

On Indirect Reciprocity

- Between Reciprocity and Altruism
by Jan Tullberg

Abstract

Indirect reciprocity, defined as acts where the return for a favor comes from someone other than the recipient of the benefaction, is a common phenomenon in human societies. However, it is a poorly analyzed phenomenon with respect to payoffs. Are the expectations of return realistic or not; are they pro social attitudes or illusions induced through manipulation? I recognize four categories of indirect reciprocity, two of which pertain to interaction among individuals, and two of which involve social systems. The conclusion is that two of these categories, reciprocal reputation and institutionalized reciprocity, are strongly linked to reciprocity, whereas the other two categories, generous reputation and metaphysical reciprocity, are likely to involve a high degree of altruism. I discuss the relationship between altruism and reciprocity and its relevance to normative ethics and argue for a strict separation between them instead of a gray zone. On the descriptive level the article argues against the strong tendency in biology to dissolve altruism. Normatively the article argues against the dominant position in philosophy that altruistic norms and acts are desired.

Introduction

In moral philosophy as well as in sociobiology, altruism is a central concept. However, the concept is certainly problematic, since in moral philosophy it tends to constitute the very bulk of what is called morality, whereas in sociobiology altruism as an explanation of human behavior tends to disappear. Here, apparent altruistic behavior can be explained by kin selection and reciprocity and extensions of reciprocity, i.e. by natural selection, and these biological explanations leave little room for a behavior to be classified as altruism in a strict sense (e.g. Trivers 1971; Wilson 1979; Alexander 1979, 1987). The analysis in this paper acknowledges altruism, understood as actions that involve a net cost (e.g. Sesardic 1995), as a real factor in human societies. Arguments for this judgement will be presented later. However, this does not imply an affirmation of the common judgement in much of moral philosophy, that altruism is both important and beneficial. The value of altruism as a social factor needs to be reconsidered in the light of an improved understanding of human behavior.

In his important book on moral systems Alexander uses the term indirect reciprocity, defined as acts where "the return is expected from someone other than the recipient of the beneficence" (1987, p.85). Unfortunately, there are rather few theoretical investigations where cooperation includes more than two individuals (Legge 1996), but Boyd and Richerson (1989), investigating indirect reciprocity, concluded that it is more important to identify non-cooperators and exclude them from cooperation than to focus on the treatment of yourself. They also concluded that a weakness of indirect reciprocity is that it is much more vulnerable to errors than direct reciprocity. Recent theoretical work by Nowak and Sigmund (1998) claim that cooperation entirely based on indirect reciprocity can be evolutionarily stable, one determining factor for this to happen being the availability of information about the cooperative quality of other individuals in the population. Work by Leimar and Hammerstein (2001) introduces a quality dimension in the 'good standing' that improves the theoretical possibilities of indirect reciprocity.

In Alexander's 21 categories of human social behavior altruism is nowhere to be found, and the reason given is that "we are not yet shown any beneficent behavior that cannot easily and logically be linked to nepotism and reciprocity" (table page 87 quote p.160). Thus, what humans name altruism is basically indirect reciprocity, with the return given in less obvious ways, and without having to be understood or consciously expected by the actor. For instance, the return in indirect reciprocity could be elevated status, which in a second step could bring advantages.

Similarly, Wilson (1979) distinguishes between two basic forms of social behavior, namely "hard-core" and "soft-core" altruism, corresponding to kin selection and reciprocity, respectively, and tends to place strict altruism in neither of these categories. Thus, in sociobiology altruism is exposed to a special problem, namely extinction, as succinctly pointed out by Trivers (1971, p. 35).

"Kin altruism" and "reciprocal altruism" are not altruism in a strict sense, as these phenomena can be understood from a selfish gene perspective. Indirect reciprocity might be just a form of reciprocity as indicated by the term and by how most sociobiologists understand behavior. But on the other hand it might hold patterns that

involve altruism. It is therefore of value to analyze the broad concept of indirect reciprocity, as defined above, since it can include several types of social interactions that may vary in their probability of giving the actor a net return, or, in other words, in their probability of excluding or including altruism. Elsewhere Tullberg & Tullberg (1994, 1996, 1997) have argued at more length about the rationale of doubting the value of altruism as an ethical and social ambition, and this doubt makes the distinction between reciprocity and altruism important.

This article focuses the gray zone between reciprocity and altruism. I propose the following four categories of indirect reciprocity for an analysis of this phenomenon in human societies: 1) reciprocal reputation, 2) generous reputation, 3) institutionalized reciprocity (the giver receives a return benefit not from the beneficiary but from a social institution), and 4) metaphysical reciprocity (the giver expects a return benefit in the next life). The first two categories pertain to interactions between individuals, whereas the last two pertain to interactions between individuals and systems, such as society and religion. Before starting to penetrate these four groups, something has to be said about the measurements and definitions to use.

