EMPATHY
A MULTIDISCIPLINARY APPROACH

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By

Monique Devay, MA

Georgetown University
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Monique Devay, MA

Mentor: John Reuscher, Ph.D.

ABSTRACT

My argument in the present paper concerns the correlation of emotions with empathy, that of empathy with morals, and morals with religions. In particular, I argue that empathy is founded on emotions, and in turn, empathy provides the foundation for morals which in turn, is foundational for all religious traditions. My argument is informed by evolutionary animal psychology and by recent advances in basic biological and social neuroscience. After defining the terms used in this paper and some general remarks, first, I will provide evidence for animal empathy, cooperation, and sociality. I shall give special consideration to the metaphoric Russian Doll model of empathy as conceived by the internationally renowned Dutch primatologist, Frans de Waal.

Then, I shall briefly describe the anatomic structures, and their evolutionary development, including the ‘mirror neurons,’ recently discovered and described by Italian neuroscientists Marco Iacoboni and others, as well as the physiologic functions of specific brain regions that give rise to empathetic feelings. I shall demonstrate how this ‘bottom-up’ evolution of emotional empathy is preceding the cognitive overlays and ‘top-down’ cognitive enhancements of the human moral sense. Next, I will discuss the priority of morals to all religious traditions, and the role of empathy, compassion and altruism in the charitable behavior promoted by various world religions. In a dynamic approach, I will highlight both
the negative and positive role of religious faith influencing compassion and altruism toward group members and possibly toward outsiders, even toward adversaries and enemies. I will discuss how fundamentalist faith, as an ideology (idea + logos), whether theistic or atheistic, is less than beneficial, and potentially even harmful, for emotional empathy to evolve into ever more compassion and altruism in ever more inclusive human relationships. I will point to the Golden Rule as the foundation of a harm-based morality, independent of any particular theistic belief.

Empathy, being an innate emotional capacity has the potential for being used, and abused, precisely through its ‘top-down’ cognitive layers, for sinister purposes, such as by some psychopathic political leaders, or by some common people in our daily lives.

For a final synthesis, I shall argue that while religious beliefs are not necessarily and unequivocally beneficial for the cultivation of empathy, they can play a positive role in encouraging compassion and love not only for members of one’s own group, but for outsiders, strangers, adversaries, and even for enemies. In this regard, Buddhist and Christian meditative practices have shown specific positive results.

The intentional cultivation of empathy, compassion and altruism, can greatly contribute to the morally good life as proposed by Aristotle and discussed by Kant. Also, according to St. Francis of Assisi, it is through giving that we receive – which sentiment is now supported by evidence of basic and social neuroscience that have shown through physiologic and psychometric measurements that being good and acting generously – really feels natural and good.
I dedicate my present work to the memory of my late parents,
Dr. Jozsef Vajda, M.D. and Mrs. Vajda, Kornelia Mihaly,
and to the memory of my late husband,
Mr. Leslie Devay,
who, by the example of their lives, taught me all that is
true and good and beautiful in empathy.

I wish to express my sincere appreciation for the wise guidance of my mentoring professor, Dr. John Reuscher, and for the tireless patience and kind help of our Assistant Dean, Anne Ridder, for it is only with their help and support that this work has been possible. I also wish to thank my dear friends who inspired me with their most useful comments, provided substantial technical support, and encouraged me along the way.
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INTRODUCTION

The concepts of kindness, compassion, altruism, generosity have been widely described, discussed and explored since antiquity through the Middle Ages, the Age of Enlightenment, and ever since up to our modern era. Whether singular instances of behavior, customary habits, or well-established character traits, these concepts have been most studied and promoted first by religion, then by philosophy and theology, and later by social psychology. All these disciplines, however, represent cognitive processes, and while they admit the ‘passionate' feeling component, they still regard kindness, compassion and altruism as the result of cognitive reasoning or divine inspiration or social conditioning – but certainly as something that distinguishes humans from animals. With Darwin’s evolutionary theory, however, the evolutionary aspects of the life sciences came into the forefront. As in the 20th century, cognitive processes have been more and more described by evolutionary neuroscience in terms of anatomic structure and physiologic function of the brain, the possibility of such biological foundation for emotions has become the subject of many investigations, as well. The long-suspected critical role of emotions and feelings has emerged as crucial for singular actions, repeated behavior and ultimately, for the life-long character traits of kindness, compassion and altruism.

While morality may be the exclusive domain of Homo sapiens, humans are animals, also, sharing many of the characteristics of animals, and “so it is not surprising to discover pre-moral sentiments in other animals,” says Michael Shermer (2004, 27). It
also appears that the closer a species is to humans the more moral-like are their pre-
moral sentiments . . . and the further away we go down the phylogenetic scale, the less
pre-moral sentiments will be found. In fact, Shermer states:

There is no distinct place to draw the line between moral and non-moral, a problem created by the restrictive nature of binary logic. In binary logic, one sees the world as black or white, up or down, in or out. In fuzzy logic, one sees the world in shades of gray, between up and down, in and out (italics mine). Instead of dividing the world into binary digits of 0 or 1, we can nuance it with shades in between (0.1, 0.2, 0.3, . . ., 0.9) Instead of simply saying that humans are moral and animals are not moral (1 and 0), we could describe humans as 0.9 or 0.8 moral, the great apes as 0.7 or 0.6 moral, . . . and so forth. (Shermer 2004, 27)

And thus, Shermer also asserts:

This is why a scientific analysis or morality can be more fruitful than a philosophical one. An evolutionary perspective grants other animals degrees of morality (or pre-morality) that allows us to discover how we developed our moral sentiments; it also grants them (the animals) greater dignity and status than does a non-evolutionary perspective. (Shermer 2004, 27)

As countless observations of spontaneous kindness and compassion in pets and other domestic and wild animals, as well as many experimental animal and human studies attest, there are many related characteristics shared by humans and other mammals, such as “attachment and bonding, cooperation and mutual aid, sympathy and empathy, direct and indirect reciprocity, altruism and reciprocal altruism, conflict resolution and peacemaking, deception and deception detection, community concern and caring what others think about you, and awareness of and response to the social rules of the group” (italics original in Shermer 2004, 31). Of course, different species exhibit these sentiments and behaviors to different extents, but they are to be found, not
only in our beloved pets, such as cats and dogs, and not only in the great apes and monkeys, but in other mammals, as well, such as in dolphins, whales, elephants, and even in the smallest rodents, such as vampire bats and laboratory mice and rats.

In his essay, *Primates and Philosophers: How Morality Evolved*, Frans de Waal argues that human morality is on a continuum with animal sociality – recalls Marc Bekoff in his own book on *The Emotional Lives of Animals* (2007, 86). Bekoff describes the general features of animal play where rules must be followed or else play is broken off. He claims that “animal play appears to rely on the universal human value of the Golden Rule – do unto others as you would have them do unto you. Following this requires empathy (feeling another’s feelings), and implies reciprocity.” Bekoff further claims that while the phrase “survival of the fittest” has been used to refer to the most successful competitor – cooperation, rather than competition, may be of greater importance for survival (Bekoff 2007, 87).

Matt Ridley, in his seminal work on *The Origins of Virtue: Human Instincts and the Evolution of Cooperation* (1997), convincingly demonstrates that in both animal and human interactions, if they are played out more than once, selfishness is not rewarded on the long term. To be sure “Cooperation was first used, not for virtuous reasons, but as a tool to achieve selfish results” (Ridley 1997, 152). But even so, “duration and permanence” have major significance: “one-shot encounters encourage defection, (while) frequent repetition encourages cooperation.” He further claims that “our frequent use of reciprocity in society may be an inevitable part of our natures: an
instinct. We do not need to reason our way to the conclusion that ‘one good turn deserves another’” (Ridley 1997, 64-6). Moreover, Ridley, further argues that it is emotion, rather than reason, that is the “wellspring of human motivation” (Ridley 1997, 141).

And so, with a little slangish colloquialism, I might add that empathy is ‘the name of the game.’ Thus, without any claim for completeness, my aim in the present paper is to present evidence for empathy in animal behavior, to show that empathy is embedded in the evolution of the species and begins with animal behavior, especially that of mammals, and to demonstrate the emotional continuity between animals and humans. Furthermore, following Frans de Waal’s Russian Doll model of empathy, I posit that empathy, starts with emotional resonance, continues with other-oriented concern, and by cognitive perspective-taking, it results in targeted helping. Moreover, informed by the most recent advances in biological and social neuroscience, and along with other scholars of empathy, I also claim that empathy provides the foundation for moral sentiments and morally relevant actions in both animals and humans. The moral sense is prior to and is necessary for religions to emerge and thus, morality, preceding religions, forms the foundation for them. We will see that empathy is an innate capacity of humans, but also of other mammals, universal and independent of culture, while its manifestations – with time even codified into moral laws, evolving into religions – are specific to various human cultures and civilizations.
Religions, with their man-made, imperfect nature, clan- and culture-bound character, have caused, and still are causing, much human suffering in the world. However, I also argue that the priority of the moral sense and the sinister potential of religion does not render religions entirely superfluous and unnecessary. Inasmuch as they promote empathy, compassion, kindness and altruism, religions can be helpful for the moral development of individual human beings. In fact, just as the physical development of the individual fetus inside the womb repeats phylogensis, that is, the evolution of the species – the same way, the psychological development of the individual human being outside the womb repeats the evolution of the psychological stages, including the stages of religious faith, of mankind. This idea is based on the work of James Fowler’s book *Stages of Faith* (1981), on Don Edward Beck and Christopher C. Cowan’s *Spiral Dynamics* (1996), and on Ken Wilber’s *Integral Psychology* (2000) and *Integral Spirituality* (2006). In these two latter works of his, Ken Wilber with his Integral Theory, also claims that the psychological and social achievements of previous eras are not lost, but are first mastered and incorporated, and then transformed and transcended by subsequent generations. If however, an individual suffers psychological trauma at any particular age of childhood development, the psyche may become arrested at that particular level of its development and remain there for the rest of the individual’s entire life. As a consequence, that individual will see and relate to the world from that particular perspective, including the stage of religious faith. On the other hand, mature religious faith can promote the transcendental experience and the feeling of oneness and
unity with all of nature. Such experience, in turn, would make men and women more inclined to act in an empathetic, compassionate, protective and altruistic manner toward all sentient beings, the earthly environment, and the entire universe. And finally, I conclude that an all-encompassing view of reality, as proposed by Ken Wilber in his Integral Theory, provides the road map to combine the achievements of the disciplines mentioned above into a coherent, unified view regarding the empathic nature of animals and humans, and their societies.

In the first chapter, I shall briefly discuss empathy and related terms, such as sympathy, compassion and altruism, in an etymologic sense. Following the French philosopher Andre Comte-Sponville’s essay on Compassion (1996, transl. 2001, 2002), I shall compare and contrast those terms in the general sense of human values and virtues.

Next, in Chapter Two, relying on the work of internationally renowned ethologists, such as Frans de Waal, Marc Bekoff, Marc Hauser, and others, I will present evidence of various animals experiencing emotions that motivate morally relevant actions, including helping and harming others, as well as reconciling differences to achieve peaceful coexistence (Hauser 2006, 355).

Then, in the third chapter, I shall discuss the most recent advances in biological and social neurosciences pertaining to the evolutionary development of the anatomic structures and physiologic functions of the brain, including the recent discovery and detailed study by Italian neuroscientists (such as Iacoboni, Gallese, Cattaneo, Rizzolatti
and others) of ‘mirror neurons,’ that provide the foundation for empathetic feelings and compassionate actions.

The views of the empathy researcher Martin Hoffman, more recently popularized by Daniel Goleman in his much acclaimed book *Emotional Intelligence: Why it can matter more than IQ* (1995) will lead to my next argument. In Goleman’s book, Hoffman claims:

The roots of morality are to be found in empathy, since it is empathizing with the potential victims – someone in pain, danger, or deprivation – and so sharing their distress that moves people to act to help them. Beyond this immediate link between empathy and altruism in personal encounters, Hoffman proposes that the same capacity for empathic affect, for putting oneself in another’s place, leads people to follow certain moral principles. (Goleman 1995, 105)

Chapters Four and Five will be complementary as they will examine empathy and the consequent compassionate, altruistic actions and behaviors from the religious and the secular viewpoints. For the religious views, I will rely on contemporary essays collected in the volume *Altruism in World Religions*, as well as on the work of other contemporary philosophers, such as Donald Broom, Philip Clayton, Joseph Poulshock and Jeffrey Schloss. For the secular views, I shall cite some of the opinions of Richard Dawkins, Daniel Dennett, Samuel Harris, Kay Nielsen and Sinnott-Armstrong.

In the final chapter, Chapter Six, I will strive to create a coherent synthesis and integrated view of the workings of empathy, resulting in compassionate and altruistic actions, which in turn, become the moral basis of religions.
 CHAPTER ONE

EMPATHY, SYMPATHY, PITY, COMPASSION, ALTRUISM: DEFINITIONS, SIMILARITIES, DISTINCTIONS

“Love and do what you wish” – or be compassionate and do what you must.

Andre Comte-Sponville after St. Augustine
A Short Treatise on the Great Virtues, 2002

Empathy has become a fashionable term recently – it is preferentially used instead of the older, and more usual ‘sympathy,’ ‘compassion’ or even ‘altruism’ in many contexts, especially in the healthcare and bioethics literature, but in any situation where higher education is assumed. And rightly so, as the nuances in meaning of these terms in various contexts will clearly show. So, it might be useful to clarify the definitions, similarities and distinctions, of these terms.

I begin with ‘compassion’ which – according to the New Oxford American Dictionary, means “sympathetic pity and concern for the sufferings or misfortunes of others.” The word consists of two parts, the Latin ‘con’ meaning ‘with’ and a derivative of the more ancient Greek ‘paskhein’ meaning ‘feel’ or ‘suffer’ – thus, ‘feel or suffer with.’

Next, ‘sympathy’ – again according to the New Oxford American Dictionary – firstly means “feelings of pity and sorrow for someone else’s misfortune.” Sympathy has a second meaning, also, “a common feeling or understanding between people.” In both
of these senses, as a ‘fellow feeling,’ sympathy is already leaning toward empathy, yet these two terms are not entirely synonymous.

Empathy, according to the *New Oxford American Dictionary* again, means “the ability to understand and share the feelings of another” – which sounds rather similar to the second meaning of sympathy as cited here above. In both cases, the second part of the word is derived from the Greek ‘pathos’ which means ‘feeling,’ but also ‘suffering.’ The first part of the words ‘en-’ and ‘syn-’ (as well as ‘com-‘) clearly mean ‘in’ and ‘with’ – respectively.

The Greek term ‘empatheia’ was literally translated by Theodore Lipps (1851-1914) who created the German term ‘Einfühlung’ (‘feeling into’) for aesthetic perception, a state in which the perceiver loses self-awareness as his identity becomes fused with the object he is observing. “The viewer, according to Aristotle in his *Poetics*, does not merely witness the drama, he experiences it” (Brener 2008, 23). Thus, it is the German translation of the Greek concept originating in Aristotle’s *Poetics*, from which the English concept of the term is more directly derived.

Based on Becky Lynn Omdahl’s explanations, empathy can be defined as the “capacity to think and feel oneself into the inner life of another person” and as “an affective response that stems from the apprehension and comprehension of another’s emotional state or condition” (Brener 2008, 24). Furthermore, Brener, along with many psychologists, insists that empathy should not be confused with sympathy. According to the *Dictionary of the History of Ideas*, “Empathy supposes a fusion of subject and object,
while sympathy supposes a parallelism between them. In the case of sympathy, I am aware of the distinction between myself and the other. In sympathy, I feel with; in empathy, I feel in.” In other words, “sympathy is ‘I’m sorry for your pain;’ [whereas] empathy is ‘I feel your pain’” (Brener 2008, 24).

Milton Brener has also observed that biologists and psychologists do not use the same language or rather, do not use the same words in the same way. “Biologists do not often use the word ‘empathy.’ They speak of ‘altruism’ among both animals and humans to denote any behavior that is, or seems to be, primarily for the benefit of another . . . [regardless] how selfish the motive may be.” Psychologists, on the other hand, “often speak of altruistic empathy and egotistical empathy. Based on the views of B.L.Omdahl, Brener explains:

The ‘egotistical’ empathetic act is primarily for the benefit of the actor’s own feelings, though it necessarily benefits the recipient, as well. The egotistical empathetic act in such cases may be due primarily to feelings of guilt that would ensue for not acting, or to a desire to reap the reward of praise and enhanced [public] stature for helping. The ‘altruistic’ empathy, on the other hand, is primarily for the benefit of the recipient of the empathetic act. The benefit to the empathizer is secondary, but must certainly exist in most cases. (Omdahl in Brener 2008, 24)

The term ‘altruism’ – etymologically, as well as conceptually – stands a little apart. According to the New Oxford American Dictionary, ‘altruism’ is “the belief in or the practice of disinterested and selfless concern for the well-being of others.” In addition, the dictionary also mentions that in zoology, it is the “behavior of an animal that benefits another at its own expense” – most remarkable definition, as we shall see in
later chapters. The immediate origin of our contemporary word is the 19th century French term *altruisme*, coined by the French philosopher, Auguste Comte, based on the Italian *altrui* meaning ‘somebody else’ which in turn comes from the Latin *alteri huic* meaning ‘to this other.’

To return to the three more closely related terms, it is especially remarkable that all these terms – compassion, sympathy and empathy – comprise the Latin root ‘pati’ originating from the Greek ‘paskhein,’ meaning to ‘feel’ or ‘suffer’ which is the origin of the word ‘passion’ itself, meaning a “strong, barely controllable emotion,” and also meaning the Passion, the suffering and death of Jesus Christ, as well as of the word ‘pathos,’ signifying a quality that evokes the emotions of pity or sadness and sorrow. Thus, if we are to examine any of these terms any further we do well to dwell a little longer on their common aspect of passion and pathos, meaning intense emotion or suffering and evoking the feelings of pity and sadness, respectively.

