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Moral Institutions and Evolution: In Search of Equilibria

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Abstract

After having met severe opposition with its introduction, evolutionary ethics is becoming increasingly popular. One adherent is Ken Binmore, who – extremely simplified – argues that evolution has equipped humans with the inclination to reciprocate, and that via reciprocity moral norms have evolved. While Binmore's theory more or less implicitly rests upon several behavioral assumptions, it lacks a clear empirical foundation. In this paper, I provide a summary of key results from various disciplines related to the core assumptions, namely: i) People behave as if they held other-regarding preferences, ii) Such other-regarding behavior is enforced via reciprocity, iii) Norm-violators are punished, and iv) In the absence of norms, people employ a trial-and-error strategy from which an equilibrium will evolve. While most of these assumptions are well-supported, the application of equilibria to real-world states of the world seems problematic. Rather, human behavior is heterogenous and in constant flux. Further, because morality is merely one institution embedded in a wider set of institutions, the evolutionary pressure does not influence moral norms in isolation. If one institution changes, so will the (theoretical) equilibrium of the institution "morality".

1 Introduction

Evolutionary explanations of moral norms and fairness at times arouse rather severe forms of disapproval. As Klenk (2019) notes of the case of Eward Wilson, one of its prominent representatives: “[H]is talks were controversial, shouted down by protesters, and at a conference in 1978, an opponent even expressed his dismay by emptying a can of water over him.” I am not aware of any explanation of why Wilson was shouted down, but, arguably, at least for some of the protesters, the normativity we attribute to and derive from moral norms may have made them stand beyond evolutionary justifications which abstract from such normativity.

In “Crooked Thinking or Straight Talk: Modernizing Epicurean Scientific Philosophy” (2020), Kenneth Binmore sides with the gist of evolutionary ethics by claiming that people’s own long-term interest is what matters in explaining why they adapt fair-minded behavior. Although he does not mention any similar expressions of resistance as those of Wilson, it can be imagined that his writings are not endorsed by all philosophers - but whose writings are? In essence, the argument is as follows: Because humans do not live by themselves but in larger groups or societies, being fair to each other turns from being a selfless action into a long-term investment since one may in future be the subject of similar deeds. Binmore calls this the reciprocity principle. Reciprocity also helps to avoid misbehaviors. If I know I will be the target of retribution, I might think twice about harming someone else. Via this behavioral mechanism, norms of fairness evolve, i.e. shared understandings of what one’s deeds are.

Further, for Binmore’s analysis the notion of equilibrium is of central importance. Binmore describes norms of fairness, which derive as Nash equilibria from the reciprocity principle. Nobody can improve his situation by choosing another behavior or strategy, given that everybody else sticks to the corresponding Nash strategy. According to Binmore – and evolutionary theory in general – such equilibria are reached by a process of trial-and-error. Put simply, people will learn which behavior is best for them, and this behavior will turn into a norm.

The essential behavioral foundations of Binmore’s theory, which he merely sketches, can be summarized as follows: i) People behave as if they held other-regarding preferences, i.e. they at times forgo gains to the benefit of others. Such behavior is at the core of conceptions of fairness (see for instance the examples provided on p. 47 of Binmore 2020). ii) Such other-regarding behavior is enforced via reciprocity. In case somebody violates a norm, he will be punished (ibd. pp. 83ff.). iii) One mechanism via which reciprocity is supported are the emotions triggered by the perception of norm violation (ibd. p. 88). iv) In the absence of a clear norm, people employ a trial-and-error strategy to figure which behavior is best for them. At some point after this trial-and-error process a stable state will be reached, where nobody has an incentive to change his behavior.

In this paper, I aim to explore these behavioral underpinnings of Binmore’s theory in reference to empirical results from various disciplines. While some of the assumptions turn out to be extremely robust, others are not. Most importantly, the assumption of an equilibrium proves somewhat difficult to support empirically. Any state of the world is under constant scrutiny by variations in both the environment and

individual behavior and perceptions, meaning that there is no clear equilibrium, but rather a constantly changing mixture of different behaviors.

