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BIOLOGICAL ASPECTS OF TRANSPERSONALISM

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An issue of this journal's predecessor asked the question, 'Science and Mysticism: Is Synthesis Possible?' (McNeill, 1983). It is my intention in this article to try to address this question in the context of transpersonalism and from the point of view of an adherent of evolutionary biology. My expertise is not in mysticism, and very likely some readers will have reservations about some of the things said of this subject, but at least, for what they are worth, my suggestions might be of some interest as a sample of the kind of thinking evolutionists sometimes engage in in this general area of investigation.

Over the last two or three decades (since, say, the publication of Rachel Carson's Silent Spring, 1962), and thanks to the earlier insights of writers like Teilhard de Chardin (1964, 1965a, 1965b), and more recently, Francis Schaeffer (1982) and Thomas Berry (1988), the idea of a sense of relatedness to and responsibilities towards nature is now commonplace in much religious writing. One might get the impression, though, that this nature-consciousness has been rather late in appearing, and is yet another example of the slowness of theologians in coming to grips with scientific thought: as relatively new sciences like ecology have demonstrated the inter-dependence of man (using the term in its generic sense) and the natural environment, so too has theology—as with the reluctant recognition of the discoveries of Galileo, Darwin and others—had to make room for these new findings.

A closer look at earlier religions, including Christian writing however, suggests that the picture may not be so straightforward. To stay with Christian writers for a moment, it is not difficult to find expressions of a sense of unity with nature long before it became a predominant theme in the books of Teilhard de Chardin and others, and before the term 'ecology' (from iokos, house - as in habitat) was coined. The Anglican clergyman Charles Kingsley, author of The Water Babies, for example, in a letter accompanying a copy of this book to his friend the Rev. F. D. Maurice in 1862, wrote that the then recent work of Charles Darwin and W. H. Bates (author of The Naturalist on the River Amazons, which contains theories on the evolution of mimicry) had filled him with "utter astonishment and awe", and were for him evidence of a "living, immanent, ever-working God" (Kingsley, 1982).

For Kingsley, evolutionary theories simply provided confirmation of a long mystical tradition—in Christianity as in other religions—in which a heightened awareness of the essential interrelatedness and interdependence of all phenomena (see Neill, 1993), including man, is a prominent feature. In the novel Two Years Ago, published in 1857—i.e. two years before Darwin's Origin of Species—Kingsley has one of his main characters say that there was "link enough...and chains of iron and brass too" between zoophytes (sea anemones etc.) and humans (Kingsley, 1890, p. 150). After Darwin sent Kingsley (who was a respected naturalist in his own right) a copy of The Origin of Species in late 1859, Kingsley wrote back that he had "gradually learnt to see that it [was] just as noble a conception of Deity to believe that He created primal forms capable of self-development...as to believe that He required a fresh act of intervention to supply the lacunas which He Himself has made" (letter reproduced in F. Darwin, (1892)).
A pivotal concept in modern ecological thought is the idea that complex ecosystems—rainforests, for example—are the product of often exquisitely subtle adjustments and accommodations between species over evolutionary time (see, e.g. Ricklefs, 1990). That is to say, colony and evolution are very closely related. General Smuts (1926) realised this just as the new science of ecology—the study of the interactions of plants and animals with each other and the physical environment—was emerging in the earlier part of this century, but perhaps the most eloquent expression of this concept (and which Kingsley clearly had in mind in his letter to Darwin) is that contained in the last paragraph of The Origin of Species:

It is interesting to contemplate a tangled bank, clothed with many plants of many kinds, with birds singing in the bushes, with various insects flitting about, and with worms crawling through the damp earth, and to reflect that these elaborately constructed forms, so different from each other and dependent upon each other in so complex a manner, have all been produced by laws acting around us...There is grandeur in this view of life [in which] from so simple a beginning endless forms most beautiful and most wonderful have been, and are being evolved. (C. Darwin, n.d., pp 373-4).

