
KIN SELECTION AND INCLUSIVE FITNESS IN EVOLUTIONARY BIOLOGY AND PSYCHOLOGY PART II. COULD THEY BE RELATED TO NEW TESTAMENT EXPLANATIONS OF ALTRUISTIC BEHAVIOUR?

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Abstract

This paper in both Part I & II examines the theories of inclusive fitness and kin selection and their relationship to New Testament considerations of cooperation and altruism. It discusses how these theories have been developed and what they represent in Evolutionary biology and Psychology. In evolutionary psychology, altruism has also a social care component where individuals who bestow favours onto non-kin enable the society or community at large to thrive and prosper. Group selection effects on kin selection and the exaptation effect on inclusive fitness are also visited in Part II of this paper. The central thesis of Part II is that altruism and cooperation are not only of importance in evolutionary approaches but to anthropological issues deriving from New Testament texts. Thus, a cooperative attitude, including altruistic sacrifice, is explained as a prerequisite for adaptation and survival in sustaining and cultivating progressive societies.

Keywords: inclusive fitness, kin selection, group selection, exaptation, altruism

1. Introduction

In this second part of the paper, there will be discussed the understanding of the ‘exaptation effect’ for inclusive fitness theory in terms of an adaptation for the betterment of the society which can be cultivated not only for the benefit of genetically related individuals, but most importantly for individuals totally unrelated to each other. In this part, there will also be discussed the issue of altruism in the light of examples provided in the New Testament, where not only aspects of genetic unrelatedness are covered as far as altruistic behaviours are concerned, but also what the meaning of altruism in New Testament terms has to offer for the modern Evolutionary psychology and Biology, whereby trait

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behaviour does not play a crucial role but what one's willingness has to offer for another's needs and expectations in a social environment. Through the understanding of altruism in New Testament terms what is suggested is that 'tit-for-tat' behaviours and social exchange considerations in the social milieu are fully explained by the motto 'do to others what you would expect them to do for you in return', meaning that altruism is not only approached as a reciprocal characteristic of exchange between two, but as a 'social should' beneficial and costly both for those exercising it as well as for those accepting it. This aspect in the Church's anthropological literature is known as the 'golden rule' of human interrelationships through which not only social balance is effectuated but also interpersonal interaction is favoured.

2. The exaptation effect of inclusive fitness theory

The criticism of inclusive fitness theory sparked off a number of alternative explanations for the term [1, 2]. The main reason for such criticism is that inclusive fitness alone, based as it is on the evolutionary history of genetic relatedness, fails since society (rather than genetic relatedness) has the leading role in the establishment of cooperation, reciprocity and altruistic attitudes between humans [3].

Inclusive fitness theory provides a direct adaptive value to individuals sharing familial genes; it can also provide indirect adaptive processes, such as caring for the offspring of unrelated individuals whose phenotypic appearance suggests similar genetics. Inclusive fitness theory may also be examined under the interpretation of exaptation. What inclusive fitness was originally '*for*' can also benefit unrelated others and total strangers (e.g. caring for people of the third world by sending them supplies to fight against famine, disease, or any unprecedented need they might have). Though exaptation refers to an adaptation which solved a particular problem and then evolved to something of a different purpose [4-6], it may also explain the function of current processes in the presence of adaptations still in use (e.g., traits inherited from our ancestors to indirectly benefit human development like variant testosterone levels found between males) [7].

Inclusive fitness as a term captures the concept of genetic inheritance in two ways: a) via the passing on of genes to future generations; and b) via maximising the fitness of offspring and reducing the fitness of the donor. The term inclusive fitness may be regarded as an evolved process which was further developed to fulfil the needs of genetic inheritance via altruistic behaviours. The way in which inclusive fitness fulfils the needs of genetic inheritance via altruistic behaviours can be regarded as a) taking care of the unfit and b) helping others at the expense of the fittest.

The *care component* of inclusive fitness, as an exaptation, enhances *the wellbeing of members of the community so peripheral adaptive problems may be resolved*. Taking care of the unfit can be maintained even if doing so is against the "survival of the fittest" [8]. Humans, by demonstrating helping behaviours towards disabled individuals unable to pass on their genes to future generations, do not

‘practically help’ the course of evolution regardless of whether the behaviour occurs in a family or in society at large [9]. Does that mean that empathy, leading to altruism, is demonstrated according to the needs at present, and without any direct genetic cause [10]? In modern societies, taking care of those in need is expected. This also took place in ancestral environments. Those who had disabilities were occasionally revered as people with spiritual capabilities sent from the gods to aid society [11]. We no longer consider the disabled as divine gifts even though the component of care for them hasn’t changed at all [12]. So, inclusive fitness theory can be explained as a function of inclusive altruism; helping behaviours towards others, whether kin or non-kin, may be at the expense of individuals or societies practicing altruistic traits.

