

## Is religion grounded in evolution? A critical look at some models

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### Religion and natural evolution

Following recent developments in some disciplines the question of the evolutionary grounds of religion has obliquely entered the science-religion arena. A few decades ago that would have been unthinkable. But new perspectives are emerging that indicate how human beings, as they evolved, needed religion in order to survive more successfully, and how this proceeded over time. Thus the basic argument is that religion is a natural, organic phenomenon, part of ordinary human cognitive processes and transmitted by individuals, societies and their traditions, where it continues to evolve. The current debate appears to be simply a further phase in that evolution. "This emphasis on the natural or organic aspect of religion as being paramount is a departure from the previous reigning paradigm in the social sciences that treated religions and cultures as primarily superorganic – that is, brought about, maintained, and developed through processes that are irreducible to individual mind/brain mechanisms" (Hansen & Norenzayan 2006:189).

### Religion cannot exceed the boundaries of human biology<sup>i</sup>

Religions change, sure, but is that evolution? Probably not. To grasp this, let us look at our terminology. The verb 'to evolve' (Latin, *evolvere*: to unfold, to unroll) implies that in principle the emergence of a phenomenon is predetermined by a blueprint at the very outset of its development. *Ad fontes!* (back to the source) gives the impression that the development of anything may be traced to its source (the original blueprint). The growth of a plant is inscribed in the seed, human maturing is the unfolding of our genetic inheritance. But human beings have not developed a religious gene, a 'god spot', to provide a blueprint of religious growth. The popular notion that all people are born with the seeds of religion embedded in their nature is false. People are born with *brains*, which have the capacity to accept and experience religion inasmuch as it is transmitted from childhood in a given cultural context.

Darwin's evolutionary theory is best rendered by the term 'descent with modification', and when he speaks of evolution it refers more specifically to evolution by natural selection. The notion of evolution was first raised by Spencer in 1857, two years before the publication of Darwin's *Origin*, in the context of embryological growth. He speculated "that this principle of development might govern not only the constitution of living organisms from cells but also the constitution of societies from their individual members, of minds from elements of consciousness and, indeed, of the entire universe from the basic constituents of matter". So it was Spencer who saw evolution as "one phase of a cosmic movement that continually builds itself, through its own properties of dynamic self-organisation, into ever novel and increasingly complex structures". It was Spencer, not Darwin, who saw evolution at work in the process of adaptive modification (Ingold 1998:80-81). In later editions of his *Origin* Darwin, prompted by Wallace, was persuaded by Spencer to use the phrase 'survival of the fittest' as an alternative to 'natural selection'.

Ingold (1998:81) points out that adaptive modification is phylogenetic change<sup>ii</sup> rather than evolution. Ontogenetic development, underwritten by the organism's

genetic endowment, may be regarded as a progressive evolution of organised complexity. People evolve from birth to adulthood according to their genetic blueprint.

Unfortunately the word 'evolution' is used loosely and its meaning has to be inferred from the particular context. The semantic field ranges from the sense of something that unfolds, to change, adaptation, development, progression, growth, flow and the like. Most people understand evolution to be adaptive modification rather than the unfolding of the genetic inheritance contained in the sperm/zygote. We use the term in the popular sense of adaptive modification (as opposed to the literal meaning of the unfurling of something that already exists).

What has all this got to do with religion? The popular notion is that evolution concerns development from a primitive state to a modern, sophisticated level. In that sense the evolution of religion would imply development from 'primitive' beliefs that everything is animated to our modern conception of inanimate nature created by God; from the notion that there are gods who can be bribed to alter the lot of human beings to our view that God is omniscient and predetermines their destiny; that polytheism evolves into monotheism; that a rationally substantiated book religion is better than orally transmitted traditions; that emotional fanaticism is a lower form of religion than a rationally/ethically/aesthetically moulded faith; et cetera.

Like language, human insight and technology, religion changes over time. Neither are the changes arbitrary: they relate to the volition or experience of groups of people, as the Reformation demonstrates. But in the context of human biology monotheism is not superior to polytheism, nor are book religions truer than orally transmitted traditions. Indeed, one could not prove any difference between superstition and religion based on a highly sophisticated, self-critical, hermeneutic theology. After all, no belief of whatever nature can be proven – it can only be believed. We can say this today because we have a clearer understanding of religion's roots in human biology. Religion and human biology interact. On the one hand religion meets biologically rooted needs (especially in the early days of human culture), such as the need to find causal explanations of the origin, nature and end (death) of things. On the other hand it relies on biology to survive, for instance to face the natural fear of the unknown – death – and of pain and punishment (hell). These explanations could be found without recourse to Christianity as a natural cycle in which we need to find equilibrium – as many modern people do (especially since the establishment of Christianity as a world religion).

Though there may be some truth in the claim that religion helps humans to survive more effectively, 'evolution' did not have religion 'in mind', not even when it produced consciousness and the human brain. On the other hand, the brain has the capacity to develop religion: "The need for meaning may be a direct result of the large and complex brains that humans possess ... The brain evolved to process complex information and needs this kind of information so badly that, if deprived of information, it will produce information itself in order to process it" (Park & McNamara 2006:67). In that sense the human brain may be seen as an evolutionary 'over-achievement', because its capacity is far greater than is needed for successful survival in a natural environment. Should religion perhaps be seen as an unintended by-product or side effect of evolution? Here Wilson (2002:44) observes that "self-awareness evolved by natural selection for its survival value, with the unfortunate by-product that self-aware individuals can foresee their own deaths. Religion might then have arisen to help allay the fear of death, a secondary adaptation that can be understood only in the context of a more primary adaptation (self-awareness)". Hence brain development was probably stimulated by the vulnerability of our earliest ancestors. It was prompted not only by challenges from the natural environment: factors in their cultural environment also contributed. In this context Girard (1987:88) writes: "We recognize that the stages of biological evolution are too rapid not to implicate cultural elements, but we have no idea whatsoever of how that reciprocal relation functions. Everyone today agrees in hypothesising that the volume of the

brain has grown much too quickly to be attributed to a normal process of biological evolution.”

Religion did not ‘develop’ because humans changed biologically. It developed for other reasons. Given a constant biology, humans can develop all manner of religions and all sorts of changes may occur in any religion. Humans could also have managed their cultural evolution without any religion, using non-metaphysical explanatory systems, although this is unlikely.<sup>iii</sup> The functioning of religious experience, and the role of hope, fear, imagination and the like, are based on the same human biology. Religion as a cultural expression is made possible by the biological physicality of human beings. Humankind evolved over millions of years. “An unbroken sequence of forms is supposed to link the apes of some five million years ago, from which both human beings and chimpanzees are descended, through the earliest hominid creatures of two million years ago, to people like you and me – certified humans of the ‘anatomically modern’ variety: *Homo sapiens sapiens*” (Ingold 1998:89). Since the age of Cro-Magnon man some 30 000 years ago we have remained biologically stable. The difference is that the consciousness of Cro-Magnon man, with a brain no different to ours, was oriented to a totally different life world than the one we face today.