A sense of the interrelatedness of all things long predates Darwin, too, and in fact has long been a strand in Christian thought, notwithstanding this religion's often exploitative attitude towards nature. A striking expression of this strand can be found in Psalm 104 which, interestingly, speaks of the birds' "home" in the trees—a possible origin for the word 'ecology':

Praise the Lord, O my soul...He makes grass grow for the cattle, and plants for man to cultivate—bringing forth food from the earth...The trees of the Lord are well watered, the cedars of Lebanon that he planted. There the birds make their nests; the stork has its home in the pine trees. The high mountains belong to the wild goats; the crags are a refuge for the conveys...How many are your works, O Lord! In wisdom you made them all; the earth is full of your creatures. There is the sea, vast and spacious, teeming with creatures beyond number—living things both large and small...These all look to you to give them their food at the proper time. When you give it to them, they gather it up...When you hide your face, they are terrified; When you take away their breath, they die and return to the dust.

St. Francis of Assisi also comes to mind as the personification par excellence of enlightened Christian attitudes towards the natural world: to him, as Schaeffer (1982), p.75), writes, humans were "brothers" to the birds, and in G. K. Chesterton's (n.d., p. 99) words, he "wanted to see each tree as [an] almost sacred thing, being a child of God and therefore a brother or sister of man." St. Francis is often described as something of a revolutionary in the history of Judeo-Christian thought (see, e.g., L. White, 1967; Singer, 1986), but as Schaeffer (1982) notes, floral and faunal themes—reflecting the mystic tradition—are a prominent feature in medieval art, and similarly Kingsley (1879a) liked to point out that the masons who worked on the medieval cathedrals, as at Chester, were students of animal and vegetable form: "That is proved," Kingsley wrote, "by the flowers, the leaves...the birds, with which they enwreathed their capitals and enriched their mouldings." Kingsley attributed this consciousness in the workmen to a "remembrance" of the sacred groves of pagan times, which had become part of Christian tradition; the workmen's ancestors "had held the oaks for trees of God, even as the Jews held the Cedar, and the Hindoos [sic] likewise" (pp.305-6).

An interesting sidelight on medieval man's relationship with animals has been provided by C. S. Lewis (1964). Lewis points out that although it is true medieval zoology, as in the various 'Bestiaries' of the time (with their unicorns, dragons etc.), strikes us as childish, actual knowledge about the habits and so forth of animals among the general European population must have been considerably greater than today, given the almost total dependence on animals
for motive power and in farming in a society where “everyone who could be was a horseman, hunter, and hawker, and everyone else a trapper, fisher, cowman, shepherd, swineherd, goose-girl, henwife, or beekeeper” (p. 146-7). People in those times must have been aware, in some sense at least, of the interdependence of humans—who are a part of nature—and the rest of the natural world (as in the Psalm). Lewis also makes the intriguing suggestion that if it was believed, as Platonism taught (and Platonism had been incorporated into the Christian world-view of the time), that the visible world is made after an invisible pattern—the Platonic archetypes, or ‘ideas’—the expectation that some sort of moral sense would have been built into the nature and behaviour of the creatures would not have been unreasonable. If so, this would have been a remarkable anticipation of much that Charles Darwin would later have to say (see below), and in stark contrast to the view of non-human animals as mere automata advocated by Descartes (see Dunbar, 1984) and others from the seventeenth century onwards.