In the evolutionary psychological view, inclusive fitness might be a cognitive element demonstrated via an altruism or cooperative propensity. As a cognitive element, inclusive fitness *could* incorporate genetically-inherited traits such as *loving others as oneself, self-sacrifice, personal devotion aiming at others’ wellbeing* or *one helping another’s neighbour* [13]. Specific altruistic and cooperative behaviours can be found in both non-humans and humans, at least in a somewhat parallel fashion: for instance, vampire bats regurgitate blood to feed other members of their colony unable to find food for themselves [14]. In human terms, we might call such behaviour a blood transfusion. Another example is bird species that receive help from others, kin or non-kin, to raise their fledglings [15]; in humans, such help is often offered from grandparents or unrelated nannies who take care of others’ progeny. A final example is sterile worker ants that care for the offspring of their queen [16]; in humans, such behaviour is seen in unmarried relatives who care for nieces and nephews.

In reality, what inclusive fitness does – its reason for existing – is via a cognitive feature in one’s own life and the life of others. Without altruistic and cooperative acts there is no need to even talk about inclusive fitness; there is no need to look for genetic inheritance if the parameter of altruism and cooperation is not present [17]. Added to this understanding is what exists between family members who are destined to be heirs. We argue for this propensity to exist without a direct genetic linkage since, in many families, there exists considerable animosity, hostility and conflicting behaviours if one member inherits more than others [18]. Does that mean they haven’t inherited the same genes from their parents? Or, are there genes – perhaps ‘selfish’ genes – that exhibit prevalence over genes for altruism [19]? (For example, in the case of altruistic suicide in contrast to altruistic acts which though costly are not fatal to actors.) Since ‘genes for’ altruism have never actually been found in our DNA, they are clearly hypothetical; so are ‘selfish genes’ merely a metaphor. A better way of seeing altruistic and cooperative behaviours is that they are learned: being kind, generous, helpful and caring towards others [20]. I am not claiming that genes for altruism do not exist – in the future, biologists may be able to discover them in our DNA – but that what we currently understand as altruism are the favours we bestow on others whether these are returned to us or not regardless of a genetic linkage [21].

Thus, we can propose an exaptation effect of inclusive fitness. My theory on the exaptation effect goes well beyond the aspect of fitness of genes and whether they can replicate and survive, in some degree, in genetically-related individuals. The literature on inclusive fitness has thoroughly avoided discussing any exaptation issues for fear that its main idea on the genetic inheritance of altruistic and cooperative behaviours should be put at stake. I propose, therefore, that what we know as altruism or even mere cooperation (e.g. benevolence and interest towards others), is what inclusive fitness has adaptively co-opted to be the trait of altruism and cooperation that we have inherited from our ancestors, whether or not that trait refers to a particular replication of genes.

If this position is valid, then one may argue that a trait is simply *the phenotypic demonstration of all the genes we have inherited in a particular environment that rewards cooperative and altruistic actions*. If this proposal is correct, however, why are these traits seen even among individuals from widely differing descent? Does that mean that traits commonly shared among people (not necessary from the same kin, society, or culture) explain the same behaviours universally? Are moral and ethical issues which derive and/or are connected with altruistic or cooperative traits representative of the same trait in any given culture? Could those who sacrifice themselves for the sake of their community or culture exhibit the same trait for altruism with those who place themselves at risk to assassinate others for the betterment of their society or beliefs? The point of these questions is to suggest that the trait for altruism can have different connotations among different cultures; those different connotations may not necessarily be due to inclusive fitness issues. Inclusive fitness is a technical term for both evolutionary biology and psychology and on its own cannot sufficiently explain why genetic inheritance and fitness maximisation are adequate to resolve the existence of altruistic sacrifice. In terms of the needs of particular societies and cultures, altruistic sacrifice is practiced in different ways [22].

The exaptation effect of inclusive fitness does not negate the role of inclusive fitness in mainstream evolutionary biology; nor does it disregard the assumed influence of genes on the genetic familiarity between members of the same kin to make them struggle for the betterment of their relatives in order to maximize reproductive success and pass on genes to related progeny [23]. The exaptation effect of inclusive fitness represents behaviours which favour the wellbeing of others in altruistically sacrificial ways; it demonstrates that altruistic behaviours help societies remain cohesive and successful. Exaptation emphasizes that altruistic behaviours help individuals flourish via being shown compassion and forbearance. This is what the exaptation effect could mean for inclusive fitness: *an attitude of goodwill which hasn't been inherited; an attitude helpful to the needs of others; an attitude directed to the welfare of others regardless of genetic relatedness*. The exaptation effect may be related even more to the human ideal of family. We are very susceptible to familial metaphors and easily 'tricked' into considering non-relatives as 'brothers in arms' provided there is 'another' to fight against. Solidarity is easily foisted upon us provided there is cause to fight against.

