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Repository Citation

Paganelli, M.P. (2011). The same face of the two Smiths: Adam Smith and Vernon Smith. *Journal of Economic Behavior and Organization*, 78(3), 246-255. doi:10.1016/j.jebo.2011.01.009

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The same face of the two Smiths: Adam Smith and Vernon Smith

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How do we go from personal to impersonal exchange? How do we go from cooperation among kin to cooperation among strangers?

Economic theory today explains the presence of cooperative behaviors and other-regarding behavior in terms of evolutionary biology and/or utilitarianism. Cooperation makes us evolutionarily fit, and it is in our interest to cooperate, at least in the long run. We create complex human society through this evolutionary process and through the internalization of the rules that allow us to trade successfully with strangers. These explanations are correct but fall short of explaining how we generate, internalize, and institutionalize those rules of cooperation that allow us to go from personal to impersonal exchange. Adam Smith's ideas of moral imagination, sympathy, and innate desire to be both praised and praiseworthy may offer a possible way to integrate and complete these explanations.

The idea to use Adam Smith and some of the literature of his time to integrate the picture of human behavior emerging from experimental economics originates with Vernon Smith. In 1998 Vernon Smith introduced *The Theory of Moral Sentiments* (TMS) – the “other” book of Adam Smith – into the experimental literature. Vernon Smith used TMS to help explain some experimental results with human and non-human primates and how those results relate to evolutionary biology. Given the depth of the insights and the stature of Adam Smith, Vernon Smith was followed by many more economists, and now TMS is relatively commonly seen in the experimental literature. This article is an attempt to develop the argument that Vernon Smith originally proposed.

In particular, I suggest integrating Adam Smith's ideas of sympathy, moral imagination, and praiseworthiness with the current explanations deriving from experimental results to possibly create a more complete picture of why and how humans cooperate, trust each other, and grow prosperous in industrialized societies. By this, by no means do I mean to diminish the importance of the traditional explanations based on self-interest. Nor do I mean to juxtapose self-interest to something else. Self-interest is and remains a major driving force of human cooperation. Other-regarding preferences and/or a moral sense do not substitute for self-interest in any respect, but they may integrate and fill the gaps in explanations of human cooperation among strangers that are based exclusively on self-interest. Additionally, in considering this, by no means do I mean to indicate that what I suggest is the only explanation. I simply propose an argument as a possible explanation. Adam Smith's analysis does not seem to contradict the existing explanations offered by evolutionary biology and neuroscience. His analysis seems relevant because it may integrate and potentially complete them. Another couple of caveats are due. First, the description of Adam Smith's views, provided herein, is instrumental to the explanation of problems we face in today's literature. Smith's primary concern was not about evolution or evolutionary biology as we know it today. Nevertheless, as Vernon Smith has demonstrated, Adam Smith can be successfully used, even if out of context, to help us understand questions we face today. Vernon Smith chooses to look at Adam Smith as a possible source for answers, and I choose to follow his line of thought because in many ways Adam Smith asked similar questions to the ones we ask today. Adam Smith's broad Scottish Enlightenment background incorporates and merges knowledge and insights and it may offer us different perspectives and answers that may be otherwise hard for us to see. Secondly, I will use the word sympathy not as a synonym of altruism or benevolence but in its Smithian meaning: as a mechanism through which we relate with others. The specific forms this mechanism takes will be discussed below.

If the analysis provided here is sound, the results are relevant for at least three reasons. First, because it shows the importance of moral imagination, praiseworthiness, and a sense of fairness in developing and sustaining complex commercial societies and the importance of commercial society for increasing not only prosperity but also cooperation. Second, because by understanding the process through which we generate, internalize, and institutionalize rules of cooperation we may be in a better position to understand how we can reach prosperity and cooperation. And finally, it highlights opportunities to integrate the homo economicus of our economic analysis, as Vernon Smith's suggests, with some of the insights of the underappreciated depths of economic and social understanding in the 18th century, offering a potentially more complete picture of human behavior.

The paper develops as follows. The first section describes some of the hypotheses used to explain cooperative behaviors in the existing literature. It is followed by the explanation of how Adam Smith may help us understand the mechanism through which we may be able to move from personal to impersonal exchange, namely the internalization of rules of cooperation achieved through sympathy, reducing the transaction costs present in complex anonymous societies. The Smithian explanation is subdivided into three sections: the generation and internalization of cooperation at the individual level, at the social level, and the institutionalization of the rules of cooperation which may be seen as a feedback mechanism caused by and causing increasing cooperation. The final section of the paper briefly examines some limitations for developing cooperation.

1. Vernon Smith and economic experiments

Vernon Smith fathered the branch of economics that uses human (and non-human) subjects in experiments to understand economic behavior. Despite accusations of "mechanicism" (Lee and Mirowski, 2007), Vernon Smith has increasingly and more vocally demonstrated interest in a broad and full view of human beings, looking at the 18th century as one of the possible sources of understanding and alternatives to the strict utilitarian mode (Smith, 2003, 2008, 2010).

In experimental results in industrialized countries, cooperation and fairness are routinely observed. Cooperation and fairness may vary with the degree of anonymity, as subjects respond to incentives. Nevertheless, even with complete anonymity, a relevant amount of cooperation and fairness is observed (see for example Hoffman et al., 1996; Cox and Deck, 2005; Cherry et al., 2002).¹ Additionally, cooperation and fairness are also observable in many foraging societies across the globe, although in different forms from the ones observed in industrialized countries. Fairness seems to be universally present among humans, even if it varies with different incentives and across cultures (Henrich et al., 2004). Interestingly, similar experiments done with non-human primates also show some level of cooperation and "fairness." Non-human primates help each other in getting food and reciprocate the help received. They get upset if one gets an "unfair" share: if one primate undeservedly gets a larger portion or tastier food, the other primate screams in protest (de Waal, 1996, 2003; de Waal and Berger, 2000; de Waal and Luttrell, 1988; Brosnan and de Waal, 2003; Jansen et al., 2006).