If we apply evolution in the biological sense of change in a population’s gene pool by way of mutations and natural selection to human beings, then they have not evolved biologically since the Pleistocene epoch. That may not be saying all that much, for the ‘equipment’ they possessed even then had virtually limitless potential, in light of our knowledge of the capacity of the human brain and the concomitant philosophical, aesthetic and techno-scientific ingenuity it gave rise to. It is an illusion that we evolved from the great apes into nuclear age humans. What is true is that human beings with the same biology as their Cro-Magnon forebears developed the science and technology we have today.

### **Biological evolution (adaptive modification) and the evolution of religion**

There are marked analogies between biological and cultural evolution – but equally marked differences as well. In neither case is the outcome predictable. This does not rule out the possibility that humans, as conscious beings, can set themselves teleological goals and achieve these, although the religions of the world do not abound in examples. The long-term results of cultural evolution may be predictable but cannot be guaranteed. Humankind may even survive long enough to experience a few more significant biological mutations, with potentially interesting consequences for its cultural evolution. Both natural and cultural evolution may have protracted periods of no apparent development, followed by dramatic change (see Dawkins’ notion of punctuated equilibrium – Dawkins 1986). Both natural and cultural evolutionists think in terms of change by descent. On the cultural plane we can show how each epoch differs from the one before it. One thing is certain: nothing remains the same. Whether change is progress is a moot point; it depends on our definition of progress. But whatever the level of cultural development, whatever sophisticated or underdeveloped forms culture assumes, it remains linked to human biology. Ironically, nature – especially since Paul, and pre-eminently in Christian Protestantism – has been branded sinful. That is why Berger (1967:111) maintains that Christianity has contributed little to progress. Löwith (1949:73-73), while acknowledging that human progress was inspired by Christianity, points out: “Christianity could not, however, suggest any scientific view of social progress; for any such view was at once barred by Christianity’s claim to be the final stage at which the human mind must stop.”

At a physical level humans are incontrovertibly sexual beings. This allows us to predict certain behavioural patterns. They are social animals, which again suggests certain behavioural patterns (including conflict, struggle and war). And their rational capacity may be used to develop culture, of which religion is part. When successful

cultural habits and institutions emerge on the basis of human biological endowment, these will predictably be transmitted from one generation to the next and there is a possibility that they may evolve quite rapidly.

The human capacity to conceive of spirits, gods, powers and even sophisticated religious systems is not considered pertinent in the three revelational religions – Judaism, Christianity and Islam – and any link between evolution and religion is rejected.<sup>iv</sup> religion cannot be seen as an inevitable by-product of natural human development. There is no religious gene, although our particular genetic development permits variants of religious experience. We are not wired for religion, only for rationality – though, considering the way human thought evolved, it seems unlikely that we would not have developed a belief in metaphysical forces. The established mainline religions regard all sorts of superstitions as natural and stress the distinctiveness of ‘true’ (revealed) religion.

It means that new insights increasingly focus attention on the relation between religious experience and biology. Certain basic examples can be cited from the development of life on earth and the concomitant possibilities. (Examples are taken from Williams 2008: 209-212.) Organisms develop in order to be mobile: “The mobile ones needed the sensations they had: hunger, thirst, and hurt – painful sensations – but they also experienced pleasurable ones like satiety and coolness and warmth. They even had interests, the decrease of pain and the increase of pleasure” (p 209). The development of sex by many bird species and mammals entailed the parallel development of parental nurture. Although mechanical in most instances, it did evolve in some species. “Then caring in the sense of having warm emotions between parent and offspring, evolved. The capacity for something like human love evolved” (p 210). The evolution of sex entailed the phenomena of deception and competition: “With the evolution of sex, males compete directly against each other for females ... and females competed to some extent for males ... With the evolution of the capacity for emotions accompanying caring, concomitant painful emotions also evolved. Jealousy arose as fear of losing out; grief accompanied loss. New pleasures and new pains appeared. ... If sex drove intelligence, so did the evolution of carnivores ...” (p 211). “Hunting required new intellectual capacities, variety, complexity, structure, and intelligence increased. Creatures that are more intelligent see more options and thus have more choices” (p 211).

These few examples suffice to give some clues on how humans evolved biologically. The resultant attributes were to form the cardinal components of religion.<sup>v</sup> Again we cite a few examples: the need for care and security; human competitiveness and dealing with it (see Girard); human emotion and its role in the experience of birth, death, crisis and happiness, and how religions accommodate it; human sexuality, fear, dreams and the way they are structured in religious taboos and ethical rules. Religions respond to biological facts by feeding on them or combating them, as is evident in every moral system that humans have devised.

Another consideration is the structure of human consciousness, patterns of the human brain, and the emergence of new experience. Whatever design we opt for, it is motivated by the notion of human happiness and advantage in our natural and cultural environment. It would be reductive to isolate any one of these concepts as the sole explanation of the evolution of religion. All proposals remain conjectural. The proposed models should rather be viewed in light of their focus on some aspect of human nature, which easily leads to reduction: as though everything revolves around desire; fear; security; explanatory systems; power and manipulation; the need for food; sociality; self-assertion; et cetera. Many needs are evoked by environmental requirements, like the need for self-protection and survival (i.e. for coping mechanisms). Others are a result of the society in which people live, like the need for self-assertion, fulfilment of the desire to possess what others have or to be like them.

## **Evolution and progress**

Both natural and cultural evolution put the accent on change. But is change necessarily progress? Is it always an improvement? Humans project the notion of ongoing progress onto natural and cultural evolution.

Christian religion often insists on the church's role in the progress of science and technology. After all, it is the Christian emphasis on humankind's task to subjugate and have dominion over the earth that makes the earth a manipulable object instead of a mana-charged subject. Here, however, we must note Löwith's caveat (1949:239): "[A]ll modern progress has been achieved quite independently of, if not against, the faith in salvation through Christ, and the faith in Christ was for eighteen hundred years, quite independent of all our recent improvements."

The merit of the debate on the evolutionary links of religion is its deconstruction of the notion of progress. The evolution of religion is probably a result of the evolution of secular culture (cf. the many instances of pacts between religious leaders and civil authorities). Löwith (1949:113) observes: "But it would be very naïve to think, for example, of the Christian religion as having continually advanced from 'primitive' Christianity through the church of the Middle Ages to the Reformation, to find its perfection in the most recent forms of liberal Protestantism and neo-orthodoxy. The changes of a historical world religion cannot but conform to the changes of world conditions, but all religious reformations try to re-form the original, primitive message under new conditions."