The following is organized as follows. In section 2 I offer a brief summary of some recent findings related to the fundamental assumption that people behave as if they held other-regarding preferences. Particularly, in subsection 2.2 I discuss recent findings regarding which others we behave other-regardingly to and in subsection 2.3 how norm-violations are punished. The results documented in this section largely support the assumptions i)-iii) of Binmore. The assumption of an equilibrium, however, is somewhat more debatable, as the results documented in sections 3 and 4 imply. While I focus on variations of behavior in section 3, I discuss overlapping institutions in section 4. A concluding summary is provided in section 5.

2 Evolution and Fairness

Justice, fairness and morality are comparatively broad terms which might require some clarification before proceeding. In its wide meaning, justice may be defined in the sense of Scanlon (1998) as “what we owe to each other.” In this wide understanding, justice is to be identified with morality as such (Miller 2017) and thus subject matter of ethics. Obviously, not everything we owe to each other is subject to ethical debate. We may owe each other very different things, from back cash over favors to equal treatment or what have you. So the first question to settle is what kind of things we owe to each other should we focus on when considering ethics. For evolutionary ethicists the answer to this question is to focus on observed human behavior instead of on normative ascriptions to it.

Of particular interest in this respect is other-regarding behavior, which is characterized by being at least partly motivated by its effects on others. Based on this understanding of evolutionary ethics as dealing with other-regarding behavior, I will thus crudely use the terms just, other-regarding, fair, moral or alike for such behavior synonymously.

In the following subsections, I will gather some of the empirical facts regarding moral or other-regarding behavior which are by now well-established. The aim can obviously not be to provide a complete list of experiments and results. I will rather focus on the presentation of some core findings. Further, I will try to link results from economics to insights from other disciplines.

2.1 Other-regarding behavior

Do we act as if we owed to each other? The answer to this question is clearly that we often do. Research from various disciplines has furthered our understanding of how our behavior is shaped by norms of distributive and procedural fairness. For instance, experimental game theorists have repeatedly and consistently shown that people are willing to forgo monetary gains both to themselves and to others if these were the result of an apparently unfair division offered by proposers in an ultimatum game (see

e.g. Osterbeek et al. 2004, for a meta-analysis of ultimatum games). Why would anybody reject to receive a positive amount of money, even if someone else received more, if not a sense of “unfairness” would prevail in us and we wanted to retaliate or reciprocate this insult?

But behavior which is beneficial to others may also be affected by procedural aspects. For instance, as Sun et al. (2020) have shown, procedural fairness may positively affect cooperative behavior. In their experiment, procedural fairness was affected by a monetary endowment either being determined by rolling of dice (perceived as fair), or by the arbitrary choice of an individual (perceived as unfair). Cooperation was elicited via behavior in a series of chicken games.

The instrumental argumentation for why we should owe to each other comes from theories of evolution. Humans live in societies. Similar to some other animals living in groups, sharing and caring seems a natural form of insurance. If I have food today but you don’t, I might share mine with you because you might share with me next time, when I might not be lucky but you are. Also, my caring for you if you are injured may be reciprocated in future as well. Finally, if hunting or defense is more effective as a group, sharing and caring gives us an incentive to contribute our “fair share” to the endeavor.

In sum, the first two behavioral assumptions of Binmore, that people behave as if they held other-regarding preferences, and that such behavior is enforced via reciprocity, seems to be relatively well-supported empirically. However, we do not behave equally towards all others. Rather, people distinguish between in- and out-groups, a topic I turn to in the following subsection.

2.2 Relevant others

A crucial factor for reciprocal behavior to evolve is to distinguish relevant others, those who to be reciprocal to. In the case of many species such a dividing line is kinship or the proximate group. While without a doubt similar group delineations hold for humans as well, our inclination to reciprocate often transcends to even unknown others from distant groups. In Adam Smith’s words, people enjoy “mutual sympathy” (Smith 2000[1759], pp. 10ff.). Binmore is not very explicit on how the “domain within which norms are understood to apply” (p. 101) is actually defined. The best guess probably is that for Binmore this circle is somehow defined via the likelihood of interaction, meaning that if you are sufficiently likely to encounter someone else repeatedly (however such a threshold may be determined), then you consider this other person part of your circle.