In his lecture on medieval decoration Kingsley compared Christian workmen’s reverence for nature with that of Jews and Hindus. Kingsley more fully discussed comparisons between feelings towards nature in Christianity and other religions,(and specifically mystical experiences involved) in a Preface to a now rarely seen book, The History and Life of the Reverend Doctor John Tauler of Strasbourg, published in 1857. In this Preface Kingsley points out that the kinds of ideas expressed by Tauler—who lived in the fourteenth century—had a pedigree dating back at least to the Brahmins, through the ancient Christian mystic, the so-called Pseudo-Dionysius the Areopagite, and eventually finding noted articulation in the writings of Meister Eckhart (who may have influenced Tauler—see also Rolt, 1940; Davies, 1991). Such ideas, according to Kingsley, "go down to the very deepest and most universal grounds of theology and of metaphysics", and "however distinctly Christian they may be" are "connected with thoughts which have exercised men of every race which has left more behind it than mere mounds of earth"—thoughts which readers "will find in the Greek, the Persian, and the Hindoo; in the Buddhist and in the Mohammedan Sufi." And interestingly, Kingsley suggests that readers may conclude from this that such thoughts, "bubbling up, as it were spontaneously, among men divided utterly from each other by race, age, and creed" must be "a normal product of the human spirit" (Kingsley, 1857, xxiii-xxv).

No doubt Kingsley had theological notions behind this last statement, but is nonetheless an interesting one in view of what biologists and anthropologists now believe to be the common ancestry of the human species (e.g. Australian, 24 November 1993). It may well be that mystical experiences concerning a sense of oneness and interrelatedness with nature in which the mystic feels that his "life becomes swallowed up into a larger whole"—a commonly found theme, to which I have already alluded (see also Selbie, 1926; Happold, 1977)—such experiences may be part and parcel of 'human nature', built into our species as it were. And just as a sense of oneness with nature in general seems to be a not uncommon experience in humans, so also does a sense of relatedness to other human beings. Just such a dual experience is clearly conveyed, for example, in the following extract from the German idealist Malvida von Meysenbug’s memoirs, as quoted by William James (1977):

I was alone upon the seashore as all these thoughts flowed over me, liberating and reconciling...I felt that I had prayed as I had never prayed before, and knew now what prayer really is: to return from the solitude of individuation into the consciousness of unity with all that is...Earth, heaven, and sea resounded as in one vast world-encircling harmony. It was as if the chorus of all the great who had ever lived were about me. I felt myself one with them, and it appeared as if I heard their greeting: 'Thou too belongest to the company of those who overcome.'

If all humans are related through common ancestry (it is currently believed that we all share about 99.9 per cent of our genetic inheritance, and as Thomas Berry [1988, p. 21] points out, we are all genetically related to the entire community of living beings, since all species share DNA and are descended from a single origin), then there is bound to be much that is
psychologically in common between us, and this could be in some sense what Kingsley is getting at when he talks about mystical understanding being a normal part of human experience. In any event, such a conception appears to have underlain much of Jung's thinking concerning the 'collective unconscious'. Jung believed that the latter contained traces of ancient ways of thought inherited from a remote past. Moreover, in a paper on 'Some Crucial Points in Psychoanalysis' (Jung, 1920), Jung discussed what he called 'biological duties', or what some describe as "those tendencies or motives in human beings giving rise to civilisation as inevitably as in the bird they give rise to the exquisitely woven nest" and which undoubtedly helps explain such universal cultural traditions as the incest taboo. (Which is to say, in Darwinian terms, such taboos have been selected for their conferring of greater genetic fitness in the 'struggle for existence'.)

The universally found sense of relatedness to each other and to nature, then--and associated sublime feeling--may be an inheritance that has evolved through processes of natural selection. This, anyway, is the view of some biologists. Sir Alister Hardy, for instance, from interviews conducted by the Religious Experience Research Unit (which he had founded) noted, firstly, that feelings of unity with one's surroundings were indeed a common phenomenon described by interviewees--as the following example details:

[The phenomenon] invariably occurs out of doors...Everything becomes suddenly more clearly defined; sights, sounds, and smells take on a whole new meaning...and I actually feel as though I were part of the scene around me (Hardy, 1983, p. 35).