Andre Comte-Sponville, in his *Short Treatise on the Great Virtues* (1996, transl. 2001, 2002), discusses compassion at length in a separate essay and states that “Compassion, precisely because it is reactive . . . and identifies with its object, is the lowest form of love, perhaps, but also the easiest.” Along with Schopenhauer he sees “compassion as the motive force behind morality, the origin of its value, ever-present . . . compassion guides us far more dependably than any religious commandment or philosophical maxim” (Comte-Sponville 2002, 110). Schopenhauer attempted to derive from compassion even the virtues of justice and charity. But Comte-Sponville regards
these as “late-stage virtues . . . requiring considerable development on the part of humanity [and] civilization. Who knows if they would have come about without pity?” (Comte-Sponville 2002, 110-1)

Yes, compassion is also a much maligned emotion and is called ‘pity’ by many (such as the Stoics, Spinoza, Nietzsche, Hannah Arendt, just to name a few) who would like to dismiss it as a needless and useless feeling. And indeed, “pity is the sadness one feels in response to the sadness of another: it does not spare the other person his own sadness, but rather tends to add to it. Pity only increases the quantity of suffering in the world, and that is what damns it” (Comte-Sponville 2002, 107). In agreement with Spinoza, Comte-Sponville declares that “pity, without being a virtue, is still good . . . because of the part it plays in benevolence and human kindness or courtesy.” Pity is only a beginning, but at least, it is a beginning toward more kindness. There is an affective difference between the virtuous and wise man who acts with joy, “moved by love and generosity” – and merely decent people who act in sadness, “moved by duty or pity.” But whether motivated by joy or sadness – morally, their actions are the same. (Comte-Sponville 2002, 108) For suffering is a moral evil in that it is always morally regrettable; [and] compassion is this regret, or rather this regret is compassion in its minimal form”(Comte-Sponville 2002, 106).

However, Comte-Sponville further argues that compassion is more than just pity and sadness. In fact, compassion, even if not outright joyful, it may very well involve active attention, positive openness, solicitude, patience, readiness for action, even
altruistic action. Admittedly, “compassion in the usual sense of the term applies only to ill fortune; good fortune does not call for compassion” (Comte-Sponville 2002, 109). On the other hand, Comte-Sponville also states:

To define compassion as joy does not take away from its sadness (we can prove this for ourselves: when we rejoice in someone’s existence, which is to say, when we love that person, we are sad to see him or her suffer). Rather, it changes compassion’s orientation and its value. For love is joy, and even if that joy gives way to sadness, in compassion as in pity, at least this sadness is devoid of hatred. Or if there is hatred in it, the hatred is for the [suffering] and not for the [sufferer] whom we would rather help than scorn. (Comte-Sponville 2002, 109)

Furthermore, Comte-Sponville views pity and compassion also related as gradations of the same sentiment: pity as an emotion on one singular occasion, compassion as a general attitude and disposition for benevolent action, in general.

It is most noteworthy that again in agreement with Schopenhauer, Comte-Sponville argues that “compassion holds for our relations with animals, as well” and he explains: “Most of our virtues have humanity as their object . . . Compassion, on the contrary, sympathizes universally with all suffering beings; if we have duties with regard to animals, as I believe we do, they stem from or are part of compassion. This is why compassion is perhaps our most universal virtue” (Comte-Sponville 2002, 111).

One might counter that we can also love, respect and be faithful to animals, especially in the case of our pet companions, yet these feelings are not quite the same in depth as the similar feelings we owe to our fellow human beings, especially to our friends, but even to a stranger. “When it comes to compassion, however, this distinction becomes less
clear. Is it worse to slap a child or to torture a cat?” Comte-Sponville asks, and then answers his own question by saying:

If the latter is the more serious offense, as I tend to think, then one has to conclude that the unfortunate animal is more deserving of compassion. Pain, in this case, takes precedence over species, and compassion over humanism. Compassion, therefore, is the one virtue that lets us open ourselves not just to all humanity, but also to all living beings or, at the very least, to all suffering beings. (Comte-Sponville 2002, 111)

In agreement with Montaigne, Rousseau, Schopenhauer and Claude Levi-Strauss, Comte-Sponville further argues that “a wisdom based on compassion or nourished by it, would be the most universal wisdom . . . and the most necessary . . . it is the true wisdom, the wisdom of living beings, without which all human wisdom would be too human, which is to say, insufficiently humane” – and he concludes that “humanity, when we speak of it as a virtue, is nearly synonymous with compassion, a fact that says much about both” (Comte-Sponville 2002, 111).

Comte-Sponville devotes special attention to the views of Jean-Jacques Rousseau as “Rousseau demonstrates that pity, the favored term of his century for compassion, is the first of all the virtues and the only natural one. Pity, he explains, is a feeling, a ‘natural sentiment,’ all the stronger for deriving from self-love (through identification with others); it thus tempers, in every man, ‘his ardor for well-being with an innate repugnance to see his kind suffer’” (Comte-Sponville 2002, 112). And so, for Rousseau, compassion is the “mother of all virtues” – as he says:

(Bernard) Mandeville sensed clearly that for all their morality, men would never have been anything but monsters if Nature had not given them pity (compassion) in support of reason: but he did not see
that from this single attribute flow all the social virtues he wants to deny men. Indeed, what are Generosity, Clemency, Humanity, if not Pity applied to the weak, the guilty, or the species in general? Even Benevolence and Friendship, properly understood, are the products of a steady pity (compassion) focused on a particular object; for what else is it to wish that someone not suffer, than to wish that he be happy? (Rousseau in Comte-Sponville 2001, 112)

Nevertheless, Comte-Sponville reminds us that pity is not entirely without egoism, not any more than generosity is. He recalls Aristotle’s definition of pity “as a feeling of pain at an apparent evil . . . which we might expect to befall ourselves or some friend of ours . . . what we fear for ourselves excites our pity when it happens to others” (Aristotle in Comte-Sponville 2001, 113). However true this may be, it does not make much difference, as our feeling of pity is still real, and it also “extends to misfortunes that cannot befall us personally . . . and [it is] no less compassionate for perhaps not being selfless” (Comte-Sponville 2002, 113).

However, Comte-Sponville suggests another distinction between pity and compassion. In his view, “pity always entails – he says – some degree of contempt, or at least a feeling of superiority on the part of the person who experiences it . . . there is a self-satisfaction in pity that underscores the deficiency of its object” (Comte-Sponville 2002, 114). As proof, he cites the adjective pitiful which in earlier times designated the person who was ‘full of pity’ whereas these days, pitiful refers to the one who arouses this emotion. And he observes that “in this latter meaning, pitiful is a term of deprecation, roughly synonymous with inferior, pathetic, or contemptible. Compassion does not carry these negative connotations: compassionate describes only the person who feels or shows
compassion.” And this may be so because compassion does not presuppose any particular value judgment regarding its object; “we can have compassion for someone we admire as well as for someone we disapprove of” (Comte-Sponville 2002, 114).

“On the other hand” – Comte-Sponville further argues that – “compassion does entail respect, at least in some small measure; otherwise, according to [his] distinction . . . it would no longer be compassion but pity.” This is a subtle, but important distinction that is obvious in daily life: to someone who has lost a loved one or is suffering from a serious illness we would express our sympathy or compassion, but certainly not our pity which would be considered contemptuous or insulting. And he explains as follows:

Pity comes, as it were, from the top down. Compassion, on the contrary, is a horizontal feeling; it makes sense only among equals, or better yet, it realizes this equality between the suffering person and the person next to him, who becomes his equal by sharing his suffering. In this sense, there can be no pity without some measure of contempt, and no compassion without respect. (Comte-Sponville 2001, 115)

Furthermore, Comte-Sponville argues, that “we should therefore avoid confusing compassion with condescension or with what has become to be caricatured as ‘good works,’ charity (in the sense of giving charity), philanthropy, or almsgiving.” While, he maintains, along with Spinoza, that aiding the poor is the task of the state and public policy, and not of private persons – for social problems require social solutions. (Comte-Sponville 2002, 115) “On the other hand, having a social approach to poverty does not mean our attitude toward the poor need not be one of fraternal closeness, respect, availability, and sympathy – in other words, compassion, which might also
manifest itself (since politics is no panacea) in concrete acts of benevolence . . . or of solidarity” (Comte-Sponville 2002, 116).

Comte-Sponville emphasizes the double nature of compassion by stating that “Virtue though it is, there is no getting around the fact that compassion is also very much a feeling; [and] as such, it is something we either do or do not feel – it cannot be called up on command.” In fact, he continues:

This is why, as Kant reminds us, compassion cannot be a duty . . . We cannot decide to love, but we can be taught to love. The same is true of compassion; it is not our duty to feel compassion, but, as Kant explains, it is our duty to nurture the capacity to feel it. This is what makes compassion not just a feeling, but a virtue – in other words, a capacity, an effort, and an excellence, all at once. (Comte-Sponville 2001, 116)

Most importantly, Comte-Sponville claims that through compassion we can pass from the realm of emotions to that of morals: “from what we feel to what we want, from what we are to what we must do. Love, some will say, effects the same passage. Undoubtedly it does, but love isn’t much within our reach, whereas compassion is” (Comte-Sponville 2002, 116).

For a final thought, Comte-Sponville, juxtaposing the Christian virtue of charity (in the positive sense of the word) with the Buddhist virtue of compassion, finds difficult to choose between them as they are not mutually exclusive. In his view – and mine – “charity would certainly be better if we were capable of it, but compassion, which resembles charity (in its gentleness) is more accessible and might lead us to it” (Comte-Sponville 2002, 116). It is an unfortunate fact that we have a much greater talent for sadness than for joy – and so, we must begin with what is easiest – which is
compassion. And he concludes by saying that yes, indeed “Christ’s message, which is love, is the more exhilarating, but Buddha’s lesson, which is compassion, is more realistic. Therefore, ‘love and do what you wish’ – or be compassionate and do what you must” (Comte-Sponville 2002, 117).
CHAPTER TWO

EMPATHY IN EVOLUTIONARY ANIMAL PSYCHOLOGY

Is there a ‘secret chain’ that links evolution, biology, and morality? Unequivocally, yes. If human beings are moral creatures at all, it is a result of evolution.

– Bradie, The Secret Chain – Evolution and Ethics, 1994

Introduction and etymology of the term ‘empathy’

We tend to think of the virtues as an elaborate tower with the pinnacle of a lighthouse that gives light and assurance to those passing by in the dark night – whether on calm waters or stormy waves. We also tend to think of the virtues as rationally explained in spoken and written language, all taught by traditional religions, and some enforced by law. The tower of the virtues, however, is a complex system as is the elaborate foundation and inside structure of the lighthouse, built on the rock of biological nature.

It was in 1975, when the biologist Edward O. Wilson raised “the possibility that the time has come for ethics to be removed temporarily from the hands of the philosophers and biologicized” (Wilson 1975, 562). Shortly thereafter, Stephen Jay Gould posed the rhetorical question: “Why should our nastiness be the baggage of an apish past and our kindness uniquely human? Why should we not seek continuity with other animals for our ‘noble’ traits as well?” (Gould 1980, 261)

Frans de Waal, one of the leading ethologists of our time, a primatologist, suggests that this may be so because of the combination of two main reasons:
One is fear of an anthropomorphism, which has created unnecessary taboos surrounding animal emotions. The other hampering influence has been Huxley’s (1894) dualism between nature and ethics, which still dominates the thinking of some contemporary biologists. This ‘nature red in tooth and claw’ view has little room for kindness, human or animal. (de Waal 2004, 381)

However, Wilson’s and Gould’s call to fellow scientists was already the result of a slowly emerging trend to explore the biological foundations of human virtues and morality. And so, in this chapter I will discuss this biological foundation of the virtues as observed and described by various scientists over the last few decades.

Empathy may not be considered a virtue in the strictest sense of the word, but rather an emotion. However, the emotion of ‘feeling into’ the situation of another being (human or animal) is the foundation for altruism, kindness, cooperation and justice. “Empathy is a fundamental link in our ethical behavior” (Hauser 2006, 235). More recently, based on their extensive research of animal behavior, Marc Bekoff and Jessica Pierce also have argued that “empathy is foundational to morality, in humans and animals alike” (Bekoff and Pierce 2009, 109).

Even before Wilson’s call for biologizing ethics, morality, and the virtues, there were significant attempts made by various scientists doing exactly that. As recalled by Frans De Waal, the psychologist Russell Church, in 1959, published a paper entitled “‘Emotional’ reactions of rats to the pain of others,” wherein he described his observations of rats which would stop pressing a lever to get food if another rat within full view in a neighboring cage would flinch from the pain of an electric shock. The question arises why would the first rats simply not ignore the second, but even more
significantly, were the first rats worried about their companions’ wellbeing, or just simply afraid for themselves of a potential electric shock (de Waal 2007, 28).

Church’s work initiated an entire series of similar experiments in the 1960-ies that investigated the potential presence of ‘empathy,’ ‘sympathy’ and ‘altruism’ in various animals. It must be noted, however, that these terms were used in quotation marks, so as to avoid skepticism and criticism from the scientific community (de Waal 2007, 29).

Another paper, also from 1959, by psychologist Robert Miller and colleagues (“Relevance of facial expression and posture as cues in communication of affect between monkeys”), reported their investigation if monkeys could interpret facial expressions which are presumed indicators of emotions. In this case, again, the experiment was devised to study the reaction of monkeys to the facial expression of fear in another monkey, when all other clues were eliminated. Miller concluded that the acting monkey was able to read the facial expression of fear in the other monkey that would receive the electric shock. Moreover, as the element of sound was involved before the electric shock, the receiver monkey was able to indicate to the acting monkey that the shock was about coming, and thereby the acting monkey was able to prevent it by pulling a lever (Hauser 2000, 54).

A further study from 1964, conducted by Jules Masserman and colleagues, entitled “‘Altruistic’ behavior in Rhesus monkeys” reported a different type of experiments. This set of experiments showed that the monkeys pulled the levers to get
food less frequently if that action was connected with causing pain in the other monkeys by electroshock. But even more significantly, some of the monkeys refrained from eating altogether for 5-12 days to prevent the painful shocks to their receiver counterparts (Hauser 2000, 54).

Most unfortunately, however, “the prevailing behaviorist atmosphere [of the time] made mention of animal emotions an anathema. [And] combined with the traditional emphasis on nature’s nasty side, this taboo ensured that these studies went largely ignored” (de Waal 2007, 29).

More recently, however, the call of Edward Wilson to biologicize ethics has bore its fruits in a flurry of numerous papers reporting on the emotional, empathetic, if not outright altruistic, behavior in various animals, such as in the small rodents, like rats and mice, as well as in canines, like dogs, coyotes, and wolves, in the large sea mammals, dolphins and whales, in other large mammals, such as elephants, hippopotamuses, monkeys, and in the great apes, such as chimpanzees, gorillas and orangutans.

In 1988 a Swiss ethologist, Eduard Stammbach devised a set of experiments which demonstrated that high-ranking monkeys (Macaca fascicularis) would curtail their own aggressive behavior in obtaining food if that was possible only through the special skill of low-ranking monkeys, that is the high-ranking monkeys would allow the low-ranking specialists also to eat some of the food. What is more, the high-ranking monkeys would eventually even ‘court’ the low-ranking specialist monkeys by grooming and protection even when food was not an immediate reward. “Although this attitude change
[in the high-ranking monkeys] enabled low-ranking specialists to access food that normally would be unobtainable, it had no impact on their dominance rank within the group” (Hauser 2000, 51).

In 1991, yet other Swiss ethologists Hans Kummer and Marina Cords set up experiments to test monkeys how aggressively they would pursue another monkey for raisins, one of their favorite food item, stored in see-through tubes which were either fixed to a wall or freely lying around. Although dominant members of a group often take food from subordinates, a dominant monkey would appear to inhibit its impulse to grab a [free] tube if a subordinate monkey held it already close to its own body (Hauser 2000, 51).

Marc Hauser, an evolutionary biologist and ethologist himself, has conducted experiments with rhesus monkeys and food, and found that there was a system of underlying rules if and when monkeys would punish other monkeys for not sharing unexpected food, depending on the giving of vocal signal about the find, and depending on whether the monkey that found the food, was a member of the group or a ‘peripheral male’ shifting among different groups (Hauser 2000, 52).

Furthermore, Marc Hauser also traces the emergence of human empathy from the third trimester of human fetal life when playing back the mother’s voice causes heart rate deceleration, whereas that of another woman does not. Within a few hours after birth, infants will join in if one baby of the maternity ward begins to cry, which is interpreted by the evolutionary psychologist Nancy Eisenberg as evidence that newborns
experience a “rudimentary form of empathy” (Eisenberg in Hauser 2006, 193) Empathy begins to emerge when one individual mimics the actions of another which reveals the other’s particular emotional state. And Hauser explains as follows:

Empathy is thus a matching up of emotions in the displayer and observer. It differs from sympathy, in which the observer notices an act or emotion in someone else, but does so without experiencing the same emotion or repeating the same action. It also differs from personal distress, in which seeing someone else in some estate triggers a feeling of distress rather than a matched emotional response. What differentiates empathy, sympathy, and personal distress is, then, how the observer responds to the displayer. (Hauser 2006, 194)

One of the leading scientists of animal behavior, a primatologist, is the Dutch-born Frans de Waal who has been living and working in the United States for almost 30 years now, at first professor at the University of Wisconsin, and presently at Emory University, while also directing the Yerkes National Primate Research Center in Atlanta, Georgia. His work centers on the social behavior of the great apes, such as cooperation, conflict resolution, food sharing and aversion to inequity among members of their own group. With his first book, *Chimpanzee Politics* published in 1982, still in London, de Waal “broke old scientific taboos by attributing traditionally human qualities to animals” (Nuzzo 2005, 11137).

De Waal observed the chimpanzees to care extensively for their young, going to great extent, even to the extreme sacrifice, as when an adult male drowned while trying to save an infant chimp that had fallen in the moat surrounding their habitat. Such extreme helping behavior toward one’s own offspring is based on a feeling of connectedness. Richard Joyce takes it a step further by arguing that “once there is in
place a cognitive faculty for thinking of family help as *required*, it may be exploited by
natural selection for other useful ends, . . . [such as for] helpful behavior towards non-kin
individuals on the expectation that they will reciprocate” (Joyce 2001, 141). This, of
course, is very useful, because a larger group of cooperating individuals can often attain
desirable end results that a smaller kin-group cannot. Helping behavior, in turn, may be
exploited by some individuals that would not reciprocate the favor. However, another
trait, that of “sensitivity and hostility towards exploiters” was emerging also to
accompany the trait of reciprocal help, as manifesting in ‘moralistic aggression’ toward
free-riders (Joyce 2001, 142).

Although de Waal initially focused on cooperative and reciprocal behavior in
primates, he has also been interested in other types of behaviors of the apes that could be
best described as empathy. In his book *Good Natured* (1996), he discusses the capacity
of primates to have empathy. He has also argued that there is a connection between
empathy and the ability of self-recognition of the apes in a mirror (Nuzzo 2005, 11139).