Obviously, determining likelihoods of repeated interaction is often impossible. Maybe this is why real people unconsciously rather look for cues which render others similar to them. One feature we rely on in distinguishing relevant others is identity. Akerlof and Kranton (2000) suggest that simply being able to identify with a group can in itself enhance an individual’s wellbeing. And indeed, evidence from neuroscience implies that being a member of a group increases the level of endorphin (Dunbar 2003). Such identification apparently also plays a role for our application of our understandings of justice. As Skitka

and Crosby (2003, p. 283) observe, “people will be more likely to think about justice when identity concerns are particularly salient.”

Identification with one group, also called in-group, implies the existence of an out-group, a group of others not identified with. It is often found that people are more generous towards members of their in-group than towards members of an out-group, a phenomenon labeled in-group bias or in-group favoritism by psychologists. At times, in-group bias can turn to out-group hate (see e.g. Brewer 1999). Interestingly, it has been argued that the existence of a real threat from out-groups has led to in-group generosity – more specifically, that in-group prosocial behavior has coevolved with intergroup war (Choi and Bowles 2007). According to this argument, without war as an out-group threat, there would have been little evolutionary advantage to showing in-group kindness.

Several experiments have shown that subjects even react to groups which are entirely meaningless outside the laboratory. Often, in so-called minimal groups, these are delineated by symbols or alike. For instance, Hugh-Jones and Leroch (2017) have used color-coding to identify groups of otherwise anonymous participants. Even in such a minimal group setting, the authors have shown that reciprocity transcends to entire groups. Kind or unkind behaviors were not only reciprocated directly, towards the initial actor. They were also “reciprocated” towards members of the initial actor’s group – a phenomenon called group reciprocity. Subjects exerted this behavior knowing that the recipient of their action was not the initial actor.

2.3 Punishing norm-violators

What makes people stick to cooperative behavior, when defecting may provide larger benefits? The answer from evolutionary theory is that defecting has to come at a cost. Typically, such costs are assumed to occur via punishment of cooperators. Interestingly, there is conflicting evidence regarding punishment of norm-violators from the field and the lab. While laboratory experiments do find such punishment, field experiments find significantly less support for punishment of norm-violations by bystanders.

The evidence stemming from laboratory experiments is unambiguous: Norm violators are punished. Gächter and Herrmann (2009), for instance, review a large range of literature related to punishment in public goods games. They find that “[m]any people punish those who contribute less than them to the public good. In particular, the more someone free rides, the more he or she gets punished on average. This observation has been made in all public goods experiments with punishment we are aware of” (ibd., p. 794).

In the lab, norms of fairness also seem to be enforced by people initially not involved, a phenomenon labeled altruistic punishment, which is also often found in the lab (see e.g. Guala 2012). Altruistic punishment occurs if some person A incurs costs for punishing a person B who has violated a norm in an interaction with person C. The punishment by people initially not involved may help to stabilize norms.

In contrast to this unambiguous finding from lab experiments, evidence from field experiments is less clear-cut. In fact, anthropologists seem to find no evidence for costly enforcement of norms. Reviewing this literature, Guala (2012, p. 14) concludes that ‘‘there is no evidence in the anthropological literature that costly material punishment is used in small acephalous societies, except in the regulation of sexual conflict.’’

Economic field experiments support this conclusion. For instance Balafoukas and Nikiforakis (2012) have analyzed punishment behavior by bystanders in a field experiment conducted in the main subway station in Athens, Greece. In their experiment, male and female experimenters violated either of two different norms, standing on the right on an escalator and not to litter. The experimenters then noted responses by bystanders. Notably, the authors were interested only in norm enforcement, not punishment. The difference between these two is that norm enforcement merely requires some bystander to remind a norm violator of the norm, for instance by asking somebody standing on the left side of the escalator to step to the right. Hence, norm enforcement need not be associated with costs for the norm violator. Punishment, on the other hand, would require such costs. One would hence expect that people are more likely to enforce a norm than to punish a norm violator. In their study, Balafoukas and Nikiforakis (2012) observed only 35 cases of enforcement out of 300 norm violations, i.e. the enforcement rate was merely 11.7%. Further, in case of violations of the universal norm not to litter, the enforcement rate was only 4%, whereas it was 19.3% in case of violations against the environment specific norm to stand on the right on an escalator.