3. Altruistic behaviour explanations according to the New Testament

Altruism and cooperation in the New Testament is explained in many ways, be they biological/physiological (e.g. John 16.21, 1 Corinthians 11.33-34, 2 Corinthians 9.10-11, 2 Timothy 3.11), behavioural (e.g. Matthew 19.21; Luke 6.27-35, 19.8; John 13.29), or cognitive (e.g. Luke 18.9; Romans 14.10, 15.1-2; 1 Corinthians 8.12-13).

3.1. Biological/physiological altruism

3.1.2. John 16.21

The biological need to give birth and bring up children is the natural outcome of an actor's tendency to convey life to future generations. In doing so, altruism becomes a tool upon which parent-offspring relationships can be built. Though this extract refers to kin selection to maximise fitness of one's phenotypic conveyance to progeny, it also refers to the importance of the new family member for others (κόσμος). In this way, it is realized that one's birth to a particular family does not solely benefit that family per se, but the social environment as well; the newborn member's implementation of actions will be introduced and practiced in the future to benefit of society as a whole. The biological explanation of inclusive fitness is also indicated in this extract. Conveyance of genes to future generations makes life not only plausible but creative as well.

3.1.3. 1 Corinthians 11.33-34

An altruistic or cooperative demeanour is of great significance for the progress of the Christian Church. St. Paul uses the example of eating together where everyone should be accepted and no discrimination be present. In accepting others, what the faithful are accepting is Christ, the presence of whom is a vital belief for the culmination of faith. The purpose of eating together is not to satisfy hunger but to commune with others in Christ's body through the sharing of the Eucharist. Altruistic behaviour in this extract is not only something that members of the Church are doing but why they are doing it and what is its purpose. The point Paul is making is that Christians must consider others the way they consider themselves: with needs which ought to be fulfilled so cooperative expectations will be met. Gathering together is understood as an important gesture of accepting others regardless of status and to fulfil each one's needs. Such cooperative behaviour expects that each person is there for the other in order to expand the communal relationship of the group.

3.1.4. 2 Corinthians 9.10-11

As God takes care of his creation, by giving seeds and bread, he will also take care to multiply and increase the outcomes of human justice, the foundations of

which need to refer to simplicity and giving thanks, i.e. to the absence of pretence and acknowledgement of his love towards humans. Absence of pretence and acknowledgement of love can be demonstrated via altruistic and cooperative behaviour towards understanding others' needs against personal wealth and accumulation of resources. The biological need of hunger becomes, in these verses, the representation of how self-preservation needs should be satisfied: not thinking only about oneself, but also, first and foremost, about others.

3.1.5. 2 Timothy 3.11

What Saint Paul indicates is what he suffered; he suffered it for the Church. The Lord was behind his safety and what happened to him represents his fight for the Church; his fight for Christians to be stable in faith and quick to care for others. Saint Paul's suffering indicates the exercise of altruistic behaviour for the benefit of others in the prism of salvation unto Christ. The physiological pains he felt to his flesh, Saint Paul considers them as a route to salvation coming through his care for others, those in need, those for whom Christ has also been crucified.

3.2. Behavioural altruism

3.2.1. Matthew 19.21

Behavioural altruism, or altruism in action, is not an easy thing to be accomplished. Natural people only think of themselves; they don't take into account what other peoples' needs are. Christians are called to think about what they should leave out so others may be helped. For one to behave altruistically and be regarded as a disciple of Christ, he or she has to consider others as one's own self; one has to consider peoples' needs as one's own. Matthew says in this verse that altruistic behaviour should be enacted upon and based on what other people need most. It is very difficult for one to offer part of oneself so others' needs to be satisfied. That can refer not only to money, but time and personal sacrifice as well. When one acts altruistically, one acts against one's assumed superiority; one acts against one's assumed consideration of nobility. By offering one's 'treasure', one offers one's goods so others to have them, so others to benefit from them. One by offering one's 'treasure', one offers oneself to others. Acting altruistically implies acting for others and not for oneself; acting for others in terms of altruistic demeanour excludes one from gaining from others but instead emptying oneself so others to be benefited.

