethical criteria, and resolve them by attaching weights to each. (The alternative would be to pretend pretending that a single criterion, such as a categorical imperative, suffices to produce all the answers in all cases.)

This is one of the areas where ethics benefits from law (Sect. 5.3): it is standard practice in legal reasoning to weigh the respective importance of several criteria. Someone who rushes into the street to help an accident victim should not be charged with jaywalking. The legal concept of "extenuating circumstance" is a more general example of the multi-criterion approach of judicial decisions.

Neglecting the Principle of Importance is the specialty of single-issue advocates, who subordinate everything to their favorite concern. The *Ethics of Free Software* article cited this extract of a lecture on free software by Richard Stallman:

*[...] scientists used sometimes to be able to cooperate even when their countries were at war. I read that once American soldiers who landed on an island of the Pacific Ocean, during World War II, found a building with a note saying: 'To American soldiers. This building is a marine biology laboratory. We put all our samples and reports in order so that US scientists can go on with our work.' Because, for them, they were working only for humanity. Not only for Japan. They wanted their work to be useful for humanity, regardless of the outcome of the war. But today we live in a state of civil war between small groups, in every country. In which every group acts to stop the others, hinder the others, hamper the others. It's sad.*

Obsession with a single issue (academic openness) led the author to lose his ethical perspective. Reading his plea, one might believe that willingness to share marine research was the salient feature of Japanese troops in WW2, rather than the unprovoked attack of democratic countries and the devastation of Asia; and that marine biology was the salient feature of Japanese research, rather than horrendous experiments on humans ([en.wikipedia.org/wiki/Unit\\_731](http://en.wikipedia.org/wiki/Unit_731)).

For another example of distorted ethical priorities, here is an extract (in my translation at from the French at [bertrandmeyer.com/2012/11/04/souvenirs-of-a-dark-time/](http://bertrandmeyer.com/2012/11/04/souvenirs-of-a-dark-time/)) from the memoirs of my mother, who during the war was placing Jewish children in homes and convents:

*I also have to evoke that other Mother Superior, stern and dry, who after making me languish for several days while asking for the approval of her supervisors finally consented to see four or five little girls. I arrived with five of my charges, whom my neighbor had brought to me after their parents were arrested on that very morning. I can still see the high-ceilinged parlor, the crucifix on the wall, the freshly waxed and shining floor, the carefully polished furniture and a tiny figure with curly brown hair, all trembling: the eldest girl, who at the point of entering stepped back and burst into tears. "One does not enter crying the house of the Holy Virgin Mary", pronounced the Mother Superior, who had me take my little flock back to Grenoble, without further concerning herself with its fate.*

If in today's peaceful France a little girl starts crying loudly in a church, you might order her to behave: to conform to temperance. The Mother Superior understood that Aristotelian virtue. Courage is what she lacked. In such examples, we cannot make an ethical decision without deciding on the respective importance of the criteria at play. Here is an extreme case from Timothy Snyder's *Bloodlands*, about the Holodomor (the Ukrainian famine expressly caused by Soviet authorities):

*Survival was a moral as well as a physical struggle. A woman doctor wrote to a friend in June 1933 that she had not yet become a cannibal, but was "not sure that I shall not be one by the time my letter reaches you." The good people died first. Those who refused to steal or to prostitute themselves died. Those who gave food to others died. Those who refused to eat corpses died. Those who refused to kill their fellow man died. Parents who resisted cannibalism died before their children did. Ukraine in 1933 was full of orphans, and sometimes people took them in. Yet without food there was little that even the kindest of strangers could do for such children. The boys and girls lay about on sheets and blankets, eating their own excrement, waiting for death.*

Such extreme circumstances are a challenge to any system of ethics—no moralist would defend cannibalism, or leaving children without food—but the passage again illustrates the necessity of weighing criteria against one another.

One hardly needs to argue for the Principle of Importance with a person who has had the privilege of living or working with an uncontested hero. "There are no heroes to their valets." Petty offenses in everyday behavior do not, however, annul the heroism.

The Principle of Importance does not justify the ethical fallacy, sometimes known as "false moral equivalence", of pretexting of an ethical violation to justify another, as in "how can you accuse me of Y given that you did X?" Unless Y is a demonstrable consequence of X, they are worthless. Yet such arguments are a

favorite of propaganda in foreign policy, as if a country could invoke another's past military follies as a permission to invade its own defenseless neighbor. The Principle of Importance does not involve comparing different cases but comparing competing criteria in one case.