If norm violators are not punished, the question then is how norms are enforced. Binmore (2020, p. 88) suggests two additional mechanisms to punishment which is costly for the punisher: “mild” punishment and emotions.

Binmore (2020, p. 88) describes mild punishment as follows: “No stick is commonly brandished. The carrot is simply withdrawn a little. Greetings are less warm. Eyes look over your shoulder for someone more acceptable. These are warnings that you are in for more serious disapproval if you don’t mend your ways.“ The withdrawal of the carrot, a reduction of cooperative behavior, is also termed indirect punishment. And indeed field experiments do show evidence for such behavior. Balafoutas et al. (2014) found that bystanders were significantly less likely to help others (pick up a book which was dropped) when these violated a norm (not to litter). The authors further found that when both direct punishment and indirect punishment are available, norm violations are rather punished indirectly than directly, meaning that indirect punishment opportunities crowd out direct punishment.

There is also increasing evidence that emotions play an important role in enforcing norms. For instance, perceptions of fairness have been shown to share a strong link with emotions. Using fMRI scans of responders’ brain activity, Sanfey et al. (2003) have e.g. shown that recipients of unfair offers elicited activity in brain areas related to both emotion and cognition. Rejecting such unfair offers heightened the activity in the areas related to emotion (but not cognition). Expressing an emotion such as anger may change the behavior of others, for instance by increasing concessions, as van Kleef et al. (2004a and 2004b) have shown.

It should be noted that a lack of consciousness need not be an evolutionary disadvantage, it might be the exact opposite. As Engel (2008) has argued, nonconscious decision-making is beneficial because more information can be processed in less time. Further, Frank (2008) observed that emotional reactions are hard to imitate or manipulate. They may thus serve as commitment device to signal others that we are “moral” individuals.

3 Variations in Behavior

What the results documented above have shown is that people behave other-regardingly towards others and that they directly or indirectly punish those who are not. However, these findings do not tell us how much we care about others, or in which specific situations we should do so. They also do not tell us how severely we should punish others who do not behave other-regardingly. In order to speak of a norm, however, such specifics are required.

Fairness norms, which, formally speaking, constitute equilibria in evolutionary ethics, are of central importance for Binmore’s theory. Binmore assumes that a) such equilibria do exist in real life, and that b) we reach such equilibria via trial-and-error. Trial and error requires that people vary their behavior from time to time. According to Binmore’s theory, at some point after a trial-and-error process a stable state will be reached, where nobody has an incentive to change his behavior. In this section, I present empirical evidence supporting the assumption that there are many variations in behavior, or trial-and-error. Even the same individuals hold a different set of preferences, where each set of preferences may be “activated” in different choice situations, for instance triggered by situational cues. In light of such variations, however, the notion of equilibria turns extremely fuzzy when applied to real societies. Rather, our norms - understood as something like the behavior of a majority of people - appear to be in constant flux.

3.1 Across societies

At least in part due to the cognitively uncontrolled reactions mentioned above, fairness or justice turn into general patterns or rules we follow. As with other, non-moral rules, respecting them may pay off to different degrees, also depending on the environment. As mentioned above, Choi and Bowles (2007) have for instance shown that intra-group altruism may have co-evolved with inter-group warfare. Accordingly, only due to the conflict with other groups of humans did it turn profitable enough for individuals to share and care for their in-group fellows.

Since humankind has spread across the globe, and is thus been exposed to different environments, the norms of fairness have also evolved differently. This is for instance shown by results of ultimatum game experiments. What kind of offers are perceived as fair apparently varies between societies. For instance, Henrich et al. (2001) have shown that low offers in the ultimatum game are accepted by subjects from the Machiguenga (living in the Peruvian Amazon), while the Au (living in Papua New Guinea) tend to

only accept offers associated with an equal split. The Machiguenga are almost entirely economically independent at the family level, while the Au hunt in groups and share their catch. The implication is that the social environment, for instance hunting alone or hunting in groups, affects our perceptions of fairness, expressed for example by the acceptance of unequal divisions of a surplus.