3.2.2. Luke 6.27-35

This passage includes difficult and incommensurable commands. It invites to a *real altruism* that refers to *complete self-sacrifice* for the benefit of others, even excluding kin in favour to the community of Christ; even including *sinners* and *one's enemies* in the hope to bringing them all together into the Body of Christ – His Church. In this passage, no boundaries are shown or hinted in one's relationship

unto others. What is advised is that one's fellow humans are one's spiritual brethren to whom no familial obstacles in terms of kin or favours not to be bestowed upon, is the case. One's kin is the entire human species. Issues such as reciprocity, altruism, selection of favours to be offered to, are not part of the framework of this passage. Issues of cooperation even appear minimal and of no importance because what is asked is the offering of one's self unto everyone other's needs. What could be called 'altruistic' in this passage is the understanding that satisfying others' needs and expectations is what altruism is all about and not just a 'phenotype' that appears in our genes. What this passage shows to us is that altruism if bestowed to all, irrespective of kin or non-kin, then can be regarded a genuine by-product of self-sacrifice, the aim of which is not only others to be benefited, but most importantly others to liken unto God in ways which they would choose to return that 'favour' (i.e. one's self-sacrificial deeds unto them) not to the actor but to another/others non-known recipient/s.

3.2.3. Luke 19.8

Altruistic behaviour in this extract becomes the culmination of Zacchaeus's self-conscientiousness with regards not only to his transgressions but to the impact they have had on his fellow humans' life. Altruistic behaviour is therefore understood in terms of self-awareness and it could be maintained that the former depends on the latter so to be conscientiously demonstrated. What self-awareness indicates in this extract is that altruistic behaviour cannot be experienced practically if one does not behaviourally show that altruism is a way of life being implemented explicitly so others' needs to be fulfilled. Fulfilment of the needs of others presents the altruist as a practical agent of interpersonal and social balance.

3.2.4. John 13.29

Jesus' disciples learned from him that one's life was measured by how much one offered it to others. That is why they misunderstood Jesus' saying to Judas thinking he was sent by him to collect goods and give them to the needy – though what Jesus meant was that *your time has come to go and betray me*. Disciples' understanding of a life of offer to the needy reveals the disposition of love in the form of specific altruistic behaviours through which individuals of a 'less social importance' could be cared for. In this way, altruism becomes a virtuous and not virtual attitude so the needs of others to be practically cared for and not theoretically.

3.3. Cognitive altruism

3.3.1. Romans 14.10

Cognitive damage to one's conscience is worse compared to material or physical damage. What Saint Paul underlines here, is what we need to do for our

fellow humans is first and foremost to accept the situation they are in without judging them. That includes any thought, emotion, or behaviour, which might be different from theirs. In this way, we act altruistically in a twofold manner: first, by showing that our fellow humans' understanding of things and events in life does not bother us, even if we disagree with what they are doing and, second, by exhibiting compassion and forbearance to what our fellow humans believe in, enact upon, or to which they adhere. Not judging and not chastening our fellow humans leads to the restructuring of thoughts not only of ours, but also of others. Consequently, this extract demonstrates the issue of *cognitive altruism* whereby differing mentalities can become at ease and be expressed in a common frame of mind, both for the benefit of the actor as well as that of the recipient.

3.3.2. *Romans 15.1-2*

Following the above excerpt, St Paul refers to those having a balanced conscience to stand by and be patient with the weaknesses of the spiritually frail. Two positive outcomes result from this: actors do not become selfish or behave selfishly by being strong, but their main objective is to serve God in all goodness through struggling for the goodness of fellow humans. Altruistic behaviour in this excerpt appears in the actors' demeanour so that the recipients' psychological needs may be met in terms of *shouldering* their conscience and cognitive inabilities as much as possible, plausible and feasible.

3.3.3. *1 Corinthians 8.12-13*

Saint Paul becomes clearer now as he speaks about the kind of *cognitive altruism* actors should demonstrate towards recipients. Not putting fellow humans under strains of conscience is what Saint Paul explains here. Any action may become scandalous to individuals having a weak conscience, i.e. a conscience which is unable to bear others' actions even if such actions are not damaging to recipients' *sensing* choices. St Paul uses the example of food to show that even meat can become a scandalous element to recipients with a weak conscience. Abstaining from any sort of food – not only meat – can be a restorative choice to a recipient's weak conscience. On the one hand, they accept weakness, value it, and do not come against it; on the other, they 'employ' it to alter negative cognitions undermining the recipient's mind.