In a more recent article of 2007, entitled “Do Animals Feel Empathy?” de Waal
says in his introductory remarks:

We call a callous turncoat a ‘rat.’ Rats and mice, however, are
giving scientists clues to the evolutionary origins of empathy. Apart from
some rear-guard behaviorists, few people hesitate to ascribe empathy to
their dogs. But then dogs are man’s best friend, freely credited with lots
of human sentiments. For as much as we empathize with our canines, we
have been stingy about recognizing empathy elsewhere in the animal
kingdom, reserving it as a human trait. This belief is changing, however,
as a growing line of research demonstrates not just empathy’s existence in
other animals, but its subtleties and exceptions, as well. And they shed
some interesting light on how we developed our capacity for caring for others. (de Waal 2007, 28)

The empathetic capacity is present from the very first day of an individual’s life. This can be amply observed in a maternity ward, where as soon as one newborn begins crying, within a minute or two all babies will be crying. De Waal observed similar spread of distress in young rhesus monkeys. “. . . when an infant monkey had been bitten, it screamed so incessantly that it was soon surrounded by other infants . . . climbing on top of the poor victim, pushing, pulling and shoving one another as well as the first infant. The response seemed automatic, as if the other infants . . . sought to comfort themselves as much as their companion” (de Waal 2007, 29).

Other researchers, studying the behavior of mice, found that if (for other purposes) mice were exposed sequentially to light electric shocks of the same intensity to their feet, the last animal would always show more signs of pain than the first. When an experiment was designed, the phenomenon could be repeated, but only with mice that had been housed in the same cage. In another, related, experiment, it was also observed that mice exposed to different sources of pain while in full view of each other, would be sensitized to any kind of pain (stomach ache induced by diluted acetic acid or heat) (de Waal 2007, 30). According to de Waal, this is a most significant observation for “although it does not prove that mice feel vicarious emotions, [but] it demonstrates that they experience a vicarious intensification of their own experience [of pain].” And he concludes that “This demonstration justifies speaking of ‘empathy’ outside of humanity – at least in some instances” (de Waal 2007, 30).
Most recently, the American ethologist, Marc Bekoff, has greatly contributed to our understanding of animal virtues and animal morality which are the forerunners of human virtues and morality – sometimes with stunning similarities between animal and human behavior.

Here we consider briefly also the work of Marc Bekoff with various canines, wild and domestic, such as dogs, wolves and coyotes. Bekoff originally published his remarkable report on the subject, entitled “Wild Justice, Cooperation, and Fair Play – Minding Manners, Being Nice, and Feeling Good” with an accompanying reflective essay, “Virtuous Nature,” in the journal New Scientist, in 2002. Both the research report and the essay were published again, bound in a volume along with similar writings, entitled Animal Passions and Beastly Virtues, in 2006.

Bekoff’s special interest lies in animal play, specifically, fair play, cooperation and justice in the behavior of social animals, especially of dogs and coyotes. He presents ample evidence how animals when minding their manners and are being nice, are also feeling good in the exhilaration of play. To watch animals play is fascinating, and many people want to study animal behavior, so that they may conclude that humans are ‘above’ and “higher” than animals. Bekoff, however argues that the more he has studied animal behavior the more he has to realize that there is no real dichotomy, there is no unbridgeable chasm between animals and humans, but rather an evolutionary continuity. He reminds us of Charles Darwin’s emphasis on evolutionary continuity among different species, and that the emotional, cognitive, behavioral and moral “variations among the
different species are differences in *degree* rather than differences in *kind*” (Bekoff 2006, 146).

Bekoff argues that social play is the foundation of fairness. ‘Behaving fairly’ is a “notion that animals often have social expectations when they engage in various sorts of social encounters and the violation of which constitutes being treated unfairly.”

Furthermore, Bekoff argues that “based on recent research in the neurobiology of human cooperation, ‘being fair’ may feel good for animals, as well” (Bekoff 2006, 148). And thirdly, Bekoff also argues that “cooperation is not always merely a by-product of tempering aggressive and selfish tendencies and attempts at reconciliation. Rather, cooperation and fairness can evolve on their own because they are important in the formation and maintenance of social relationships.” His view is in contrast with others’ who see selfishness, cheating, and aggression as the driving forces behind the evolution of fairness and justice (Bekoff 2006, 152-3).

Regarding the notion that ‘it feels good to be fair,’ we know that animals and humans share the same circulating brain chemicals when they experience the same emotions, such as joy and pleasure – and of course, “if being nice feels good than that is a good reason for being nice. It is also a good reason for a pattern of behavior to evolve and to remain in an animal’s [behavioral] arsenal” (Bekoff 2006, 153). In terms of neurobiology, studies of chemistry of play support the claim that play is fun. Neurotransmitters, such as dopamine, serotonin, norepinephrine, as well as the opiates, are involved even when anticipating play, but especially during and after play. Thus, the
resulting physiologic pleasure and psychological enjoyment could very well be the motivator for play behavior.

Bekoff has observed on countless occasions dogs and coyotes at play, and describes the ritual of fair play which begins with a “bow,” a highly stereotyped movement – meaning ‘I want to play with you’ and not fight or mate with or prey on you. Following this bow, there is a quick sequence of subtle movements for exchanging information about the sincerity of intent, so that their cooperative agreement can be further negotiated while on the run already. If the other agrees, then play continues with the boisterous frolicking which includes ‘role-reversing’ and ‘self-handicapping’ between the playmates as they may be unequals for various reasons in real life. Since play may involve behaviors that may be misinterpreted as aggressive, predatory or mating moves, there may be another bow and/or other types of ‘play markers’ (‘honest signals’) midway in the play to maintain the playing mood and playing mode. Cheaters are recognized and unlikely to be chosen as playmates again, they are avoided or chased away from play groups. Thus, “there seems to be a sense of right, wrong and fair” (Bekoff 2006, 156-8).

Furthermore, in the course of his extensive fieldwork, Bekoff also observed that cheating at play, or not playing at all, interfered with the long-term chances for life and reproduction of the young coyotes. As non-players and/or cheaters bonded less with the members of their groups, they were more likely to leave their groups and try to survive on their own which is, of course, is much more dangerous. It was found that more than
50 per cent perished of those who left their groups, whereas only 20 percent died of those who stayed with their respective groups (Bekoff 2006, 162). And so, Bekoff argues that “morality evolved because it is adaptive in its own right, not because it is merely an antidote to competition or aggression. Behaving fairly helps many animals, including humans, to survive and flourish in their particular social environment” And he concludes that “incorporated into many explanations of social play are such notions as making a deal, trusting, behaving fairly, forgiving, apologizing, and perhaps justice – behavioral attributes that underlie social morality and moral agency” (Bekoff 2006, 162).

It is evident from all this that humans didn’t invent emotions, empathy and virtue – their origins are much more ancient than our own. “It is clear that morality and virtue did not suddenly appear in the evolutionary epic beginning with humans. While fair play in animals may be a rudimentary form of social morality, it still could be a forerunner of more complex and more sophisticated human moral systems” (Bekoff 2006, 171).

**Theoretical implications for empathy based on evolutionary psychology: Veneer Theory versus the Russian Doll Model**

De Waal explains how psychologists and philosophers tend to think in terms of ‘top-down’ processes, whereas biologists and other scientists of the life sciences tend to think in ‘bottom-up’ sequences. The ‘top-down’ view considers the most advanced forms of empathy which presupposes advanced cognition, and possibly, even language. But he points out that intellectual imagination does not necessarily involve the emotions. Granted, there is much cognition involved in human empathy, but the emotional
connection has to come first and foremost which is as old as the structures of our early mammalian brain (de Waal 2007, 30).

The ‘top-down’ view of empathy produced the Veneer Theory. De Waal attributes the beginnings of this view to Thomas Henry Huxley. Even though Huxley was nicknamed the ‘Bulldog of Darwin’ for his promotion of the Darwinian concept of evolution, he had a dark view of nature, including human nature. In a lecture of 1893, he attempted to reconcile this view with the occasional kindness that he also could observe in human society. “Huxley compared humanity with a gardener who has a hard time keeping weeds out of his garden. He saw human ethics as a victory over an unruly and nasty evolutionary process” (de Waal 2006, 7).

De Waal finds this “an astounding position for two reasons. First, it deliberately curbed the explanatory power of evolution . . . [by] in effect saying that what makes us human could not be handled by evolutionary theory. We can become moral only by opposing our own nature.” And “second, Huxley gave no hint whatsoever where humanity might have unearthed the will and strength to defeat the forces of its own nature” (de Waal 2006, 7-8).

The theme of humanity’s heroic battle against the forces of nature that constantly would drag it down, has remained dominant in our days. It is a dualistic view that humanity is part nature and part culture, but not an integrated whole. By many “human morality is presented as a thin crust underneath of which boil antisocial, amoral, and egoistic passions. This view of morality as a ‘veneer’ was best summarized by
Ghiselin’s famous quip: ‘Scratch an altruist, and watch a hypocrite bleed’” (de Waal 2006, 10).

It is unfortunate that such a controversy arose at all, and even dominated the discussions of biologists and philosophers for so long in the course of the 20th century. But de Waal points out that even in Huxley’s own time there was already opposition to his concept of morals as being a thin overlay over the brutish nature of animals and humans. Most notably, around the turn of the 20th century the Russian biologist Peter Kropotkin observed that in the harsh climate of Siberia animals were much more cooperating with, than combating one another, which “contrasted with Huxley’s dog-eat-dog perspective” (de Waal 2006, 12).

As opposed to the Veneer Theory, de Waal uses the most picturesque metaphor of the Russian Doll (2003, 396; 2006, 39; 2009, 209) to illustrate the evolving layers of brain structure and function, of ever-increasing complexity from automatic emotional responses to cognitive perception and empathy (comprising both sympathy and personal distress), and ultimately to highly conscious ‘perspective-taking’ and imagination which eventually can result in targeted help to another individual, not even necessarily of the same species, as de Waal observed.

All the previous studies of animal behavior have illustrated the following:

Social animals have a great need for the coordination of action and movement, collective response to danger, communication about food and water and assistance to those in need. Responsiveness to the behavioral states of conspecifics ranges from a flock of birds taking off all at once because one among them is startled by a predator to a mother ape who returns to a whimpering youngster to help it from one tree to the next by
dрапа [own] body as a bridge between the two [trees]. The first is a reflex-like transmission of fear response that may not involve any understanding of what triggered the initial reaction. The second seems more insightful, involving anxiety in the female who hears her offspring’s whimpers, assessment of the possible reasons for its distress, and an attempt to ameliorate the situation. (de Waal 2004, 382)

There is plenty more further instances when primates were observed to come to the aid of another who was battered in a fight or putting an arm, as if in consolation, around another’s shoulder that was a victim of an attack. De Waal concludes that “In fact, almost all communication among non-human primates seems [to be] emotionally mediated.” And facial expressions play an important role in the perception and interpretation of another’s emotional state, whether of and by apes or humans (de Waal 2004, 382).

Following the terminology coined by Hatfield and colleagues (1993), psychologists, and even lay people, often speak of ‘emotional contagion’ which occurs when “the emotional state of one individual induces a matching or closely related state in another.” De Waal, however, prefers the term ‘affective resonance,’ which “avoids the disease connotations of the term ‘contagion’ with its implication of inevitability and undesirability, as well as the assumption of an exact match between the subject’s and object’s emotions” (de Waal 2004, 382).

Even though affective resonance may be an automatic and involuntary response of the autonomic nervous system affected by the emotional state of another individual, many a times, the two individuals are engaged in direct interaction, such as the temper tantrum of a rejected youngster at it’s mother’s feet, or one’s facial expressions,
gestures, vocalizations, etc. begging for food in the possession of a companion. “In other words, emotional and motivational states often manifest themselves in behavior specifically directed at certain partners. The emotional effect on the other is therefore not [merely] a by-product, but actively sought” (de Waal 2004, 383).

Building on earlier work by Eisenberg, de Waal continues as follows:

With increasing differentiation between self and other, and an increasing appreciation of the precise circumstances underlying the emotional states of others, affective resonance develops into empathy. Empathy encompasses – and it could not possibly exist without – affective resonance, but it goes beyond it in that it places filters between the other’s state and one’s own, adding a cognitive layer. (de Waal 2004, 383)

Furthermore, empathy also comprises sympathy, and the affective resonance in stressful situations turns into personal distress. These two elements of empathy, that is, sympathy and personal distress, work differently in their social consequences. Sympathy is an “affective response that consists of feelings of sorrow and concern for a distressed or needy other (rather than the same emotions as the other has) . . . it also involves an other-oriented, altruistic motivation” (Eisenberg 2000, 677). “Personal distress, on the other hand, makes the affected party selfishly seek to alleviate its own distress, which is similar to what has been perceived in the object. Personal distress is not concerned with the situation of the empathy-inducing other” (de Waal 2004, 383, based on Batson 1991).

For the evolving levels of ‘affective resonance,’ cognitive empathy and ‘perspective-taking’ de Waal uses the picturesque metaphor of the Russian Doll.
According to the Russian Doll Model, empathy comprises all neural processes that may manifest in external behavior which may be called even altruistic.

The innermost ‘doll’ – corresponding to ‘affective resonance’ – represents the involuntary and unconscious reactions in response to another’s emotional state, such as electromyographically measurable, but involuntary and unconscious muscle contractions in response to another’s facial expression of distress or pain. This is also called the Perception-Action Mechanism (PAM) for which there is evidence at a cellular level of ‘mirror neurons’ (de Waal 2006, 38). “‘Mirror neurons’ found in macaques, fire when a monkey executes an action, and also when the monkey observes the same action performed by another monkey” (Bekoff 2006, 163, based on Gallese and Goldman).

The next doll represents ‘cognitive empathy,’ which means the assessment of a situation and understanding of the reasons for the other’s predicament and emotions, such as the ‘bridging’ behavior of monkeys, when a mother helps her young offspring to get from one big branch of a tree to another by draping her own body between the two branches or connecting them with her tail. Thus, ‘cognitive empathy’ makes possible the help to be tailored to the others’ needs (de Waal 2006, 41).

The outermost doll represents the culmination of empathy in perspective-taking when one can fully adopt the other’s viewpoint. Perspective-taking, that is, thinking about “what it is like to feel what someone else is feeling is an important mediator of altruistic behavior” (Hauser 2006, 195). A significant animal example of perspective-taking are the actions of a bonobo (chimpanzee, Pan paniscus), named Kuni that,
however unsuccessfully, tried to save a bird’s life. “De Waal observed Kuni, a captive female bonobo capture a starling and take the bird outside and place it on its feet. When the bird did not move Kuni tossed it in the air. When the starling did not fly Kuni took it to the highest point in her enclosure, carefully unfolded its wings and threw it in the air. The starling still did not fly, and Kuni then guarded and protected it from a curious juvenile (chimpanzee)” (Preston and de Waal in Bekoff 2006, 154).

The Russian Doll Model, as opposed to the Veneer Theory, metaphorically demonstrates the multilayered nature of empathy consisting of the innermost core of ‘affective resonance’ to match another’s emotional state, evolving into the next layer of concern for others as represented, among other behaviors, by consolation for the distressed other, and resulting in the outer layer of cognitive perspective taking that makes targeted help possible and very likely to happen (de Waal 2009, 209).
CHAPTER THREE

BIOLOGICAL AND SOCIAL NEUROSCIENCE OF EMPATHY

There are many spontaneous observations of human behavior imitating the action of another, such as all the infants crying if started by one in a neonatal unit, or one-year-old infants trying to figure out the source of their distress through ‘motor mimicry,’ or “contagious” laughter, or irresistible yawning in a group of people. The coordination of movement appears to be especially significant in many different activities of humans and animals; e.g., horses or sled dogs pulling carts side-by-side for a long time seem to develop a strong bond, so that the paired animals later protest the slightest separation from their companions. Even more movement coordination is required of backseat passengers on motorcycles or bicycles – to the great delight of young people, as the passenger has to be a true partner in the ride, expected to mirror the rider’s every move. Furthermore, “not only do we mimic those with whom we identify, but mimicry, in turn, strengthens the bond . . . being in sync has a bonding effect” Think of mothers and children playing games of clapping, friends or lovers walking with the same stride or partners dancing in perfect synchrony! Performing together, such as in music or dance ensembles has an even greater effect of bonding on the participants, as it requires being in sync and being in tune and in bodily coordination – quite literally (de Waal 2009, 50-1, 61-2).

In times of stress, touching the hand, or putting an arm around the shoulders of the distressed person, or even full body hugging, is a spontaneous reaction to someone in
need of consolation. “Comforting body contact is part of our mammalian biology, going back to maternal nursing, holding, and carrying, which is why we both seek and give it under stressful circumstances. People touch and hug at funerals, in hospitals around sick or injured loved ones, during wars and earthquakes and following defeat in sports” (de Waal 2009, 94).

Marco Iacoboni, a leading neuroscientists, introduces his recent review on the subject, entitled “Imitation, Empathy and Mirror Neurons,” by the following:

Although mimicry is a pervasive phenomenon in the animal kingdom, imitation certainly achieves its highest form in humans. Past authors – for instance, Montagne (1575), Adam Smith (1759), Poe (1842), Nietzsche (1881), and Wittgenstein (1980) – have often associated imitation with the ability to empathize and understand other minds. The evolutionary, functional, and neural mechanisms linking imitation to empathy, however, have been unclear for many years. Recently, there has been a convergence between cognitive models of imitation, social psychology accounts of its pervasiveness and its functional links with empathy and liking, and the neuroscience discoveries of neural mechanisms of imitation and empathy. This convergence creates a solid framework in which theory and empirical data reinforce each other. (Iacoboni 2008–2009, 654)

In the previous chapter I described some characteristics of the social behavior of animals, especially of mammals, and in particular of primates, that reveal affective resonance and the beginnings of empathy. Here I wish to consider a few examples of human mimicry and imitative behavior that is giving rise to empathy in a more definite manner. As was observed by several philosophers, as well as scientists, humans have a strong inclination to match their body language (sometimes even their verbal language) to that of their companions in the course of social interactions. And this is happening
automatically and with great frequency. Marco Iacoboni in his above mentioned review also states that “imitation is pervasive and automatic in humans (Iacoboni 2008-9, 667).

Pervasiveness and automaticity have been selected as distinctive features of imitation – for a variety of reasons, most importantly because imitation is likely to “facilitate social interactions, increases connectedness and liking . . . and fosters mutual care.” If this hypothesis is correct, it would follow that good imitators would also be good at recognizing other people’s emotions, which in turn would lead to greater empathy. “Thus, this account would predict a correlation between the tendency to imitate others and the ability to empathize with them” (Iacoboni 2008-9, 658).

This hypothesis was tested in a series of experiments. The first experiment tested the automaticity of imitation, and revealed through videotaping that yes, indeed, imitation was automatic. The second experiment demonstrated, proven again through video recording, that imitation did increase liking between individuals, by showing that when someone is imitating us, we tend to like more that person. And the “third experiment tested the hypothesis that the more people tend to imitate others, the more they are concerned with the feelings of other people. . . . This result suggests that through imitation and mimicry, we are able to feel what other people feel” (Iacoboni 2008-9, 659).