3.2 Within societies

Further, even within societies, notions about what constitutes morally permissible behavior varies and changes over time. Evidence for this claim for instance comes from Hannikainen et al. (2018), who analyze how moral judgements concerning sacrificing behavior differs between subjects of different age and how these change over the life span of participants. Subjects were asked to respond to thirteen different moral dilemmas, each consisting of a choice to personally sacrifice someone in order to save a larger number of lives. Among other things, they found that younger participants were more likely to endorse utilitarian sacrifice instead of leaning towards deontological moral judgements. Further, in a second wave of the experiment, taking place eight years after the first, the moral judgements did not change significantly. The same subjects did not show a change in judgements, while the elder cohorts still employed deontological judgements more frequently than the younger cohorts, who judged in line with utilitarian theories more frequently. Others have found results consistent with these, showing that the moral acceptability of sacrificing one or few people to the benefit of a larger group has increased with the year of birth (see e.g. Awad 2020, p. 2334).

Recent developments have also furthered our understanding of how our biological system reacts to different situations, and how these reactions in turn relate to different ethical theories. It has, for example, been shown that deliberative processes, which trigger brain activity in the prefrontal cortex, tend to be consequentialist, outcome-based and utilitarian (Greene 2014). Affective processes on the other hand, which trigger brain activity in the limbic system, tend to support deontological judgements.

These differences play out when people are confronted with different kinds of information. In an experiment, Small et al. (2007) have for instance found that subjects confronted with a picture of a suffering girl and statistics related to it were less giving than those who were confronted with the picture only. The authors conclude that deliberative thinking, induced by the presence of statistical data, reduces the sympathy towards identifiable others.

In a similar manner, experiments using brain scanners imply that sanctions or even the mere threat of sanctions trigger more calculating, self-interested responses and hence cause a “perception shift” – away from emotional, affective, towards deliberative, cognitive (Li et al. 2009).

3.3 Within subjects

These differences in preferences both between and within subjects also map to the application of different moral principles, such as equity, solidarity or freedom, or consequentialist vs sentimentalist judgements. In an amended trust game with varying multipliers, which were only known to the trustee, van Baar et al. (2019) have shown that three different pure moral strategies were used by different people: inequality aversion, guilt aversion, and greed. The authors also found that some subjects self-servingly switched between guilt-averse and inequality-averse behavior, depending on the specific context, a strategy the authors labeled moral opportunism. Similar to the neuroscientific results mentioned in the previous section, the authors also showed that the choice of three of these moral strategies - guilt aversion, inequality aversion and moral opportunism - correlated with the activation of distinct brain regions.

That context matters for the choice of one's moral strategy is also supported by other findings, e.g. of Andrejevic et al. (2020). Using a dictator game, the authors first had subjects make a context-absent choice about which share of a given endowment was to be given to a receiver. In a second stage, senders learnt about the offer the receiver had made himself in the previous stage. In the first stage, most participants chose context-independent norms like generosity or equality, while they switched to context-dependent norms like relative generosity or indirect reciprocity in the second stage. Consequently, "moral judgements evolve in real time as people learn more information about a given situation" (Andrejevic et al. 2020, p. 1).

3.4 Evolutionary Effects

For the application of evolutionary arguments this variation makes sense. Without it, there would be no evolutionary pressure on existing behaviors. As Klenk (2019) observes: "Recall one of the core premises in evolutionary theory about the role of individual differences in natural selection. Fit phenotypes survive and reproduce more or better than unfit phenotypes."

What do we gain from this for moral theory? Apparently, our understanding of what constitutes morally permissible behavior changes, depending on the circumstances. To give another example for such change of moral norms, consider the evolution of female suffrage. According to Acemoglu and Robinson (2019, p. 36), Wyoming was the first place in the world to grant women voting rights in 1869. Apparently, before that year it was morally permissible to exclude a large share of the population based on gender. However, Wyoming males at some stage found it less acceptable to keep women from the ballot box. Apparently, the prospect of achieving statehood (which depended upon a population requirement) and the fear of being outnumbered by African American voters were sufficient to enforce a change of mind (assuming that nowadays most males in Wyoming would not consider female suffrage a moral atrocity).

