

Seven moral rules found all around the world

Oliver Scott Curry

Dr Oliver Scott Curry is Research Director for Kindlab, at kindness.org. He is also a Research Affiliate at the School of Anthropology and Museum Ethnography, University of Oxford, and a Research Associate at the Centre for Philosophy of Natural and Social Science, at the London School of Economics. He received his PhD from LSE in 2005. Oliver's academic research investigates the nature, content and structure of human morality. He tackles such questions as: What is morality? How did morality evolve? What psychological mechanisms underpin moral judgments? How are moral values best measured? And how does morality vary across cultures? To answer these questions, he employs a range of techniques from philosophy, experimental and social psychology and comparative anthropology.

Abstract: *What is morality? And to what extent does it vary around the world? The theory of 'morality-as-cooperation' argues that morality consists of a collection of biological and cultural solutions to the problems of cooperation recurrent in human social life. Morality-as-cooperation draws on the theory of nonzerosum games to identify distinct problems of cooperation and their solutions, and predicts that specific forms of cooperative behaviour – including helping kin, helping your group, reciprocating, being brave, deferring to superiors, dividing disputed resources, and respecting prior possession – will be considered morally good wherever they arise, in all cultures. In order to test these predictions, we investigate the moral valence of these seven cooperative behaviours in the ethnographic records of 60 societies. We find that the moral valence of these behaviours is uniformly positive, and the majority of these cooperative morals are observed in the majority of cultures, with equal frequency across all regions of the world. We conclude that these seven cooperative behaviours are plausible candidates for universal moral rules. Future work will gather new data in contemporary societies*

will test the prediction that variation in moral values reflects variation in the value of different types of cooperation under different social and ecological conditions.

Introduction

Would you return a lost wallet to its rightful owner? Could you kill a man to defend your country? Should you lie to the police to cover up your father's hit-and-run accident? Life is full of moral dilemmas. They are among the most consequential decisions we ever make. They define who we are, what kind of person we want to be, and what others think of us. Good choices make our lives go well, bad choices bring it all crashing down. So what's the right thing to do? And how are we supposed to know? How do we navigate our way through these moral minefields, and live ethical lives?

For millennia, philosophers have struggled in vain to answer these questions. They have created a blizzard of 'isms' and 'ologies' – emotivism, expressivism, cognitivism, non-cognitivism, realism, anti-realism, intuitionism, deontology, consequentialism, contractarianism – in an attempt to make sense of our moral thoughts and feelings, our rights, duties and obligations. But philosophers still can't agree on the basics. They don't know what morality is or where it comes from. They can't decide whether morality is innate or acquired, subjective or objective, universal or culturally relative. They don't know what, or how many, moral values there are. And they don't know how to make a moral decision.

Some have argued that morality is natural – the product of instincts placed in us by natural selection. Others have argued that morality is learned – from parents, priests and police officers. Some have argued that morals are subjective – a matter of desire or preference or taste. Others have argued that morals are objective – there is a fact of the matter, and some actions are right or wrong irrespective of what we might think or feel about

them. Some have argued that morals are culturally universal – the same in every society across the world. Other have argued that morals are culturally relative – that is, they differ across time and place, such that there is no overall standard of right and wrong, and you can't use the standards of one society to judge another. Some have argued that there is only one overarching moral value (say, the promotion of happiness). Others have argued that there are many moral values – honesty, justice, compassion – not all of which can be 'reduced' to happiness. Some have argued that making a moral decision is a question of consequences – the right thing to do is that which brings about the best outcomes, in terms of saving the most lives, or promoting the maximum well-being. Others argue that morality is about sticking to a fixed set of rules ('deons'), whatever the consequences – 'let justice be done though the heavens fall'. And others argue that morality is not a matter of consequences or fixed rules, but is instead about being a particular kind of person, of cultivating and displaying particular 'virtues'.

What is the result of all this confusion? As the philosopher HA Prichard wrote in 1912 "to most students of Moral Philosophy there comes a time when they feel a vague sense of dissatisfaction with the whole subject. And the sense of dissatisfaction tends to grow rather than diminish. It is not so much that the positions, and still more the arguments, of particular thinkers seem unconvincing, though this is true. It is rather that the aim of the subject becomes increasingly obscure" (Prichard, 1912). Quite. Instead of helping us with our problems, moral philosophers have lost themselves in labyrinths of their own making.

Luckily, there is another way. For in recent years the study of morality has become a science, encompassing research in game theory, evolutionary biology, genetics, animal behaviour, psychology, neuroscience and anthropology. Not only can this science answer all of our moral questions, in many cases it

already has. For this science says that there is nothing mysterious or magical about morality. Morality is merely a collection of cooperative rules – rules that help us get along, work together, keep the peace, and promote the common good.