1 Intentions, actual results and expected results

The ultimate way of understanding behavior is from the point of view of effects. Effects should be measured for patterns of behavior, strategies. These strategies should then be judged according to their statistically expected results. For an evolutionary biologist this comes naturally, but also a philosopher like Adam Smith shares this view, stressing the importance of "design, not events" (See e.g. Binmore 1994). When I classify according to effects I mean effects that are expected in this statistical sense in contrast to the two variants of intention - what the actor intended and what we as observers think he intended. Such an expected effect is also in contrast to actual outcome - a credit loss of a bank should not be regarded as post fact altruism.

Strategies are not necessarily outspoken or even conscious to the actor (Lopreato 1981). In philosophy as in law, claims of good intentions are given a central importance although there are excellent possibilities for manipulation. This not only through convincing lies, but also through lies that are improbable but not impossible. Furthermore, our thoughts, prejudices and self-deception might be quite complicated and hard to sort out. A type of behavior might be egoistic in terms of its statistical effects, even if the agent himself is convinced of a pure altruistic motivation. The intention is by itself of limited interest. However, psychology is also a proximate mechanism for the execution of behavior, and the factor of prime interest here is the behavior and the consequences of that behavior.

Natural selection work against behavior that has negative effects, but that is a long-term process. Behaviors, having evolved because they were adaptive in one environment, may not be so in a new environment. The radical changes of human societies from the hunter-gatherer mode, puts man in radical new environments to which he hardly can be expected to be perfectly adapted. Ideology and religion will be strong forces that influence humans to behave in ways that are sub optimal from

the perspectives of organism and gene. Not least will psychological heuristics - normally helpful for both cognitive and emotional choices - be exploited by others to obtain advantages. My position is that humans do perform some altruistic behavior, i.e. acts where the expected returns do not compensate for the costs, and that such altruism can be of more or less systematic occurrence in societies. The reasons for altruism - psychological urge, successful manipulation, failure in understanding, complex situations - can vary; the main point is that people commit acts with an expected net cost (in terms of resources, survival, reproduction).

2 Reciprocal vs. generous reputation

Some people might associate reputation with an anxious or self-important obsession about what others think about them. Therefore it might be motivated to stress the importance for humans of reputation in order to be favored rather than dismissed for social interaction. This section will not argue any further about the importance of reputation, but discusses whether a reciprocal reputation or a generous reputation might be the most useful.

Consider a situation with two interacting individuals, A and B, and an observer, C. Then C, depending upon his observation of interactions between A and B can perform actions of indirect reciprocity. One case is the observation that A helps B and B later returns the help to A, whereupon C helps B with the expectation that B will return the help to C (example in Tab. 2.2, Alexander 1987). In this case C expects a fruitful reciprocal relationship with B because the latter has shown to be able to reciprocate help, i.e. has a good reciprocal reputation. C may also consider helping A with the expectation that help is returned.

Each reciprocal interaction has to be initiated by someone, so a simple A-helps-B behavior may be interpreted in terms of reciprocity, and attract a reciprocal C. For instance, a new neighbor that lends his car to an old neighbor indicates his interest for interaction in the new location. However, generally for a reciprocal relationship the most assuring forecast is for B's behavior, because he has shown his ability to return a favor.

An A-helps-B situation is, however, not necessarily an initiation of a reciprocal relationship, but could be an altruistic act lending a generous reputation to A. One type of interested bystander is an egoistically inclined C, but he is not attracted because of a potential reciprocal relationship, but in order to get the next favor. Another type of bystander is an altruistically inclined C, but since altruists are not reciprocal individuals getting together for mutual benefit, there is no particular reason why C should help A. For an altruistic A there is neither a commitment to return such a favor would it take place; he may make other priorities as for someone more in need of help than C. A reciprocally inclined C will appreciate that A is not selfish and will not mind getting the next favor. But if C is considering a favor to A, this is more attractive for C if A has a reciprocal reputation rather than the less focused generous reputation.

It is often assumed that a generous reputation is associated with substantial payoff. To take the extreme example of heroism, this quote from Fisher takes a radical stand:

"The mere fact that the prosperity of the group is at stake makes the sacrifice of individual lives occasionally advantageous, though this, I believe, is a minor consideration compared with the enormous advantage conferred by prestige of the hero upon all his kinsmen" (1958, p. 265). I believe that a more common reaction is that war veterans feel they don't get the appreciation they expected. If alive it is certainly better to have the reputation of a hero than a coward, but whether heroism gives high enough a dividend to motivate real life sacrifices is another matter. It seems likely that the children of killed veterans will suffer a decreased fitness.