Consequently, universal morality is, from an applied and evolutionary point of view, not a convincing position (even killing others is permissible for some, as history teaches us). We might likewise consider

morality an evolving institution regulating certain domains of life, most likely the most basic ones (as it arguably triggers the strongest emotional reactions).

4 Institutional Embeddedness of Morality

The empirical results summarized in sections 2 and 3 have shown that, while humans consistently behave as if they cared for others, there is considerable variation of other-regarding behavior across and within societies, and within individuals. Human behavior, in other words, is heterogenous and in constant flux, not in equilibrium. What adds to the complexity of the matter is that our moral norms are embedded in a wider institutional setting, as I argue below. Further, for instance economic, political and moral institutions overlap. Any moral norm can thus only be a potential equilibrium as long as the other institutions do not change. It also follows that the evolutionary success of moral norms has to be considered in its wider social context, and not in isolation.

4.1 Overlapping institutional domains

One of the key insights from the previous section is that individuals respond to the context of a choice when consciously or unconsciously selecting their behavior. This can be read as support of the long-standing argument from psychologists that separate domains of life are governed by different principles (see e.g. Fiske 1992). Accordingly, people look for cues about which domain of life is the relevant one, and then select the corresponding appropriate behavior.

In market interactions, for instance, the other-regarding components tend to be muted to some degree, as various experimental results have shown. For instance, Hoffman et al. (1994) found that offers and rejections of low offers in the ultimatum game were reduced when the game was merely renamed to “exchange game”, most likely triggering subjects to think of the game as a market transaction instead of a social transaction. Similarly, Falk and Szech (2013) found in an experiment that subjects’ willingness to accept the death of a mouse they were explicitly entrusted to take care of is affected by the institutional environment. Subjects were provided with a monetary incentive to have the mouse killed. When the amount of this incentive was determined by an auction, a significantly larger fraction of subjects was willing to accept the death of the mouse than when they were merely being offered a fixed monetary amount (determined by the experimenters), even if the amounts were identical between the two treatments. The authors concluded that the market-like bargaining drove out moral motivations. Such a reduction in salience of moral motives is called moral disengagement.

Economists are typically used to separate two institutional domains, the political and the market domain. As the previous examples have shown, it may prove useful to add a civic domain, including moral or other social norms. Social life rarely falls into merely one institutional frame only. To illustrate this point, figure 1 assigns a set of generic examples to a simplex formed by the three domains, economic, political and civic. As a first example, economic policy falls in both the political and economic domain. Moral

disengagement, the reduction in salience of moral motives in light of monetary incentives, finds itself in both the economic and the civic domain. Levitsky and Ziblatt (2018) analyze the relationship between the political and the civic domain. Their main objective is to figure "when democracies die" (so the title of their book). They find that two factors are crucial for the survival of democracy: First, tolerance of political opponents. Second, sticking to the implicit rules, i.e. not exploiting every legal loophole to one's own advantage. The authors call this second aspect forbearance. Both tolerance and forbearance are clearly related to the civic domain, while having severe impact for the political domain. Tax morale, as a fourth generic example, includes aspects of all three domains. Taxes are implemented by the political domain and they are designed to affect the economic domain because people will have to pay them. While material incentives, such as an increase in detection of tax evasion, typically affect tax payments in the expected way, it has also been shown that society may react to these incentives to different degrees, thus giving rise to the importance of tax moral (see e.g. Pommerehne and Weck-Hannemann 1996).