A criticism of the Principle of Importance is that it does not include rules for assessing the respective weight of conflicting criteria. This question may indeed need further work. In many practical cases, however, the more difficult step is to accept that more than one criterion may be at play; after that, the assessment is not so hard. Carelessness in managing your email server may be bad; but as an ethical violation, it cannot possibly measure up against repeated lying, shady financial dealings, boasting of sexual assault, and insulting people because of their handicap or national origin.

## 5.7 Relativism

The Principle of Importance does not imply “moral relativism”. This term denotes arguments (often used by apologists for dictators) justifying unethical behaviors through cultural differences. Relativism is generally unfounded. We may, for example, respect “Asian values”, but they cannot not justify violations of universal rules of ethics. Asians require freedom, respect and safety as much as everyone else.

The Principle of Importance can justify moral relativism in diachronic rather than synchronic comparisons (history rather than geography). At a given time (synchrony), the same general norms apply everywhere, with some fine-tuning to local nuances. We need, however, some flexibility in assessing *past* practices, and must recognize that all human discourse is influenced by the author's times. Otherwise we would reject almost all the classics: Kant, as noted, condoned cases of infanticide, and Voltaire was an anti-Semite. While we may and should remain shocked by some of their ideas (as anyone reading us in two hundred years will undoubtedly be by some of ours), we must accept that some of them simply followed from the authors' cultural context and focus on their contributions of eternal value.

Examples abound, here is a Japanese one (Fig. 5.1).

Hard to imagine today. As another Japanese example, if only from the Japan of Western fantasy, the story in *Madama Butterfly* involved an ethical scandal<sup>8</sup> at the time of its creation and still does. But the nature of the scandal has entirely changed. The scandal then was a child conceived out of wedlock (even from an arranged union with a cynical American officer). The scandal for the modern mind is the story's reliance on what we would call child sex tourism, a practice that the libretto treats with not even a hint of disapproval.

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<sup>8</sup>One may safely combine at most two of: supercilious moral principles; a love of opera; understanding of Italian.

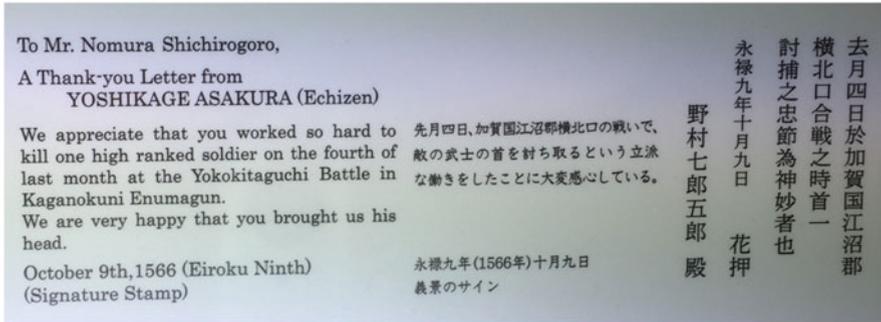


Fig. 5.1 An Exhibit from the Nomura Samurai House Museum in Kanazawa

Ethical principles do evolve, but at a given time, while we should be tolerant of cultural differences, the key rules of ethics are universal.

## 5.8 The Principle of Goodness

The Principle of Goodness states that we should help people who are weaker than we are. This idea, also known as altruism, may be the source of all ethics.

We cannot restrict Goodness to cases in which it helps our self-interest, such as protecting our children (members of other animal species do so too) and the rest of our families. The true test of altruism is whether we can do good even we do not stand to benefit other than, possibly, from the pleasurable sense of having acted right. The principle's definition contains, however, another restriction: helping *weaker* people. Without this qualification, goodness might suggest that you should give \$100 to Warren Buffett if he asks. That is not the idea.

The principle bears in itself a contradiction: altruism cannot be absolute without becoming self-defeating. If you gave all your food to the hungry, or even just (as the principle more exactly suggests) to those hungrier than you are, you would lead a wretched life and become unable to help anyone at all. Even the most saintly people must, like airline passengers with their oxygen masks, take some care of themselves. Saint Martin, of Catholic legend, wisely gave the beggar *half* of his coat.

More generally, any of us can only ever help a minuscule subset of those who need it. This inherent limitation separates Goodness from other ethical principles, making it inherently non-absolute. It is in fact so far from the possibility of absolute application that it can only be viewed as a general advice, what scientists call a heuristics: help weaker people "as much possible".