What characterizes altruistic behaviour in New Testament texts are empathic matrices picturing cases of offering and sacrifice for the needy. Empathic matrices can be extracts, parables, short stories, and conversations . . . the literal meanings of which can be presented both allegorically as well as pragmatically [24]. Altruists become empathic agents in the New Testament where actions do not only refer to beliefs of how people in need should be supported, but how such support would have practical implications for the betterment of everyone's lives. An aspect which separates New Testament explanations of altruism from kin selection and inclusive fitness is the understanding of 'favours'. In New Testament terms 'favours' are not

bestowed upon same-kin or different-kin individuals because altruistic behaviours do not have to do with 'favours' but with a loving disposition. However, in few cases, favours related to altruistic behaviours can be bestowed upon same kin compared to non-kin individuals simply because that was the understanding of Christ's contemporaries in relation to supporting and maintaining the status of genetically-salient others to whom favours bestowed were intended for the wellbeing of such individuals. Jesus certainly knew others' willingness to bestow favours upon individuals of their kin and sometimes employs that understanding to make his teaching more clear as well as to explain that parent-offspring relationship is a strong one such as the relationship of God the Creator towards His created – us – as in the cases of Lazarus' and the daughter of Jairus' resurrections (Mark 5.22-23 & 35-43, John 11.1-44).

The idea that favours should be bestowed on individuals only of the same kin is an aspect, which can be found in extracts of Matthew 15.26 and 19.4-5. In the first passage (Mathew 15.26), apart from the understanding that Jesus' response on the one hand refers to the Gentiles and on the other it is about the reaction of that woman in terms of her faith and confidence unto him, notifies also the importance of altruistic deeds exhibited to members of same race. The woman's behaviour, caring for her daughter and asking for help from Jesus, is what kin selection is about: enhancing fitness maximization via promoting bodily, spiritual and psychological health. In the second passage (Mathew 19.4-5), the understanding of kin cannot only be understood as a genetic-relatedness process within existed families, but it can be foreseen in intimate relationships between males and females as well. Thus, sexual selection and fertility issues are what are needed for kin selection to be established. What could be addressed in this extract is that fertility issues are those which start kin selection, not only in terms of choosing a mate but, most importantly, in terms of spouse-to-spouse relatedness as to the establishment of kin to last for generations to come. From both passages we extract the relationship of kin selection and altruistic behaviours: they can refer to kin and non-kin members, an idea which will be further discussed below.

Though genetic explanations of behaviour are not the focus of the New Testament, there are passages, such as Acts 6.1-3 and James 1.27, which present altruistic behaviours as important for the establishment of communities not only adhering to the teaching of God, but meeting the needs of those unable to care for themselves. In studying the first extract (Acts 6.1-3) altruism in the Church does not require members to have or not have needs, but whether such needs are satisfied or not. That sort of altruism goes beyond genetic relatedness for it embraces one's goodwill towards fellow others. Altruism is not just a matter of giving-for-needs-satisfaction, but a common demeanour without which the world cannot change. In studying the second extract (James 1.27), what we also discover is that altruism equates considering others as oneself. In considering others as oneself, one ceases putting his/her interests above anyone and/or anything, and regards others as fellows of one's own; as persons of one's own culmination towards personal integration. As a result, altruism does not only refer to good deeds, but to a personal undertaking of others' needs so others to feel safe and included, an idea suggested by Apostle Paul

in Romans 15.1. As we see, in the above two extracts genetic relatedness or similarity is not the case for the demonstration of altruistic behaviours towards members of the Church, but the degree to which such behaviour is required to fulfil the community's needs. Altruistic behaviours indicated in these two texts require us to behave towards others not according to what those in charge believe is best for others' needs, but what those actual needs are so that social and communal balance will be furthered and relationship to non-kin members will progress for the better. In this way, altruism appears as an engaging and not disengaging factor for human interrelationships.

Altruistic behaviours in New Testament texts reveal an 'inclusive fitness' understanding in terms of community fitness as to the demeanour of the Church towards sacrifice. Issues of 'personal prestige', 'self-promotion' or 'self-aggrandizement' are totally unacceptable in the context of New Testament cooperation and altruism [25, 26]. These terms point to the understanding of self-centeredness which in Saint Paul's Epistle to the Phillipians equals to vainglory which literally means 'empty opinion' referring to the *empty assumptions* one may have about self compared to the knowledge one should have about individuals who suffer and are in need. Self-centeredness is an unwanted attitude in New Testament altruism. Ultimately, Christ's demand of us is for self-sacrifice for the good of others (Luke 6.27-35) [27]. An idea self-centeredness could be counterbalanced by is the so called 'golden rule' (6.31) which refers to be doing things to people we would like to be favoured of them as well, in return. The framework that refers to, is the verse 30 where Christ points out that whatever others wish to have from us, or what they are in need to be given, we should give it to them in the way we would like it if we were in their position. In other words, by offering to others what they need, we offer a balance to the society whereby disorder and upheaval are reduced. If that could be everyone's demeanour in the society, then people could think of one another in terms not only of what they could offer to them, but also whether what they could offer, could actually satisfy others' needs in reality. The psychological understanding which Christ offers to us through this passage is that altruistic behaviour is a cognitive attribute which influences human social mentality toward not only thinking of non-salient others, but also working for their own benefit as well as for the benefit of the social needs of a given society in general.