### **Explanation of religion and religion as an explanatory system**

Although all biologically and environmentally determined needs are processed by human consciousness and thought, needs also arise from the mental worlds people create. One of these is the need for a system to explain positive aesthetic and mystical experience, as well as traumatic events that affect people deeply. But many explanatory systems are counter-productive. "In all its manifestations, religion constitutes an immense projection of human meanings into the vastness of the universe – a projection, to be sure, which comes back as an alien reality to haunt its producers" (Berger 1967:100).

This also raises the question whether there is not a point at which we outgrow the need for religion. Something of the sort is already observable among secularised people in Europe and elsewhere. It is typical of the 'cunning of human reason' to find a response to a crisis situation and then, once the crisis is over, feeding on the historical success of the solution, thus elevating it to a redundant institution.<sup>vi</sup> To many people religion is unnecessary scaffolding, because we have devised scientific explanatory systems, supply our own needs and do not need transcendent personifications in order to survive successfully. In fact, present-day religious conflict, fundamentalism and fanaticism are among the major threats to our survival.

The morally cohesive force of religion is no longer as important as it once was; humankind is globally interdependent and antagonising division into religions and nationalisms is primitive. Universal human rights offer the protection that religious morality once sought, unsuccessfully, to provide. We have arrived at new perceptions of life, death, happiness and meaning that offer many people freedom from narrow-minded, tormenting religious morality. Yet despite these insights religion is not waning. The fact that institutionalised religion is making way for a public theology in Europe and elsewhere and that natural spirituality is steadily gaining ground does not mean that this is happening everywhere (Taylor 2007:185-196). Wilson (2002:41) maintains that "there is no evidence that scientific understanding replaces religious belief in modern cultures. America has become more religious over the course of its history, not less, despite the influence of science and engineering."<sup>vii</sup> Accordingly many cling to the notion of a gene that accounts for the stubborn persistence of religion.

Religion as an interpretive system does not pertain only to the world outside us, but more particularly to our inner world.<sup>viii</sup> It functions in tandem with our biological

capacities, but these in fact make religion an 'open' as opposed to a 'closed' book. The inner worlds we create sometimes pose greater challenges than the outside world and we are continually making creative adjustments to cope with them. We may try to identify and structure our rational and emotional functions, but we can never predict how they will develop and manifest themselves. The human brain's capacity for metaphoric thinking cannot be tamed. Its evolution has enabled us to establish a new environment – a cultural environment that includes the metaphysical, ideological and various other facets of our mental world. It could be that it is harder for people to survive in their self-created mental worlds than it was for earlier societies to survive in the natural environment.<sup>x</sup> Our self-created, dynamic mental environment is continually changing, requires radical adaptations and can make us flourish or founder. The evolution of the human mental environment and our response to it will determine our survival. Humans are their own greatest threat.

The fact that religion has such a strong influence on people's interior worlds shifts the emphasis from its role as an explanatory system to help us survive in a threatening natural environment to an inner world created by ourselves. This is the religious interior world that Berger regards as the cause of human alienation. The irony is that the history of religious evolution completely ignores the initial motivation for the origin of religion – to help people make sense of their natural environment and cope with it better – by transplanting it to a synthetically created environment that has nothing to do with our real world: the metaphysical, transcendent world of heavenly and divine realities. That makes religion a world-less system by focusing it, not on this world, but on a future reality.<sup>x</sup>

Explanatory mechanisms have characterised religion from its earliest manifestations, as is evident in shamanism. Wilson (2002:52, with reference to Durkheim) explains how shamans use dreams: "In this way they constitute a veritable arsenal of causes, always at hand, never leaving the mind that is in search of explanations unequipped. Does a man seem inspired; does he speak with eloquence; does he seem lifted above himself and the ordinary level of men? It is because of a benevolent spirit in him, animating him. Is another taken by a seizure or by madness? An evil spirit has entered his body, agitating him." In a hunter society the shaman fulfils the following functions: leading all-night ceremonies characterised by drumming, dancing and chanting; heading raids; arranging communal hunts; and guiding group migrations. A typical attribute of shamans is ASC (altered states of consciousness).<sup>xi</sup> These usually consist in 'soul flight', journeys to the underworld, and/or transformation into animals. 'Religion' in this context helps to integrate the worldview of hunter societies into a meaningful whole.

Pascal Boyer's anthropological studies have distinguished between the religious experience of traditional societies and that of industrialised societies. He focuses attention on memes ('cultural genes') that differ from natural genes, in that they are transmitted to individuals via complex filtering and processing brain operations and do not function like similar software that is loaded on individuals in a society.

We are constantly bombarded by sensory stimuli and the concomitant associations and challenges. "All this information has some effect on the mind. Whatever you hear and whatever you see is perceived, interpreted, explained, recorded by various inference systems ... But then some pieces of information produce the effects that we identify as belief" (Boyer 2001:30). Inferences relate to the independence of every individual brain: "Minds that acquire knowledge are not empty containers into which experience and teaching pour predigested information. A mind needs and generally has some way of organising information to make sense of what is observed and learnt. This allows the mind to go beyond the information given, or in the jargon, to produce *inferences* on the basis of information given" (Boyer 2001:42).

Boyer distinguishes between different templates (cf. categories) that a child learns. The mind has a predisposition to arrange conceptual material in certain ways

rather than others. “There are templates for religious concepts. That is, there are some ‘recipes’ contained in my mind, and yours, and that of any other normal human being, that build religious concepts by producing inferences on the basis of some information provided by other people and by experience ... Templates in the mind filter information from other people and build predictable structures out of that information” (Boyer 2001:47). Hence it seems likely that the brain developed a large number of specialised subsystems that are fairly problem/function-specific as opposed to purely “general-purpose intelligence” (Boyer 2001:117).

Of course, we are not always conscious of the operation of the brain: “When people have thoughts about gods or spirits or ancestors, a whole machinery of complex mental devices is engaged, most of which is completely outside conscious access” (Boyer 2001:49). We appear to have an infinite number of mechanisms that are activated by different circumstances: “[T]here are different functional systems that work to produce particular kinds of inferences about different aspects of our surroundings” (Boyer 2001:102). We discriminate intuitively between objects in our immediate environment, but there is no metaphysical imperative determining how we make these distinctions/inferences. Which inferential system is activated depends on the situation. Objects in my environment acquire their ‘identity’ through my particular intentionality in that situation. Intentionality presupposes not just the person or animal’s own intentionality, but also awareness of the intentionality of others: “Whenever an animal treats something as an *agent*, with beliefs and desires (with knowledge and goals), I say that it is *adopting the intentional stance* or treating that thing as an *intentional system* ... [M]any animals can make an informationally sensitive decision either to retreat or to call the other’s bluff, but there is scant evidence that they have any sense of what they are doing or why” (Dennett 2006:110-111).