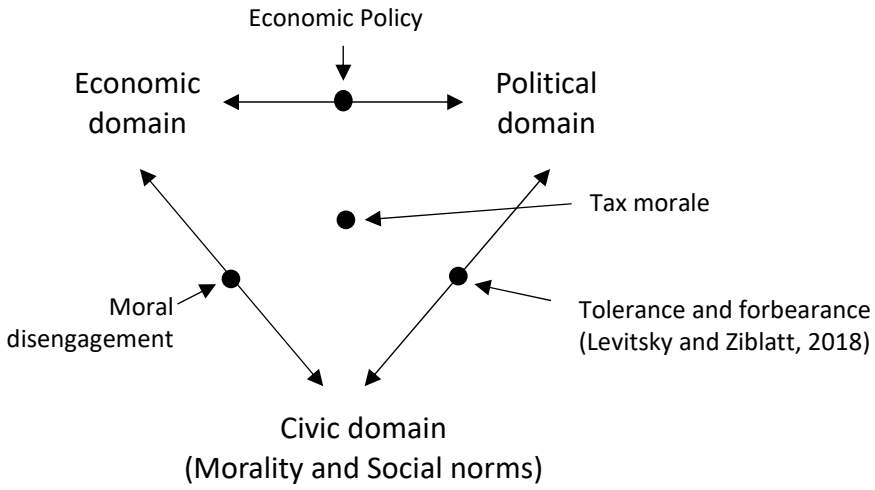

Figure 1: Institutional domains and social interactions

4.2 Moral restrictions on economic behavior

Because institutions are in some cases overlapping, analyzing the effects within one institutional domain without considering the others may be misleading. For instance, as the case of moral disengagement illustrates, considering the effects of a change in the material incentives (typically an economic analysis) without acknowledging that people might also be affected by the moral incentives of the situation, might misguide us in using too much or too little of the respective material incentive – or in using it at all if other interventions may prove more effective.

Put differently, moral institutions provide a specific set of incentives in social interactions. These incentives may operate independently from other forms of incentives, such as material or economic incentives, but they need not. For instance Frey and Jergen (2001) and Bowles and Polania-Reyes (2012)

have collected and systematized a range of examples where incentives crowded others either in or out, meaning that the (increased) use of one form of incentives, such as economic incentives, affected the efficiency of other forms of incentives, such as moral incentives.

Bowles and Polania-Reyes (2012) distinguish four mechanisms via which these forms of incentives affect each other. First, the incentive may provide information about the person who implemented the incentive. For instance, when punishment for shirking in a labor relationship is implemented, the agent may infer that the principal believes her to shirk, at least with a certain probability. In other words, he distrusts her. Second, incentives may frame the situation in such a way to suggest an appropriate behavior. The examples of moral disengagement mentioned in section 4.1 are of this kind. Third, the sense of autonomy of the agent may be compromised when he is provided with an extrinsic incentive. Evidence provided in Falk and Kosfeld (2006) is an example for this mechanism. They implemented an experiment where a principal could provide a minimum performance requirement for the agent. The effect was that most agents reduced their efforts, instead of increasing them. Asked for their emotional perception of this control mechanism, the limitation of the agent's autonomy was most mentioned by those who reduced their effort. Finally, incentives may affect the process via which people acquire new preference. Because extrinsic incentives such as prices or wages are salient, they tend to dominate other, intrinsic incentives, such as generosity or fairness. Hence, even when people act out of other-regarding preferences, their behavior may be attributed to extrinsic incentives by by-standers. Inasmuch as people tend to be conformist, this would lead them to adapt the reaction to the extrinsic incentive, but not to the intrinsic one.

On a more abstract level, from an economist's point of view, institutions are important to regulate external effects of actions on others. When economic transactions are regulated by contracts, one aspires to regulate these effects directly, by making them subject to contract. However, contracts are notoriously incomplete (a case assumed away for perfect competition), which is how morality may enter the economic domain. In the words of Gauthier (1986, p. 96): "Morality has no application to market interactions under the conditions of perfect competition." Given that contracts are incomplete, the potential for moral incentives to come to play always exists.

But this is not the only way how morality is important for economics. Morality may also matter because markets might be considered inadequate as allocation mechanism for more some goods. Sandel (2012) provides several examples, including for instance access to Papal Masses, selling the right to immigrate and betting on the death of others. Put simply, principles of justice or fairness and the market may, at times, be contradictory.