Hardy believed that such experiences must have a strengthening and renewing effect, which benefits the people concerned, as presumably does religious belief generally, and that this would especially be so where the experience was one shared with one's fellows. The experiences would have a socially unifying effect, and would be of great value in the struggle for life in primitive communities and thus selected for in Darwinian terms. Hardy also thought that these religious emotions very likely had become linked with more basic biological feelings, including bonds of affection between parents and offspring and between members of broader social groups, which feelings probably pre-dated the emergence of the human species. With man, a deity could be conceived of as an invisible yet infinitely able supplier of sustenance and strength--an all powerful helper in time of need, providing what Dean Inge (1925) has called "the sublime folly of hope". Such an evolutionary history, Hardy believed, could explain the personal attributes of deities commonly found in religions: "When those feelings of a beneficent power from beyond the conscious self came to be recognised by man it was not unnatural for that power to be thought of in a personal way" (Hardy, 1983, p. 135).

Hardy's conviction that the origins of religion must be sought in pre-human social species is also set out in a chapter on 'the Biological background' in his book, The Divine Flame (Hardy, 1966), in which he puts his idea this way: "[S]ome, at any rate, of the elements which go to make up a religion-the sense of the sacred, the numinous and the feelings of being in contact with some power other than the self, are unlikely in themselves to be products of [a cultural system], although only that system can give a verbal expression of them; they are, I believe, more likely to be part of a tacit, inarticulate, extra-sensory knowing which is linked with elements going much further back in biological history" (Hardy, 1966, p. 46).

From a slightly different tack, Ray A. Rappaport (1971) agrees (though he does not cite Hardy) that "emotions called 'religious' or numinous'...may not only be present in infants before they acquire language, but may have been present among the ancestors of men before language or a concept of the sacred evolved" (p. 31). Rappaport, like Hardy, links these emotions with feelings of dependence (as in the mother-offspring relationship, and between members of, e.g., primate troops), and he notes that as long ago as 1928 Wolfgang Kohler, from close observations of gorillas in captivity, had suggested that "those emotions which we associate with the religious" seem to occur among the great apes. (One might add that even
before Kohler, the idea of ape gatherings as a precursor of religious ceremonies had been suggested by the imaginative writer E. R. Burroughs (1920, in his conception of the Dum Dum. Certainly the continuing role of religious ritual as an important focus for the meeting together of like-minded people has been recognised by theologians [see Renner, 1979], as well as social scientists.

But Rappaport (1971) adds the interesting idea that the 'sacred' can also be seen as having evolved along with language, in the sense that statements accorded this quality would be regarded as authoritative thus making human society based on verbal structures possible: "[T]he idea of the sacred is as old as language and...the evolution of language and of the idea of the sacred were closely related, if not indeed bound together in a single mutual causal process" (p. 30). In this connection Rappaport refers to the writing of the Jewish-French philosopher Henri Bergson, who had pointed out (Bergson, 1935) that since in humans increasing intelligence has largely displaced hereditary pre-dispositions as a basis for social life, agreed rules must be allowed to prevail. "[N]o society", Rappaport cites Bergson as saying, "if it is to avoid chaos, can allow all alternatives to be practiced," of which Rappaport adds the stronger claim that human organisation, based on verbal rules, could not have come into existence in the first place "in the absence of ultimate sacred propositions and the sanctification of discourse" (p. 29). Rappaport concludes:

In summary, to invest social conventions with sanctity is to hide their arbitrariness in a cloak of seeming necessity. Conventions, to the extent that they are sanctified, are likely to be taken by those subject to them to be as 'natural' as if they were genetically determined. Indeed, they seem not to be mere conventions, but reflections of human nature, and those who flaunt them seem less than human...[T]o sanctify conventions is...to ameliorate, at least partially, the conflict between the individual and the society. The interests and needs of the society are presented to the individual as his own ultimate interests and needs, and his inconveniences and sacrifices on behalf of the society are rewarded symbolically. Recalcitrance, selfishness, and resentment thus are replaced by docility, compliance, cooperation, altruism, commitment and enthusiasm (p. 36).