Although we cannot dwell on them in detail, we briefly mention some other models accounting for the origin of religion. William James regarded mystical experience as the source of religion. Rene Girard considers it to be an attempt to control mimetic desire and avoid bloodshed by way of the scapegoat mechanism. In recent times the connection between religion and physical health has been much in the limelight and has emphasised the link between religion and physicality anew. In the cognitive sciences Lakoff and Johnson have highlighted the metaphoric nature of language and the basis of these metaphors in the person’s bodily experience, which commences immediately after birth. Evolution equips the individual (phenotype) with qualities needed for the survival of the group. That is why religion developed as a group phenomenon: “There can be no doubt that a tribe including many members who, from possessing in a high degree the spirit of patriotism, fidelity, obedience, courage, and sympathy, were always ready to aid one another, and to sacrifice themselves for the common good would be victorious over most other tribes; and this would be natural selection” (Wilson 2002:9). Wolpert maintains that religion is induced by evolution to help us explain things. What should be noted is that evolution does not question whether something is naïve or scientific.<sup>xii</sup> “I think that religious beliefs were adaptive for two main reasons: they provided explanations for important events, and offered prayer as a way of dealing with difficulties ... [O]ur brain ... has a natural tendency to find consistent and reasonable explanations for important events, and so religious beliefs are most likely partly genetically determined. They are linked to our need to seek causal beliefs, and our minds are largely fashioned by genes specifying how our brains work. There is a tight linkage between genetic evolution and cultural history, and gene-culture evolution has created many human societies with religious beliefs” (Wolpert 2006:137).

Religion evolved as an instrument to help people find meaning in an inexplicable, hostile environment and thus have a better life. Evolution provided them with the ‘tools’ to work out such theories. They developed through animism and shamanism and subsequently assumed more sophisticated forms as human civilisations advanced. With the emergence of the earliest settled societies and the

art of writing religion turned into a power system which, in tandem with political power, developed into a book-oriented institution. Via revelation it acquired a supernatural dimension that excluded the natural world.<sup>xiii</sup>

The stronger accent on religion as a natural phenomenon is not intended to undermine revelational religions, but rather to provide a clearer understanding of religion as a human phenomenon. Oviedo (2008:118) writes: "In a similar way, religion's being a by-product of evolution does not necessarily mean that it is useless or even harmful; it can turn out to be a derived trait that becomes adaptive or at least can play a function of positive value for the entire species or for many of its members – as happens with art, for example."

### **Girard's model of mimetic desire**

#### *Girard and mimetic desire as an explanatory principle*

We need an ethnological equivalent of Darwin's *On the origin of species*, Girard avers – an *Origin of religions* that will play the same role in the human sciences as Darwin's book played in the physical sciences. Girard believes that he has found a model for it: the development of mimetic desire, culminating in the offering of a surrogate sacrifice (scapegoat mechanism<sup>xiv</sup>), which has characterised humankind since the time of our first progenitors and still operates today (see Girard 1987:3). To Girard this is the master model, explaining not only all religion but all cultural phenomena over the centuries, right up to their modified versions in our day.

Although Girard's work is familiar to most scholars, we discuss it because it is one of the best examples of a thinker who consistently traces a human behavioural pattern through its evolutionary process to our own time. In addition his work has not previously been related in any depth to other theories on the evolutionary development of religion. Obviously it would be highly exceptional to find an evolutionary concept or idea that influenced religion alone, without affecting other disciplines like philosophy, literary studies, sociology and psychology as well. Girard's work makes this connection. He applies his notion of mimetic desire to the entire spectrum of human cultural activities – something few scholars have managed to emulate.<sup>xv</sup>

#### *'Self', 'other' and 'double'*

By way of background to Girard's theory we look briefly at the evolution of consciousness of the self.<sup>xvi</sup> We know that apes recognise themselves in a mirror, unlike other animals like cats or dogs.<sup>xvii</sup> Consciousness of self is important for the development of awareness of others (in the sense of others also being selves and not simply prey). Distinguishing between self and others leads to comparison. What others are able to do, acquire and enjoy is compared with what I have conquered and possess. Even if I have enough, I still desire what they have and I do not (yet) have (cf. the Old Testament story of Naboth's vineyard). Whereas in the animal kingdom desire is apparently mitigated once the need has been fulfilled, in humans the process is never ending, driven by insatiable desire.

A concept of self is a precondition for human life and was probably indispensable for the survival of early hunter-gatherer societies.<sup>xviii</sup> The self-other relationship was prerequisite for successful hunting and relationality was characteristic of other communities as well: "In short, the world of hunters and gatherers is not a socially segmented one, for it is constituted by relations of incorporation rather than exclusion, by virtue of which others are 'drawn in' rather than 'parcelled out'" (Ingold 1998:88). Without this development, Ingold (1998:89) avers, human evolution could not continue. In similar vein Touraine (2000:13, 14, 80) points out that the individual can be transformed into a subject only if others are recognised as subjects as well. This makes the subject a co-subject in communal life.



Communitarian societies were typical until the end of the Middle Ages, when the individual came to be seen as an entity separate from, even in opposition to, the community.

Girard, however, confines the development of self to the context of competition and strife. It is a process enacted between self (subject) and other (object) about something I desire from the other (model/double). I want to mimic the other, be her double. Being a double does not mean losing my own identity but supplementing it with what I desire from the other (beauty, power, possessions, etc).<sup>xix</sup> A case in point (Girard 1987:237ff) is the well-know Old Testament story (1 Kings 3:16-28), in which Solomon had to judge between two women laying claim to the same child. This is an instance of rivalry of doubles. The two women want to be the same: to have a child. They are the same in another respect as well: both are prostitutes. "It does not matter who is speaking since both of them are saying precisely the same thing. This obvious symmetry represents the very essence of each human conflict" (Van Heeswijck 2005:91). Solomon decides to settle the dispute with a sacrifice (the victimisation model always demands a sacrifice): cut the child in half. Throughout the king maintains the symmetry between the doubles, as well as their similarity-in-difference. The scapegoat (child to be sacrificed) puts an end to non-differentiation – the real mother is revealed, the two women are not the same, one of them does not have a child. To the woman who was not the mother the child no longer matters – all that matters is her mimetic rival. If the child dies, the symmetry between doubles would be restored. The 'good' prostitute prefers to sacrifice herself: take my life and let the child live (this is equivalent to Christ's sacrificial death – see Girard 1987:241). Van Heeswijck (2005:93) aptly observes: "Of course, sacrifice is at the heart of Christianity. It is a sacrifice that introduces the kind of *difference* that enables the escape from a violent tendency towards global identification."