These experimental results show much more cooperation than economic theory predicts. So why do we cooperate so much? Smith (1998) presents a positive and negative reciprocity story using the behaviors of non-human primates to shed light on the origins of some human behaviors. Cooperation evolves, in part, when I punish you if you do not cooperate and when I reciprocate if you do cooperate. Increasing evidence, though not conclusive, suggests that non-human primates cooperate and have some sense of reciprocity and fairness, suggesting human behaviors evolved over millennia into what today seems like an innate sense of cooperation and fairness (de Waal, 2009, cf. Berry, 2006; Clutton-Brock, 2009).

These observations and explanations can be complemented by evolutionary game theory models. Reciprocal behaviors, such as a tit-for-tat strategy, have been shown to be the most effective strategies over time (Axelrod, [1984] 2006). So it is reasonable to believe that reciprocity is a product of evolutionary fitness, or in Gordon Tullock's words (Tullock, 1985), if in games the players decide with whom to interact, and one player was found out to be disposed to cheat, all others would avoid interacting with that player: "Where ... there are many alternatives, you had better cooperate. If you choose the noncooperative solution, you may find you have no one to noncooperate with" (p. 1081).

So, thanks to evolutionary fitness, it seems that we now reciprocate and cooperate. Non-human primates show some cooperation, as social beings. Humans, as social beings, may have shared some basic forms of cooperation. However, humans cooperate much more than chimps and monkeys. Additionally, foraging societies show more cooperation the more their members are faced with commercial realities (Henrich et al., 2010). And industrialized societies, which are imbedded in commerce, seem to show the highest level of cooperation.

Genes and culture may combine to help us arrive at today's (industrialized) high level of cooperation (Richerson and Boyd, 2005). One aspect of culture that seems relevant, given the cross-cultural studies present so far, is the exposure to markets. Controlling for other possible explanatory variables, Henrich et al. (2004, 2010) find that "market integration" (that is, do people engage frequently in market exchange?) accounts for a significant part of the variation between groups. The higher the level of market integration, the higher the level of cooperation and sharing in the experimental games.

¹ In a regular dictator game, where one player is given a positive amount of money and is asked to share it with another player, subjects share monetary rewards over 80 percent of the times. In a dictator game where it is known to all parties that dictators have to earn the stakes to be shared (by answering correctly GMAT questions), subjects do not share as much (between 20 and 30 percent of the offers are nonzero offers). With the complete anonymity of a double blind procedure, a hard-core of 3–5 percent of the offers remains nonzero.

So the questions: why do we seem to have more cooperation in commercial societies than in non-commercial societies? How can commercial societies, large anonymous societies of strangers, cooperate and sustain themselves rather than disintegrate? As societies expand, individuals may internalize the rules of cooperation to which they are accustomed. This becomes part of a positive reinforcement mechanism of reciprocity and reputation. Individuals in small groups learn to cooperate through daily social engagements. They then are more able to use their cooperation-skills in other environments (Kimbrough and Wilson, forthcoming). Rules of in-group cooperation are eventually somehow internalized so that cooperative behaviors are observed even in the absence of repeated or monitored interactions, but also in the presence of strangers. Additionally, when exchange is non-coincident, it requires trust or at least monitoring the other's behavior and being perceived to have the opportunity to punish defectors. The institutionalization of rules of fair conduct and the punishment of deviant behaviors may have facilitated this expansion of cooperation (Greif, 2006; O'Hara, 2008). Industrialized countries' tendency to display more cooperation and prosperity than pre- and/or non-industrialized countries may be linked to this shift.

The explanations offered are powerful and appealing. Yet they leave some points unexplained. How do we get from screaming angrily at a group-member who does not divide the pie fairly to giving money to the homeless in the streets of a foreign city? How do we internalize and institutionalize rules of reciprocity so that they allow us to develop anonymous cooperation? A possible explanation as to how we develop, internalize, and institutionalize rules of cooperation and their connection with market integration may come from Adam Smith's Theory of Moral Sentiments: in addition to the economic explanations familiar to us, Smith also employs imagination, sympathy, and the desire to be praiseworthy and not to be blameworthy. These may allow Smith to offer a possible way to complete the explanations offered today as to how we are able to go from personal to impersonal exchange.

2. Adam Smith and cooperation

Adam Smith seems at times to point toward a version of the utilitarian story presented today to explain why we are such cooperative beings (TMS, II.ii.3.2). Nevertheless, TMS "make[s] clear that contemporary notions of reciprocity in economics and reciprocal altruism in biology, are inadequate as oversimplified mechanical reductions in comparison with the concept as Smith applies it to human interaction" (Smith, 2010, p. 84. See also, Young, 2001, p. 99; Evensky, 2001, 2005).

Right after the utilitarian explanation of TMS II.ii.3.2, in TMS II.ii.3.4, Smith claims that human societies are characterized by the presence of justice. Indeed, a human society without justice would not be possible. "Justice . . . is the main pillar that upholds the whole edifice. If it is removed, the great, the immense fabric of human society . . . must in a moment crumble into atoms." And how do we introduce justice in human society? "In order to enforce the observation of justice, therefore, Nature has implanted in the human breast that consciousness of ill-desert, those terrors of merited punishment which attend upon its violation, as the greatest safe-guards of the association of mankind, to protect the weak, to curb the violent, and to chastise the guilty. Men, though naturally sympathetic, feel so little for another, with whom they have no particular connexion, in comparison to what they feel for themselves . . . they have it so much in their power to hurt him, and may have so many temptations to do so, that if this principle ["the consciousness of ill-desert" that "Nature has implanted in the human breast"], did not stand up within them in his defence, and overawe them into a respect for his innocence, they would, like wild beasts, be at all times ready to fly upon him; and a man would enter an assembly of men as he enters a den of lions" (p. 86).