Alexander makes the point that altruism is often a dishonest display or that there is a systematic overestimate of one's own altruism. However, he endorses teaching the altruistic message: "This means that whether or not we know it when we speak favorably to our children about Good Samaritanism, we are telling them about a behavior that has a strong likelihood of being reproductively profitable" (p. 102). By seeing such rationality, the alternative of anti-rational behavior is not being paid sufficient attention. If convinced of an adaptive explanation, it is natural to focus on different possible explanations that would make a behavior rational not only for the beneficiary but also in some indirect way for the actor.

The popularity of a generous reputation among the potential receivers needs no long explanation, but why do people invest resources in such a reputation. Are they all real altruists? One line of thought is to make a parallel to "conspicuous consumption" (coined by Thorstein Veblen). Such behavior does not primarily bring value for money, but showing off wealth. Burning money has always been a way of telling others that you have plenty ... "Conspicuous benevolence" (Coleman 1991) is another way to impress onlookers for the same kind of reason. Still, such "Pharisaical giving" - even if ethically dubious - can generate indirect effects such as respect, ability to reciprocate, envy or admiration. There is however no point in labeling everything reciprocity and then assume that there is a pay back. Bragging might not always be a rational behavior.

In social life we are likely to pay a lot of attention to a person's credit history, faithfulness and loyalty to friends. The donation record of a person is less central and might even generate some uneasiness. In conclusion, it is highly probable that reciprocal reputation is a more important social factor than a generous reputation. Few C's - altruistic, reciprocal or egoistic - will make A a favor as a return for his help to B. The C that is actually helping A will do this, not as a return, but as a starting point for a new reciprocal relationship.

In their theoretical analysis of indirect reciprocity Boyd and Richerson (1989) used two models, one with a strategy they called upstream tit-for-tat where individual help is not conditioned upon the receiver's previous behavior, but on whether the actor himself has received help from somebody else, and the other with a strategy called downstream tit-for-tat, where help is given to individuals who themselves have helped somebody else. The second strategy, the spread of which needed the least restrictive conditions, corresponds to the above situation where C helps A, i.e. the generous reputation situation. This strategy is also used in the theoretical framework of Nowak and Sigmund (1998). It would be interesting to extend these analyses of indirect reciprocity to include a strategy corresponding to the C helps B situation, i.e. the reciprocal reputation situation.

It is important to note the difference between a reciprocal and a generous reputation and that it is the first type of reputation that is most likely to generate new and lasting reciprocal relationships. Considering reciprocal reputation, it will attract observers who hope to avoid cheats and find reliable individuals for the possibility of cooperation for mutual benefit. A generous reputation may cause popularity, but may generate less cooperation because individuals with egoistic or altruistic strategies have other ambitions.

3 Institutionalized reciprocity

This category represents such benefits and retributions that are formalized by society. They are indirect in the sense that it is the state or authority, not the initial beneficiary or the victim from an act, that pays or punishes the actor. The taxpayer receives his old age pension and murderers are imprisoned by the state. The question is if such reward systems should be *quid pro quo* or if the return should be less strict.

There are dangers in making the consequences of rule breaking and rule following flexible or uncertain, because such a discrepancy between social goals and practical enforcement probably leads to unwanted effects. Thus, a risk of not receiving reciprocal reward would probably result in fewer helpful acts, and negative acts would probably increase as a result of a deficiency of reciprocity, i.e. deficiency in punitive action. The optimistic thief and the pessimistic cooperator will be pushed in the wrong direction. To have occasional draconian enforcement might provide sufficient repellence, but is hardly the way to build justice. Systems that make a saving by short-changing people who make a positive contribution are also hard to see as ethical. Such a lack of fairness will cause frustration and erode acceptance of social rules, and it is therefore likely that the more clear and credible the rules are, the greater is the positive effect they will have.

The argument for the opposite view is based on an ambition despite the shortcoming of the institutions. Often an altruistic agitation prevails at a high level, demanding the social system not only to be fair - but also compassionate, forgiving and sympathetic. Ambitions reach further than real capacity and the state wants its citizens to do good deeds that it cannot compensate for. Frequently, politicians ask for funds for services that they then fail to deliver. Some scientists (e.g. Brunsson 1989) see such discrepancies between promises and deliveries as the high art of politics, but such politics is likely to undermine public confidence and pro-social behavior. There are in my opinion good reasons for institutionalized reciprocity to be transparent; problems arise when a set of actions are officially praised or condemned, but reward and punishment are linked to other criteria.