### *Breaking the cycle of mimetic desire*

Desire usually culminates in conflict because its object tends to be scarce or can only be obtained through ingenuity. The evolution of a self-concept goes hand in hand with the evolution of the concept of the other. This is where the plot starts to thicken. We return to this point below.

Apart from consciousness of self, we need to understand the background to Girard's theory: why humans had to live in groups from the beginning. Contrary to Rousseau's belief, they could not live in isolation. Humans are a threatened species. Evolution gave them a great deal, but it also deprived them of many things. "The reduction of canine teeth to their current position occurred a long time before the appearance of *homo sapiens*, suggesting that stones had replaced dentition in most of their uses, including inter-species combat" (Girard 1987: 86-87). As a result humans are more likely to kill each other in combat than species that are armed only with canines. And how far have people not developed from stone throwing as a mode of combat! "The human infant is more vulnerable and helpless than the offspring of other mammals" (Girard 1987:84). The prolonged period that the infant must stay with the female necessarily poses an obstacle to the male's relations with the female, sometimes leading to family murder (Girard 1987:85). These and many other factors significantly influenced brain development.

What is important to Girard (1987:96) is that, against this background, there had to be a mechanism propelling the developmental process: "[W]hat has been missing is a model for the organising and driving factor in the process, a motor for this strange machine" (Girard 1987:96). He finds such a motor in the victimisation mechanism, which evolved and co-determined human evolution: "In this sense it becomes conceivable that human infancy could become more and more vulnerable and prolong itself for a period corresponding to the growth of the brain without bringing about the simple annihilation of the species in the course of the latter's development. One can also see that at each step more and more elaborate

institutions would favour a new mimetic level, which would bring about a new crisis and thus continue on in a spiral movement that would progressively humanise the anthropoid" (Girard 1987:96). According to Girard only the scapegoat mechanism of collective murder could produce types of societal organisation based on taboo and ritual that would guarantee human evolution. "I will be criticised for exceeding the limits of the possible when I propose that the victimage mechanism is the origin of hominization" (Girard 1987:97).

The phenomenon of mimetic rivalry is not confined to early human communities. It is also typical of animals when they first encounter each other and a fight is the quickest way of settling the rank order.<sup>xx</sup> "Among human beings, because the rivalries are more intense, dominance patterns become impossible and that is the reason, I believe, why human societies are built not on them but on this mysterious entity we call religion" (Girard 2008:335). Among animals everything revolves around dominating and being dominated (Girard 1987: 89, 90-91)

We learn by imitating. Unfortunately this does not stop with adulthood, when imitation assumes the form of mimetic desire. That is what Girard's model is moulded on. Underlying all human behaviour is what Girard (1987:9) calls 'acquisitive imitation', being the desire to imitate<sup>xxi</sup> so we can possess what the other has, can be what the other is. But mimesis differs from imitation. Copycats and mimicry are not highly rated: "We despise it rather than fear it. We are always 'against' imitation ...; we have excluded it from just about everything, including our aesthetics" (Girard 1987:17). The earliest societies feared mimesis, for it led to violence, danger, even group extinction. Imitation inevitably leads to violence (everyone wants to own the same desired object), hence imitation and violence have been linked since the start of human evolution (Girard 1987:11). The violence accompanying mimetic rivalry soon gets out of hand, relegating the desired object to the background and leaving violence in command. Hence violence (read: will to power) underlies the development of culture and religion. In early societies violence was an everyday occurrence and could only escalate. "[R]eciprocal violence is an escalation of mimetic rivalry, and the more divisive it is, the more *uniform* its result" (Girard 1987:12).

For that reason one did not taunt someone by mimicking him – that symbolised mimetic rivalry and death. By the same token twins were feared as a symbol of the same rivalry (e.g. African tribes that traditionally killed twins). Girard (2008:338) cites myths referring to the harmful presence of twins: "This is why a sizable number of myths have twins as their protagonists instead of heroes, Eteocles and Polyneices in Greek tragedy, Romulus and Remus in Rome, Jacob and Esau in the Bible, etc. The mirror-like opposition of twins is a rivalry for some object they both desire with the same intensity, the same bride, the same inheritance." Hence the dreaded situation is identity, not difference. Only one twin secures the throne, the bride or the inheritance. Identity symbolises the violence that would follow and as such was feared.

We copy one another especially when it comes to desired objects. In a room full of toys one child will soon want to play with another child's toy. This leads to conflict, mimetic rivalry. We imitate not only others' desires but also their hatred and violence. In the adult world it culminates in struggle by all against all. Family feuds, tribal wars, vendettas, you name it – they are all products of the same phenomenon.

When it comes to bloodshed the process is never ending and peace comes only when one person is declared the culprit and is sacrificed (scapegoat mechanism). The sacrifice assumes religious features and should be linked with the origin of the idea of the sacred and of religion generally. To Girard the sacred is always connected with violence, because it incorporates the idea of sacrifice. In his view human sacrifice is the basis of human society. Violence (sacrifice) characterises not only religion but also politics – indeed, all human institutions: "We can therefore see why it is that in all primitive cultures the institutions and rituals surrounding death, marriage, hunting, child rearing, and initiation present themselves as a 'mimetic crisis' that concludes with the sacrifice of a victim" (Girard 1987:78-79). Sacrifice is under the jurisdiction of religion. Sacrifice and violence go together, so religion and violence

are inseparable and 'violence and the sacred' are a consistent theme in Girard's thought. "*The sacred is violence*, but if religious man worships violence it is only insofar as the worship of violence is supposed to bring peace; religion is entirely concerned with peace, but the means it has of bringing it about are never free of sacrificial violence" (Girard 1987:32). He describes the biblical evolution of religion as follows: "The first stage is the transition from human sacrifice to animal sacrifice in the so-called patriarchal period; the second, in Exodus, is the institution of Passover, which accentuates the common meal rather than the burnt sacrifice and can hardly claim to be a sacrifice at all in the proper sense of the term. The third stage is represented by the prophets' wish to renounce all forms of sacrifice, and this is only carried out in the Gospels" (Girard 1987:240).

Hence the history of Jesus falls outside the sacrificial paradigm: "First of all, it is important to insist that Christ's death was not a sacrificial one. To say that Jesus dies, not as a sacrifice, but in order that there may be no more sacrifices, is to recognize in him the Word of God" (Girard 1987:210). Girard puts the accent on God as love rather than as the sacred. The latter exorcises violence, evokes it and typifies pre-Christian religions (Van Heeswijck 2005:94). According to Girard the Old and New Testaments provide the great counter-narrative to the scapegoat narrative. He maintains that the sacrifice Christ made could put an end to all mimetic violence (see Girard 1987:205ff for the non-sacrificial death of Christ). Ideally what violence remains should be confined to its mimetic replication in sacrificial ritual (cf. communion). Taylor (2007: 708) describes it thus: "Thus we can point to the Gospel picture of a Christian counter-violence: a transformation of the energy which usually goes into scapegoat purification; transformation which reaches to overcome the fear of violence not by becoming lord of it, by directing it as an annihilating force against evil, but which aims rather to overcome fear by offering oneself to it; responding with love and forgiveness, thereby tapping a source of goodness and healing."