As was mentioned earlier in connection with animal behavior, when considering the neural foundations of empathy, it is important to distinguish between two perspectives. In an other concise review of the subject, Sue Carter, James Harris, and
Stephen Porges point out that in contemporary cognitive neuroscience, empathy is regarded as being the function of higher brain structures, such as the cerebral neocortex, which represents the most recent stage in the evolution of brain development.

“However, at least some of the underlying physiological [structures and mechanisms] necessary for the expression of empathy are shared with more general aspects of emotionality, as well as sociability and reproduction, which are dependent on lower brain structures and the autonomic nervous system,” and also on functional neuroendocrine processes (Carter, Harris, and Porges 2009, 169). In other words, one perspective is from top down, viewing empathy as the result of highly developed cognitive processes in the neocortex of the brain, whereas the other perspective is from bottom up, viewing empathy as the result of long evolutionary processes of the autonomic nervous system, revealing its automatic and emotional nature.

To begin with the bottom-up approach, when describing the evolutionary stages of the autonomic nervous system, the vagus nerve deserves special attention. According to the polyvagal theory, there are three major phylogenetic states, still observable in animals at the present time. The first and least developed stage is the unmyelinated, dorsal vagus nerve that in a danger situation allows only a very primitive reaction of immobilization, that is, ‘freezing’ behavioral shutdown, feigning of death, and passive avoidance. At the next stage, with the establishment of the hypothalamo-pituitary-adrenal axis, the sympathetic nervous system came into being, which has made mobilization possible, resulting in the active avoidance of danger through the fight or flight response. And finally
with the myelinization of the vagus nerve, social communication has become possible, self-soothing and calming, and the inhibition of the immediate sympathetic effects. (Carter, Harris, and Porges 2009, 171)

In the evolutionary transition from reptiles to mammals, primitive neuroanatomical structures of the head gave rise to the more sophisticated structures of the sense organs, such as the eyes and ears, located on the face. In addition, changes in cranial dimensions made the evolution of the cranial nerves, originating from the brain stem, also possible. The cranial nerves, in turn, allowed a more versatile use of the facial muscles, aiding facial gestures, and so, all these evolutionary changes made communication possible. Further changes in cranial dimensions also facilitated oxygenation of blood, and cerebral blood circulation itself, giving rise to a larger mammalian cortex.

To accommodate the expanding brain, the cranial bones had to be further stretched causing three little pieces of bone to detach from the mandibular arch, and become part of the middle ear (the auditory ossicles: malleus, incus, stapes) which, in turn, made possible a much perfected auditory perception. The more sophisticated mammalian hearing has greatly contributed to the evolution of sociality as “it allowed the mother to eat, nurse, and listen to conspecific vocalizations at the same time” (Carter, Harris, and Porges 2009, 172).

Parallel with the evolution of the head, face and sense organs, “a link evolved between the new myelinated ventral vagus nerve and the neural regulation of the viscera, the internal organs of the body, and the peripheral muscles, also.” And so, “this more
modern vagus efficiently fostered calm behavioral states and dampened the reactivity of
the sympathetic nervous system and the hypothalamic-pituitary-adrenal axis. Thus,
sociality could overcome states of fear” (Carter, Harris, and Porges 200, 172).

With the firmly established autonomic nervous system, reliably connecting the
head and face with the rest of the body, the phylogenetic emergence of empathy became
possible:

The concept of empathy accounts for the phylogenetic advantages of these
[organ] systems in promoting cooperative behaviors that enable groups of
individuals to share in the responsibility for detecting danger and to
facilitate social communication and social interactions within a safe
environment. It is this ability to share knowledge regarding environmental
danger that provides the basis for the subsequent development of social
groups and societies . . . . (Carter, Harris, and Porges 2009, 173).

Essential to the concept of empathy is the detection and communication of
environmental danger through facial gestures and through vocal intonation. The neural
evaluation of the environment is very quick, almost instantaneous and can happen
without conscious awareness. The term neuroception is used to describe the capacity of
neural circuits to detect environmental danger or safety. “Because empathy is linked to
feelings [dependent] on the detection of distress in others, the concept of empathy can be
further understood by examining neural mechanisms that mediate both, the expression of
feelings and the detection of feelings in others” (Carter, Harris, and Porges 2009, 173).

The environment, constantly changing between threat and safety, necessitated the
aforementioned three neural circuits to evolve in a phylogenetically organized
hierarchy. The newest circuit of social cues and social support, including features of
empathy, is used first. When this circuit fails to provide safety, mammals recruit the older defensive circuits, including fight and flight, and then lastly, freezing and immobilization, sequentially.

As mammals evolved they became dependent on social cues and support from others, usually of their own species. Social behaviors facilitate both survival and reproduction, allowing mammals to more safely eat, digest, sleep, mate, and care for their young. These same factors, which led to the evolution of mammalian social communication, were involved in the evolution of the primate autonomic nervous system and presumably play a role in the capacity to experience emotions, including empathic feelings, and to exhibit empathic responses. (Carter, Harris, and Porges 2009, 175)

In addition to the structural evolution of the autonomic nervous system, neurohormones also play an important part in the evolution of mammalian sociality. The neurohormones oxytocin and vasopressin, acting in tandem, participate in the regulation and facilitate the integration of many vital processes, including emotions and social behaviors. In particular, oxytocin “facilitates mammalian birth, lactation, and the development of maternal behaviors and social bonds,” which in turn, underlie the emotional states and responses necessary for empathy (Carter, Harris, and Porges 2009, 175). By generally acting to reduce reactivity to stressors, oxytocin also plays a central role in the coordination of social behaviors. “Oxytocin tends to decrease fear and anxiety and to increase tolerance to stressful stimuli. [It] may protect the vulnerable mammalian nervous system from regressing into the primitive states of lower brain stem dominance (such as the reptile-like freezing pattern with an associated shutdown of higher neural processes). At the same time, oxytocin appears to encourage various forms of sociality” (Carter, Harris, and Porges 2009, 176).
Vasopressin, on the other hand, while structurally similar to oxytocin, tends to act into the opposite direction. Whereas oxytocin tends to reduce autonomic and behavioral reactivity to stressful stimuli, vasopressin causes arousal and vigilance when potential danger is perceived. It tends to favor defensive responses in situations of perceived threat. Furthermore, the “dynamic interactions between oxytocin and vasopressin” may be particularly important for the patterns of approach and avoidance in social behavior (Carter, Harris, and Porges 2009, 177).

In addition to oxytocin and vasopressin, other neuropeptides, such as corticotropin-releasing factor (CRF), released during ‘stressful’ experiences may be anxiogenic, acting upon the adrenal cortex to influence responses to dangerous and threatening cues. But “at least some of the fear-associated or defensive [effects] of vasopressin and CRF can be counteracted by oxytocin. Thus, oxytocin may have the capacity to reduce fear, and calm the sympathetic responses to stressful stimuli” (Carter, Harris, and Porges 2009, 178).

Thus, it may be stated that empathy is dependent on the proper function of the autonomic nervous system which is a dynamic, bidirectional system with both sensory and motor components. Visceral sensations are communicated through the sensory fibers of the autonomic nervous system to the brainstem, which in turn, through the release of oxytocin and vasopressin, sends signals to the body’s periphery for relaxation when safety prevails, or coping with potential danger. Thus, visceral sensations can be dealt with by the brainstem that controls the heart and other internal organs, but can also
transmit signals to higher brain structures. While sociality is an important feature of mammalian existence, selective social behaviors are required for safety and successful reproduction. Sensitivity to social cues and a sense of trust is essential to empathy, which is mediated by the workings of the autonomic nervous system, the brainstem and the neurohormones oxytocin and vasopressin (Carter, Harris, and Porges 2009, 179).

Traditionally, the prevailing view of empathy was “top down,” that is, it was the cognitive element of empathy that was more emphasized, suggesting that empathy was a cognitive process of taking someone else’s perspective, or cognitively imagining how another individual would feel in a particular situation. In the course of the past few decades, the bottom-up approach has gained momentum, and the more archaic, automatic and emotional aspects of empathy were explored. And as we have seen, these automatic, emotional origins of empathy have been observed and described in detail by ethologists, as well as by social psychologists.

However, empathy is not only the result of autonomic nervous system functions. Empathy is also a product of higher brain structures and functions mediated by the mirror neuron system (MNS).

In the course of the last ten years, several neuroscientists (especially the Italian Rizzolatti, Dapretto, Iacoboni, Gallese, Mazziotta) have investigated and described the structural “hardware” of the brain that makes the function of the “software” for imitation possible. This circuitry, called the “mirror neuron system . . . may provide a necessary first step in triggering the moral emotions” (Hauser 2006, 355). This system consists of
certain neurons in the premotor cortex. The premotor cortex is the anterior section of the frontal lobe of the brain, containing neurons that are relevant for the planning of actions. Called “mirror neurons” in the premotor cortex, as well as in the posterior parietal cortex, were found by neuroimaging to fire not only during the execution of an action, but also while observing somebody else performing the same or similar action (Iacoboni 2009, 659). In monkeys, as well as humans, these neurons show the same level of activity when the individual reaches for an object as when he watches someone else do the same, or when the individual hears a sound associated with an action or performs the same action himself. While monkeys’ mirror neurons are responsive only when objects and actions are actually within sight of the monkey, the human mirror neurons respond when subjects merely imagine an action or imitate someone else performing an action on an invisible object (Hauser 2006, 224, Iacoboni 2009, 660). Hauser points out, however, that all this does not imply that the motor neuron system is dedicated exclusively to our moral faculty – nevertheless, it is essential to it. The correlation between the mirror neurons’ activity and behavioral imitation suggests that internal mirroring of another’s affective response may constitute a mechanism that quite literally allows one to feel what others feel (Pfeifer and Dapretto 2009, 188).

Here we have to remember that “it has long been suggested that empathy involves resonating with another person’s unconscious affect.” More specifically, we have to recall the Perception-Action Model (PAM) of empathy, proposed by Preston and de Waal (2002). There the main assumption was that perceiving an affective state of
another individual automatically activates the corresponding affective state in the observer which in turn activates autonomic and somatic responses. “The discovery of (certain) sensorimotor neurons (called mirror neurons) in the premotor and posterior parietal cortex that discharge during both the production of a given action and the perception of the same action performed by another individual provides the physiological mechanism for this direct link between perception and action” (Decety and Lamm 2009, 200).

Thus, it may be stated that all the above scientists concur on the biological and psychological evidence that some of the core capacities underlying our moral faculty are present in non-human animals. In Hauser words “We have seen that animals experience emotions that motivate morally relevant actions, including helping and harming others, as well as reconciling differences in the service of achieving some modicum of peace” (Hauser 2006, 355). He also points out the similarity and continuity between animal and human brain structures and functions that result in similar and continuous capacity for emotions, even the moral emotions, cognition, perspective taking and the actions that follow.

In connection with perspective-taking, another aspect of empathy deserves further mention. Our ability to adopt the psychological perspective of others has important implications. “Well-developed perspective-taking abilities allow us . . . to tailor our behaviors to others’ expectations . . . (and have) been linked to moral reasoning and altruism.” Mental imagery allows us not only to see the world with the
eyes of our conspecifics, that is with the eyes of our fellow human beings, but also to feel what another feels. Thus, feeling another’s pain and suffering may result in personal distress which may cause self-concern, rather than to attend to the other’s predicament, and as a result, the observer may fail to act in a sympathetic manner (Decety and Lamm 2009, 203).

A further implication of the recent work on the relationships between mirror neurons, imitation, and empathy is the consideration that the evolutionary process made us wired for empathy. This is a major revision of widely held beliefs. Traditionally, our biology is considered the basis of self-serving individualism, whereas our ideas and our social codes enable us to rise above our neurobiological makeup. The research on mirror neurons, imitation, and empathy, in contrast, tells us that our ability to empathize, a building block of our sociality and morality has been built ‘bottom up’ from relatively simple mechanisms of action production and perception. (Iacoboni 2009, 666-7)

And finally, one more aspect of empathy has to be mentioned, a cognitive overlay, which is the effect of *interpersonal* factors, such as the similarity or closeness versus competitiveness or even animosity between the observed individual and the empathizing observer. Several investigations on the neural, psychophysiological, and behavioral levels revealed that similarity and closeness between observer and observed resulted in strong empathic concern and helping behaviors on the part of the observer.

As we have seen, empathy is an innate capacity and is in itself neutral. It may manifest in a positive, and also in a negative direction. As early as in 1989, Lanzetta and Englis made interesting observations about the effects of base-line emotional attitudes and relationships. Their studies showed that, on the one side, a perceived emotional closeness between two people will promote a greater measure of empathy, and also more
helping behavior. In a competitive relationship, however, observation of the other’s joy resulted in distress, whereas pain in the competitor lead to positive emotions in the observer. A more recent, behavioral MRI study by Singer and colleagues (2006) revealed that empathic neural responses are modified by the perceived fairness of others (such as in a game of prisoner’s dilemma). “These findings reflect an important and often ignored aspect of empathy, namely that the ability can also be used in a malevolent way, as when knowledge about the emotional or cognitive state of competitors is used to harm them” (Decety and Lamm 2009, 208). Nevertheless, I wish to emphasize that this is a ‘top-down,’ cognitive interference which is rather different from the ‘bottom-up’ visceral, automatic, imitative, and originally cooperative, nature of empathy.

In contrast with the imitational and emotional explanation of empathy, the cognitive aspect of empathy has been advanced by the theory of mind explanation which is a highly analytical and detached approach to empathy. The ‘theory of mind’ view maintains that mental states of others’ minds are unobservable, and can be explained and consequent behaviors predicted only as if by a scientific ‘theory’ of mental processes, as if through a system of rules applied to any given situation.(Sharnay-Tsoory 2009, 216).

With the discovery of the motor neuron system within the cerebral cortex, a synthesis of these two views has become possible. Such synthesis expands the horizon for empathy, that while “an emotional state that is isomorphic with that of another individual, also requires one to be consciously aware that the other individual is the
source of the emotion in order to preclude self-focused distress and to foster other-oriented concern” (Pfeifer and Dapretto 2009, 183).

And thus, Marco Iacoboni concludes the following:

Social psychology studies (both with animals and humans) have demonstrated that imitation and mimicry are pervasive, automatic, and facilitate empathy. Neuroscience investigations have demonstrated physiological mechanisms of mirroring . . . that support the cognitive and social psychology constructs . . . Neural mirroring solves the ‘problem of other minds’ (how we can access and understand the minds of others) and makes intersubjectivity possible, thus facilitating social behavior. (Iacoboni 2008-9, 653)

Thus, it may be stated that all the above scientists concur on the evidence derived from basic neuroscience and evolutionary psychology that the core capacities in nervous system structure and function underlying our moral faculty are present in animals, and continuous between animals and humans.

An Italian neurologist, Antonio Damasio, has further refined the concept of kinetic-affective resonance by introducing a distinction between emotion and feeling which may be a tenuous conception, nevertheless readily discernable in the following remark:

The first device, emotion, enabled organisms to respond effectively but not creatively to a number of circumstances, conducive or threatening to life . . . The second device, feeling, introduced a mental alert for the good or bad circumstances and prolonged the impact of emotions by affecting attention and memory lastingly . . . [leading] to the emergence of foresight and to the possibility of creating novel, non-stereotypical responses. (Damasio in Sheets-Johnstone 2008, 206-7)

And Sheets-Johnstone concludes by stating that “Damasio’s concept of the origin and evolution of emotion clearly underscores the basic ‘motivating and
mobilizing’ energies of emotion, affirming that emotions do indeed move us to move” (Sheets-Johnstone 2008, 207).

This energizing, mobilizing, motivating force of the kinetically based and literally emotive force of emotion will be the subject of my next chapter, in which we will see how the various major religions have built cognitive super-structures on the almost unconscious, but surely subconscious emotive nature of human beings.
CHAPTER FOUR

EMPATHY, COMPASSION, AND ALTRUISM
IN THE MAJOR WORLD RELIGIONS

In previous chapters, we have seen that empathy is first and foremost an innate capacity of humans, as well as animals. It is a feeling evoked by the visual perception of another’s pain or some other distress. This feeling arises from the morphologic structure and physiologic function of the central nervous system. Sensing another’s pain or distress as one’s own in kinetic-emotional resonance may also give rise to the cognitively enhanced feeling of compassion for the suffering of another, which, in turn, may cause altruistic action by the observer.

In this chapter, first I shall examine the correlation of compassion and altruism with some of the major world religions; then, I will turn my attention to the writings of some evolutionary biologists and philosophers, such as Donald Broom, Richard Joyce, Joseph Poulshock, Jeffrey Schloss, and others who argue for the beneficial and positive role of religion in promoting empathy, compassion and altruism, in particular, and morality, in general.

While it would be quite impossible within the confines of this paper to analyze and discuss in depth all that has been written about compassion and altruism in religious literature, it cannot be ignored that all the major religions have much to say about these human traits, even virtues.
First, however, the term altruism needs to be further clarified. In this chapter I use the term ‘altruism’ in a more restricted sense than the ‘reciprocal altruism’ of animal behavior discussed in the first chapter. Here, I use the term ‘altruism’ with a definition of “unselfish concern for the welfare of others” (Webster 1983, 53). We also have to recall that ‘altruism’ is a relatively recent term, based on the Latin alter, meaning ‘other’ that was coined in the 1830-s by Auguste Comte, who believed that it was a moral obligation to serve others placing their interests above one’s own (Green 2005, xi). Thus, “altruism refers to action intended to benefit another, even if such action risks possible sacrifice to the well-being of the actor.” In other words, “the purpose of the altruistic act is helping another person [without] anticipation or expectation of reward.” What is more “altruism must carry [at least] the risk of diminution of the actor’s well-being” (Green 2005, xii).

**Judaism**

To begin with our own Western culture, I wish to consider Judaism first, that epitomizes the “top-down” approach to empathy, charity and altruism. Here I’m relying on the interpretation of the classical texts of Judaism by Jacob Neusner and Alan Avery-Peck, who argue that for the Hebrew Scriptures and the interpretive writings of the Jewish rabbies in the first six centuries of the Common Era, the concept of altruism did not even arise, and certainly could not be examined or argued in any way.

Characteristic of a culture in which ethnicity and religion are not separate, but rather intertwined in an all-encompassing tradition, Judaism does not leave the welfare of its members to the chances of individual human choice for provision, but rather, it
creates a system, in the form of commandments, believed to be of divine origin, that
govern the obligatory support of the poor and needy members of their ethnic/religious
group. Supporting the poor is a religious duty, and this duty takes place in a highly
regulated pattern. Thus, “altruism does not enter into action for the welfare of others . . .
which is commanded and not self-initiated” (Neusner and Avery-Peck 2005, 38).