The roots of a revolution

Charles Darwin deserves the credit for kickstarting this new science of morality. Darwin argued that morality should be studied 'like any other branch of natural history' – and that's what he did in his 1871 book *The Descent of Man* (Darwin, 1871). Darwin argued that humans were social animals, with innate social instincts that emerged early in infancy. He speculated that these social instincts included parental affection, loyalty, obedience, an appetite for glory. And he argued that these instincts give rise to what we call morality – “the so-called moral sense is aboriginally derived from the social instincts”.

Recent advances in our understanding of natural selection show that Darwin was right.

Evolutionists were once at a loss to explain why organisms were ever nice to one another. Surely natural selection is a nasty competitive process that can produce only nasty competitive individuals? After all, even genes are 'selfish' (Dawkins, 1976).

Well, yes, genes are selfish. But 'selfishness' just means 'self-replicating'. And we now know that while genes can replicate at the expense of other genes (in other individuals), they can also replicate in concert with other genes (in other individuals). In other words, genes don't just compete, they also cooperate; and in practice, cooperation has proved to be a winning strategy. This is why evolution has favoured cooperation since the very origins of life – why genes teamed up to form cells, why cells teamed up to form individual organisms, and why individuals teamed up to form societies (Maynard Smith & Szathmáry, 1995).

What's more, the mathematics of cooperation – the theory of nonzerosum games – tells us that there is not just one type of cooperation, there are many types. There are many cooperative problems, and many cooperative solutions. Seven types of cooperation have been identified thus far (see Box 1). Kin selection is the theory that natural selection will favour genes that help copies of themselves that reside in other individuals, that is in genetic relatives; it explains why many organisms are designed to detect and deliver benefits to members of their families. Mutualism is the theory that individuals often do better working together than by going it alone – there is strength and safety in numbers – and hence why animals form schools, shoals and herds. Social exchange is the theory that by trading favours – I'll scratch your back, you scratch mine – individuals can both come out ahead, which explains why some animals make friends and alliances. And conflict resolution is the theory that, if individuals can resolve disputes without coming to blows – by establishing dominance through 'hawkish' displays of power and 'dove-ishly' deferring to dominant individuals, by dividing resources, or by respecting prior ownership – they can both avoid the costs of a drawn-out fight (reviewed in: Curry, 2016).

So now evolutionists have an abundance of theories to explain niceness in nature – why bees sacrifice their lives to defend their sisters in the hive, why penguins huddle together for warmth, why rats return favours, why stags settle disputes by bellowing rather than coming to blows, why sticklebacks divide disputed territory fairly, and why butterflies respect each other's property – and the only problem is deciding which one applies in any given case.

These same theories explain the cooperative dispositions we see in humans.

Human morality

Humans are social animals. We have lived together in social groups for millions of years, and throughout this time we have faced a range of different problems of – or opportunities for – cooperation, for mutually-beneficial social interaction, including raising a family, caring for the sick, choosing the right leaders, hunting in teams, and sharing food. And we have evolved and invented a range of solutions to these problems – ways of unlocking the enormous benefits that cooperation provides. These solutions come in many different shapes and sizes: some are social instincts, the legacy of evolution; some are more recent cultural innovations – norms, customs and laws. Together, they provide the motivation for our cooperative behaviour, and they provide the criteria by which we evaluate the behaviour of others. And it is precisely this collection of cooperative traits – these instincts, intuitions, and institutions – that philosophers and others have called ‘morality’.

What’s more, because there are many different types of cooperation, the theory leads us to expect, and can explain, many different types of morality. Kin selection explains why we feel a special duty of care for our families. Mutualism explains why we form groups and coalitions, and hence why we value unity, solidarity, and loyalty. Social exchange explains why we trust others, reciprocate favours and punish those who don’t, and why we feel guilt and gratitude, make amends, and forgive. Conflict resolution explains why, instead of coming to blows, we settle disputes through displays of bravery and generosity, why we defer to the winners of these competitions, why we divide disputed resources fairly rather than trying to hog them all, and why we respect others’ property and refrain from theft. These types of cooperation are immensely valuable, hence we value them immensely. And it is these immensely valuable values that philosophers and others have called our moral values.

So, the cooperative theory of morality tells us why we have

multiple moral rules and values, and it tells us what those morals will be. It explains why we feel we ought to: love our families, help our groups, return favours, be brave, defer to superiors, be fair, and respect property (Box 1).