To sum up: the evil process of mimetic violence is halted only by the scapegoat mechanism, when the blame is put on a single victim, communal murder is committed to ensure the community's peace and its future, and out of 'gratitude' the victim is elevated to the divine sphere. In this sense (the victim's) death is associated with reconciliation (here Girard partly falls back on Freud), for the death of one person brings salvation for many (the parallel with Jesus' death is manifest). The Freudian approach fits neatly into Girard's system. Freud accentuates the reconciliatory aspect of death: "[I]t becomes clear that the reconciliatory aspect of mourning, the mourning that rejuvenates and invigorates all cultural activity, is in fact the essence of human culture ... The proof that human beings identify all death with the reconciliatory victim and that the power of the sacred is called the *cult of the dead*, unlike the naturalistic concept of death, appears to underlie all other forms of religion" (Girard 1987:80-81). The death of all is linked with the death of the substitutive victim, hence death brings reconciliation and the community's future is possible because of the peace that follows the death. Consider, for example, the notion that all the soldiers killed in a war are the sacrifice that had to be brought to secure peace. They are venerated (elevated to sainthood), for we owe the continuation of life to them. "There is no culture without a tomb and no tomb without a culture; in the end the tomb is the first and only cultural symbol. The above-ground tomb does not have to be invented. It is the pile of stones in which the victim of unanimous stoning is buried. It is the first pyramid" (Girard 1987:83).

In light of the history of violence – which is not foreign to the history of Christianity<sup>xxii</sup> – the success of mimetic ritual sacrifice would appear to be limited. Law and justice are really what deters mimetic violence, although worldwide its scale is declining steadily.

### Criticism of Girard's model

One is tempted to suspect Girard of basing his entire model on Jesus' atoning death, extrapolating identity to the dawn of human cultural evolution and at the same time seeing it as the embryonic model of the origin of religion. Girard distinguishes between the Christ events and the cultural evolution that gave rise to them. Jesus' reconciliatory death is distinct from its prehistory, because he was without sin (guiltless). That was why he was able to break the vicious circle of violence. But Jesus' innocence relates to a very different debate, namely his divine status, his legal status to take on the sins of others and all it entails. The fact of his innocence doesn't really affect the issue that much, since the individual who carries the blame in the scapegoat mechanism is probably equally innocent. There are plenty of examples of the killing of innocent people, such as witches who are put to death because they are held responsible for natural disasters (see Girard 2008:339).

Girard is guilty of *petitio principii*. He assumes the Jesus story to be divine revelation, then proceeds to 'prove' that it is the only solution to the violence that has afflicted humankind since its inception. The problem is that he describes the evolution of violence in purely natural terms, recounting the natural circumstances and evolution that gave rise to the scapegoat mechanism. One would expect him to follow this procedure throughout, but then, without any explanation, he suddenly introduces a religious dimension. It is doubtful whether adherents of non-Christian religions will swallow this. In analogous fashion Taylor (2007:272-273) refers to Gibbons, who cites church history without considering whether the disputed doctrines are true. He comments aptly: "No one writes history like that, i.e. in a way which factors out the truth of any and all beliefs that people have about their condition. Everyone writes history within some understanding of the human condition, in which the agents are struggling with their fate, either advancing or retarding, or moving forward and back, but in virtue of our understanding of their condition, not all movements are seen as explanatorily on the same footing" (Taylor 2007:273).

Girard's work is too extensive to deal with it in detail, so a few comments must suffice. He assigns desire a destructive role (it is the cause of all harmful mimesis). But human nature requires desire. Throughout history scientific inventions happened not because the inventors were imitating others, but because they held out for their own ideas. Arousal of desire is not confined to the mimetic process. It is a major factor in all development, initiative, creativity and play. Heraclitus' (540-480 B.C.E.) adage, "War is the father of all and the king of all", indicates the generative power of conflict, rivalry, desire. To see it as exclusively negative is one-sided.

The victimisation model, albeit significant, is reductive in that it is treated as the only motor driving human evolution (Girard 1987:27). Diamond (1998:241-242), counter to Girard, shows that when societies are antagonistic towards new inventions it is to their detriment. Diamond (1998:257-825) cites the example of the Japanese Samurai. New inventions and the benefits they entail are imitated mimetically, not necessarily out of pathological desire but out of ordinary common sense, or the bad experience of underdevelopment. The entire spectrum of human culture and cultural goods cannot be traced to the source of mimesis. That model presupposes that we are all imitating each other, leading to a homogeneous monoculture – which is certainly not the case. Cultural diversity is the norm (Diamond 1998: 253).

Nonetheless Girard's model remains a pertinent example of consistent integration of human biology and human culture. Van Heeswijk (2005:76) rightly points out: "Even if the scapegoat mechanism loses its founding status in such a society, it does not prevent all kinds of modifications of the sacrifice mechanism to occur." He shows how people in present-day Western cultures sacrifice nature, others and themselves. He accuses the physical sciences of collaborating in the desecralisation of nature: "The rise of science and technology is clearly linked to the desacralization of nature in a universe in which victimage mechanisms function less and less well" (Van Heeswijk 1987:136). But the human sciences have contributed even more to the process. "The whole of humanity is already confronted with an ineluctable dilemma: human beings must become reconciled without the aid of

sacrificial intermediaries or resign themselves to the imminent extinction of humanity” (Van Heeswijk 1987:136). Here he is referring to its self-destruction. Hence repression of the scapegoat mechanism does not help us to escape its ultimate cosmic toll: “[M]odern atheism is incapable of bringing the victimage mechanisms to light; its empty scepticism about all religion constitutes a new method of keeping these mechanisms invisible, which favours their perpetuation” (Van Heeswijk 1987:184).

## Conclusion

Maybe Girard is the last of the prophets, although his may be a self-fulfilling prophecy. Even if he is isolated in France, his work remains challenging. It is hard to avoid thinking that he is ‘hooked on’ the victimisation mechanism that he designed. Everything has to be slotted into that model. But it is difficult, if not impossible, to conceive of life without conflict and desire, which inevitably involve violence from time to time. Could one not replace the role he assigns desire with the driving force of evolution? Even love is not readily conceivable without rivalry, desire, fantasy and other motives that Girard would classify as violence.