The classical Jewish religious law (the Halakha), regulates not only religious
activities, but all aspects of daily life, as well, and deals with the welfare of all members
of Jewish society, including the landless, such as the priests and the Levites, the poor
and needy, and the otherwise disempowered. God owns the entire Land of Israel and
because of this ownership, a portion of each crop must be paid (back) to him as a sacred
tax. Thus, God (only) claims that which is owed him, and then gives it to those under his
special care, the poor and the priests” (Neusner and Avery-Peck 2005, 39).

Support for the poor and the priesthood cannot be classified as altruistic.
It is routine, not spontaneous; it is exacted as an obligation and does not
fall beyond the measure of the law; above all it yields a benefit to the
donor, who thereby acquires access to the portion of the crop that God,
as landowner, assigns the householder, as tenant farmer, for his share.
(Neusner and Avery-Peck 2005, 40)

Nevertheless, in a series of narratives of early Judaic writings, as examined by
Jacob Neusner and Alan Avery-Peck, altruism as spontaneous, unselfish behavior
appears manifest. Classical authoritative texts of Rabbinic Judaism clearly encourage
self-sacrifice for the benefit of another. However the instances of altruistic self-sacrifice
also result in divine reward. In the cited cases, the reward being the life-giving rain that
fell in answer to the prayers of commonly acknowledged sinners (such as a money
lender and a prostitute) who by sacrificing their own livelihood had acted unselfishly on behalf of another. It is important to note that no explicit religious obligation or commandment was carried out. “The conduct is supererogatory. Through deeds that the law of the Torah cannot require, but must favor, one commits an act of altruism – beyond the measure of the Law. This altruism encompasses what one does on one’s own volition, beyond the commandment of the Torah that embodies God’s volition” (Neusner and Avery-Peck 2005, 33).

Furthermore, Neusner and Avery-Peck argue for a “transvaluation of values” by “provision for the spontaneous in the midst of the routine” and they state it as follows:

A singular act, which outweighs all else, embodies what God cannot command, but what man can freely give: uncompensated self-sacrifice. In the setting of the creed ‘You will love the Lord your God with all your heart, soul and might,’ altruism conforms to the paradigm of the relationship for which God yearns, but only human beings can realize of their own free will – love, which God cannot command and coerce, only respond to. (Neusner and Avery-Peck 2005, 35)

In addition, Neusner and Avery-Peck also claim that the main purpose of these stories is not just simply promoting selfless, altruistic behavior, but to advance a basic concept of Rabbinic Judaism, that is: “Acts of kindness toward others bring divine reward.” In fact, if altruistic acts are encouraged at all, it is for the divine reward that surely would follow – and as such, Neusner and Avery-Peck conclude, these actions of seeming altruism cannot be regarded as truly altruistic, or truly on behalf of another, at all (Neusner and Avery-Peck 2005, 35).
A few centuries later, in the late 12th century, Moses Maimonides (1135-1204) codified the law of the Talmud and commentaries and provided his posterity with a highly rational and systematic statement on the eight stages in the transactions of charity (for a complete list, see Neusner and Avery-Peck, 2005, page 36). But even at its highest level, the donor will always have the (self-)satisfaction for the knowledge of having helped some poor person and fulfilled a divine obligation. Thus, actions of charity at all levels, except at the highest, do not really qualify as truly altruistic: “The systemic representation of virtuous actions in response to God’s commandments leaves little space for truly altruistic conduct in normative Judaism” – is the conclusion of Neusner and Avery-Peck (2005, 37).

It may be instructive – and imperative – for our own age to realize that the highest level of charity, as described by Maimonides, is attained by rendering charity itself altogether unnecessary through giving to the poor not the alms but the means of a decent livelihood – which, however, represents a social philosophy that goes beyond the subject of the present discussion of empathy, compassion and altruism.

In summary, we may conclude that the absence of altruism in classical Judaism results from the “foundational doctrine that God has told people how to behave and is active in the world to assure appropriate rewards for correct behavior. In the context of such an ideology, because deeds of charity or loving kindness are demanded and always rewarded, altruism per se is impossible” (Neusner and Avery-Peck 2005, 47).
It is most remarkable that Jacob Neusner and Alan Avery-Peck have called attention to what is described by others as the ‘top-down’ (versus the ‘bottom-up’) concept of empathy, and altruistic action. Neusner and Avery-Peck state that “altruism as a category for assessing the nature of human behavior is an invention only of the modern world. It is an explanatory category that was created to address questions about the human psyche and about human behavior that the authorities of Rabbinic Judaism could not yet have [conceptualized and explained]” (2005, 48). These two scholars also place the lack of altruism in Rabbinic Judaism into a historical context by pointing out that the concept of altruism is not found in either Plato, or in Aristotle. Referring to Alasdair MacIntyre who had previously explained that “Plato never probes the concept of altruism because of his understanding that the pursuit of the good in general and the pursuit of one’s own good in particular [will] always [and] necessarily coincide” (McIntyre 1972, 462) And even in the medieval world, although the approach is different, the result is similar. MacIntyre explains:

The underlying assumption is that man’s self-fulfillment [happens through] the love of God and of the rest of divine creation. So, although Aquinas envisions the first precept of the natural law as … self-preservation, his view of what the self is, and of what preserving it consists of, leads to no special problems about the relation between what I owe to myself and what I owe to others. (MacIntyre 1972, 462)

In classical Rabbinic Judaism, “this relationship is determined by the divine desire that people show responsibility toward each other, and it is controlled by the divine [system of] reward and punishment that polices that desire, and creates a human
reality in which actions I take on behalf of another always benefit myself as well” (Neusner and Avery-Peck 2005, 50).

It is only at the beginning of the Modern Era that the relationship between self and others becomes problematic when Thomas Hobbes (1588-1679) depicts human nature as essentially individualistic, competitive and aggressive, as opposed to communal and cooperative. Such view of human nature gave rise to the need to introduce and explain the concept of altruism and benevolence. “Hobbes, on his part, denied the existence of altruistic behavior by arguing that even one who voluntarily gives alms to a beggar does so not just to relieve the beggar’s distress, but also to relieve his or her own distress at seeing the beggar’s distress.” Thus, Hobbes suggests that even “what appears on the surface to be altruistic behavior, in fact, always emerges from selfish self-interest” (Neusner and Avery-Peck 2005, 50). And I might add that thereby, Hobbes unwittingly foreshadows the modern concept of emotional contagion or emotional resonance.

Theologians and religious thinkers later disagreed “arguing that people give alms to beggars because, cognizant of the divine trait of justice, they simply wish to do what is right – hence altruism.” And thereby the very idea of altruism becomes identified with the idea that religions promote altruistic behavior in an ever more secularized world. “The Rabbinic system required no such twists of logic in either direction, however. Certainly the rabbis held that one gives alms to a beggar because to relieve the beggar’s distress is to make the world more like God intends it to be, [as] to
feed the hungry or to clothe the naked is indeed to behave like God” (Neusner and Avery-Peck 2005, 50).

**Christianity**

Next, I wish to examine empathy, charity and altruism in the context of Christianity. From the Christian perspective, the recommendation for actions of charity and altruism, including almsgiving, is rather similar to that found in Judaism, as Jesus teaches:

> Take care not to perform righteous deeds in order that people may see them; otherwise, you will have no recompense from your heavenly Father. When you give alms, do not blow a trumpet before you, as the hypocrites do in the synagogues and in the streets to win the praise of others . . . But when you give alms, do not let your left hand know what your right hand is doing, so that your almsgiving may be secret. And your Father who sees in secret will repay you. (Matthew 6:104 [NAB])

In the Christian context, the favored term for empathy and altruism is love and charity. According to St. Paul’s First Epistle to the Corinthians, charity is the greatest of all the virtues: “So faith, hope, love remain, these three; but the greatest of these is love” (1 Corinthians 13:1-13 [NAB]). Later Thomas Aquinas describes charity as a “divinely infused habit inclining the human will to cherish God for his own sake above all else, and one’s fellow man for the sake of God” (Knight 2009), a notion that I regard as a most poetic conceptualization of the biological workings of empathy.

But before Aquinas, and even before Paul, Jesus set the new norm of love beyond the concepts of the Torah and other Judaic writings. Jesus was challenged by the Pharisees and the scribes on his knowledge of the Hebrew Scriptures repeatedly. One memorable instance of such testing is the one cited by all three of the synoptic Gospels
of Matthew, Mark and Luke. Jesus confirms loving God and loving neighbor as the supreme commandments and love is now revealed as the “transcendent principle, which fulfills (according to Matthew), or supersedes (according to Mark) the Torah. Christ himself, by citing and enacting that principle offers the [moral] key to communion with God” (Chilton 2005, 58). In the Gospel of Luke, however, the commandment to ‘love your neighbor’ prompts the next question on the part of the insisting lawyer ‘And who is my neighbor?’ And Jesus replies with the prototypical, almost archetypal, parable of empathy, charity and altruism which is the story of the Good Samaritan (Luke 10: 25-37).

There was a scholar of the law who stood up to test him and said, ‘Teacher, what must I do to inherit eternal life?’ Jesus said to him, ‘What is written in the law? How do you read it?’ He said in reply, ‘You shall love the Lord, your God, with all your heart, with all your being, with all your strength, and with all your mind, and your neighbor as yourself.’ He replied to him, ‘You have answered correctly; do this and you will live.’

But because he wished to justify himself, he said to Jesus, ‘And who is my neighbor?’ Jesus replied, ‘A man fell victim to robbers as he went down from Jerusalem to Jericho. They stripped and beat him and went off leaving him half-dead. A priest happened to be going down that road, but when he saw him, he passed by on the opposite side. Likewise a Levite came to the place, and when he saw him, he passed by on the opposite side. But a Samaritan traveler who came upon him was moved with compassion at the sight. He approached the victim, poured oil and wine over his wounds and bandaged them. Then he lifted him up on his own animal, took him to an inn and cared for him. The next day he took out two silver coins and gave them to the innkeeper with the instruction, ‘Take care of him. If you spend more than what I have given you, I shall repay you on my way back.’ Which of these three, in your opinion, was neighbor to the robbers’ victim?’ He answered, ‘The one who treated him with mercy.’ Jesus said to him, ‘Go and do likewise.’ (Luke 10:25-37 [NAB])
This parable effectively conveys the concepts of who is a neighbor, how to identify a neighbor, and how to behave toward a neighbor. Technically speaking, a body lying on the side of the road, apparently dead, perhaps a corpse, was considered ‘impure’ by the Jews. Thus, a devout Jew, particularly a priest and a Levite would not want to have any physical contact with a dead body. Likewise, the victim of highway robbery, a Jew, possibly on pilgrimage to Jerusalem, might have also objected to being touched by a Samaritan who was considered also ‘impure’ by Jewish law. And yet, it was the ‘impure’ Samaritan who felt for him, and was moved with compassion at the sight, possibly of an ‘impure’ corpse. And so, “the commandment of love . . . in its application creates a new sphere of purity that transcends any other notion of what is clean and what is unclean” (Chilton 2005, 59-60).

Jesus did not invent the principle of love, as “love of God (Deuteronomy 6:5) and love of neighbor (Leviticus 19:18) are basic principles embedded in the Torah . . . Jesus’ innovation [is] in the claim that the two are indivisible: Love of God is love of neighbor, and vice versa” (Chilton 2005, 64). And from the victimized traveler’s perspective, “individual suffering can achieve transcendence if the ‘other’ is seen not as a stranger or threat, but as mirroring the presence of God in the world” (Chilton 2005, 65). What is more, Jesus says: ‘whatever you did for one of these least brothers of mine, you did for me” (Matthew 26: 40). Thus, Jesus’ “spirituality of the ‘other’ . . . invested one’s neighbor with the attribute of God’s presence in the world, so that loving that person is tantamount to [love and] worship God” (Chilton 2005, 65).
Even more importantly, beyond ritual impurity lies the possibility of perceiving others as enemies. And here we find, in my view, the most radical teaching of Jesus which is loving one’s enemies (Matthew 5:38-48 and Luke 6:27-36), especially as he says: “But I say to you, love your enemies, and pray for those who persecute you . . . For if you love [only] those who love you, what recompense will you have? Do not the tax collectors do the same” (Matthew 5: 44, 46)? And in the Gospel of Luke, Jesus teaches:

Do to others as you would have them do to you. For if you love those who love you, what credit is that to you? Even sinners love those who love them. And if you do good to those who do good to you, what credit is that to you? Even sinners do the same. . . . But rather, love your enemies and do good to them, and lend expecting nothing back (emphasis is mine); then your reward will be great and you will be children of the Most High, for he himself is kind to the ungrateful and the wicked. Be merciful, just as your Father is merciful. (Luke 6: 31-33, 35-6 [NAB])

Thus, in the view of Bruce Chilton based on the narrow definition of altruism by William S. Green which would require neutral or even negative consequencies for the actor, Christianity does not provide the possibility for true altruism, either, as it promises reward for every good deed in the afterlife. Here however, more in agreement with Bradley S. Clough, I “would argue for a definition of altruism as action in which the *overriding motivation* is immediate benefit to others, not to oneself” (Clough 2005, 136).
Islam

Continuing with Islam, the third Abrahamic religion, we see an attitude to charity and altruism similar to those in Judaism and Christianity. The Arabic term for ‘altruism’ is a recent literal translation, and as such, does not occur in the early religious literature of Islam. However, “over the centuries, Muslims have referred to altruistic behaviors with several different words, which appear in the Qur’an, the prophetic traditions, and in [other] legal, theological and mystical literature” (Homerin 2005, 67).

While prayer with submission and devotion to God is the vertical dimension of faith, giving alms to the poor and needy – faith in action in the World – is the horizontal dimension. Almsgiving is regarded extremely important, and is regulated by great many passages of the Qur’an and other scriptures of Islam. The frequent and paired command to perform prayer and pay alms is interpreted by Moslem scholars as a “concise expression of Muslim faith and action” Almsgiving is a fundamental function of faith, serving two purposes: by helping others, it promotes a just society, and by exercising self-discipline and even self-sacrifice, it also purifies the individual almsgiver (Homerin 2005, 71). Long and detailed passages of the Qur’an emphasize the social function of alms for the public good.

In contrast to usury, with its ruinous rates of interest that devour the poor, alms nurture the community and help it grow. In addition to functioning as a public charity … almsgiving [also] yields spiritual benefits; it may atone for past misdeeds and lead to heavenly reward. In fact, in several instances the Qur’an likens almsgiving to giving God a loan: ‘Whatever charity you give will be repaid to you in full, and you will not be treated unjustly’ (2:272), and ‘whatever you give of alms for God’s sake, will be doubled’ (33:39). (Homerin 2005, 73-74)
About the same time when Moses Maimonides lived, a 12th century Moslem theologian, Abu Hamid al-Ghazzali, declared similar views to those of the Jewish theologian. And accordingly, almsgiving ‘purifies the person … from the destructive impurities of niggardliness’ and demonstrates their gratitude for God’s blessing. Also, in order to avoid ostentatious hypocrisy alms should be given in secret, so that neither the donor, nor the recipient would know the other’s identity. Furthermore, “the donor should not be proud of his or her almsgiving or think himself or herself superior to the poor because the donor is only serving as the trustee of God, to whom all things belong. In fact, says al-Ghazzali, the donor should thank the recipient” for the opportunity to fulfill his obligation of almsgiving (Homerin 2005, 76).

The Sufi tradition, being the mystic branch of Islam, places special emphasis on overcoming the desires of the flesh by various forms of self-discipline, such as fasting, seclusion and voluntary poverty in order to focus completely on God, deepen religious insight, and achieve eternal bliss. However, “giving away one’s possessions . . . may not always be altruistic, depending on one’s motives. The great philosopher Ibn Sina (Avicenna, d.1037) took a dim view of ascetics who were motivated by heavenly reward” by saying that “Asceticism without mystical insight is a kind of business transaction in which one sells the pleasure of this world below for the pleasure in the world to come.” Nevertheless, almsgiving and other religious practices “may serve as the means for moral discipline and purification” (Homerin 2005, 79-80).
As we have seen, Avicenna, al-Ghazzali and other “Moslem scholars have carefully considered the ramifications and ambiguities involved in seemingly selfless good deeds toward others. The Sufi term *ithar*, ‘preferring the other to the self,’ probably is the closest medieval Muslim equivalent to altruism.” But again, it will depend on the definition of the term.

The *ithar* of Muslim chivalry and mysticism may fit Green’s definition of altruism as ‘intentional action … for the welfare of others that entails at least the possibility of either no benefit or a loss to the actor.’ This will be the case, however, only if we conceive of ‘benefit’ and ‘loss’ in material and social, not spiritual terms. By contrast, *ithar* would not meet the criteria of Jacob Neusner and Alan Avery-Peck’s definition of altruism as ‘unselfish, unrewarded behavior that benefits others at a cost to oneself.’ In fact, given such a restricted definition, there can be no altruism whatsoever in Islam because God has promised in the Qur’an to reward every good deed done by any person. (Homerin 2005, 84)

**Hinduism**

Hinduism is one of the oldest, or perhaps the oldest religious tradition in the world with a complex belief system and a massive body of ancient writings, such as the Vedas, Upanishads, Ramayana, Mahabharata, Bhagavad Gita, and others. *Karma* is a basic concept in Hinduism, meaning ‘action’ – good or bad – that starts an entire cycle of cause-and-effect, which, in turn, results in *samsara*, the cycle of birth-death-rebirth, from which one can escape through righteous living, that is, fulfilling one’s righteous duty in life, called *dharma*.

In the Mahabharata, it is pointed out that the altruistic dharma of a king (similarly to that of a pregnant woman) requires renunciation of his personal pleasures
“in favor of seeking to ‘benefit the world’ – that is, all creatures under his sovereign protection” (Davis 2005, 167). But renunciation does not mean abandoning action altogether. “Rather, renunciation is a matter of abandoning attachment to the fruits of action. Action undertaken without any interest in the result or fruit to be gained – truly disinterested action – allows one to act in the world, and not bind oneself further to the world” (Davis 2005, 171). In other words, acting in the world without being bound by attachment to the world – which resembles the Christian teaching of ‘being in the world, but not of the world.’ Thus, “the worldly actor doing his duty (dharma) with a disinterested mentality, acting only for the good of the world, does not retain any detrimental karmic consequences. Generalized altruism, if done in the proper state of mental equanimity, is liberating” (Davis 2005, 172).

While there had been various disciplines to promote the attitude of equanimity, Krsna introduces a new method, that of devotion or bhakti to God – namely, to Krsna himself, saying that “those who share me with love are in me and I am in them” (Davis 2005, 173). Again, there is a remarkable resemblance with Jesus saying that He and the Father will dwell in those who love Him: “If a man love me, he will keep my words; and my Father will love him, and we will come unto him, and make our abode with him” (John 14:23). And “by making Krsna the motivating basis of one’s actions, one may remove self-interest” (Davis 2005, 175). And ultimately, such detached action can lead to moksha, which is understood as the highest state or “liberation from all bondage to the cycle of recurrent life. Therefore, in Krsna’s view, action devoid of all selfish interest
and conducive to the welfare of others paradoxically benefits the selfless actor in the highest degree” (Davis 2005, 176).