Box 1: Seven Moral Rules

1. Love: Love your family
2. Loyalty: Help your group
3. Reciprocity: Return favours
4. Heroism: Be brave
5. Deference: Defer to your superiors
6. Fairness: Divide disputed resources
7. Property: Respect prior possession

Making a science of morality

The theory that morality is a collection of cooperative rules – biological and cultural solutions to the problems of cooperation recurrent in human social life – makes a number of testable predictions, that have been tested, and that have passed the test.

For example, the theory predicts that, if ‘morality’ is the name we give to cooperation, then people will regard cooperation as morally good. And more specifically, the theory predicts that specific forms of cooperative behaviour—helping kin, helping one’s group, reciprocating costs and benefits, displaying hawkish and dove-ish traits, dividing disputed resources, and respecting prior possession—will be regarded as morally good. And this will be the case in all moral systems, in all cultures, all over the world.

The prediction that seven moral values will be ‘culturally universal’ runs counter to the widely held view that morality is ‘culturally relative’ – that morality means different things

to different people in different places, and that there are no universal moral rules. This debate has been rumbling on for centuries, largely because there has never been sufficient evidence to resolve the issue one way or the other.

And so, in an attempt to provide such evidence, my colleagues and I surveyed the moral valence of the seven cooperative behaviours in 600 ethnographic accounts of ethics, from 60 societies that had been specifically chosen to provide as representative a sample of humanity as possible (Curry, Mullins, & Whitehouse, 2019).

We found, first, that these seven cooperative behaviours were considered morally good in 99.9% of cases. Second, we found examples of most of these morals in most societies. Crucially, there were no counter-examples – no societies in which any of these behaviours were considered morally bad. And third, we observed these morals with equal frequency across continents; they were not the exclusive preserve of ‘the West’ or ‘the East’ or any other region.

So, among the Amhara of Ethiopia, “flouting kinship obligation is regarded as a shameful deviation, indicating an evil character”. In Korea, there exists an “egalitarian community ethic of mutual assistance and cooperation among neighbors and strong in-group solidarity”. In India and Bangladesh, “[r]eciprocity is observed in every stage of Garo life and has a very high place in the Garo social structure of values”. Among the Maasai of Kenya, “Those who cling to warrior virtues are still highly respected”, and “the uncompromising ideal of supreme warriorhood involves ascetic commitment to self-sacrifice...in the heat of battle, as a supreme display of courageous loyalty”. The Bemba of Zambia exhibit “a deep sense of respect for elders’ authority”. The Kapauku of Indonesia’s “idea of justice” is called “uta-uta, half-half...the meaning of which comes very close to what we call equity”. And among the Tarahumara of Mexico, “respect for the property of others is the keystone of

all interpersonal relations”.

The results were so consistent across cultures that it is reasonable to ask whether the anthropologists were biased. They might be. But if anything, they are likely to be biased against the idea of universal morals. No anthropologist makes a career by coming back from a year of fieldwork and declaring ‘they are the same as us’; and yet, not a single anthropologist, among the hundreds whose work we read, documented a culture where it was immoral to cooperate. (The same was true when we presented our findings at a major conference – despite considerable consternation, a roomful of social anthropologists were not able to come up with a single counter-example (Gellner, Curry, Cook, Alfano, & Venkatesan, 2020).)

All told, the study shows that there is a common core of universal moral principles. Morality is always and everywhere a co-operative phenomenon. Everyone everywhere agrees that co-operating, promoting the common good, is the right thing to do.

The varieties of ethical experience

Now, the theory that morality is a collection of cooperative rules does not predict that moral systems will be identical across cultures. On the contrary, it predicts that moral values will reflect the value of cooperation under different conditions. So, in traditional societies where people live in large extended families, the ethics of kinship will loom large; whereas in modern societies where people live alone in urban anonymity, and where most interactions are with strangers, the ethics of reciprocity and fairness will take precedence. Different people facing different cooperative problems and opportunities will vary in how they rank the seven moral values – and seven types of morality can be ranked in $7!=5,040$ ways, which already accounts for a lot of variation.

What's more, the theory suggests that these seven simple moral 'elements' can be combined to form a much larger number of more complex moral 'molecules' (Curry, Alfano, Brandt, & Pelican, 2021a, 2021b). For example, family values and deference combine to form filial piety – “the duties naturally owed to one's relatives, superiors... parents”. Reciprocity and heroism combine to form honour – “the belief that male aggression is sometimes appropriate, justifiable, and even necessary as a response to provocation, especially when that provocation insults or threatens a man's manhood”. Other molecules include: fraternity, blood revenge, family pride, gavelkind, primogeniture, friendship, patriotism, tribute, diplomacy, common ownership, confession, turn taking, restitution, modesty, mercy, munificence, arbitration, mendicancy, and queuing. And, if you run the numbers, you see that there might be hundreds, thousands, perhaps millions of complex moral concepts – a vast galaxy of moral possibilities waiting to be discovered. This system of molecules provides new ways of thinking about perennial and as yet unresolved issues in moral thought. Perhaps moral elements are innate and universal, but moral molecules are learned and local. Perhaps different people combine different elements in different times and places, and this explains one of the ways in which cultures differ.