I have devoted a lot of space to his model, because it is applied so comprehensively. If there is any truth in it (and it is certainly not devoid of truth), one should rather see it as the human condition. The model shows how humans accommodate motives that evolved biologically in religious and cultural ways. We could assess the development of the mechanism purely a-morally as a natural development – one which, according to Girard, must necessarily culminate in human self-extinction. To see Christianity, as he does, as the only solution to the problem is at most metaphysically true. But it excludes all other models and cultures.<sup>xxiii</sup> Evolutionary biology and human culture, being structured relationally, cannot do without the influence of others. The driving force behind all development is the dynamics of the difference between species and environment, self and others, natural and supernatural – the law of entropy (second law of thermodynamics). Does humankind not simply mirror in microcosm the entropic process enacted on a grand scale in the macrocosm, the energy driving the process at the human micro level being desire?

Reverting to the theme of the evolutionary grounds of religion, let me sum up. Human culture is incontrovertibly linked with biological nature – an alternative explanation would be metaphysically dishonest. Biological nature cannot be pinned down to scientific models – human creativity is too open-ended for that. Consequently religious experience cannot be reduced to empirical brain data. But neither can philosophy or aesthetics or plain daydreaming. The mechanisms people develop when threatened or under pressure are not necessarily bad. The human mind does not devise only self-destructive artefacts but also aesthetically creative ones.

The debate on religion and evolution must be extrapolated to clarify the relation between the sciences. Interior and outside world, subject and object, nature and culture must be correlated.

Some people see no difference between explaining things ‘from the outside’ (i.e. objectively) and experiencing them ‘from the inside’ (i.e. subjectively). Even when I explain a phenomenon in a foreign culture objectively, I can still understand what people in that culture experience because I know what experience is. But is explaining a religion the same as experiencing God? We can even explain ‘experience’ in terms of language (association), emotion (brain functions) and the like. Yet our experience is more than that explanation. Explaining something does influence our future experience of that thing. On first seeing it I may experience a phenomenon as a UFO, a ghost or a miracle, but once it’s been explained (as a weather balloon, a garden shrub or an optic illusion) the next time I will experience it differently. Explanations of God do influence the way we experience God! Science

has transformed a once enchanted world. Where does that leave us? Are we not doing ourselves a disservice by exchanging our experience of radical transcendence for explanations of immanence?

Maybe Gould's conception of NOMA (non-overlapping magisterium) should be reconsidered. Desire can be misleading. Being someone else's double may entail impoverishment of one's own potential. The mimetic desire of the human sciences (including theology) to mirror the desired 'objectivity' and 'scientific exactitude' of the physical sciences is a success story: today theology is a science. But the attainment of the ideal has also put an end to theology (and philosophy). Who or what was the sacrifice that had to be offered in the process? The subjective experience of 'knowing for sure'; the naivety of self-giving love; faith in the unprovable; our creative, aesthetic energy? Not that the physical sciences have not brought their own sacrifices. Their success is tied to the short leash of a closed worldview, of neutrality and objectivity. That entailed sacrifice in the form of reducing certainty to the empirically provable; broad vision is narrowed down to a focus on immediate objects and pragmatic advantage; and when there is scientific vision and statistically accurate prediction, humankind is sacrificed to the efficiency of boring predictability. The science-religion dialectics also presupposes mimetic desire, hence violence. Violence manifests in the sacrifice of the 'culprit': science. Hence the one party is declared guilty of superstition and lack of objective substantiation, the other of one-sided objectivity, professed neutrality and existential insensitivity.

I think we are asking the wrong questions. We need stereoscopic vision. It is not a matter of either/or but of both – each in its own way. It means accepting our humanity across the entire spectrum from the most repulsive to the most scientific (admirable?). Only an open anthropology can accommodate the human spirit. The human spirit floats on cosmic nature. The force of gravity of scientific knowledge connects it with the earth but does not tie it down. The power of radiation, the centrifugal mental powers driven by fascination are too strong for that. Stereoscopic vision reveals both the grandeur and insignificance of our humanity. The human condition cannot be determined or pinned down. We must dwell in the sphere of expanding knowledge in Socratic ignorance. In a world of objectivity I must constantly work out how knowledge affects my interior world. We must not forego the sacred – we must re-design it. Nor must we disregard the profane – the cracked earthenware jar that makes existence possible. No mental framework can ever finally define the expanding universe of human consciousness. Like God's face, the human face must never be drawn. Science is not without aesthetics; mathematical symmetry inspires awe. Faith is not necessarily naïve; a relationship with the supernatural is rationally justifiable. We must find our way, using immanent transcendence as our beacon. That way we can ground our spirit in nature.

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## Endnotes

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- 1 The evolutionary grounds of religion can be approached from the perspective of various disciplines: philosophy and phenomenology of religion; cognitive and brain sciences; medical sciences (e.g. the relation between religion and health); anthropology (with special reference to shamanism); sociology (role of the community in the development of religion); and linguistics (especially metaphor as a vehicle of transcendence).
  - 2 Phylogenesis (genesis of the *phylon*, tribe) is the sequence of events involved in the evolutionary development of a species or taxonomic group of organisms. Ontogenesis is a purely biological course of events in a specific organism's gradual change from a simple to a more complex level. The complete set of observable traits that make up the structure and behaviour of an organism is called its phenotype. These traits are the product of the interaction of its genotype with the environment. Inherited traits are controlled by genes and the complete set of genes in an organism's genome is called its genotype. Not every aspect of an organism's phenotype is inherited.
  - 3 With reference to primitive people's development that depended on belief in supernatural forces Löwith (1949:71) writes: "Such a mind has to begin its investigations with a more simple method, presupposing supernatural agents as the ultimate and direct cause of observable effects. If man had not begun with such an exaggerated estimate of his possible knowledge and of his own importance in the universe, he would never have known and done all that he is actually capable of knowing and doing."
  - 4 The idea that religious evolution is a natural human cultural capacity met with Christian resistance from the outset. Christianity as a revelational religion was seen as distinct from the natural religions of pagans. That is why Karl Barth vehemently opposed natural theology and developed an exclusively revelational theology, in which God is purported to irrupt vertically into human existence as the humanly inconceivable Totally Other.
  - 5 Ethology – the comparison of human and animal behaviour – may be too simplistic to explain everything, for it extrapolates animal behavioural systems and applies them to humans, whereas the complexity of the latter makes comparison, even by analogy, extremely difficult. The advantage of ethology is that it identifies indubitable similarities in human and animal sociality. But we may easily oversimplify. "In animal societies there is nothing outside of the relations between dominant and dominated ... The ethologists themselves are the ones who disclose the system while observing the animals and 'verbalizing' their observations ... Men who submit to the authority of a king, of a president of a republic ... act somewhat like subdominant animals ... but unlike the animals, they are also capable of talking about monarchy, the presidency and similar notions" (Girard 1987:91-92). Adapting to the environment is only one side of the coin. The other side is that every species evolves according to its peculiar nature. Human behaviour is co-determined by human idiosyncrasies, which are themselves constantly changing. That is 'the human condition'. Religion meets legitimate human needs, but it also responds to 'undesirable' needs, which it seeks to tame by structuring human behaviour.
  - 6 Here, too, the idea of progress plays a role in the sense that religion is considered 'primitive', to be outgrown like childhood fantasies. That does not guarantee that post-religious humans will be more advanced. Their biology remains unchanged and one would have to examine the mechanisms they use to fulfil their needs.
  - 7 Of course, one must be wary of statistical data. A 1999 Gallup poll found that 45% of all Americans accept a literal interpretation of the biblical creation story (hence that the earth is 6 000 years old), yet another poll in the same year found that 81% believed that dinosaurs lived millions of years ago (Park 2008:49-50)! Our present worldview is based on the constancy of natural laws. The same regularity must be assumed in respect of human evolution and the biological grounds of religion. For religious people the only rational explanation that remains is that God subjects himself to the laws he created - which suggests some sort of deism. Considering that believers' behaviour is governed by what they assume to be God's will and words, he exercises a dynamic influence at least in their reality: you act in accordance with what you believe to be true.
  - 8 Of course, that 'inner world' is in constant dialogue with the outside world. Many of our explanations could, moreover, be misleading, although we may advance ostensibly scientific grounds for them. In this regard Berger (1967:90) issues a caveat: "Whatever may be the 'ultimate' merits of religious explanations of the universe at large, their