Here is a first component of the possible missing keys to understand how we are able to internalize the rules of cooperation that allow us to go from personal to impersonal cooperation that Adam Smith may offer us. Not only do we have our innate self-interest, we also have an innate sense of ill-desert. As shown below, this sense of ill-desert is linked to our innate capacity to sympathize with others. Sympathy is our innate ability to share the feelings of someone else, our innate ability to have fellow-feelings. To be able to understand Smith's argument, we first need to understand sympathy.

The word sympathy is ambiguous. It contains at least three separate concepts. Sympathy can describe contagion, empathy, as well as sympathy proper (de Waal, 2009, but cf. Khalil, 2011). Developments in neuroscience seem to indicate that we process the information of the movements of another as if they were our own movements, blurring the distinction between us and the other (Rizzolatti and Sinigaglia, 2008; Iacoboni, 2008). The mirror neurons, responsible for these reactions called contagion, are present in both human and non-human animals and seem to be the most ancient form of sympathy (de Waal, 2009).

A more sophisticated form of contagion, which seems to have emerged at later stages of evolution, is empathy. Empathy allows me to feel your sorrow and to share your joy. Empathy allows me to process your emotions in my brain as if your emotions were my emotions and also to react to them as if your emotions were my emotions, not just to process in my brain your physical movements as I would process mine. This instinctual channel with which we communicate with others, again, seems to be present in human as well as in non-human animals (de Waal, 2009). While the activities of the mirror neurons in the case of emotional contagion are observable only by "looking inside" someone's brain, empathy can be observed also with the naked eye. Empathy seems to be involved when an animal squeaks upon seeing another animal receiving an electrical shock, when you gasp upon seeing that I am about to fall, when you smile upon seeing my smiling face.

The Smithian sympathy (and what in the 18th century was called "emotional contagion"; see Forget, 2003) seems to describe behaviors that today we would associate with mirror neurons and call empathy (Rizzolatti and Sinigaglia, 2008; Iacoboni, 2008). For Smith, indeed, sympathy is what causes us to "naturally shrink and draw back our own leg or own arm" "when we see a stroke aimed and just ready to fall upon the leg or arm of another person"; it is what causes us to "feel an itching or uneasy sensation in the correspondent parts of the body" when we have to look at "the sores and ulcers which are exposed by beggars in the streets" (TMS I.i.1.3, p. 10). Additionally, "Upon some occasions sympathy may seem to arise

merely from the view of a certain emotion in another person. The passions, upon some occasions, may seem to be transfused from one man to another, instantaneously, and antecedent to any knowledge of what excited them in the person principally concerned. Grief and joy, for example, strongly expressed in the look and gestures of any one, at once affect the spectator with some degree of a like painful or agreeable emotion. A smiling face is, to everybody that sees it, a cheerful object: as a sorrowful countenance, on the other hand, is a melancholy one” (TMS I.i.1.6, p. 11).

So far, we have a mechanism that gives us a route toward cooperation. Copying and sharing the behaviors and passions of others seem to be an instinctual form of bonding among the social species. Human and non-human primates bond with their kin and in-group through emotional contagion and empathy. Had Smith stopped here, he would not be able to offer a possible explanation for the differences in complexity between the societies of human and non-human primates. The level of cooperation we share with other social species does not seem to provide a clear basis for the development of the complex rules of cooperation that we observe in our complex societies not only with our group members, but also, and especially, with strangers.

But, Smith goes on, and adds imagination to empathy to explain what is properly called sympathy. In his view, this seems to be what allows us to form and internalize rules of fairness that in turn allow us to cooperate with strangers as well as with in-group members.

Imagination, if understood as the ability to understand the future, is observable also in non-human primates. Strategic imagination seems to explain many behaviors in chimps (de Waal, [1982] 2007). But when something like empathy is combined with imagination, through understanding (conscious or not), a different kind of imagination seems to arise, a moral imagination, something that is more typical of humans.

Sympathy proper, indeed, is for Smith innate in humans and is more than simply empathy. For Smith, indeed, sympathy is possible “by changing places in fancy with the sufferer” (TMS I.i.1.2–3, pp. 9–10). It is through our imagination that we are able to transport ourselves into the shoes of other people and somehow understand and feel as they feel, even if imprecisely (see Griswold, 2006). But this implies *we understand the situation that generated the passions in the other. “[O]ur sympathy with the grief or joy of another, before we are informed of the cause of either, is always extremely imperfect . . . Sympathy, therefore, does not arise so much from the view of the passion, as from that of the situation which excites it” (TMS I.i.9–10, pp. 11–12). It is our ability to merge imagination, empathy, and reason, to merge emotions with understanding, even if not necessarily deliberate or conscious, that lets proper sympathy arise. It is “only [these] most advanced forms of knowing what others know [that] may be limited to our own species” (de Waal, 2009, p. 100).

The importance of understanding “the situation which excites” one’s passions may be related to why context seems to emerge as a powerful modifier of observed behaviors in experimental results. Indeed, as Smith (2010) notices: “There is no such thing in TMS as individual decisions making devoid of a social context. Social context and all the experience derived from the need to take actions, and that deserves praise or blame, cannot be presumed to be left behind by the subjects when entering into these experimental games with monetary rewards. [. . .] In ultimatum, trust, and other such games, what incites resentment is the violation of the rules of fair play, not the particular ‘unfair outcomes’” (p. 85).

So let us now go back to the monkey who gets an “unfair” share of food. A capuchin monkey that receives some cucumber rather than grapes, while its neighbor “unfairly” gets the grapes, will scream and yell and reject the cucumber. Humans also get upset if someone does something unfair to us, just like monkeys do. This is not a calculated reaction. It is a gut reaction, an emotional response, similar to the behaviors observed in non-human primates. Smith calls this reaction resentment, that innate sense of ill-desert that is the base of justice. de Waal calls this reaction in non-human primates “fairness,” which is also linked to cooperation among primates. But there is a major difference between human resentment a-la-Smith and non-human primate “fairness.” What is relevant for the argument presented here is not the screaming monkey, but what is not observed in the other monkey, the one with the grapes. The monkey with the grapes will keep eating his grapes and not only ignore the angry other but reach out, grab, and eat the rejected cucumber as well. There is no active sharing (Brosnan and de Waal, 2003. See also Jansen et al., 2006; Brosnan and de Waal, 2003; de Waal and Brosnan, 2006; Mitani and Watts, 2005). But a human, according to Smith, would not necessarily behave like de Waal’s monkey with the grapes. Smith claims humans would not “keep eating their grapes” when faced with “unfairness:” humans would do two additional things, depending on the circumstances.