If we are not happy with this vagueness and search for a possibly more limited but firm rule, we may deduce from the Principle of Goodness the Principle of No Harm: do not harm needlessly. This rule is indeed a logical consequence of Goodness since someone that you can harm is by definition weaker. As always,

we should be careful about careless generalization, hence the restriction to “needless” harm, recognizing that harming someone may be needed; you may be defending yourself against him, or protecting him from greater harm (as when brutally throwing him to the side because a car is rushing his way). But even just by itself the Principle of No Harm goes a long way towards addressing the core goals of ethics. If there is indeed is a “Golden Rule” of ethics, this must be it. If everyone consistently applied this principle, the world would be a much better place.

Goodness manifests itself in portentous questions but also in small matters. Traveling, known as a way to enhance appreciation of others’ values, can also trigger a realization of the merits of one’s own culture. A good experience is to spend a week in the traffic of Shanghai or Bombay, exposed daily to road traffic. No driver of truck or car or motorcycle or rickshaw *ever* yields any advantage, not even a centimeter: all that counts when two rivals could move is who would suffer more from a clash (inevitably the pedestrian, if he is one of the two), and it is *always* the other who moves. Coming back to the streets of Paris or Milan or Los Angeles, you realize what you have been missing: the little, casual horizontal hand gesture, unknown in many parts of the world but an unsung component of polite society, with which a driver whisks off a pedestrian or other driver, with or without a smile, but *without any necessity*—other than Goodness and perhaps the common-sense desire to help smooth the flow of traffic.

The varieties of driving mores may seem a trivial concern, at most a question of temperance, in light of the giant challenges of ethics. But they are revealing, and have ethical consequences. To be convinced, it suffices to have seen a frail old lady caught in the vociferous pandemonium of Hanoi, having attempted to cross a street; transfixed in terror, she seemed to have been standing there for hours, an incessant flow of cars rushing past her left and right, none ever slowing down. “Asian Values”, with their supposed focus on honoring the elderly, were not in evidence.

European drivers generally will honk, Southern California drivers generally will not, but in both places there will soon come a driver who stops. While goodness in everyday behavior does not guarantee goodness in the life-and-death cases of ethics, it is difficult to imagine that societies that condone callous everyday behavior will naturally resort to goodness in matters of greater import.

This seemingly anecdotal example is indeed (perhaps better than intellectual puzzles of the Trolley kind) a crucible for ethical values. We can only argue for the obviously appropriate behavior (stop and let the pedestrian go, even at the risk of losing thirty seconds of your precious time or, supreme shame, let a less considerate driver overtake you) on ethical arguments. If we used law, we would argue that jaywalking is illegal (presumably in Vietnam too). If we used pure reason, we would argue that stopping many vehicles and delaying their occupants, for the sake of one person, is an affront to traffic efficiency. Only through the Principle of Goodness can we justify the decision.

Because the Principle of Goodness is at best partially applicable, we must often resort to its more restrictive but absolute corollary, the Principle of No Harm. It does the job here: we do not just try to be good to the jaywalking lady; if we were, we might as well propose to remove red lights, pedestrian crossings and all rules on

pedestrians (who are, by construction, “weaker” than vehicles as required by the Principle of Goodness). That decision, as other extreme applications of Goodness, would have unacceptable consequences. No Harm tells us, however, that when we see the occasional jaywalker ethics should drive us to compassion. To avoid harming her, we push the brake pedal.

The supreme form of harm is killing. Many stern moralists of the past had no qualms about condoning some cases of killing. It should be a cornerstone of any modern system of ethics that killing stands apart from all other disapproved forms of behavior. Any acceptance of killing humans after birth should be restricted by the most stringent and exceptional conditions. This rule, the Principle of Life, is another quasi-absolute corollary of the Principle of Goodness: before all, preserve human life.

The Principle of Life explains, for example, that while we think regrettable to separate a child from his teacher we recoil with horror at the idea of separating him from his parents. The reason is that life is the most important of all human goals, and harming people’s life, especially the life of the weak, is the worst possible kind of harm.

## 5.9 The Principle of Fairness

The Principle of Fairness states that, under equal conditions, we must treat people equally. A concern for fairness, or at least some concern, seems, like Goodness, to be a key part of the very notion of ethics.

Fairness was one of Aristotle’s principles. He defined it as fairness to enemies. Being fair to friends is easy. More significant is how you deal with your foes.

Fairness and Goodness may come into conflict. Fairness can prevent us from according an advantage to someone who from pure concerns of Goodness might seem to merit it. On the waiting list for a heart transplant, a rich child is ahead of a poor child. When a heart becomes available, goodness might entice us to move the poor child ahead: is he not “weaker”? But fairness tells us otherwise. For the relevant criterion (the need for a heart), they are equally weak.