**Buddhism**

Last but not least, I wish to discuss briefly altruism in classical Buddhism. In the words of Todd Lewis, “Unlike the western monotheisms . . . the Hindu-Buddhist worldview understands life as an ongoing succession of incarnations – a ‘wheel of life’ (samsara)” in the course of which beings undergo birth, death and rebirth, suffering indefinitely according to their deeds which generate karma. But, it has to be kept in mind that the concept of karma is “not fatalistic because one is continually, every moment creating new merit and demerit to change the ongoing calculus of karmic destiny . . . which has motivated Buddhists . . . [to] avoid doing evil and making good karma” (Lewis 2005, 90-1).

Furthermore, at the core of Buddhist thought are three basic concepts: impermanence, no-soul and suffering. The first of these concepts, impermanence, asserts that “reality is a process of ceaseless change and is not reducible to permanent things.” The second concept, no-soul or ‘an-atman,’ expresses the notion that there is no essential or central entity of a person, that there is no internal locus of an unchanging personal individuality . . . around which to organize one’s primordial existential desires or attachments.” And the third concept, suffering, plays out in the universal reality of “illness, old age, death and rebirth” And so, the concept of universal suffering provides an ethical focus of living. And “Compassion is the proper human response to moral
[existence] – an ethos that underlies all Buddhist practices of altruism” As a result of impermanence and suffering, “the universe is a vast web of connections (conditioned by karma and other causalities), and beings are linked and sustain their lives through multiple interdependencies” (Lewis 2005, 92).

Both, the Theravada and the Mahayana sources of Buddhism promote benevolence, compassion, joy and equanimity. In the Theravada tradition, meditations are aimed to develop the mental state of loving-kindness and then extending it to ever widening circle of beings, first toward friends, next toward neutral persons, then toward enemies and finally toward all sentient beings (Lewis 2005, 94). Buddhists strive to develop not only the mental state of loving-kindness, but also pursue the ideal of compassionate and altruistic service in the world which is exalted in Mahayana discourses: “In everything you do, simply work at developing love and compassion until they become a fundamental part of you . . . Let those who desire Buddhahood not train in many Teachings but only one. Which one? Great compassion” (Rinpoche 1998, 209-10). Thus, according to Mahayana Buddhism “seeking personal enlightenment entails serving others, and altruistic actions are central to the final realization of the advanced spiritual seeker” (Lewis 2005, 99).

Loving-kindness and compassion (karuna) are prominent features of both classical and contemporary Buddhism. Not unlike their Christian counterparts, Buddhists monasteries by the 9th century CE have become, and have remained ever since, places for healing the sick, teaching the young and the ignorant, and provide all kinds of service
to surrounding communities which in turn, have sustained and supported the monks and
nuns. Thus, “Buddhist monasteries . . . across Asia [have] become centers of education,
charity and medical practice – that is, institutions of altruism” (Lewis 2005, 103-4).

Regarding the decisive condition for a strict definition of altruism, if altruistic
action always and necessarily generates neutral or negative consequences for the actor,
we may conclude that altruism by the strictest definition can occur in Buddhism, because
“Once one has reached enlightenment, all seeds of karma have been ‘burned up,’ and the
casual mechanisms of additional karma generation have been forever ‘unplugged.’” Yet
these Buddhist saints (‘arhats’ in the Theravada and ‘bodhisattvas’ in the Mahayana
tradition) who help others are still embodied as humans, so they are subject to non-
karma consequences of the human condition, which can cause the enlightened ones also
to suffer from disease, old age and death. In fact, according to tradition, there was such
an enlightened Buddhist saint who instead of dying to the human condition and entering
nirvana, chose to remain among humans and help them – following his example other
Buddhist saints have made the same choice (Lewis 2005, 109).

Altruism in contemporary Buddhism is perhaps best represented by the socially
engaged Buddhism of Thich Nhat Hanh, a Vietnamese monk who, based on the central
component of mindfulness meditation, with his followers decided to go out from their
seclusion and help people in the world – and do so with mindfulness. They have
accomplished much good in their native Vietnam and in many other places of the world,
beginning from the 1950-ies through the present time. (Clough 2005, 118-9).
In conclusion we may state that in a system of karmic consequences, well-intended actions bear good fruit in the future which ultimately benefits the actor, also. However, as quoted earlier in this Chapter in connection with Christianity, and in agreement with Bradley S. Clough, I again “would argue for a definition of altruism as action in which the *overriding motivation* is immediate benefit to others, not to oneself” (Clough 2005, 136). And of course, the *overriding motivation* may be thought of as cognitively enhanced empathy beyond emotional contagion, beyond personal distress and even beyond targeted assistance, and as such, in the final analysis, each and all of the religious faith traditions greatly promote empathy, compassion and altruism.

After considering compassion and altruism in some of the major world religions, now I shall turn my attention to some contemporary evolutionary thinkers who argue for the positive influence of religion on empathy, compassion, altruism, and on morality, in general.

Jeffrey Schloss raises the issue of the evolution of moral capacity and the evolution of moral norms. In his view, morality constitutes a particularly interesting question within evolution, not only because individuals (and sometimes even collectives) occasionally behave in ways that appear to be contrary to reproductive self-interest, but also because they seem to be choosing and judging behaviors “by criteria that are understood to exist independent of the inclinations of the actor” (Schloss 2004, 7)
Furthermore, informed by the work of other philosophers, Schloss points out that
there are two particular features of this moral capacity:

First, the demand of ethical norms is felt or understood to be
categorical, [meaning that] what is moral is so regardless of personal
desire, and it is not understood as merely one among many optional
strategies for life enhancement. Second, our experience of the moral life
involves not just the evaluation and selection of behaviors independent
of, and sometimes even in opposition to, personal desire, but it also
includes a distinctive kind of desire – secondary desire or meta-affection
– that entails the ‘desire for [the] right desire. (Schloss 2004, 7)

Then, Schloss considers the potential explanations for this evolutionary turn: one
is the ‘adaptationist’ or ‘cognitive’ perspective, that is, the remarkably evolving
cognitive abilities of *Homo sapiens* make it possible to anticipate behavioral
consequences, to evaluate alternatives as more or less desirable, and to select the option
promising the best outcome. (Judging what is good or bad is, of course, another big
subject for another discussion altogether.) But here and now, the other explanation, to
parallel the ‘cognitive,’ is the ‘affective’ perspective which is also called the
‘functionalist’ view, which resembles empathy in a more biologically oriented approach:

So why do we have morality if we already have emotional value markers
– [such as] disgust, pleasure, fear, attraction – for behaviors, internal states, or
environmental conditions with significant reproductive consequences? The
proposal is that our emotional inclinations themselves have become so varied and
at times ambiguous . . . that moral capacity serves as a meta-affective evaluator
of behavioral motivations. Darwin himself proposed such a role for conscience,
which he argued was pained when one chose . . . to satisfy a desire with shorter-
rather than longer-term fulfillment. (Schloss 2004, 8-9)

Donald Broom, contends that morality is the source (or at least one of the
sources), not the result, of religion. He argues that “In the course of the evolution of
religion in humans, much of the moral code would have been established early on, but the observance of this code would have varied among individuals. Religion would have developed in order to provide a structure which encouraged the widespread observance of the moral code.” Broom also argues that “All human societies have a propensity for religion because religion provides a valuable structure for the moral code which is valuable in all of those societies. The religious framework makes it easier for the average person, or perhaps more importantly, for the likely transgressors of moral codes, to understand what should and should not be done.” (Broom 2003, 176)

And to use a more naturalistic terminology, we might think of such development of religious traditions as the meeting ground for ‘bottom-up’ emotion and ‘top-down’ cognition in the cultural evolution of the human race.
CHAPTER FIVE

SECULAR VIEWS ON THE CORRELATION OF EMPATHY WITH MORALITY AND RELIGION

It would be tempting to say that it was the remarkable advances in evolutionary psychology and in biological and social neuroscience, that gave rise to the conclusion by some philosophers that religion is entirely unnecessary for sympathy and empathy – that is, to feel with and for our fellow beings, human and animal, and to exercise compassion and altruism. However, this is not the case, as the currently surging secular views of morality have a long-standing tradition that go back for centuries, even millennia – even if considering only our own Western civilization, let alone the cultures of the Far East.

Also, as the many religious wars over the centuries between Catholics and Protestants in Christian Europe, or those between Shiite and Sunni Moslems in the Middle East attest, dogmatic, organized religion easily lends itself to be exploited by worldly aims, such as those of the rulers of medieval Europe and more recently, in the 20th century, by the emerging nation states in the Middle East, respectively. Not to mention the current wave of terrorist attacks by Moslem individuals and organizations against the Western World, using a religious ideology as its psychological foundation. It would be far beyond the scope of this paper to discuss the cultural background of all these historic events or the psychological undercurrents in the psyche of the peoples involved. Suffice it to restate the common observation that as soon as any one religion declares itself to be the one and only true divine revelation, that idea, through the power
of ‘logos’ and rhetoric, is likely to evolve into an ideology with an internal need for its militant propagation, and its sometimes violent imposition on all people far and near, as the Christian Crusades of the Middle Ages, or Islamic terrorism of our own era, shows.

So, the scope of my paper, and of this chapter, in particular, is much more limited. First, I recall Kai Nielsen’s book *Ethics Without God* (1990), in which he argues that “Morality does not presuppose religion; [rather on the contrary,] religion presupposes morality.” His argument is based on Judaism and Christianity and it goes as follows: In Judaism and Christianity, God, by definition, is conceived as the supreme goodness, and as such, worthy of worship and adoration. But such conceptualization of God presupposes the ability to discern what is good at all, and above all, what can be thought of as the Supreme Good, and what is worthy of worship. Nielsen asserts that “our very concept of God seems [to be], in an essential part at least, a logical product of our moral categories” (Nielsen 1990, 77). Furthermore, Nielsen also counters objections by stating that such claim is not “submitting God to moral judgment,” but rather recognizing the fact that even to decide if a being, or Being, is superlatively good, we have to use our own sense of good and evil in order to arrive to such conclusion. Furthermore, this refers to all God’s commandments, as well: we have to rely on “our own moral insight and wisdom, defective as it undoubtedly is, to judge anything whatsoever whether it is good” and worthy of our obedience. And Nielsen concludes:

Indeed, with all our confusions and inadequacies, it is we, human beings, who finally must judge whether anything could *possibly* be so perfectly good or worthy of worship. If this be arrogance or Promethean hubris, it is inescapable, for such conceptual links are built into the logic
of our language about God. We cannot base our morality on our conception of God. Rather, our very ability to have the Jewish-Christian concept of God presupposes a reasonably sophisticated and independent moral understanding on our part. (Nielsen 1990, 79)

Next, I wish to discuss briefly some of the most recent writings of Anglo-American authors, (all published since the year 2000), who eloquently argue for the evolutionary and universal nature of morality, for its independence from, and priority to religion. They also emphasize the culture-bound and devisive nature of religions over centuries and millennia of recorded history. As a consequence, these authors also argue for the unnecessariness of religious faith in God for the conduct of a moral and virtuous life, and how, in fact, religions may promote a tribal attitude of exclusivity and thereby hindering the compassionate and merciful actions that supposedly would flow from religious faith in God. In this connection, I shall examine first the negative role of religions through the relevant writings of Sam Harris, Daniel Dennett, Richard Dawkins, Marc Hauser and Walter Sinnott-Armstrong.

Recently, the American author, Sam Harris, in his book *The End of Faith* (2004), argues that “our ethical intuitions must have their precursors in the natural world, for while nature is indeed red in tooth and claw, it is not merely so. [As] even monkeys will undergo extraordinary privations to avoid causing harm to another member of their species.” He emphatically concludes that “Concern for others was not the invention of any prophet” (Harris 2004, 172).

Furthermore, referring to European Christians acting heroically to save Jews during the Holocaust, Harris also argues as follows:
The fact that people are sometimes inspired to heroic acts of kindness by the teaching of Christ says nothing about the wisdom or necessity of believing that he, exclusively, was the Son of God. Indeed . . . we need not believe anything on insufficient evidence to feel compassion for the suffering of others. Our common humanity is reason enough to protect our fellow human beings from coming to harm. (Harris 2004, 106)

Yet, the idea that Christ, alone and exclusively, was the Son of God has led to an ideology (idea + logos) of intolerance imposed on, and by historic necessity, embraced by whole peoples and entire nations leading to wars and violence of horrendous proportions. Even minor differences over the particulars of Christian faith resulted in protracted wars within Medieval Europe, let alone the Christian Crusades against Moslems in the Middle Ages – the backlash countereffect of which we are witnessing as Islamic terrorism against Western civilization at the present time, even in the 21st century.

Referring again to the Holocaust, Harris demonstrates the effects of moral communities based on religion using the simple example of a Nazi prison guard’s daily work and loving family life. For the guard Jews were outside his own moral community. His beliefs about Jews hardened him to the natural human sympathies that might have otherwise prevented him from torturing and killing innocent human beings. And Harris further explains by stating that religion, unfortunately, “casts more shadows than light:”

Rather than find real reasons for human solidarity, faith offers us a solidarity born of tribal and tribalizing fictions. . . . religion is one of the great limiters of moral identity, since most believers differentiate themselves, in moral terms, from those who do not share their faith. No other ideology is so eloquent on the subject of what divides one moral community from another. Once a person accepts the premises upon which most religious identities are built, the withdrawal of his moral
concern from those who do not share these premises follows quite naturally. . . . the suffering of those who are destined for hell can never be as problematic as the suffering of the righteous. (Harris 2004, 176-7)

On a more positive note, Harris also argues that while there are many other requisites for a person’s happiness “we can hypothesize that . . . his condition will be generally improved by his becoming yet more loving and compassionate.” And he also adds that this is a “strictly empirical claim – one that has been tested for millennia by contemplatives in a variety of spiritual traditions, especially within Buddhism” (Harris 2004, 191). But long before Buddhists, Aristotle suggested that exercising the virtues, major and minor, would result in an enhanced well-being, even in greater happiness and joy, for that person.

Daniel Dennett, in his book *Breaking the Spell* (2006), discusses the correlation of religion and morality. In his view, many think that “religion plays its most important role in supporting morality . . . by giving people and unbeatable reason to do good: the promise of an infinite reward in heaven, and (depending on tastes) the threat of and infinite punishment in hell if they don’t.” According to this reasoning, “without the divine carrot and stick . . . people would . . . indulge their basest desires, break their promises, cheat on their spouses, neglect their duties, and so on.” Dennett asserts that such reasoning, besides presenting a most demeaning view of human nature, simply does not seem to be true (Dennett 2006, 279). And he goes on demonstrating his assertions in detail, supported with statistical evidence, such as the rates of divorce and domestic violence among religious versus non-religious citizens, the crime rates of red
versus blue states, possibly representing more versus less religious traditions, and the
statistics of prison populations of the nation (Dennett 2006, 279-80).

Dennett regards the religious belief in a reward system of heaven and hell in the
afterlife for good and evil deeds in this life immature at best, and possibly much worse,
as it has become obvious in a post-9/11 world. Dennett also recognizes that “many in
the religious community would not welcome the demonstration that a belief in God’s
reward in heaven or punishment in hell makes a significant difference, since they view
this as an infantile concept of God in the first place, pandering to immaturity instead of
encouraging genuine moral commitment.” Furthermore he opines, that many believers
would much prefer scientific “evidence that belief in heaven and hell has benign effects.
[Since] everybody already knows the evidence for the countervailing hypothesis that the
belief in a reward in heaven can sometimes motivate acts of monstrous evil” (Dennett
2006, 280).

Dennett also demonstrates that the caring and compassionate work of scientific
materialists are not any less effective than that of religious people, as they do care for
the well-being of the poor and oppressed not only in a physical sense, but even in a
metaphysical sense, such as social justice, political and religious freedom. “After all a
good scientific materialist believes that mental health – spiritual health, if you like – is
just as physical, just as material, as ‘physical’ health. A good scientific materialist –
Dennett contends – can be just as concerned about whether there is plenty of justice,
love, joy, beauty, political freedom, and, yes, even religious freedom as about whether
there is plenty of food and clothing . . . since all of these are material benefits” (Dennett 2006, 305).

Furthermore, the work of such socially concerned scientific materialists is certainly much more effective than that of some “deeply spiritual” individuals who only care about their own spiritual well-being – while disregarding the plight of the needy far and near. Dennett argues as follows:

[There is] a common confusion of moral goodness with ‘spirituality’ [which] permits . . . people to slack off on the sacrifice and good works, and hide behind their unutterably sacred (and impenetrable) mask of piety and moral depth. It’s not just the hypocrites . . . [but] many people who quite innocently and sincerely believe that if they are earnest in attending to their own personal ‘spiritual’ need, this amounts to living a morally good life. (Dennett 2006, 305-6)

Daniel Dennett succinctly summarizes his chapter on Morality and Religion:

The widely prevailing opinion that religion is the bulwark of morality is problematic at best. The idea that heavenly reward is what motivates good people is demeaning and unnecessary; the idea that religion at its best gives meaning to a life is jeopardized by the hypocrisy trap into which we have fallen; the idea that religious authority grounds our moral judgments is useless in a genuine ecumenical exploration; and the presumed relation between spirituality and moral goodness is an illusion. (Dennett 2006, 307)

Next, in his much acclaimed, as well as much maligned work, The God Delusion (2006), Richard Dawkins argues, that our moral sense of right and wrong can be derived from Darwinian evolution and he elaborates on four particular evolutionary reasons for altruism, empathy and generosity. Referring to his own previous work in The Selfish Gene, Dawkins explains as follows:
There are circumstances – not particularly rare – in which genes ensure their own selfish survival by influencing organisms to behave altruistically. Those circumstances . . . fall into two main categories. [For one,] a gene that programs individual organisms to favour their genetic kin is statistically likely to benefit copies of itself. Such a gene’s frequency can increase in the gene pool to the point where kin altruism becomes the norm. (Dawkins 2006, 247)

The other main type of altruism is reciprocal altruism, formulated in the popular adage ‘I scratch your back and your scratch mine.’ This is often expressed in the mathematical language of game theory, introduced into evolutionary biology by Robert Trivers (such as the reciprocal altruism of cleaner fish in the deep seas picking the parasites from the skin of much larger predatory fish and remaining unharmed by them, or the warning calls of birds alerting their fellow birds to danger, or the feeding behavior of vampire bats sharing the blood meal with their less successfully sucking group members). This type of altruism does not depend on shared genes, but on the asymmetries of needs and on capacities to meet those needs (Dawkins 2006, 248).