A human would share the “grapes.” And, humans would even be willing to incur a cost to themselves to prevent or fix an injustice done to others in a situation in which they are not directly involved, even if they would get nothing out of it (Levy and Peart, 2004; for some recent experimental results on third-party punishment see Henrich et al., 2010). Why? Having both sympathy and a sense of ill-desert, when we observe an injustice done to others, we are able to feel and understand the resentment of the other. Because we have this innate propensity to imagine ourselves in the shoes of another, to become indignant to a wrong done to us as well as to a wrong done to others, we are able to suffer with the sufferers, and to rejoice in someone’s joy, even if we get nothing out of it but the pleasure of mutual feelings. A human would be capable of correcting the blameworthy behavior, because humans have an innate desire to be praiseworthy and not to be blameworthy (TMS III.3.4–5, pp. 136–138). This is a possible way to understand how we go from personal to impersonal exchange by internalizing rules of fair behavior, the details of which are presented below.

But before looking at the details of the mechanism through which the internalization of rules of fair conduct takes place, it is important to notice one more thing: that sympathy cannot be reduced to self-interest. Smith’s words are worth citing in full.

“But whatever may be the cause of sympathy, or however it may be excited, nothing pleases us more than to observe in other men a fellow-feeling with all the emotions of our own breast; nor are we ever so much shocked as by the appearance of the contrary. Those who are fond of deducing all our sentiments from certain refinements of self-love, think themselves at no loss to account, according to their own principles, both for this pleasure and this pain. Man, say they, conscious of his own weakness, and of the need which he has for the assistance of others, rejoices whenever he observes that they adopt his

own passions, because he is then assured of that assistance; and grieves whenever he observes the contrary, because he is then assured of their opposition. But both the pleasure and the pain are always felt so instantaneously, and often upon such frivolous occasions, that it seems evident that neither of them can be derived from any such self-interested consideration. A man is mortified when, after having endeavoured to divert the company, he looks round and sees that nobody laughs at his jests but himself. On the contrary, the mirth of the company is highly agreeable to him, and he regards this correspondence of their sentiments with his own as the greatest applause" (TMS I.i.2.1, pp. 13–14. Emphasis added).

This innate ability to put ourselves in the shoes of others, sympathy proper, offers a route toward explaining how we internalize and how we institutionalize cooperative behaviors, and explanation involves two levels. Smith explains how the internalization of cooperative behavior takes place at the individual level as well as at the social level. His explanations rely on moral imagination, sympathy, and the desire to be praiseworthy and not to be blameworthy, that is to our ability to understand deserved gratitude and resentment.

3. Generation and internalization of cooperative behaviors at the individual level

When someone does wrong to me, I resent the wrongdoer. Similarly, when I see someone doing wrong to someone else, and I see how this person gets upset at and resents the wrongdoer, I imagine myself in his place and share the resentment. The wrongdoer deserves the resentment of the wronged person and of the people who observe the wrong. By observing the reaction of the other, I then realize that if I did the same wrong, others would resent me as well; and deservedly so. Since I do not want to be the object of such resentment and blame, I will, therefore, try to avoid that behavior. Similarly, if someone is kind to me, I experience gratitude. And if I see an act of kindness and the gratitude experienced by the receiver toward the giver, who indeed deserves that gratitude, with my imagination, I share the gratitude and praise the giver. By observing the other, I then realize that I also want to be the object of such praise. I will therefore imitate that behavior. So, thanks to the experience of others, to our innate desire to be praiseworthy and not to be blameworthy, and to our moral imagination, which is sympathy proper, "we suppose ourselves the spectators of our own behavior, and endeavour to imagine what effect it would, in this light, produce upon us. This is the only looking-glass by which we can, in some measure, with the eyes of other people, scrutinize the propriety of our own conduct" (TMS III.i.5, p. 112. Emphasis added).

At the individual level, thanks to our experience of observing others, with our moral imagination, we are able to divide ourselves in two: an I-agent and an I-spectator. The I-spectator gives deserved praise to the I-agent, just as we give deserved praise to someone when we see a praiseworthy behavior. The I-spectator also gives deserved blame to the I-agent, just as we give deserved blame to someone when we see a blameworthy behavior. Because we want to be the object of praise (and not simply to be praised) and to avoid being the object of blame from others (and not simply to avoid being blamed), we behave in a way that another would judge praiseworthy and not blameworthy. We do so by imagining how the other may see us, by placing ourselves in the shoes of the other and feeling what he would feel. The presence of others is indispensable to allow us to develop this ability to imagine ourselves as someone else would see us. With enough practice, we will be able to see ourselves with the eyes of an impartial spectator, of an impartial other, even if the other is not physically there. We will behave in a praiseworthy way, even if no one is watching us. At that point, I will not cheat you, not because I fear your retaliation or because you will think I am blameworthy, but because I myself will be able to see my behavior as blameworthy. So you no longer need to be there for me to be honest. I will be honest anyway, because I now know that one who is honest is the object of praise and one who is dishonest is the object of blame.

What I think is appealing about Smith's explanation is that we develop our impartial spectator through the presence of others, of strangers in particular. We start our moral development process with our kin and in-group, but the heavy-lifting for the development of impartiality is done thanks to the presence of strangers. We desire to be the object of praise in the eyes of a kin member as well as in the eyes of a stranger. And, if we develop an impartial spectator within us, thanks to our interactions with others and with strangers in particular, then we are able to reduce the external cost of monitoring non-cooperative behavior with in-group members and especially with strangers, which would be so tempting in particular with one-time interactions.