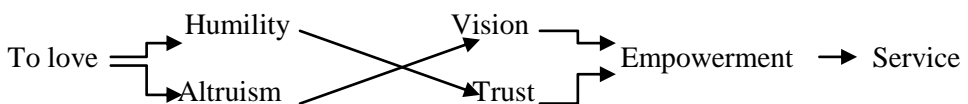
In contrast, 'self-centeredness' in an inclusive fitness context is an *imperative attitude* for it encapsulates the understanding that the presence of a donor's genes to future generations justifies the survival of genes and promotes altruistic and cooperative acts. Self-centeredness is a periphrastic term in Phillipians (2.4) employed by Saint Paul via parallel connotations, such as conceit and selfish ambition (Phillipians 2.3). Selfish ambition is referred to those who wish to be superior over others without looking at others' needs. The past participle 'to being deemed' in verse 3 has the double meaning of *one assuming one has become superior over others*. Superiority of genes is a precondition for their survival in future generations; genes depend on the superiority of their chains via DNA processes and respective alleles, for in this way they 'create' vehicles (individuals) bearing and transferring them to subsequent progeny. Selfish ambition, in terms of

Evolutionary biology and Psychology, could also be meant the allocation of similar genes to kin-related individuals. Altruism, in terms of inclusive fitness and kin selection, may be an ‘honest behaviour’ as far as genetic relatedness is concerned. The sacrificial elements of such altruism refer to the victory of the transferred genes as to the promotion of their fitness maximization and by expansion of the fitness maximization of the individuals they have ‘created.’

In New Testament terms, such altruism is non-existent. Altruistic behaviour is a loving disposition; it is not a self-centred element of behaviour but an *other-centred virtue* being presented as the call of one’s demonstration of love unto others. Altruism in the New Testament is characterized by its direct contrast to the egoism of self-promotion and conceit. Altruism is regarded as an enemy to self-preoccupation, concerned not with the wellbeing of only conspecifics [28]. Christian altruism goes beyond the biological understanding of inclusive fitness and kin selection. It has the meaning of the universal calling of altruistic care to all others. . . even one’s enemies (Luke 6.27-35).

One of the terms where altruism is understood as one of its prime connotations is the verb ‘to love’. All over human history individuals who are remembered are those who in their lives have shown a loving disposition to conspecifics; a loving disposition even a sacrificial one. Loving disposition incorporates altruism in terms of servant leadership [29]. In recalling Jesus’ saying in Mark 9.35 this is what servant leadership is all about. If one considers him or herself as the last among others, he or she will live humbly by caring for the needs of others and exercising a loving disposition. ‘Loving disposition’ equates to altruistic behaviour for it is the skilful outcome of one’s un-self-seeking demeanour of offering to others without waiting to receive anything from them in return. In kin selection and inclusive fitness terms in evolutionary biology and psychology, ‘loving disposition’ means quite the opposite. Selected kin is that upon which favours are bestowed solely to genetically-related individuals; non genetically-related individuals are excluded from such selection. The verb ‘to love’ expands to moral agency potentials such as *altruism* and *sacrifice*, both of which in the New Testament can be seen as identical to the concept of freely offering oneself in the context of human interrelationships. Altruism in kin selection and inclusive fitness cannot be understood the way it is understood in the New Testament, i.e. as the universal notion of uniting individuals of different kin and strands (Acts 5.12), but in terms of a biological sense exclusively associated with same-kin groups.

In extending Ayers’s [29] diagram of servant leadership to reach the concept of ‘to love’ and its components it can be presented accordingly:



In 1 Corinthians 13.4-8 Saint Paul, by defining love, reveals that altruistic behaviour is an expression of personal commitment towards what others need and how should they be anticipated. In other words, what Saint Paul defines as love is

the need for a common demeanour of otherness in order that people's necessities will be met. Altruistic behaviours in the sense of a loving disposition can be demonstrated in different, though not necessarily diverse attitudes referring to:

- a. *Attachment* in terms of emotional bonds,
- b. *Commitment* in terms of one's personal involvement to maintain and expand further altruistic acts,
- c. *Confidence* in order that altruistic behaviours may be impartially bestowed upon others,
- d. *Self-disclosure* in terms of inner feelings and practicing behaviours unto others,
- e. *Equilibrium* in terms of balance, social progress and interpersonal equality.