Dawkins calls kinship and reciprocity the two main pillars of altruism in an evolutionary world, but he adds that there are secondary structures, such as animals remembering, and acting on their memory of how fellow animals have treated them in the past. Thus, animals do acquire reputation within their flock, herd, etc. Game theory has explained several variations of ‘Tit-for-Tat’ with mathematical precision. In human society, with the appearance of language and the potential for gossip, reputation becomes even more important. Biologists also recognize a “survival value in not just
being a good reciprocator, but fostering a *reputation* as a good reciprocator, too (Dawkins 2006, 249-50).

There has to be mentioned one more evolutionary reason for individuals to be altruistic and that is a social custom of altruistic giving as an “advertisement of dominance or superiority.” Dawkins cites the work of Israeli zoologist Amotz Zahavi who demonstrated such behavior in birds and fish. Also, anthropologists have described the “Potlatch Effect, named after the custom whereby rival chieftains of Pacific north-west tribes vie with each other in duels of ruinously generous feasts.” Dawkins also refers to the Norwegian-American economist Thorstein Veblen whose “concept of “conspicuous consumption” strikes a chord with many observers of the modern scene” (Dawkins 2006, 250). Finally, Dawkins summarizes the four evolutionary reasons as follows:

We now have four good Darwinian reasons for individuals to be altruistic, generous or ‘moral towards each other. First, there is the special case of genetic kinship. Second, there is reciprocation: the repayment of favours given, and the giving of favours in ‘anticipation’ of payback. Following on from this there is, third, the Darwinian benefit of acquiring a reputation for generosity and kindness. And fourth . . . there is the particular additional benefit of conspicuous generosity as a way of buying . . . advertising. (Dawkins 2006, 251)

Dawkins also refers to the work of the evolutionary biologist, Marc Hauser.

One of Hauser’s research project is the Internet-based “Moral Sense Test” to investigate the moral sense of real people by questionnaires and statistical analysis. The participants are asked to judge ten scenarios each presenting a hypothetical moral dilemma. The vignettes are variations of the same basic story with some differences,
however, that call for differences in judgment. Interestingly enough, the overwhelming majority of people come to the same decisions on each scenario, but they also have difficulty explaining their reasons. Hauser argues that this is what we should expect when dealing with our moral sense which is more like an instinct – built into our brains, but without immediate conscious awareness. He compares this to language, in which the details vary among languages, but the underlying deep structure of grammar is universal (as in Noam Chomsky’s linguistic theory of the deep structure of universal grammar). Also, people’s responses, and their inability to explain them, seem to be largely independent from their religious beliefs or the lack of them. Dawkins is citing Hauser’s own words: “Driving our moral judgments is a universal moral grammar (italics mine), a faculty of the mind that evolved over millions of years to include a set of principles for building a range of possible moral systems. As with language, the principles that make up our moral grammar fly beneath the radar of our awareness” (Hauser in Dawkins 2006, 255).

In another study, collaborating with the moral philosopher Peter Singer, Hauser focused on just three of the moral dilemmas, and compared the responses of religious people with atheists. The conclusion of this study was that “there is no statistically significant difference between atheists and religious believers in making these judgments. This seems compatible with the view . . . that we do not need God in order to be good – or evil” (Dawkins 2006, 258).
In conclusion, Dawkins states that “I’m not necessarily claiming that atheism increases morality, although humanism – the ethical system that often goes with atheism – probably does. Another good possibility is that atheism is correlated with some third factor, such as higher education, intelligence and reflectiveness, which might counteract (base) impulses” (Dawkins 2006, 262).

Last but not least, as a corollary to the positive formulation of morality based on empathy, in this chapter I also wish to consider the negative formulation of morality based on harm, or rather based on the avoidance of causing harm. Whether by God’s Commandments, the Golden Rule, or by civil law, moral conduct is regulated by the negative formulation of “thou shalt not . . .” and if you do cause harm, then there are negative consequences of punishment in some form.

Most recently, Walter Sinnott-Armstrong states that assuming that God does exist, “God must be good in order to be the foundation of morality” But he also adds that “none of the standard arguments for the existence of God suggests, much less demonstrates, that morality depends on God or religion” (Sinnott-Armstrong 2009, xvi). Instead, he promotes the idea that morality is based on refraining from causing unjustified harm to another. Sinnott-Armstrong foresees his argument about avoiding causing harm simplified into the Golden Rule, which he insists, it is not. Referring to the Biblical statement in “Do to others what you would have them do to you,” (Matthew 7:12), Sinnott-Armstrong points out that we may wish that others would give us a large sum of money, but this does not mean that we should do the same to others which would
be a sheer impossibility. On the other hand, the same Golden Rule is sometimes formulated in the negative: “Do not do to others what you would not have them do to you.” However, the example of a criminal wishing not to be sentenced to imprisonment by the judge shows that mere wants, wishes and desires cannot provide the foundation for morality. The judge has a moral reason to sentence the criminal, whereas the criminal does not have a moral reason not to be sentenced by the judge. Thus, Sinnott-Armstrong concludes that it is the reasons for our actions that determine their moral value. “What really makes certain acts immoral is not what I or anyone wants but, instead, that such acts cause harm to other people for no good enough reason” (Sinnott-Armstrong 2009, 64-5).

Religious believers sometimes infer that religion should get credit for the moral insight behind the Golden Rule, and that atheists will be morally hindered because atheists cannot rest their views on the Golden Rule. Much the opposite, however. The fact that the Golden Rule is stated in so many diverse religious traditions shows [that] the insights behind the Golden Rule do not really depend on any [one] religious tradition in particular. Those moral insights are part of common sense. Every religion needs to reflect this common sense in order to grow and survive for long. . . . The Golden Rule depends on a basic moral insight that was crucial to society regardless of religion. Hence, secular harm-based morality is not dependent on any particular religious tradition, or on religion, in general. (Sinnott-Armstrong 2009, 65)

Echoing Marc Hauser’s concept of the universal deep structure of morality, Sinnott-Armstrong argues that “even if we cannot say why it is immoral to cause unjustified harm to others, that should not make us doubt that it is immoral for moral agents to cause unjustified harm to others.” Thus, in his view, “atheists can legitimately hold on to objective morality, even if nobody has a fully satisfying account of its
ultimate basis.” This in contrast to theistic theories of morality that have much more objectionable problems of their own (Sinnott-Armstrong 2009, 76-77).

Furthermore, “the notions of causation also shows how harm-based morality can incorporate special duties and obligations, such as duties to family,” etc. Considering family, company, community and country, Sinnott-Armstrong also asserts that “secular harm-based account [of morality] is able to explain why disloyalty and disrespect for legitimate authority is normally immoral” and he insists that “the limits of loyalty and authority are determined by harm” (Sinnott-Armstrong 2009, 77-9).

Moreover, Sinnott-Armstrong explains that when the reason to do (or not to do) something is based on force or threat, that does not provide any connection to the content of the command. He also claims that a harm-based account of morality shows that there is a reason to be moral, even if there is no immediate motive, in which case it takes training and good character to motivate people to be moral (Sinnott-Armstrong 2009, 118-9) – as it was suggested by Aristotle nearly twenty-five centuries ago.

This principle easily translates into the simple example of a mother trying to teach her son not to hit his sister. The mother can explain to her son that hitting his sister is causing her unjust pain and harm, and that alone is reason enough no to do it. Or she just can threaten to lock her son in the basement for a week (or a lifetime!) if he hits his sister again. “This threat will give him a reason not to hit her sister. However, it will not give him the right kind of reason. It will not teach him to care about her sister.” And Sinnott-Armstrong concludes by stating that “divine threat of Hell, or promise of
Heaven operate in the same way. If our only reason to be moral is to avoid Hell or get to Heaven, then our motivation is far from ideal” (Sinnott-Armstrong 2009, 119).

So far, in the first part of this chapter, I have examined the secular views of some atheist philosophers who regard religion not only unnecessary, but as having even a negative influence on the evolution of genuine morality, for a combination of reasons. Professor John Haught, in his recent book *God and the New Atheism: A Critical Response to Dawkins, Harris and Hitchens*, refutes the views of these authors on altruism and morality, and raises questions about the origin of the values to which Dawkins, Harris and Hitchens ultimately appeal in their attack on religion, by saying “as long as he (Dawkins) formally insists that all virtue can be accounted for in a purely natural and specifically Darwinian manner, the question remains as to where along the way the values he appeals to in his attack on religion acquired their authority” (Haught 2008, 72).

Here I call upon the Integral Theory of Ken Wilber who – in his numerous books over the past two decades – has advanced a new vision of the totality of reality with detailed explanation as to where that authority is coming from, which, of course, also includes religion. While detailed discussion of Ken Wilber’s Integral Theory would be beyond the scope of the present paper, I shall return to it briefly in the last chapter.
CHAPTER SIX

EMPATHY: A MULTIDISCIPLINARY SYNTHESIS

If it feels good to be good, it might be only natural.

This catchy headline, that appeared in the Washington Post recently, captures the essence of the basic emotional feature of empathy as revealed by numerous reports recently. But before considering the most recent reports, I wish to recall what was briefly mentioned at the beginning of this paper. It is most remarkable that it has been exactly 35 years, since in 1975, when the biologist Edward O. Wilson raised “the possibility that the time has come for ethics to be removed temporarily from the hands of the philosophers and biologicized” (Wilson 1975, 562). And less than half a century later, the time has come when an integration can take place whereby morality and ethics can draw on both, philosophy and religion on the one side, but on the other hand, on evolutionary animal psychology, and biological and social neuroscience, as well. After the pendulum swinging into the direction of scientific materialism even for morality and ethics in the course of the last half a century, most recently, time has come for finally looking at and describing morality and ethics in an “integral” fashion, to use Ken Wilber’s term. His integral vision will be briefly discussed, and applied to empathy, later in this chapter.

Most recently, in September of 2009, James Duffy, a bioethicist at Texas University, has addressed exactly this state of affairs with his article tellingly entitled
“Mirror neurons and the *reenchantment* of bioethics” (italics mine), which could be regarded as one voice in the dynamic integral response to Edward Wilson’s call 35 years earlier.

In the words of neuroscientists Decety and Meyer, “the psychological construct of empathy refers to an intersubjective induction process by which positive and negative emotions are shared, without losing sight of whose feelings belong to whom. Empathy can lead to personal distress or to empathic concern (sympathy)” Furthermore, they also argue “that empathy involves both bottom-up and top-down information processing, underpinned by specific and interacting neural systems” (Decety and Meyer 2008, 1053).

Thus, informed by the views of several authors in the field of biological, developmental and social neuroscience, in this chapter I argue that while morality historically has been the monopoly of traditional religion and secular moral philosophy with a ‘top-down’ approach of overwhelmingly cognitive overtones, it can be traced back to empathy. Empathy, however, is based, first and foremost, on emotions, which in turn are founded in the anatomic structure and physiologic function of certain regions of the brain, as recently demonstrated by basic biological neuroscience. Nevertheless, the cognitive achievements of the human race, as reflected in both, religious traditions and in secular philosophy, can have a beneficial role in the positive enhancement of those most basic, even visceral, empathetic feelings. I assert that neither the anatomic structures and physiologic functions of the brain, nor the cognitive imagination of the
mind alone, but the two together in a dynamic, bidirectional interaction, create empathy, first visceral and emotional, and then, only secondarily, cognitive and imaginative. Empathy, in turn, becomes the foundation of morality, and morality the foundation of religion.

My argument is based on a multidisciplinary synthesis of what has been said so far regarding empathy, sympathy, compassion and altruism, using the contributions of evolutionary (animal and human) psychology, biological neuroscience, secular moral philosophy and religious ethics.

It has been a long-standing observation that “many animals survive not by eliminating each other or keeping everything for themselves, but by cooperating and sharing,” says Frans de Waal, the renowned primatologist in his most recent book *The Age of Empathy* (2009, 7).

He also states that “we often make snap moral decision that come from the ‘gut’” – that is, our emotions decide first, and then our reasoning tries to provide plausible justification afterwards. He sees pre-Kantian approaches to morality making a comeback which anchor morality in sentiments, rather than in logic. De Waal is also concurring with Darwin who “saw human morality as derived from animal sociality,” but his views are also in agreement with contemporary advances of evolutionary psychology and biological and social neuroscience (2009, 7).

Frans de Waal is posing the rhetoric question “Isn’t this the problem with modern philosophy? Obsessed by what we consider new and important about ourselves – abstract
thought, conscience, morality – we overlook the fundamentals . . . [for] if we ever want to understand how we got there, we will need to start thinking from the bottom up” – says he in reply to this question (de Waal 2009, 15). And oddly enough, it is monkeys and apes, and other animals, and young infants, that teach us about our evolutionary past, and also a long-forgotten psychologist from a century ago, Theodor Lipps (1851-1914) who first described the nature of empathy, by offering a bottom-up account, starting with feelings, “rather than the top-down explanations often favored by psychologists and philosophers” (de Waal 2009, 65-6).

Lipps called empathy an ‘instinct,’ meaning that we are born with it. He didn’t speculate about its evolution, but it is now believed that empathy goes back far in evolutionary time, much further than our species. It probably started with . . . parental care. During 200 million years of mammalian evolution, females sensitive to their offspring outreproduced those who were cold and distant. When pups, cubs, calves, or babies are cold, hungry, or in danger, their mother needs to react – [and quickly] . . . Females who failed to respond never propagated their genes. (de Waal 2009, 67)

As early as 1959, Russell Church, an American psychologist, published a scientific paper with the remarkable title “Emotional Reactions of Rats to the Pain of Others” which inspired several more experimental studies of animal “empathy,” “compassion,” and “altruism” – always using the term in quotation marks, to avoid the harsh criticism of behaviorists who at the time dominated the professional world of psychology and who didn’t believe in such concepts. “This work was subsequently ignored, due partly to the taboo on animal emotions, and partly to the traditional emphasis on the nasty side of nature” (de Waal 2009, 70). Later studies (as we saw in
Chapter Two), however, revealed that mice showed great emotional and behavioral sensitivity to pain, any type of pain, in other mice — depending, however, on whether the other mice, experiencing the pain, were in sight or not. These experiments in mice confirmed the hypothesis that it is not cognitive imagination that drives empathy. Thus, de Waal makes the conclusion that “seeing another’s emotions arouses our own emotions . . . bodily connections come first – understanding follows” (72).

As many of us have experienced with our four-legged furry friends, cats and dogs offer emotional responsiveness: they read and reflect our moods which non-mammalian pet animals would not do. “Every evolved capacity is assumed to have [adaptive] advantages. If emotional contagion was indeed the first step . . . toward full-blown empathy, the question is, how does it promote survival and reproduction?” Empathy may promote helping behavior indeed, but emotional contagion in itself does not do so. Consider the example of a human toddler who hearing another child cry, her own eyes fill with tears and runs to a parent for consolation – in effect turning her back on the source of her discomfort. “Due to this lack of other-orientation, psychologists speak of ‘personal distress’ [which] is a self-centered response that doesn’t provide a good basis for altruism” (de Waal 2009, 74). That, however, doesn’t make emotional contagion totally useless. Consider a wild rodent that upon hearing the fearful squeal of another, becomes fearful itself which causes her to flee and hide, thereby possibly avoiding and surviving the danger of the other. Or more significantly, consider “the mother who ‘turns off’ her pups’ aversive noise by taking care of their problem . . .
showing other-oriented behavior for self-centered reasons.” De Waal calls this “self-
protective altruism (italics original); that is, helping another so as to shield oneself from
aversive emotions” (75). Starting from the 1960s, experiment after experiment revealed
that animals, such as rodents and monkeys, would literally starve themselves to avoid
inflicting pain on others. Many replicated experiments found that each time a rat or a
monkey was given food and its neighbor received an electric shock and would flinch in
pain, the first animal would eventually forgo eating altogether. Such behavior “was
probably self-protective altruism: a desire to avoid unpleasant sights and sounds. [For]
It’s just awful to watch others in pain, which is, of course, the whole point of empathy”
(de Waal 2009, 75).

As we have seen here above and in more detail in Chapter Two, there is a great
abundance of observations of spontaneous animal cooperation, care, and consolation, as
well as countless reports of experiments that reveal animal empathy, emotional and
cognitive, especially with their own conspecifics, but across the species, as well. There is
no end to the list of animals, wild or domesticated, such as various kinds of rodents,
wolves and dogs, elephants, monkeys and apes, dolphins and whales that spontaneously
reveal their empathetic feelings by their behavior.

Meanwhile, in another field, in basic neuroscience, the discovery of ‘mirror
neurons’ in the early 1990s gave a big boost to the empathy argument – on the cellular
level. A team of Italian scientists from the University of Parma reported that “monkeys
possess special brain cells that fire not only when the monkey itself reaches for an
object, but also when it sees another do so.” The point being that these motor neurons do not distinguish between ‘monkey see’ and ‘monkey do.’ “They erase the line between self and other, and offer a first hint of how the brain helps an organism mirror the emotions and behavior of those around it” And the fact that this most significant discovery happened in monkeys obviously has not helped claims that empathy was a uniquely human trait. And most remarkably, “the discovery of mirror neurons has been hailed as being of the same monumental importance to psychology as the discovery of DNA has been for biology” (de Waal 2009, 79).

In the course of the last few years, since the year 2000, there has been an even greater surge of studies on mirror neurons and empathy. Many Italian neuroscientists, such as Iacoboni, Gallese, Cattaneo and Rizzolatti, have found that more than just simply mirroring the actions of observed others, “mirror neurons also reflect the intended actions and intentions of others” (italics mine) which indicates that “the individual’s ‘self-identity’ is therefore neither stable nor predictable, but is constantly being shaped by past and present intersubjective experiences” (Duffy 2009, 2).

Furthermore, Jorge Moll and Jordan Grafman, neuroscientists at the National Institutes of Health, have published several reports on using brain imaging (functional Magnetic Resonance Imaging, fMRI, for short) while volunteer research subjects are asked to think of various scenarios with moral significance. In one experiment, participants were asked to think of donating money to real charitable organizations with major societal causes, which caused a primitive part of the brain – the mesolimbic
reward system – to become active on the fMRI scans (Moll et al. 2006, 15623). These results showed that when the subjects placed the interests of others before their own, such as giving money to charity, the generous thought alone would activate a primitive part of the brain that usually lights up in response to more selfish pleasures, such as eating and sex. The implication is, of course, that altruism is not a superior moral faculty that suppresses basic selfish urges, but rather, is basic to the brain, hard-wired and pleasurable. These experiments revealed that “many aspects of morality appear to be hard-wired in the brain, most likely the result of evolutionary processes that began in other species” (Vedantam 2007, A-1). Another newspaper columnist, Nicholas Kristof, concludes “while charity has a mixed record helping others, it has an almost perfect record of helping ourselves. Helping others may be as primal a human pleasure as food or sex” (Kristof 2010, WK-10).