Rappaport's understanding of the importance of religion in providing a kind of social cement had actually already been proposed in its essentials by the historian Arnold Toynbee (1988, originally published 1939-61). Toynbee, who assumed that "human nature is part of nature", went on to argue that however spectacularly man may succeed in his conquest of non-human nature, he remains at nature's mercy to the extent that he continues to fail to master his own nature, and "human nature cannot be mastered, as non-human nature has been, by collective human action" (1988, p. 346). Such mastery, Toynbee believed, can only be achieved at the level of the individual human being: "In human life, self-centredness can be prevented from causing social disasters only in so far as it is mastered in the inner spiritual life of each participant in society" (p. 346). Man's dilemma is that he cannot exist except as a social animal, yet his nature also entails for all intents and purposes (but see Denton, 1993), a unique product of evolution: consciousness and a sense of self. For society to function, these two dimensions need to be brought into harmony, and this is the role of religion. "In this plight, Man cannot find his way through life without religion, even though his belief in the presence of an ultimate spiritual reality, and his attempt to bring himself into harmony with it, are acts of unverifiable faith: (p. 350). While he does not explicitly say so, Toynbee presumably has in mind some kind of hereditary propensity for religion, whose activation is prompted by the various social situations in which human beings find themselves.

Finally in the present context, I shall quote the nineteenth-century biologist and comparative psychologist and protege of Charles Darwin, George John Romanes, who, in Thoughts on Religion (Romanes, 1895), made the novel (and no doubt questionable) suggestion that, as it appeared to be the case that "women, as a class are...much more disposed to Christianity than
men"; it was likely that there were elements in the female psyche more amenable to this religion's ethical demands. "[T]he whole ideal of Christian ethics is of a feminine as distinguished from a masculine type"; was the way Romanes put it, and after discussing what he considered to be the "psychological differentiae" between the sexes, concluded, in good Darwinian language, that "women is, for all these reasons, the 'fitter' type for receiving and retaining Christian belief" (p. 165-6).

Religion then according to some writers, evolved for its social utility, and is indissolubly linked with human social institutions via deeper hereditary mechanisms. It would thus seem to follow that mystical experiences, those most heightened instances of the religious consciousness, are bound to be in some sense 'transpersonal' in nature, notwithstanding their intensely individual occurrence. This will help to explain, surely, not only the feelings of unity with one's fellow human beings as in von Meyesenbug's experience, but also the well-attested phenomenon whereby votaries of different religious traditions tend to have visions of the seers and saints of their own traditions. In any case, heightened religious experiences, at least bordering on the mystical, are by no means unusual for individual believers at religious gatherings—at so-called 'charismatic' Christian services, for example, and amongst some Islamic sects (Morton, 1938; Sargent, 1959; Deere, 1993). Indeed, the very raison d'être for such gatherings would seem to often be the facilitation of these experiences, which appear to have been valued from ancient times for the strengthening and energising benefits they provide for the communities concerned, as in Hardy's thesis.

Thus the native Hawaiians, as reported by Christian missionaries last century, had a religious gathering called the Ha Rite in which deep breathing activities held a central place (Ha literally translated meant 'breath' or 'to breathe', and also 'to breathe with some exertion', but it also had other connotations, as in the 'breath of life' imparted to Adam in the Judeo-Christian creation story.) It was believed that participants in the rite could thereby gain mana, or 'empowerment' through these exercises, and interestingly, as the author from whom I obtained this information (Long, 1987) points out, similar deep breathing had been practiced by the Hindu yogis who "believed that the prana (mana) they accumulated was drawn from the air" (Long, 1987, p. 80). Long also notes that the performance of the breathing exercises was frequently accompanied by mental visualisations, which, he says, today would be put down to the physiological effects of hyperoxygenation. Regarding the ideational context of these visions (which perhaps can be described as mystical in some sense), it is interesting to notice also, in terms of what has been said about similarities between mystical conceptions of the relatedness of humans to the rest of the natural world and evolutionary understandings of the same, that according to the Hawaiian (kahuna) scheme of things, the human personality consists of three selves—the 'low self', which we share with all other animals, a 'middle self' (or "the self which talks"), and a 'High Self' which, like the low self, also does not speak in words. According to Long (1987, p. 21), the Hawaiians also believe that "an animal spirit has evolved upward until it became the animal or low self of the man", and that this spirit "evolving slowly, eventually became a middle self in a man, and this self evolved and in time became a High Self."