The full development of the impartial spectator is something that very few individuals are able to achieve over the course of their lifetimes. Nevertheless, the presence of this ever-watchful internal eye may be significant enough to promote and maintain a certain level of cooperation among strangers. Thus, Smith may offer us an explanation for human cooperation that works with kin as well as with non-kin. This kind of behavior seems indeed somehow to be captured in double blind experiments. In spite of the double blind treatments, we always observe a hard residue of sympathetic cooperation.

4. Generation and internalization of rules of cooperation at the social level

How we generate and internalize social rules of cooperative behaviors is explained through the same mechanism. Through our common propensity to share others' feelings and "the love and admiration which we naturally conceive for those whose character and conduct we approve of" (TMS III.2.2, p. 114), we learn from each other what generates praise or blame, what is praiseworthy or blameworthy. We want to imitate or avoid that behavior, and so we embody that learning into rules of just conduct that will guide our present and future behavior, those rules so much needed to cooperate with strangers, as well as with our in-group.

Let us say that someone does something wrong. "We hear every body about us express the like detestations against [these wrong actions]. This still further confirms, and even exasperates our natural sense of deformity. It satisfies us that we view them in the proper light, when we see other people view them in the same light. We resolve never to be guilty of the like, nor ever, upon any account, to render ourselves in this manner the objects of universal disapprobation. We thus naturally

lay down to ourselves a general rule, that all such actions are to be avoided, as tending to render us odious, contemptible, or punishable, the objects of all those sentiments for which we have the greatest dread and aversion. Other actions, on the contrary, call forth our approbation, and we hear every body around us express the same favorable opinion concerning them. Every body is eager to honour and reward them. They excite all those sentiments for which we have by nature the strongest desire; the love, the gratitude, the admiration of mankind. We become ambitious of performing the like; and thus naturally lay down to ourselves a rule of another kind, that every opportunity of acting in this manner is carefully to be sought after” (TMS III.4.7, p. 159. Emphasis added). Thanks to our innate sympathy and desire to be praiseworthy and not to be blameworthy, by collecting the experience of many and transmitting that knowledge to many others, we form social rules of moral conduct, internalizing cooperative behaviors.

So we may have a possible explanation for how we generate and internalize rules of cooperation. Rules of cooperation are formed and internalized, according to Smith, thanks to our imagination, our sympathy, our desire to be praiseworthy and to receive the approbation of others, and our desire not to deserve the blame of others.

Note, as Smith (2010, p. 84) does, the difference between Smith and modern explanations that may incorporate esteem or praise. The internalization process that is commonly described today goes from praise to praiseworthiness. I want to be praised and eventually I will become praiseworthy. Smith explicitly rejects this argument to propose its opposite instead. Smith claims that what is natural is our desire to be praiseworthy and not to be blameworthy and what is derived from it is our desire to be praised and not to be blamed. “The love of praise-worthiness is by no means derived altogether from the love of praise. Those two principles, though they resemble one another, though they are connected, and often blended with one another, are yet, in many respects, distinct and independent of one another. The love and admiration which we naturally conceive for those whose character and conduct we approve of, necessarily dispose us to desire to become ourselves the objects of the like agreeable sentiments, and to be as amiable and as admirable as those whom we love and admire the most ... Neither can we be satisfied with being merely admired for what other people are admired. We must at least believe ourselves to be admirable for what they are admirable. But, in order to attain this satisfaction, we must become the impartial spectators of our own character and conduct ... Their approbation necessarily confirms our own self-approbation. Their praise necessarily strengthens our own sense of our own praise-worthiness. In this case, so far is the love of praise-worthiness from being derived altogether from that of praise; that the love of praise seems, at least in a great measure, to be derived from that of praise-worthiness” (TMS III.2.2, p. 114).

So Smith may provide us with a possible mechanism through which we generate and internalize rules of cooperation. He also may provide us a feedback mechanism through which our natural cooperation is enhanced: commerce and the institutionalization of the rules of cooperation that seem to come with it.

5. The institutionalization of rules of cooperation and their role as feedback mechanisms

Human interactions seem to shape the environment in which one lives and the environment in which one lives may provide a feedback mechanism that shapes humans’ behaviors. Different environments, indeed, may affect us differently. In particular, commerce and commercial societies seem to effectively institutionalize rules of cooperation and to provide an environment which favors cooperation farther. “Such internalization [of fairness norms in more market-oriented societies] would require that fairness is learned in the course of the market exchange, and we have evidence that this is the case across the development of the life cycle. Camerer and Thaler (1995) agree that norms of fairness are learned, noting that kindergarteners are most selfish in economic experiments, while by the sixth grade, more fair behavior toward one’s peers emerges” (Ensminger, 2004, p. 358).

Also Adam Smith tells us that fairness, rules of cooperation and sharing may feed and feed off different institutional environments. Cooperation and development of moral sense evolve with both our internal judgment and with external institutions. Humans, being social animals, have always cooperated with each other, in one way or another. All social animals generally survive through in-group cooperation. But humans, differently from other non-human social animals, cooperate also with non-group members, they cooperate with strangers. Commerce is an institutional setting in which cooperation with strangers is the norm, rather than the exception. Notice that commerce is not merely to exchange. Our “propensity to truck, barter and exchange” is innate for Smith. Commerce is not. Commerce is what characterizes commercial societies, just like feud is what characterizes feudal societies, agriculture agrarian societies, and pasture pastoral societies. In all societies there is exchange, but in commercial societies, impersonal market transactions dominate the social and economic structure.

Smith tells us that the opportunity to trade with strangers allows individuals to learn more easily how to interact with others in a fairer way, without being exclusively motivated by fear of retaliation. The opportunity to trade with strangers also allows for the generation of institutions that facilitate cooperation, which in their turn facilitate the internalization of cooperation. Commerce, the social and economic structure in which impersonal exchange with strangers is the norm, seems therefore to reduce the cost of cooperation and to increase how relevant cooperation is in our life (Henrich et al., 2010).