Kin selection and inclusive fitness, as previously discussed, have been expanded to interpret selection in group terms [30]. An important conflicting matter in this approach toward traditional kin selection and inclusive fitness is defining altruism in terms of its benefit to society and less in terms of same kin considerations. A parallel view is approached in the New Testament. The known extract of Luke 2.49 is not about Jesus' relationship to his Father, but to his relationship to others who by listening unto him they can also be related to his Father. What Jesus shows, is a group-selected behaviour toward individuals with whom he shares the same frame of mind, i.e. the coming of the Messiah and what Messiah would do for Israel – irrespective of the fact that in his discussion with the nobles of Israel what he says about Messiah is actually self-referential. A group-selective altruism, referring to those who sacrifice themselves for others, does not demonstrate a kinship attitude but a global understanding to others' needs, such as doing voluntary work for individuals unable to care for themselves. In this care, such altruism is not represented as a selfish ambition, but as sacrificial behaviour toward individuals from whom the actor has no expectation of return benefit. The use of the term 'selfish ambition', discussed previously, explains the need for self-love to be overturned in favour of social balance. Selfishness is a self-seeking behaviour where the interests of an individual are promoted in contrast to those of others.

In reference to group selection, an excellent example of altruistic behaviour in the New Testament is the parable of the Good Samaritan (Luke 10.30-37). The parable of the Good Samaritan presents a case of costly behaviour which is at the expense of the actor and favours the recipient. The Samaritan's altruistic behaviour is characterised as selfless and loving towards the person in need who isn't only his kin but also not of his ethnicity [31]. The Good Samaritan's behaviour lies at the antipode and operates as an antidote to those egotistic tendencies which do not cultivate altruism. In comparing the Good Samaritan's altruistic behaviour to what we discussed about kin selection and inclusive fitness previously we come to understand that the latter approaches cultivate selfish behaviour against members of different kin and/or ethnic descent, for they are taking place amongst members of the same kin. In widening the framework of kin selection and inclusive fitness we see they express narcissistic behaviours for they are of limited psycho-physiological focus [32]. They are of limited psychological focus because they expand only to

individuals one has a direct and/or indirect interrelationship; they are of limited physiological focus for they concentrate only on biological interconnectedness.

For Jesus, altruistic behaviour should be directed to others even if others are on the brink of their natural existence. Altruism thus becomes a motivation to sacrifice to benefit individuals who can be saved from imminent dangers as well as for individuals who cannot be saved due to circumstances out of our direct control (e.g. natural disasters, conflicts, illnesses). Even if altruistic acts may not have the expected or desired impact on the recipients, it should nevertheless be exercised; it is not about the actual help which is offered, but refers to one's personal contribution to the sufferer's needs. The aspect of altruism in the parable of the Good Samaritan appears in the terms *neighbour*, *pouring (oil and wine)*, *inn*, *gave (two denarii)*. These terms explain the actor's personal interest in the recipient (i.e. *neighbour*), and that this interest takes place at the actor's personal expense and cost (he *gave two denarii*). On the other hand, the phrases '*look after him*', '*you spend*', '*coming back*', and '*I will repay you*', present altruism not only in the framework of a long-lasting attitude of the actor toward the recipient, but in the framework of social care as well. In the last verses (36-37) of the parable, what Jesus asks the man is not a rhetorical question but a question about the conceptual comprehension of the contrast between selfishness and altruism.

The Apostle Luke wishes his readers to comprehend the following:

1. The Good Samaritan is the practical implementation of altruism in the way such behaviour should be bestowed upon others in given societies.
2. Readers can identify themselves as well as not identify themselves with it. Readers who internalize this parable can consider what altruistic behaviour means in terms of accepting others' needs and helping them where they are; readers who do not can understand what aspects continue to hinder them from helping others found in need.
3. The Good Samaritan is the opposing pole to the problem of narcissism, a problem of contemporary societies where individuals think only of themselves and not of others. Narcissism is a selfish behaviour which does not assist the development of societies or individuals living in them.

In the parable of the Good Samaritan, altruistic behaviour is not an attitude to be implemented but a process towards implementation which can be imitated in terms of a learned behaviour and stance in life. The central figure in this parable is not the 'altruistee' but the altruist. The neighbour who is helped serves to explain the Samaritan's example of offering without asking for a return from whom he serves. What is also shown in this parable is that altruistic behaviour becomes the foundation of the society both on a personal (from the side of the recipient) and interpersonal level (with regards to the relationship between the actor and the recipient). Kin selection and inclusive fitness refer to the survival of the donor's genes on the face of one's kin (primary survival) and the survival of one's relatives (secondary survival). Genetic relatedness is the basis for kin selection and inclusive fitness – biological altruism. Such 'altruism' (actually mere cooperation) provides limited value for society because the main scope for survival primarily benefits kin rather than providing a direct benefit to society. In this parable, identification of the

reader with the Good Samaritan is one of the main objectives of this narrative. Altruistic behaviour in the parable favours the member of another group. Heinz Kohut in discussing this parable employs the term ‘transmuting internalisation’ to describe the Good Samaritan as the idealized self-object of altruistic behaviour against narcissism [24, 32]. What he means is that the Good Samaritan is the internalized object of the collective consciousness of the society in terms of goodness and moral excellence. Through this ‘transmuting internalisation’ individuals examine their own behaviour idealistically to acquire missing psychological values, such as originality, congruence and acceptance; this process re-structures the self in terms of personal integrity. The example of the Good Samaritan is the apex of the acquisition of such psychological values; he represents a human with a completely re-structured self due to altruistic behaviours.