Intimations of evolutionary connections between man and the rest of the natural world are ubiquitous in other religions too, and it seems reasonable to think on the basis of what is known about mystic apprehensions of interconnections between man and nature in general, that these intimations owe much to mystical insights. Thus the thirteenth century Sufi mystic, Jaluludin Rumi, records the following dream-like experience in his writings:

I have again and again grown like grass; I have experienced seven hundred and seventy moulds. I died from minerality and became vegetable; and from vegetativeness I died and became animal. I died from animality and became man (Cited in Shah, 1990, pp. 115-16)

-from which Rumi develops a more specific evolutionary philosophy:
First of all [man] came into the inert world. From minerality he developed into the realm of vegetation. For years he lived thus. Then he passed into an animal state, yet bereft of any memory of his being vegetable—except for his attraction to Spring and to blossoms.

This was something like the innate desire of an infant for its mother's breast. Or like the affinity of disciples for an illustrious guide.

From realm to realm man went, reaching his present reasoning, knowledgeable, robust state; forgetting earlier forms of intelligence.

So too shall he pass beyond the current form of perception. There are a thousand other forms of Mind...(Shah, 1990, p. 272).

The 'Great Chain of Being' idea, specifically named in Pope's Essay on Man and alluded to by Shakespeare (see Tillyard, 1977, Ch. 5), dates back to at least the ancient Hindus—for instance, as transmitted to us in the writings of the Theosophist, Annie Besant and C. W. Leadbeater: "Life-streams may be traced from kingdom to kingdom in their ascent [from the Mineral...then successively through the Vegetable and Animal...and the Human" (Besant and Leadbeater (1913, p. 8); according to a recent interpreter, the Theosophical view is that "consciousness evolves—it doesn't just happen"—see Reverberi, 1993). In a somewhat similar though less specific way the Buddha is said to have taught that "the world [is] an unending flux of becoming. All is changeable, continuous transformation, ceaseless mutation, and a moving stream...Change is the very constituent of reality" (Dhammananda, 1987, p. 86). Likewise the ancient Taoist text, the Chuang-tzu talks of nature in terms of flux, and stresses that human knowledge must take into account that which it depends on—the natural world—is "never fixed" (Gross and Shapiro, 1993).

But for all their remarkable intuitions, these mystical notions in various religious traditions remain as I have described them, mere intimations, or adumbrations, of what science now regards as the reality of evolution. For the specifics of how science believes evolution actually operates, one must turn to the writings of Charles Darwin onwards. The basic principals of natural selection and 'survival of the fittest' will, be familiar to the reader, but what might not be so familiar, perhaps is Darwin's almost equal emphasis on cooperation, as well as competition, as an important factor in the evolutionary process. This facet of Darwin's writing should now be looked at in some detail.

In The Origin of Species, under the sub-heading 'The Term, Struggle for Existence, used in a large sense', Darwin wrote: "I should premise that I use this term in a large and metaphorical sense, including dependence of one being on another" (Darwin, n.d., p. 52), and in this work he gives a concrete illustration of what he means in his discussion of the sting apparatus in bees: While use of the sting often results in the death of an individual bee through tearing out its viscera, "if on the whole the power of stinging be useful to the social community[i.e. the hive], it will fulfil all the requirements of natural selection, though it may cause the death of some few members" (pp. 149-50). But it is Darwin's other most well-known evolutionary work, The Descent of Man, in which he more fully elaborates on his concept of 'dependence of one being on another' as a factor in natural selection. And interestingly, his discussion of this subject includes some reference to a role for religion in human evolution.