Not only the wealth generated by commerce let us abandon the practice of abandoning unwanted children to be devoured by wild beasts (WN, introduction), and allows honesty to increase with the decrease of dependency and the increase of interdependency (LJ(B), 205; WN III.iv.4. See Young, 2001). But, commerce also brings “order and good government, and with them, the liberty and security of individuals ... This, though it has been the least observed, is by far the most important of all their effects” (WN III.iv.4, p. 412). Commerce therefore generates the “regular administration of justice,” which is a way in which rules of cooperation are institutionalized, and the foundation of commercial prosperity (Rosenberg, 1990; Rasmussen, 2006; Smith, 2010).

Adam Smith also tells us someone else before him noticed that commerce increases cooperation, these effects that today we, at times, call “market integration:” David Hume. Hume ([1752] 1987), in particular in his essays “Of Refinement in the

Arts,” claims that commerce brings about an increase in sociability and humanity. Commercial societies are generally richer than non-commercial societies. More people have more wealth. And the more wealth we have, the more we cluster together to show off our wealth to others. The increased interaction with strangers, the increased opportunities for men to interact with women, makes people more sociable and more humane, and more cooperative. Commerce “softens” the human spirit. “So that, beside the improvements which they [mankind] receive from knowledge and the liberal arts, it is impossible but they must feel an encrease of humanity, from the very habit of conversing together, and contributing to each other’s pleasure and entertainment. Thus industry, knowledge, and humanity, are linked together by an indissoluble chain, and are found, from experience as well as reason, to be peculiar to the more polished, and, what are commonly denominated, the more luxurious ages” (Hume, [1752] 1987, p. 271. Emphasis in original).

Adam Smith and his 18th century contemporaries would not be surprised by today’s cross-cultural results suggesting that differences in cooperation and fairness occur in part due to the degree of market integration (Henrich et al., 2004, 2010), and in those writers we may find an explanation. The increase in prosperity brought about by the internalization and the institutionalization of the rules of cooperation and at the same time made possible because of these rules of cooperation allows us to further develop cooperation. The increasing presence of commerce seems to become both the internalized and the institutionalized social glue needed to keep together large assemblies of strangers (Paganelli, 2008).

6. Additional parallels

Adam Smith as well as David Hume, Adam Ferguson ([1767] 2007), and other 18th century writers count the internalization and the institutionalization of the rules of cooperation as some of the benefits that come with commerce (Clark, 2007). Yet, they also see the potential fragility of these benefits. Similarly, in today’s experimental results we can observe how cooperation among strangers may not emerge or may easily disappear.

Increases in wealth sometimes bring about large opportunities for gain. Our 18th century writers recognize at least two potential problems with this: larger opportunities for opportunistic behaviors, which would eventually undermine the moral base of commerce and the individual trust that commerce tends to develop, and rent-seeking, which would undermine the institutional trust that commerce tends to encourage.

Rent-seeking indeed implies both that the few benefit at the expense of many because of the former’s ability to gain some government’s favors, and that the rent-seeker will likely rely more and more on government and its power and authority to allocate resources and resolve disputes, substituting the rules of cooperation generated by commerce (Paganelli, 2009). Adam Smith explains that bad policies (and bad luck) may prevent or disrupt the natural tendency toward cooperation: “The difference between the genius of the British constitution which protects and governs North America, and that of the mercantile company which oppresses and domineers in the East Indias, cannot perhaps be better illustrated than by the different state of those countries” (WN, I.viii.26, p. 91). The American colonies are a growing economy, Bengal is poor and declining instead. The “natural progress of things” is not a necessary outcome.

Additionally, experimental results seem to indicate that once trust is broken, it is difficult to recreate it (for example, Rigdon et al., 2007). They also seem to indicate that the rules of fairness internalized in anonymous societies may be crowded out by the ever-present monitoring eye of the government. Ostrom (2005) presents evidence of this crowding out from results of Public Goods games: “Voluntary behavior is the result of what we have called the predisposition to contribute to a cooperative endeavor, contingent upon the cooperation of others. The monetary incentive to contribute destroys the cooperative nature of the task, and the threat of fining defectors may be perceived as being an unkind or hostile action (especially if the fine is imposed by agents who have an antagonistic relationship with group members). The crowding out of voluntary cooperation and altruistic punishment occurs because the preconditions for the operation of strong reciprocity are removed when explicit material incentives are applied to the task” (p. 20). Material incentives crowd out moral incentives, since moral incentives are treated as irrelevant (Handy, 2008).

It would be instructive to have more experimental evidence on how we may have gone from personal to impersonal exchange, based on the insights of Adam Smith and his contemporaries, on the role of praiseworthiness and blameworthiness, as opposed to simply trust, trustworthiness, reputation, or fear of punishment; as well as on how fragile or robust impersonal exchange is, how susceptible to the destruction of trust caused by unconstrained self-interest or by the over-monitoring of an external power.

7. Conclusions

Social animals evolved to cooperate among each other. It is therefore not surprising, in a sense, to observe cooperation among members of the same group. But while, for example, members of a community of chimps cooperate with each other, if a stranger walks in their community, most likely it will be ripped apart. Humans in many ways behave in a similar way. We experience in-group cooperation and we do not offer non-group members the same kind of cooperative behavior. Yet, we are capable of cooperating with strangers; we are capable of personal exchange as well as of impersonal exchange. Our observations are corroborated by experimental results suggesting a high level of cooperation among humans, even under complete anonymity conditions. It seems this ability to cooperate with strangers, among other ways, through impersonal exchange, allows us to develop complex and prosperous societies.

Understanding how humans go from personal to impersonal exchange is an open research question, which attracts potential answers from different directions. For example, evolutionary game theory offers a positive and negative reciprocity explanation, where, thanks to repeated games, we learn that cooperation is in our best interest in the long run, so we

eventually internalize these rules of cooperation. Neuroscience proposes a possible explanation based on mirror neurons, thanks to which we seem to blur the distinction between ourselves and others. Primatology suggests the presence of an evolved sense of “fairness” and in-group cooperation among members of social species. These explanations are powerful and possibly correct. Yet they fall short to address how humans are able to generate, internalize, and institutionalize rules of cooperation not just with in-group members, but also with strangers.