4.3 Instrumental analysis of ethical norms

The instrumental logic underlying economic analyses may also be fruitful to our understanding of the evolution of ethical norms. Accordingly, ethical norms do not evolve at random. They respond to evolutionary pressures arising from the larger environment the society under scrutiny is surrounded by – and

this involves the other institutional arrangements. The mere history of theories of justice indicates that our understandings of what we owe to each other depends on our broader social arrangements. Hausman et al. (2019, p. 224) provide an example: “In the seventeenth and eighteenth centuries, following the collapse of a medieval and Renaissance vision of society as naturally hierarchical, political philosophers revived the notion of a voluntary social contract as the source of political obligations and social norms, including principles of justice, for people who are each other’s equals.” In other words, it needed a decline in the authoritarian, hierarchical political domain to render theories of justice built upon the idea of humans being equal acceptable.

Awad et al. (2019) have shown on a slightly smaller scale that moral perceptions differ according to the broader social environment. They find that in societies where people can develop new relationships relatively easily, people are more inclined to sacrifice others. The willingness to sacrifice others was elicited by asking subjects about their behavior in a trolley problem. In essence, the trolley problem confronts subjects with the choice to take action to avoid a multitude of people being harmed or even killed, or not taking this action, which would lead to harm or death of a smaller group of people. The authors explain their results with sacrifice sending a negative social signal in the sense that people are willing to sacrifice others. If people are less relational mobile, then the existing relation is relatively valuable. Hence, sending negative social signals should be avoided in order to not jeopardize the relationship.

Acemoglu and Robinson (2019, p. 22f.) offer an instrumental explanation even of such horrible norms like slavery or pawning of humans, a practice that existed for instance in the Western parts of Africa for a long time. “Though norms are not chosen by anybody and evolve over time from practices and collective beliefs, they are more likely to become widely accepted if they also play a useful role in society, or at least for some people in society. Akan society [in Western Africa] consented to norms restricting freedoms and the unequal power relations they implied because they reduced people’s vulnerability to [a Hobbesian state of] Warre.” According to Acemoglu and Robinson (2019, p. 101), group-specific norms mainly evolve in response to the threat of (violent) conflict with other groups. Hierarchical norms, for instance, may help control conflict. As new opportunities arise from peace, new inequalities arise, introducing pressure on the existing norms.

5 Concluding Summary

What morality is, and which moral norms should be guiding our behavior has occupied philosophers for ages. Results from various disciplines give us at least a different perspective on this question. According to the evolutionary approach to morality, moral behavior provided humankind with the ability to form coalitions, and as coalition survival was easier - similar to other species living in groups.

But research from various fields has shown that human behavior is far less homogenous than one might think when reflecting about norms. Similar to the evolution of species, the evolution of morality is exposed to continuous pressure. Research has shown that people differ in the moral norms they hold and

their regard of which aspects of interactions are morally important. Further, moral norms change in response to information actors receive about others. Depending on the environmental circumstances, the norms different groups adopted were also different. For instance, when hunting was possible single-handedly, norms prescribing sharing appear to be less common than when hunting was possible only in groups.

Maybe some form of behavior may be followed by a majority of actors at a given point in time. But this can hardly be interpreted as equilibrium in the sense intended by, for instance, Binmore (2020). Individuals employ different moral strategies and self-servingly switch between them. Further, morality is merely one institution shaping our modern environment. Adding to the complexity of the matter, the interplay of different institutions is crucial for evolution. Hence, if one form of moral behavior proves to not yield sufficient advantages, the corresponding norm is likely to die out. Consequently, in our complex societies, moral institutions do not account for evolutionary advantage in themselves. Rather, they interact with a wider set of institutions. Evolutionary advantages then stem from the “fit” of these overlapping institutions to the conditions provided by the wider environment.

It may be hard to accept that our moral convictions are merely an institution, brought forth and shaped by the unemotional force of evolution, and that they do not convey any innate superiority over the convictions held by others. The dismay Edward Wilson encountered may serve as sufficient evidence for this claim. Ken Binmore probably has proven wise to address his book only to “oddballs like himself” (Binmore 2020, p. vii) rather than to the wider audience – unfortunately so, one may add.

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