Darwin notes in Chapter 3 of this latter volume that religious beliefs of some kind or other "seem to be universal with the less civilised races" (presumably in addition to the 'civilised'?) and that these beliefs very frequently were associated with such feelings as "love" and a "strong feeling of dependence" (C. Darwin, n.d. pp. 468, 470.). Just as this sense of dependence could be directed towards an all-powerful God, so also it could involve social feelings (as in the 'community of saints' in the Christian New Testament and in the writings of St. Augustine—see Pelikan, 1987). It is not difficult to conceive of such feelings as concretised in love for one's fellows and a sense of dependence on them—being selected for in biological and social evolution. At any rate Darwin goes on to explain his idea, though he does not say much more about religion as such in the following chapter of Descent of Man.
where he argues that the moral sense—"the most noble of all the attributes of man" (p. 471)—can be seen to have evolved for its survival value. Various species, Darwin observes, behave cooperatively, apparently for the mutual benefit the animal members of troops, packs etc. receive as a result of such behaviour. Thus, Darwin wrote:

[w]olves and some other beasts of prey hunt in packs, and aid one another in attacking their victims. Pelicans fish in concert. The Hamadryas baboons turn over stones, etc.; and when they come to a large one, as many as can stand round, turn it over together, and share the booty... Bull bisons in N. America, when there is danger, drive the cows and calves into the middle of the herd, whilst they defend the outside. (C. Darwin, n.d., p. 474).

Such behaviours, Darwin considered, very likely involved feelings of "sympathy" or "affection" between members of these animal social groups, and this helped bind the groups together. These feelings which might be described as social instincts, could even lead to individual animals sacrificing their own lives for the sake of the group, or social community, as a whole (as with the bisons, and also with the bees, mentioned above; similar behaviour has also been observed in baboons—see Washburn and DeVore, 1981). Overall the species benefits, in so far as the majority of individuals would tend to survive and pass on their species-specific heredity (see also Eldridge, 1986). That is to say, species in which such behaviours can be observed can be said to have survived in evolutionary history at least partly because they have acted in these mutually beneficial ways in the past—such behaviours have been selected for at the group level. As put by Washburn and DeVore (1981), with regard to baboons, "[S]olitary [as against gregarious] animals are far more likely to be killed, and over the generations natural selection must have favoured all those factors which make [sociability] easy" (p. 95). Humans presumably, can be regarded as inheriting something of these same dispositions, as in Hardy's (above) conception. Again though, Darwin was not the first to notice this phenomenon in animals. The eighteenth-century English country parson, the Rev. Gilbert White, in his Natural History of Selborne (S. White, 1912), had observed the "wonderful spirit of sociality in the brute creation, independent of sexual attachment", and how "oxen and cows will not fatten by themselves; but will neglect the finest pasture that is not recommended by Society" (Letter xxiv). And the element of 'self sacrifice' that such behavior can entail had been drawn attention to by Charles Kingsley in a religious context in a Christmas talk on 'Biogeology' to members of the Winchester Scientific Society in 1871 (the same year as publication of Descent of Man, but possibly in part reflecting earlier thinking by Kingsley on the subject). Is there not in nature, Kingsley asked, besides competition a "law of mutual help"? The working of such a law could be observed, he suggested, in "those magnificent instances of true self-sacrifice shown by the social insects, by ants, bees and others...though unconscious...as far as we know." The same principle can be seen to be operating in human society, Kingsley believed, and in human moral and religious codes which might be regarded as a formalising and articulation of underlying dispositions. Whatever the case with the "lower" animals, Kingsley wrote, "in many the law of self-sacrifice...rises into consciousness" (Kingsley, 1879b, pp. 197-8).