Vernon Smith recognizes that, in the 18th century, Adam Smith asked similar questions and proposed answers that in a way are similar to ours, in a way are simpler and in a way are more sophisticated and complex than ours. Adam Smith’s answer does not seem to contradict the existing answers we have today, but may integrate them by introducing the idea of moral imagination, sympathy, and the innate desire to be praiseworthy and not to be blameworthy, concepts that so far are not explicitly incorporated in the experimental literature.

The problem of cooperation may be analyzed on two levels: cooperation within group members and cooperation with non-group members. In-group cooperation may be a natural characteristic of social species. Cooperation with strangers on the other hand seems to be typical only of the human species and is what calls for a more thorough explanation. Adam Smith seems to be aware of this distinction. His worry with in-group cooperation is not so much to explain its presence, but to limit it. The natural tendency to “too much” cooperation within a group may cause factional wars and disrupt social peace and growth (Levy and Peart, 2009). Smith sees in our innate sympathy and innate desire to be praiseworthy and not to be blameworthy a way through which we are able to limit the potential disruptions of excess in-group cooperation (Farrant, 2010) and a way through which we are able to extend cooperation to strangers.

Moral imagination, sympathy, and the desire to be praiseworthy and not to be blameworthy may help improving our understanding of the generation, the sustainment, and development of cooperation among strangers and how human cooperation develops from personal to impersonal exchange. A better understanding of the processes of our cooperation with strangers may enhance not just our knowledge, but also our ability to peacefully increase our prosperity.

Acknowledgements

Thanks to the participants of the 2009 Summer Institute for the Preservation of the History of Economic Thought, the 2009 Current Research Workshop of the Institute of Humane Studies, the 2009 Duke University Workshop of History of Political Economy, the 2010 New York University Colloquium on Market Institutions & Economic Processes, to the Earhart Foundation for supporting the presentation of this work at the STOREP 2010 meeting, at the Università di Palermo, and Università di Firenze, and to the Japanese Society for the Promotion of Science for supporting the presentation at Keio University. Thanks also to Tyler Cowen, David Levy, Todd Seavy, Vernon Smith, and three anonymous referees. All mistakes are mine.

References

- Axelrod, R., [1984] 2006. *The Evolution of Cooperation*, Revised edition. Perseus Books Group.
- Berry, C., 2006. Aristotle, Hobbes and chimpanzees. *Political Studies* 54.4, 827–845.
- Brosnan, S.F., de Waal, F.B.M., 2003. Monkeys reject unequal pay. *Nature* 425, 297–299.
- Camerer, C., Thaler, R., 1995. Ultimatums, dictators, and manners. *Journal of Economic Perspectives* 9 (2), 209–219.
- Cherry, T.L., Frykblow, P., Shogren, J.F., 2002. Hardnose the dictator. *The American Economic Review* 92 (4), 1218–1221.
- Clark, H., 2007. *Compass of Society: Commerce and Absolutism in Old-Regime France*. Lexington Books, Plymouth, UK.
- Clutton-Brock, T., 2009. Cooperation between non-kin in animal societies. *Nature* 462, 51–57.
- Cox, J., Deck, C., 2005. On the nature of reciprocal motives. *Economic Inquiry* 43 (3), 623–635.
- de Waal, F.B.M., [1982] 2007. *Chimpanzee Politics: Power and Sex among Apes*. Johns Hopkins University Press, Baltimore.
- de Waal, F.B.M., 1996. *Good Natured: The Origins of Right and Wrong in Humans and Other Animals*. Harvard University Press, Cambridge, MA.
- de Waal, F.B.M., 2003. On the possibility of animal empathy. In: Manstead, T., Frijda, N., Fisher, A. (Eds.), *Feelings and Emotions: The Amsterdam Symposium*. Cambridge University Press, Cambridge, pp. 279–299.
- de Waal, F.B.M., 2009. *The Age of Empathy: Nature’s Lessons for a Kinder Society*. Harmony Books, New York.
- de Waal, F.B.M., Berger, M.L., 2000. Payment for labour in monkeys. *Nature* 404, 563.
- de Waal, F.B.M., Brosnan, S., 2006. Simple and complex social reciprocity in monkeys and apes. In: Kappeler, P., van Schaik, C. (Eds.), *Cooperation in Primates and Humans: Mechanisms and Evolution*. Springer Press.
- de Waal, F.B.M., Luttrell, L.M., 1988. Mechanisms of social reciprocity in three primate species: symmetrical relationship characteristics or cognition? *Ethology and Sociobiology* 9, 101–118.
- Ensminger, J., 2004. Market integration and fairness: evidence from ultimatum, dictator, and public goods experiments in East Africa. In: Henrich, J., et al. (Eds.), *Foundations of Human Sociability: Economic Experiments and Ethnographic Evidence from Fifteen Small-Scale Societies*. Oxford University Press, Oxford, New York, pp. 356–381.
- Evensky, J., 2001. Adam Smith’s lost legacy. *Southern Economic Journal* 67 (3), 497–517.
- Evensky, J., 2005. *Adam Smith’s Moral Philosophy: A Historical and Contemporary Perspective on Markets, Law, Ethics, and Culture*. Cambridge University Press, New York.
- Farrant, A., 2010. Mill, Hayek, and the Problem of institutional change. A renovated social fabric? In: Farrant, A. (Ed.), *Hayek, Mill and the Liberal Tradition*. Routledge, London, pp. 81–129.
- Ferguson, A., [1767] 2007. *An Essay on the History of Civil Society*. Cambridge University Press, Cambridge, New York.
- Forget, E.L., 2003. Evocations of Sympathy: sympathetic imagery in eighteenth-century social theory and physiology. *History of Political Economy* 35 (Suppl.), 282–308.
- Greif, A., 2006. History lessons: the birth of impersonal exchange: the community responsibility system and impartial justice. *Journal of Economic Perspectives* 20 (2), 221–236.
- Griswold, C., 2006. Imagination: morals, science, and arts. In: Haakonssen, K. (Ed.), *The Cambridge Companion to Adam Smith*. Cambridge University Press, Cambridge, New York, pp. 22–56.
- Handy, C., 2008. What is business for? In: Zak, P. (Ed.), *Moral Markets*. Princeton University Press, Princeton, Oxford, pp. 328–338.
- Henrich, J., Boyd, R., Bowles, S., Camerer, C., Fehr, E., Gintis, H. (Eds.), 2004. *Foundations of Human Sociability: Economic Experiments and Ethnographic Evidence from Fifteen Small-Scale Societies*. Oxford University Press, Oxford, New York.
- Henrich, J., Ensminger, J., McElreath, R., Barr, A., Barrett, C., Bolyanatz, A., Cardenas, J.C., Gurven, M., Gwako, E., Henrich, N., Lesorogol, C., Marlowe, F., Tracer, D., Ziker, J., 2010. Markets, religion, community size, and the evolution of fairness and punishment. *Science* 327, 1480–1484.
- Hoffman, E., McCabe, K., Smith, V.L., 1996. Social distance and other-regarding behavior in dictator games. *The American Economic Review* 86, 653–660.
- Hume, D., [1752] 1987. *Essays, Moral, Political, Literary*. Liberty Fund, Indianapolis.
- Iacoboni, M., 2008. *Mirroring People: The New Science of How We Connect With Others*. Farrar, Straus, Giroux, New York.