In paraphrasing Kohut’s consideration of ‘transmuting internalisation’ I would argue that the altruism we see in the parable of the Good Samaritan is of ‘*transmuting socialisation*’ for it explains how altruistic behaviour can become an agent of fitness maximization for societies and its members when appropriately and honestly exercised. Though ‘transmuting internalisation’ may also refer to a personal helplessness for those who comprehend the need to help others yet do not help them, such as the Levite and the Priest in the Parable, it can nevertheless express the intuitive representation that the self is internalizing danger and trying to avoid it – assuming that the Levite and the Priest did not help the sufferer for fear of being attacked by the thieves. To overcome this risk, one must realize that the needs of others are more important than one’s own safety in terms of what might be the outcome if the person in need is left to suffer: social upheaval, dissatisfaction and alienation between social groups, depersonalization and interpersonal conflict. In the latter, intuitive representation in terms of transmuting internalization can take place through eliciting help from others either in the form of engaging others in the looking after of persons in need, or asking them to contribute to helping others, as in the case of the Good Samaritan who transferred the sufferer to a secure place where, through the help of another person, the sufferer’s needs were fully attended.

One could also claim that the exaptation effect is responsible for altruistic behaviour. Exaptation is used to explain how inclusive fitness derives from the co-opted gene transmission of adaptive kin-selected behaviours to allow helping behaviours directed to non-kin. In the same way, the exaptation effect is used to explain altruistic sacrificial behaviour. Whether it is connected to gene transmission by fitness maximization of the genes transmitting it and the individuals bearing it, or connected to group-selective altruistic behaviours towards people of non-kin unable to care for themselves, one can maintain that altruistic sacrifice for unrelated others has been co-opted to promote *social* fitness maximisation. The exaptation effect of altruistic behaviour is being colourfully presented in the Parable of the Good Samaritan, where the actor is a total stranger both genetically and ethnically to the recipient. The co-opted exaptation of his altruistic behaviour would claim that the selected survival needs and adaptations have a universal value in all human societies despite different traditions, languages, ethnical priorities, and different religions. In this way, what the narrative of the Good Samaritan ‘bestows’ upon its readers is not

‘favours’ but a self-conscientiousness commitment to the assistance of the needy, as well as what the repercussions of favours could be about, if not satisfied, in terms of social welfare.

4. Conclusions

In Part II of the article have also been assumed, from an evolutionary psychology point of view, alternative explanations for both inclusive fitness and kin selection. One is group selection theory and another – I have argued – the exaptation effect. Group selection incorporates kin-selective favours demonstrated not only among members of own kin but to members of non-kin as well: a classic example is that coming from adoption studies [33]. I consider the exaptation effect of inclusive fitness as a valid explanation in terms of evolutionary theory for it underlines that not only unrelated individuals can also be cared for but that also individuals who happen to be totally unfit, unable to pass on their genes to future generations, can be cared for too. Relevant literature has been visited that supports, with corresponding evidence, the above ideas which on the one hand emphasise the potentiality of kin selection and inclusive fitness and on the other comprise further approaches, which though inherent, haven’t been that much accepted by both evolutionists and psychologists.

In Part II of the article, I have also discussed kin selection and inclusive fitness in New Testament terms. The point, which characterizes kin-selected and inclusive fitness behaviours, is the aspect of altruism, which though is the main issue of discussion for kin selection and inclusive fitness theories is also of importance in New Testament terms. The only – and main – difference between evolutionary biology and psychology to New Testament is that altruism is explained more widely in the latter compared to the former. Nevertheless, we can argue that foundations are similar in both approaches for they refer to what altruistic behaviour is about, whether this is directed to kin or non-kin, something which also can be attested by the ‘golden rule’ statement in the New Testament. Also, *the exaptation effect of inclusive fitness* was found to have been developed to *the trait of sacrificial altruism* that expands the genetic trait of altruism to members of non-kin for the benefit of the survival of the society, with to be observed in charity work as well in monastic communities and celibates who serve God through serving humans in need totally unrelated to them.

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