4 Metaphysical reciprocity

In many human moral systems there is a reassurance that the world is constructed in such a way that it pays to be an altruist. Religions bring this message in the form of reincarnation and paradise. Kant argued that God and an eternal life was necessary for the existence of morality - and that God exists because of this "necessity" (The

moral proof of God, e.g. Mackie 1977). Such a pattern of indirect reciprocity - A helps B and later C (God) rewards A generously in an unobservable way - is labeled "metaphysical reciprocity" in this paper.

Altruistic messages are indeed often loaded with promises of reciprocal payoffs, but such promises have to be investigated. If the payoffs actually turn out to be true, an altruistic label is misleading. However, if the reciprocal messages turn out to be false, we are left with a net cost, i.e. altruism.

E.O. Wilson (1979) discusses the example of Mother Theresa. Since it is highly probable that she believes in the teaching of the Bible about the possibility of admission to paradise, her sacrifices in this world can be seen as measures taken for a more precious goal, the salvation of the soul. Wilson's conclusion is that she therefore is selfish, not altruistic. However, the classification of a deed should - following our prior discussion of criteria - not be based on an agent's hope, but by the statistical outcome in the real world. I think Joseph Lopreato makes an important point when commenting Wilson's judgement: "If the issue is stated this way, there are by fiat no altruists, for we shall find that in one fashion or another we all seek for ourselves "good" as contrasted to "evil". But that is not the issue. The sociobiology of altruism concerns the salvation or perdition of genes, not of souls." (Lopreato 1981, p. 117)

Kin aid is a common phenomenon and by the theory of inclusive fitness its rationale is well understood. There is no problem to understand a hybrid between kin aid and reciprocity as in the following sequence A helps B; followed by B helps K (child of A). If B provides help to K, that A is not able to perform himself, the return benefit is most valuable. However, if the receiver of this benefit is not real kin, but pseudo kin, another situation emerges.

Parasitism is sometimes accomplished by pure force, but sometimes by manipulation of the host animal. The classical example is the adoptive parents of the cuckoo who act as if they were involved in providing for their kin. The cuckoo succeeds in manipulating the victims' understanding of the situation and to trigger a beneficial behavior. This parasitic behavior is based on a pseudo kin relation.

Man has used the feeling of affection between brothers and transformed it into special bonds of blood brothers. This is really reciprocity that is formalized into stronger ties of rights and liabilities than between unrelated men of the tribe. Later in history there are brotherhoods of monasteries and of revolutionary activists. The ruler is normally described as the father of his subjects, from "the Holy Father" in Rome to "the Little Father" in Moscow. The point I want to make is that altruistic agitation is supported by a pseudo kin vocabulary (e.g. Holper 1996) as well as by metaphysical reciprocity to be more appealing.

One likely explanation for the existence of altruistic propaganda is that it is a technique to manipulate people (Williams 1989); if you make your fellow man believe that he has to serve others, there are two likely beneficiaries - the receiver and the organizer. It is not justified to see such benefits as a side effect, but much more probable as the driving force. Altruism is hard to explain as a result of natural

selection, but it is a likely product of altruistic agitation. The mere popularity of this agitation for such a long time indicates some effects or it should have evaporated.

If the potential giver is reluctant, the promise of a future generous return might make a sacrifice acceptable. Proponents of altruism frequently soften their demands of duty by linking them to pseudo kin benefits and metaphysical reciprocity. As indicated by Wilson's comments on Mother Theresa such behavior appears less altruistic because it does not reflect a pure altruistic motivation. But judged according to the most important aspect, real world effects, such behavior is altruistic. She and others make sacrifices that are not sufficiently rewarded in this life to be rational.

5 Discussion

In order to be classified as reciprocity, a behavior has to be shown to include a probable payoff, and the reason for making the present categorization is to shed light on the possible inclusion of altruism in indirect reciprocity. The conclusion is that reciprocal reputation and institutionalized reciprocity are both strongly linked to reciprocity, whereas the payoffs from generous reputation and metaphysical reciprocity are questionable. Accordingly, these two categories have a much stronger link to altruism than to reciprocity. A figure illustrates the split.

Figure 1.

Categories of indirect reciprocity based on the likelihood of involving reciprocity (return payoffs) or altruism.

	Reciprocity	Altruism
Individual level	Reciprocal Reputation	Generous Reputation
Societal level	Institutionalized Reciprocity	Metaphysical Reciprocity

The analysis thus indicates that some skepticism toward the concept indirect reciprocity is justified. It is often treated as a black box, but according to my opinion it is important to stress the prime difference between reciprocity and altruism. This criticism is not focused on the rather unusual term indirect reciprocity, but on all ideas supportive to a gray zone between reciprocity and altruism.