- Jansen, K., Hare, B., Call, J., Tomasello, M., 2006. Are chimpanzees spiteful or altruistic when sharing food? *Proceedings of the Royal Society B* 273, 1013–1021.
- Khalil, E., 2011. Mirror neurons paradox: how far is understanding from mimicking? *Journal of Economic Behavior and Organization* 77 (1), 66–75.
- Kimbrough, E., Wilson, B., forthcoming. Geography and social networks in nascent distant exchange. *Journal of Institutional and Theoretical Economics*.
- Lee, K.S., Mirowski, P., 2007. The energy behind Vernon Smith's experimental economics. *Cambridge Journal of Economics* 32, 257–271.
- Levy, D., Peart, S., 2004. Sympathy and approbation in Hume and Smith: a solution to the other rational species problem. *Economics and Philosophy* 20, 331–349.
- Levy, D., Peart, S., 2009. Adam Smith and the place of faction. In: Young, J. (Ed.), *The Elgar Companion to Adam Smith*. Edward Elgar, Cheltenham, UK, Northampton, USA, pp. 335–345.
- Mitani, J., Watts, D., 2005. Correlates of territorial boundary patrol behavior in wild chimpanzees. *Animal Behaviour* 70, 1079–1086.
- O'Hara, E.A., 2008. Trustworthiness and contract. In: Zak, P. (Ed.), *Moral Markets: The Critical Role of Values in the Economy*. Princeton University Press, Princeton, Oxford.
- Ostrom, E., 2005. Policies that crowd out reciprocity and collective action. In: Gintis, H., Bowles, S., Boyd, R., Fehr, E. (Eds.), *Moral Sentiments and Material Interests: the Foundations of Cooperation in Economic Life*. MIT Press, Cambridge, pp. 253–275.
- Paganelli, M.P., 2008. The Adam Smith Problem in reverse: self-interest in Adam Smith's *Wealth of Nations* and theory of moral sentiments. *History of Political Economy* 40 (2), 365–382.
- Paganelli, M.P., 2009. Approbation and the desire to better one's condition in Adam Smith: when the desire to better one's conditions does not better one's condition and society's condition. . . *Journal of the History of Economic Thought* 31 (1), 79–92.
- Rasmussen, D., 2006. Does 'bettering our condition' really make us better off? Adam Smith on progress and happiness. *American Political Science Review* 100 (3), 309–318.
- Richerson, P.J., Boyd, R., 2005. *Not By Genes Alone: How Culture Transformed Human Evolution*. University of Chicago Press, Chicago.
- Rigdon, M., McCabe, K., Smith, V., 2007. Sustaining cooperation in trust games. *Economic Journal* 117 (522), 991–1007.
- Rizzolatti, G., Sinigaglia, C., 2008. *Mirrors in the Brain: How Our Minds Share Actions and Emotions*. Oxford University Press, New York.
- Rosenberg, N., 1990. Adam Smith and the stock of moral capital. *History of Political Economy* 22 (1), 1–17.
- Smith, A., [1759] 1984. *The Theory of Moral Sentiments*. Liberty Fund, Indianapolis.
- Smith, A., [1762] 1982. *Lectures on Jurisprudence*. Liberty Fund, Indianapolis.
- Smith, A., [1776] 1981. *An Inquiry into the Nature and Causes of the Wealth of Nations*. Liberty Fund, Indianapolis.
- Smith, V.L., 1998. The two faces of Adam Smith. *Southern Economic Journal* 65 (1), 1–19.
- Smith, V.L., 2003. Constructivist and ecological rationality in economics. *American Economic Review* 93 (3), 465–508.
- Smith, V.L., 2008. *Rationality in Economics: Constructivist and Ecological Forms*. Cambridge University Press, Cambridge.
- Smith, V.L., 2010. What would Adam Smith think? *Journal of Economic Behavior and Organization* 73, 83–86.
- Tullock, G., 1985. Adam Smith and the prisoners' dilemma. *The Quarterly Journal of Economics* 100, 1073–1081.
- Young, J., 2001. Adam Smith's two views of the market. In: Porta, P.L., Scazzieri, R., Skinner, A. (Eds.), *Knowledge and Social Institutions and the Division of Labor*. Edward Elgar, Cheltenham, UK, Northampton, MA, USA.