From 'is to ought'

What does this new science of morality say about how we ought to behave?

Well, given that morality is a collection of cooperative rules, then of course, it is morally good to follow these rules. It is good to cooperate. You ought to love your family, be loyal to your group, return favours, be brave, respect your superiors, be fair, and respect other's property. And if these rules come into

conflict – if you have to choose between different cooperative opportunities, such as helping your family or helping your group – then you ought to choose the more cooperative option, the greater good.

Hence moral problems are empirical problems; moral questions are empirical questions. The question is always “what is the most cooperative move to make in this situation?” And these questions have objectively correct answers – some behaviours really do promote cooperation more than others. Hence we can solve our moral problems using standard scientific method. Faced with a moral problem, we identify candidate cooperative solutions, and criticise and test them. (And we can apply this method universally, to any culture, as long as we remember that different people in different places might face a different set of problems, and have different solutions available to them.)

As with science in general, we may never be 100% sure what the answer is. Our current set of solutions are tentative, they are hypotheses about how to solve our problems. Nevertheless through successive rounds of trial and error we might move closer to the moral truth. For we do not have to stick with the cooperative solutions given to us by nature or culture. We can try (and have tried) to invent new and better solutions – for example the Enlightenment idea of treating people as equals, or the cultural invention of queuing. And when our new solutions are successful, when they provide better solutions to our problems – when, in game theoretic terms, they lead to superior equilibria – then we make progress, moral progress.

This cooperative theory explains why previous moral theories have identified cooperation (social contract theory), stable strategies (deontology), specific character traits (virtue theory), and beneficial outcomes (consequentialism) as important parts of morality. And it explains why each of these theories – because they each focus on some parts of morality and omit others – has run into predictable difficulties. For example, Social

Contract Theory focusses on only one type of cooperation – reciprocity – and is criticised for ignoring the rest. Deontology advocates stable strategies that can be adopted by everyone, but is criticised for neglecting their consequences. Virtue Theory celebrates various ad hoc lists of character traits – love, loyalty, heroism – but it doesn't explain why these particular traits are moral, nor does it explain how to choose between them when they conflict. Consequentialism, meanwhile, focusses on the beneficial outcomes, but is criticised for advancing unstable solutions that, because they are not cooperative, are not considered moral. The cooperative approach avoids all of these problems.

So conventional wisdom is wrong to claim that you can't go 'from is to ought' or 'from facts to values' (Curry, 2006). You can go 'from facts to values' if you start with the right 'facts' – facts about the nature and content of our moral values, facts about what morality is (Sterelny & Fraser, 2016). With this discovery we can solve our most important problems using the most successful problem-solving machinery ever invented – science.

Morality explained

The new science of morality explains everything there is to explain about morality. It explains what morality is – a collection of traits, dispositions and rules designed to promote cooperation, the common good. It explains where morality comes from – it is the product of evolution by natural selection and more recent cultural invention. It explains that our morals are subjective preferences for objective states of the world (namely, a more cooperative world). It explains why there are many moral values – there are as many types of morality as there are types of cooperation (and their combinations). It explains why we think it is morally good to love our families, help our groups, return favours, be brave, defer to our superiors, be fair,

and respect others' property. It explains that our basic moral principles are universal, and that these principles generate variation in predictable ways. It explains why moral dilemmas arise, and why we feel it's so important to solve them. And it explains how to solve them. Science explains how to be good.

Many philosophers are scandalised at the thought that science is encroaching on their turf. But they shouldn't be. For this is not the first time a branch of philosophy has become a part of science. Science, after all, is simply the method of choosing between alternative ideas on the basis of evidence. There is no fixed boundary between what is science and what is not, what can be studied scientifically and what cannot. The boundary moves, and has moved, as science grows and develops – as new ideas are proposed, and new ways of gathering evidence are invented. It happened when 'natural philosophy' became physics, and conquered the heavens. It happened when 'natural theology' and 'vitalism' gave way to evolutionary biology, and explained the origins of life. It happened a century ago, when 'philosophy of mind' became psychology, and we realised that our inner life was all information processing. And now it's happening to ethics.

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