Fairness is in general, more than other principles, subject to qualification. In particular, fairness does not imply absolute equality. That chimera has been tried (by such principled ethicists as the Khmer Rouge), with results that no one wants to experience again. We want fairness, but not too much of it, because we recognize that conditions are seldom entirely equal.

One practical, actionable consequence of the Principle of Fairness is the Principle of Respect: show tolerance towards the diversity of humans. Here too we have to be careful, applying the Principle of Importance and avoiding the pitfall of moral relativism. The Principle of Respect directs us to accept other cultures; but if someone tells us that his culture justifies keeping women inferior, we should treat this remonstrance as the nonsense it is. Giving every person a chance to develop to

his or her fullness, justified by the principles of Goodness and particularly No Harm, has overwhelming priority, and is indeed the very idea of Fairness.

## 5.10 The Principle of Truth

The last principle states that we should tell the truth.

Like Goodness, the Principle of Truth has a weak positive form and a stronger negative form,<sup>9</sup> as reflected in the standard instruction to jurors in a trial. “Tell all the truth” is the positive rule; “tell only the truth” is the negative one since it is equivalent to “do not lie”.<sup>10</sup>

The positive form is not an absolute principle. When you describe yourself in your CV, or in declarations to a girl you court, you seldom tell the full truth. That does not make you depraved. Telling actual lies, however, is a different matter. The negative variant, “Do Not Lie”, is indeed closer to an absolute rule.

Yet again, even the Do Not Lie principle has exceptions. To the object of your heart’s desire you should not lie, but few people in love have ethical qualms lying to their rivals. The Principle of No Harm justifies that doctors lie to terminally ill children. The Principle of Restraint justifies that companies and sports team lie to their competitors (because such cases generally do not involve any compelling ethical element).

It is significant that these examples include a justification through other ethical principles. The existence of exceptions to Do Not Lie does not mean that we should take lying lightly. Most ethical behaviors are also truthful behaviors. Departures from the principle, that is to say, lies, create a heavy burden of justification.

The Principle of Truth seems related to a commonly accepted rule: the keeping of promises. Hold Your Promise is, however, not a separate ethical principle. It relates to the Principle of Truth only marginally: at the time of making a promise, if you already do not intend to hold it, you are lying. At any subsequent time, however, any ethical argument for keeping the promise has to come from the Do Not Harm principle. Such an argument can only exist if breaching the promise would harm someone weaker. If I promise to you on December 31st that I will eat less next year, and do not stick to that resolution, your opinion of me may sink, but I have not done anything ethically wrong unless your well-being depends on my slenderness. Keeping a promise can in fact be gravely unethical. If you have promised to send a child to a summer camp, and discover that the camp’s leader has had a conviction for child abuse, reneging on your promise is the ethical solution.

What is the basis for the Do Not Lie principle and more generally for the Principle of Truth? To some extent, they can find a rationale on the sole basis of

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<sup>9</sup>The two forms were, for Goodness, “help the weak” and “do not harm” (Sect. 5.8).

<sup>10</sup>Technically, “do not lie” is a trifle weaker than “tell only the truth” since it also allows proffering statements that you not know to be true or false.

reason and logic. If everyone lied all of the time, or many people much of the time, it would be very hard for society to function. This matter provides an illustration of the Snow *Two Cultures* thesis: computer scientists trying to address fault tolerance and safeguard computer networks have made considerable progress towards understanding how a system can work correctly even when some or possibly many of its components, consistently or occasionally, deliver wrong information. Every ethicist should have read the Paxos paper.

On the other hand, the most obvious lesson, once you have learned from such work how to deal with systems that lie, is that if there is a choice truth always wins. We deal with lies because the world is imperfect and TCP/IP loses the odd packet or two, but things would be so much easier if Alice could always trust Bob.

The rational arguments are not enough; truthfulness in human affairs is in the end an ethical issue. What better evidence could there be, for the last example of a discussion arising from an informatics conference, than the titanic Volkswagen lie of 2015? The software engineers, and their managers, and most likely the managers of their managers, apparently thought that results-faking software would gain VW a few points of market share. The company will, it seems, recover; but only after providing, through its egregious violation of the Principle of Truth, a textbook-quality example of unethical behavior, sure to serve many generations of future ethicists.

## 5.11 Conclusion

Ethics affects some of the most crucial aspects of the human condition and of our ability to live in a society. These matters are far too fateful to allow for the interference of prejudices, superstition, or the overreach of ethics into questions that trivialize its value.

By taking a reasoned approach to ethics, based on the careful application of a small number of well-defined principles in a strictly delimited scope, we can obtain guidance for some of the most difficult decisions humans have to make.

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