For the overwhelming majority of people, the basic, natural feeling of emotional empathy makes it difficult to hurt others or even just to see others being hurt – even if done for a good reason (such as medical treatment). And the strong feelings of psychic reward make a compassionate and altruistic action very likely, even difficult to avoid. In fact, De Waal says that “empathy needs both a filter that makes us select to what we react, and a turn-off switch” and that “Empathy’s chief portal is identification” (de Waal 2009, 213).

While empathy is a primal, visceral reaction, quite literally, there are some cognitive regulatory mechanisms that curtail its effects. We can consciously control its
arousal by “selective attention and identification” by simply not looking at images and
scenes that likely would arouse our empathic feelings. And even though we identify
easily with others, the extent of this identification depends on similarities in age, gender,
ethnic features, cultural background, emotional closeness, and the like. Of course, there
are those who are “pre-approved” for our empathic reactions, based on similarities or
emotional closeness, such as parents, spouses, children and friends, with whom we can’t
help but have an automatic and instantaneous empathetic responsiveness. On the other
hand, “empathy can also be nipped in the bud. Doctors and nurses in emergency rooms,
for example, just cannot afford to be constantly in an empathic mode” (de Waal 2009,
80-1). And then, there are times when matching the other’s emotions is not a good idea,
at all, such as when facing a furious boss, regardless whether he is right or wrong. “It is
just a matter of social rank – a dynamic intuitively understood by every primate” (de
Waal 2009, 82).

In spite of all the positive things that have been said about empathy so far, there
is also a ‘dark side’ to empathy. As we have seen, empathy is an innate capacity for
mirroring emotions of another, be it pain or pleasure. While the emotive, emotional and
motivating aspects of empathy arise involuntarily from the nervous system, one can
counteract cognitively and consciously this sympathetic inclination and can chose to
convert the natural inclination for compassion and altruism into empathetic malice, even
malicious glee and gloating. In other words, we could say that the empathetic ability is
also the root for malice or Schadenfreude, to use the German term, also well-recognized

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in English. Making such a choice repeatedly, the actions easily turn into the ‘second nature’ of a malicious personality.

Reflecting on mirror neurons, James Duffy argues that the empathetic capacity is entirely neutral.

... it does not provide a sufficient model for explaining how an individual chooses to respond in a particular interaction with another person. Although (one) may have an empathetic understanding of the other’s intentions, he still has free will to decide whether he wishes to reciprocate that intention (e.g., the ‘Golden Rule’ and ‘Silver Rule’). Indeed, empathy for the other does not guarantee an altruistic response and can in fact become a powerful tool for manipulating the behaviors of others. In this regard sociopathic individuals exhibit cognitive empathy whilst lacking emotional empathy — thereby allowing them to act in a ‘cold-blooded’ manner that manipulates the benevolence and/or distress of others. (Duffy 2009, 3)

Thus, here Duffy distinguishes between emotional and cognitive empathy which is in agreement with de Waal’s metaphoric model of the Russian Doll with its three layers. “In and of itself, taking another’s perspective is a neutral capacity: it can serve both constructive and destructive ends. Crimes against humanity often rely precisely on this capacity . . . (the) ability to assume (others’) view point and realize what will hurt or aggravate them the most. . . . Cruelty, too, rests on perspective-taking” (de Waal 2009, 211).

Psychopaths, sometimes violent, but always antisocial, are all around us, often in prominent positions as “snakes in suits,” as one book title labels them (Paul Babiak and Robert Hare, 2006). “The comparison with snakes is apt” — says de Waal — “since psychopaths seem to lack the Russian doll’s mammalian core. They do possess all of its
cognitive outer layers, allowing them to understand what others want and need, as well as what their weaknesses are, but couldn’t care less about how their behavior impacts them” (de Waal 2009, 211-2). “According to one theory, they suffer from a developmental disorder that puts them on a wrong learning track early in life . . . (which) culminates in manipulation and intimidation without the slightest worry about the pain it may cause” (de Waal 2009, 212). This can happen in a very personal diadic situation, in the extended family, or in the greater community, but also on a large social scale, as it did happen in the course of the last century in the case of psychopathic political leaders whose psychopathic behavior lead whole nations into disaster, desperation and disgrace. Thus, it is quite obvious that it is not the inner layer of visceral emotions, but the outer layers of cognitive perspective-taking that lead such individuals away from the more natural inclinations for kindness and compassion.

Just because natural emotional empathy can be used and abused by cognition and conscious choices for destructive purposes, it does not mean that cognition cannot be used also for much good. While helping others may be as primal a human pleasure as food and sex, and being good may feel naturally good, empathy can be also greatly enhanced by cognitive imagination of the human mind, and so, empathy evolved into more elaborate codes of morality and religion.

Religious world views, as we have seen in Chapter Four, do not yet explain two facts: They do not yet conceptualize the priority of the moral sense in humans that precedes and predates the concept of perfect goodness, even the perfect goodness of
God, and religious faith in God; and they cannot account for the physical/physiological sensation of the feeling at the sight of another’s distress. In the first case, the prior internal moral sense is being projected upon an external entity, called God who, in turn, would instill the sense of justice into human minds which had evolved already to a certain level as attested by the Sacred Scriptures of various religions; and secondly, religious views, while neglecting empathetic feelings, insist that charity and altruism is the result of cognition alone by recognizing and serving the justice of God.

“Altruism is usually contrasted with egoism,” – as Peterson and Seligman assert in their encyclopedic opus Character Strength and Virtues: A Handbook and Classification (2004). And they further explain:

An altruist intentionally acts for the other’s sake as an end in itself, rather than as a means to public recognition or internal well-being. . . . Altruism, especially when it extends beyond biological relations (kin altruism) and ‘tit-for-tat’ calculations grounded in self-interest (reciprocal altruism), is widely lauded and commonly considered a foundation of spiritual and moral life. (Peterson, Seligman 2004, 327)

Also, in its fullest expression, altruism may include significant self-sacrifice, as well, while aiding strangers or even enemies (Peterson, Seligman 2004, 327).

However, the priority of the moral sense to religion does not render religions entirely unnecessary as there is a dynamic, bidirectional correlation and interaction between the evolving moral sense and the various, also evolving, religious traditions. Once the idea of God and other related notions are cognitively conceived and religions established, they can play a positive role in character formation of individual human
beings, as explained by James Duffy in his article on “Mirror neurons and the reenchantment of bioethics” (2009, 2).

Earlier in this chapter, identification was mentioned that can be based on many different factors, the most basic of which is genetic kinship, and membership in various kinds of other groups, based on age, gender, ethnicity, educational and socioeconomic status, but also based on friendships and religious affiliations. However, people are not always lovable, and even one’s closest affiliates may be rather unlovable for various reasons, from time to time. And here comes in religion (especially Christianity and Buddhism) with its recommendation for ‘loving one’s enemies” or any others who appear to be unlovable for whatever reason.

It is also true that according to all the religious traditions, good deeds are likely, or even certain, to be rewarded, if not immediately, then surely in the afterlife, but this lag in time and place makes a more immediate, emotional motivation to help those in need only more likely. And it is this emotive – empathetic – motivation and intention that plays a crucial role in determining the altruistic value of an action. In agreement with J. Duffy, I also would suggest that “it is the nature of our intentions (our ‘character’) . . . that is most important in defining our moral choices. Recent neuroscientific findings (also) suggest that the ability to consciously select positive intention can be purposefully shaped by specific contemplative practices . . . these findings suggest that specific character traits may be increased by training” – as attested by the meditation practices of Buddhist monks (Lutz et al. 2004 in Duffy 2009, 4).
Thus, the most recent neuroscientific findings seem to prove the truthfulness of the old adage that ‘thoughts beget actions, actions form habits, habits shape character and character is destiny.’ But more importantly, the most recent neuroscientific findings are “consistent with Aristotle’s teachings that good conduct arises from habits that in turn can only be acquired by repeated conscious effort (Duffy 2009, 2). In addition, while mirror neurons provide for simple ‘motor mimicry,’ they also provide for more complex imitative behavior. And as recent neuroscientific findings suggest, our moral character is shaped not only by our own actions and habits, but also by the actions and habits of those people who surround us and whom we observe in our daily lives.

Observing kind, compassionate and altruistic actions and behavior in others results in the activation of the same brain regions (the anterior and middle cingulate cortex) that are also active when the experimental subjects themselves are thinking of, or actually performing altruistic actions (Immordino-Yang 2009 in Duffy 2009, 2). And in sheer practicality, this observation makes possible to develop our own repertory of kind and compassionate responses in words and actions.

In this connection, the views of Immanuel Kant, as already mentioned in the first chapter, are most relevant. Kant, as translated and edited by Mary Gregor, argued that feelings, such as love and compassion, cannot be commanded, and therefore it cannot be our duty to love or feel compassion – on the other hand, it is our duty to cultivate, develop and nurture our capacity to love and feel compassion (Kant 1797, 1996, 154-6).
And we can do this by surrounding ourselves by people who are behaving regularly with compassion and altruism, and imitating their behavior in our own actions.

The most succinct definition of such compassionate and altruistic actions is the Golden Rule. Several authors, such as Joseph Poulshock, Michael Shermer, and others discuss the principle of reciprocity as formulated in the Golden Rule: ‘Do to others as you would be done to,’ which appears in slightly different versions as the basic moral code of many different religions and cultures throughout the world. Poulshock lists nine different formulations, from cca 900 BCE to 800 CE, starting with Judaism, through Zoroastrianism, Buddhism, Confucianism, Socrates, Brahmanism and Hinduism, Christianity to the latest in Islam (Poulshock 2004, 126). According to Shermer (2004, 26), it was Hillel, the great Jewish rabbi of the first century BCE, in fact, an elder contemporary of Jesus, who raised the Golden Rule to the ultimate moral principle: “That which is hateful to you, do not do to your fellow. That is the whole Torah; the rest is the explanation” (Talmud, Shabbat 31a, the "Great Principle"). The Golden Rule, of course, features prominently in Christianity, as stated in the Gospels, “Do to others whatever (or ‘as’) you would have them do to you” (Matthew 7:12 and Luke, 6:31).

Michael Shermer provides an even more exhaustive list of the various formulations of the Golden Rule, including those found in the major world religions, as well as those by secular philosophers, from Diogenes Laertius who attributed it to Aristotle, through Hobbes, Spinoza, John Stuart Mill to Peter Kropotkin, among others.
(Shermer 2004, 25-6). Thus, there is ample evidence that the Golden Rule provides the foundation to secular as well as to religious morality.

In secular humanistic views, the Golden Rule is described as follows:

Living according to the Golden Rule means trying to empathize with other people, including those who may be very different from us. Empathy is at the root of kindness, compassion, understanding and respect – qualities that we all appreciate being shown, whoever we are, whatever we think and wherever we come from. And although it isn’t possible to know what it really feels like to be a different person or live in different circumstances and have different life experiences, it isn’t difficult for most of us to imagine what would cause us suffering and to try to avoid causing suffering to others. For this reason many people find the [negative] corollary to the Golden Rule – ‘do not treat people in a way you would not wish to be treated yourself’ – more pragmatic (www.Thinkhumanism.com, April 2010).

Whether in the positive or in the negative formulation, the Golden Rule calls people to the same kinds of sacrificial behaviors that are associated with kinship, it calls people to exercise altruism toward all, even those who are not members of one’s own group, that is, to act in an altruistic way that is not contingent upon genetic, or for that matter, any other, but sentient, relatedness (Poulshock 2004, 127-8).

This sentient relatedness has been a powerful motivator in morality even so far in history, but it also holds great promise for the future for more intentional application in the character formation of children, as well as of adults. The words of Frans de Waal provide insight into the dynamics of animal and human nature:

There exists, in fact, no obligatory connection between empathy and kindness, and no animal can afford treating everyone nicely all the time: Every animal faces competition over food, mates, and territory. A society based on empathy is no more free of conflict than a marriage based on love. . . . Like other primates, humans can be described either
as highly cooperative animals that need to work hard to keep selfish and aggressive urges under control or as highly competitive animals that nevertheless have the ability to get along and engage in give-and-take. (de Waal 2009, 45)

Nevertheless, “Biology constitutes our greatest hope. One can only shudder at the thought that the humaneness of our societies would depend on the whims of politics, culture, or religion. Ideologies come and go, but human nature is here to stay” says de Waal (2009, 45).

And it is this basic human nature that can be exploited for raising the bar of moral standards by providing young people with role models of compassion and altruism to imitate. In this connection, Daniel Goleman reported on a series of studies by NIH neuroscientists, Marian Radke-Yarrow and Carolyn Zahn-Waxler, who uncovered the fact that young children’s empathic concern mostly depended on how parents disciplined their children. “Children, they found, were more empathic when the discipline included calling strong attention to the distress their misbehavior caused someone else, (such as): ‘Look how sad you’ve made her feel’ instead of ‘That was naughty.’” The same neuroscientists also found that “children’s empathy is also shaped by seeing how others react when someone else is distressed; by imitating what they see, children develop a repertoire of empathic response, especially in helping other people who are distressed” (Goleman 1995, 99). Here, the reader is referred back to Chapter V, where the concept of harm-based morals, as put forth by Sinnott-Armstrong, is discussed. Sinnott-Armstrong argued that a harm-based account of morality shows that there is a reason to be moral, even if there is no immediate motive, in which case it takes
training and good character to motivate people to be moral (Sinnott-Armstrong 2009, 118-9), which is in full agreement with the views of Aristotle and Kant.

For a final thought, Ken Wilber’s Integral Theory has to be mentioned.

If we think of the universe as a circle or a square on a piece of paper two-dimensionally, or three-dimensionally in space, as an enormous cube or sphere without boundaries, infinite in all directions – starting from an imaginary center point, we can divide this square or circle, or cube or sphere, into four quadrants which would represent in the Upper Right (UR) quadrant the exterior objective appearance and actions of the individual brain, in the Upper Left (UL) quadrant the interior subjective intentions of the individual human being as a whole, in the Lower Left (LL) quadrant the interior cultural characteristics of the collective group, and in the Lower Right (LR) quadrant the exterior social organizations of the collective. For short, we might even call these quadrants, following their previous order: the “IT,” the “I,” the “WE,” and the “ITS.” (Wilber 2000, 67)

In reference to my subject of empathy, here I’ve described empathy in terms of the external structures and functions of the brain (IT) and how cerebral structure and function supports the interior intentions of the mind (I), which in turn influences the external structure and function of the brain again, in a bidirectional, dynamic interaction. This interplay between the brain (IT) and the mind (I) becomes much more complex when it is not only one individual’s brain and mind, but the brains and minds of many individuals in an entire group or collective that are interacting. With regard to empathy,
when members of a whole collective put their minds together (WE), empathy resulted in moral codes with cultural distinctions, giving birth to the various world religions, ultimately organized into massive social entities (ITS) of organized religion.

As it is described in the third chapter of this paper, in terms of brain development, the exterior objective “IT” structures of individual evolution proceeded from atoms to cells, and through some more stages to the neural cord in fish and amphibians, to the brain stem of reptiles, to the limbic system of mammals, to the neocortex of the primates, and finally to the present complex neocortex in humans – the latter two structures including the ‘mirror neurons.’ The individual interior and subjective “I” levels proceeded from simple sensation to perception, to impulse, to emotion (such as empathy and fear), to image, to symbols, and to concepts. In the collective interior quadrant (WE), after some prehistoric (even preverbal) stages, evolution resulted in the archaic, the magical, the mythic and more recently, in the rational world views and corresponding religions. And correspondingly, on the external social scene of the ITS, evolution resulted in foraging tribes, horticultural villages, agrarian empire states, industrial nation states, and we are arriving to the global information age in our own era on the Earth, before reaching more universal, even cosmic proportions (Wilber 2000, 67-8).

In terms of disciplines, biological and evolutionary neuroscience of the UR quadrant describes the exterior, objective structures and functions of the brain; social neuroscience and evolutionary psychology of the UL quadrant is concerned with
interindividual subjective interactions of the mind; while in the LL quadrant, the collective groups relate to the world through various cultures, including moral codes, religions, nascent theology, and even system theory; and ultimately, in the LR quadrant, the collective exterior appears in the administrative structures of religious and social institutions.

Upper and lower, right and left quadrants are all part of a whole – they only represent different perspectives for describing the same reality – in this case, empathy. Matt Ridley uses the more general term ‘virtue,’ but it could simply mean empathy, compassion, kindness, when he states that it is an “instinctive and useful lubricant that is part of our nature. So instead of trying to arrange human institutions in such a way as to reduce human selfishness, perhaps we should be arranging them in such a way as to bring out human virtue” (Ridley 1997, 144).
CONCLUSIONS

In this paper, I have discussed various aspects of empathy, with an interdisciplinary approach, using the most recent advances in biological and social neuroscience, evolutionary psychology, animal and human, as well as traditional religions and secular moral philosophy. I began with etymologic definitions of empathy and other related terms, such as sympathy, compassion, pity and altruism, including general philosophical distinctions among them. Next, I have described in greater detail some of the psychological aspects of empathy based on countless observations and many experiments in evolutionary animal psychology. Observations and experiments in human social psychology revealed great similarities with those in animals. Then, in the course of the last two decades, basic and clinical neuroscience has made major contributions to our understanding of empathy on the cellular level through the discovery of ‘mirror neurons.’ Most importantly, ‘mirror neurons’ are motor neurons that fire not only when an individual executes an action, but also when an individual merely observes an action carried out by another. These ‘mirror neurons,’ furthermore, reflect not only the actions, but even the intentions of others, both animals and humans.

Through the advances in evolutionary psychology, and neuroscience, it has become ever more clear and indisputable that empathy with its ‘hardwired’ physiologic nature provides the foundation for morally significant actions, moral behavior, in general, and for morality as a whole, which precedes all religions. As a result of, or partially parallel with such recent development in the natural sciences, some secular
philosophers – by emphasizing the divisive nature of (fundamentalist) religious beliefs – advanced their views against the historical monopoly of theology and religion (especially that of the Abrahamic religions) on the realm of morality, and the virtues. Others, also secular philosophers, have defended the role of religion in the cognitive cultivation of positive empathic feelings for the practice of compassionate and altruistic actions, and for the promotion of individual character formation.

Finally, based on Ken Wilber’s Integral Theory, I have argued for the integration of all aspects of empathy, combining the achievements of all disciplines for the benefit of the individual as well as the collective, big and small.

In further studies, each one of these aspects of empathy could be further investigated and described, and exploited for the purposes of character formation of the young and the not so young, alike. Nevertheless, I firmly believe that the most viable ideas and the best solutions for society in the Age of Empathy will be borne by the dynamic interplay of all the disciplines combined to represent the totality of earthly, and even of cosmic, reality.
REFERENCE LIST


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