Alexander shares the view that altruism is a manipulative game, but he sees no real distortion; we all play by the same rules even if nobody acknowledges them officially: "whether they know it or not, people are indeed pursuing their own self (=genetic) interest, at least insofar as current environments mimic those of the past" (1987, p. 164). I hold that there are many respects in which the current environments do not mimic those of the past. To judge what is rational and what is not, is hard enough in complex situations, and when this process is under heavy misinformation and when it is considered unacceptable to make rational evaluations, it becomes even more difficult. Such obscurity of various situations increases the possibility for a reallocation of benefits, with a prime flow, taking place from manipulated to manipulating individuals and institutions.

Many people hold the belief that societies develop towards an ever-increasing degree of indirect reciprocity or altruistic behavior. One reason is that the competition of "I am holier than you are" builds cumulatively and that "no one can afford to lag too far behind relative to everyone else" (Alexander 1987, p.105, p.193, Fig. 2.1). A similar view was held by Herbert Spencer (1884), who saw man acting out of self-interest, but that since society moves towards increased division of work and complicated interactions, we change towards altruistic behavior.

However, these theories of expanding benevolence miss some essentials. It is true in so far as human societies have become more complicated with increased division of labor, and that the units for collectivist action and displays of loyalty have become larger over time. But in terms of real sacrifices it is hard to see a change towards more unselfish behavior and a common opinion is that there is less willingness to make sacrifices today than before. It has probably been an advantage most of the time to be conformist, i.e. supporting the conventional ideas in a society (e.g. Boyd

& Richerson 1985), and therefore, adjustments to current norms are often important in the sense that there are problems for the one who "lags far behind". But now being poor and ascetic is less of a virtue, whereas expressing compassion about the poor is more important. Theories of an expanding circle (Singer 1981) may have very little to do with real behavior, and it is hard to see that there is a real trend toward more indiscriminate altruism.

Probably, most people are quite aware of a high frequency of manipulation and fraud in altruistic messages. But before drawing a conclusion of such critical observations, we must all reflect over further consequences. If a strong propaganda for altruism is a necessary component of the social fabric, we might have to accept it; moral questions should perhaps not be regarded as a choice between truth and lies, but as a support to necessary myths. For instance, liberals in the 18th century advocated more religious freedom, but not the right to be an atheist, because a belief in God was seen as a necessary precondition for social life. The question then is whether a good social life is possible without a common belief in God or a permanent agitation for altruism.

6 Conclusions

Altruistic actions are certainly not a major but a minor part of human life. But do altruistic norms improve the human condition or are they tools for manipulation? Maybe both. The public opinion will probably be that altruism is beneficial if not exaggerated. This attitude might be a reason for the acceptance of many strange views held in the field of ethics. The major line is probably an inconsistent model: intend altruism and obtain reciprocity. A message of straight forward reciprocity will bring about some cooperation, but an altruistic spirit will reach a higher level. Altruism is a benevolent manipulation, partly an illusion and partly a misnomer - but it brings some improvements despite these intellectual shortcomings that are better to be let unnoticed. Some kinds of indirect reciprocity can be seen as ideas supporting such a positive view of altruistic influence.

According to most sociobiologists, we can face the truth that altruism is an illusion. This critique of ethics is driven in the quest for honesty and understanding, but it does not imply much of a reformist potential of behavior. Human behavior is adapted - it is just philosophy that is confused. The Good Samaritan will receive prestige for his kindness, and the kin of the dead hero will be rewarded. There is little support for the belief that many goods deeds bring no reward.

This article suggests a third position, seeing a positive potential in a better understanding. Even if humans are not all mind, the rational capacity to make proper decisions should not be underestimated. Knowledge - about self and others - is normally a way for improvement. The common praise of altruistic behavior as well as altruistic ethics, is a problem for honest communication and rational cooperation. In a situation with widespread deception and self-deception it is difficult to make the proper judgements.

I do not agree with the idea that all behaviors labeled indirect reciprocity should be regarded as reciprocity. There is a danger that concepts like indirect reciprocity develop into a black box where various phenomena are intermingled. Several factors

contribute to blur the distinction between reciprocity and altruism. Reciprocal acts are decorated with altruistic labels and altruistic admonitions are softened with reciprocal possibilities. In each case it is always possible to motivate a reclassification by making new interpretations of the motifs and intentions of the actor. Such common confusion is no accident, but a useful tool to all of us who want others to do something that is not in their own interest - but in line with ours.

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