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- empirical tendency has been to falsify man's consciousness of that part of the universe shaped by his own activity, namely, the socio-cultural world. This falsification can also be described as mystification ...” These are the mental constructs that account for human alienation: “[E]mpirical history and biography are falsely apprehended as grounded in supra-empirical necessities. The innumerable contingencies of human existence are transformed into inevitable manifestations of natural law ... Men then live in the world they themselves have made as if they were fated to do so by powers that are quite independent of their own world-constructing enterprises” (Berger 1967:95).
- 9 People have only come to realise this recently. Taylor (2007:31) points out that “things are ‘in the mind’, in the sense that things only have the meaning they do in that they awaken a certain response in us, and this has to do with our nature as creatures with feelings, with desires, aversions, i.e. being endowed with minds in the broadest sense.” But until as recently as 500 years ago people saw meaning not as a result of mental responses to the world, but as the product of an enchanted world full of demons and spirits outside them (p 32).
- 10 Hannah Arendt explores the issue of world-lessness in her *The human condition*, where she indicates that not only religion but also and more especially techno-science leaves us world-less (Arendt 1958:253-254). Religion takes us out of this world (an inner-worldly asceticism) (p 251), so “modern men were not thrown back upon this world but upon themselves” (p 254).
- 11 Various subdisciplines of cognitive science make a connection between religion and brain functions. Religious experiences are seen as brain functions and can even be chemically induced (see Roberts 2006:235ff). The brain processes that make these possible are the same in shamans in hunter communities and in 21st century people in our societies.
- 12 Wilson (2002:230) holds that only natural science practises science for its own sake and that all other knowledge is loaded with ulterior motives: “[S]cience emerges as an unnatural act. The human mind is probably far better at subordinating factual to practical realism than the reverse.”
- 13 The brain sciences show that the religious experience peculiar to transcendental revelational religions is no different from the animistic experiences of natural religions, because both have biological evolutionary roots. That democratises religion and makes it possible to see, understand and respect all religions as one and the same phenomenon.
- 14 The Old Testament scapegoat mechanism is well known (Lev. 16:21-22). Girard gives the following etymology: “The expression scapegoat comes from *caper emissarius*, a term in the Vulgate that is a liberal interpretation of the Greek *apopompaiois*: ‘one who wards of illness’” (Girard 1987:131).
- 15 Insofar as he confined himself to religion and literary analysis. In the case of his anthropological analyses there has been plenty of criticism, with due allowance for the fact that he is not a trained anthropologist.
- 16 Here one can quote De Chardin (1975:183): “The being who is the object of his own reflection, in consequence of that very doubling back upon himself, becomes in a flash able to raise himself into a new sphere. In reality, another world is born. Abstraction, logic, reasoned choice and inventions, mathematics, art, calculation of space and time, anxieties and dreams of love – all these activities of *inner life* are nothing else than the effervescence of the newly formed centre as it explodes onto itself.”
- 17 Girard describes mimesis among apes and sees it as the precursor or human mimesis. However, the surrogate sacrifice is the dividing line distinguishing humans from animals: “The only thing ‘lacking’ in animal rites is the sacrificial immolation, and the only thing an animal needs to become human is the surrogate victim” (Girard 1987:102). Of course, this should not be taken literally. Girard is merely underscoring his point.
- 18 See Taylor’s idea (2006:75) of humans as self-interpreting animals. We are continually interpreting ourselves, our emotions and our reactions.
- 19 Girard (1987: 284) puts it thus: “Our hypothesis makes it logical to imagine that the rigorous symmetry between the mimetic partners (which results in the paroxysm of rivalry that is in itself sterile and destructive but becomes fruitful to the extent that ritual retraces it in a spirit of fear and solidarity) must bring about two things among man’s ancestors, little by little: the ability to look at the other person, the mimetic *double*, as an

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- alter ego* and the matching capacity to establish a *double* inside oneself, through processes like reflection and consciousness.”
- 20 Mimesis occurs among humans’ closest relatives, the anthropoid apes: “In certain species the propensity to imitate and what we would call a quarrelsome, bickering mood are one and the same thing; it is a question of acquisitive mimesis.” Nonetheless there is big difference between animal and human sociality. In some mammal species a single individual dominates the rest and occupies a key position. “This means that imitation applies to all attitudes and behaviours of the dominant animals *except for acquisitive behaviours*” (Girard 1987:90-91). The latter phenomenon is also found in human societies.
- 21 Williams (2008:208) mentions that science “has discovered that we have *mirror neurons* that fire as if we were experiencing what others experience. When we see another human being writhing and screaming, grasping her twisted arm with its protruding bone, we assess the situation rationally by analogy, and also, through the excitation of our mirror neurons, experience some anguish like hers.”
- 22 In this regard Taylor (2007:709) refers specifically to Christian anti-Semitism.
- 23 The love that Girard sees as the only solution to the problem of violence does not feature in practice. In the public and political domains conflict is counteracted with conflict resolution procedures, international law, human rights, power sharing treaties based on democratic principles and the like.