If the germ of 'true self-sacrifice' can be present in the so-called 'social insects' (the Hymenoptera-ants, bees and wasps; and Isoptera-termites), perhaps some kind of rudimentary feeling of belonging to a larger whole can too. Maurice Maeterlinck, winner of the 1911 Nobel Prize for Literature, thought so anyway. In The Life of the White Ant (Maeterlinck, 1927) this author asked whether it might not be too much to suggest that if we knew more about the instincts of the social insects "we should perhaps gain some knowledge...of our [own] brain, which is merely a dropping of the same nature" (p. 195). Maeterlinck also essayed the suggestion that just as in a termite colony each individual termite can be considered as essentially equivalent to a cell in a kind of metaoorganism—the colony (so that the winged caste can be thought of as gametes, the soldiers as phagoocytes, etc.), so the 'cells' are "disseminated only in appearance, but remain always subject to the same energy
or vital personality, the same central law" (p. 199). Just what this 'vital personality' or central law was Maeterlinck had no idea—it remained a mystery (as indeed it does still); the best he could do was to commend the writings of Henri Bergson, such as Creative Evolution (Bergson, 1911) which, he admitted, though attractive may in the end be little more than exercises in attaching words (like 'elan vital') to this same mysterious energy.

The 'social organism' concept has been extended by some writers to human society as well. Indeed as long ago as the first century A.D. St. Paul (whom Happold [1977] includes among the mystics) utilised the idea when talking about the Christian Church (1 Corinthians 12); and the metaphor was taken up by Shakespeare (e.g. Coriolanus, Act I Scene I), among others. But the first use of the concept in an evolutionary sense seems to have been by the nineteenth-century British philosopher Herbert Spencer, who wrote in First Principles (Spencer, 1870), for example, about such things as the "evolution of the social organism" in which "all organised results of social action - all superorganic structures, pass through parallel phases" (pp. 347, 374). This idea was taken up with enthusiasm by late nineteenth-century socialists, who contended that human societies 'inevitably' evolved towards socialist (as against 'individualist') types, the argument somehow taking in comparisons with other manifestations of the 'social organism' in nature, such as the beehive: "For an example of the most perfect organisation of labour we must look to the beehive, where cell property is held in common, and relays of workers are always on duty, engaged in the different tasks of building their nurseries and storehouses, collecting and storing food...[etc.]" (Commonweal, 5 June 1886).

But apart from this kind of propagandist use of the social organism idea (or perhaps 'body politic'), some deeper thinking along these lines was being engaged in by religious writers of the time, albeit sometimes in a quasi-political context (as in Christian Socialism, which made much use of Kingsley's ideas). The Rev. Henry Drummond, for instance, in The Ascent of Man (1894), cleverly combines Darwin's understanding of the adaptive value of sociality in some species with the mysterious cohesive forces found in the social organisations (Drummond was an amateur naturalist, and had studied termites and other species in Africa, see Drummond, 1899). Drummond appears to have been the first writer of these subjects to employ the word 'Altruism' (with a capital A) extensively in this context—a term later much used by so-called sociobiologists (E. O. Wilson and others) from the mid 1970s. In a chapter headed 'The Struggle for the Life of Others' in Ascent of Man, for example, Drummond argued as follows:

The Struggle for the Life of Others is the physiological name for the greatest word of ethics-Other-ism, Altruism...Were [the operation of this principle] a late phase of evolution, or a factor applicable to single genera, it would still be of supreme importance; but it is radical, universal, involved in the very nature of life itself...In the physical world, to speak of the Struggle for Food as selfish, or to call the Struggle for Species unselfish, are alike incongruous. But if the morality of Nature is impugned on the ground of the universal Struggle for Life, it is at least as relevant to refute the charge by putting moral content into the universal Struggle for Species. No true moral content can be put into either, yet the one marks the beginning of Egoism, the other of Altruism. Almost the whole self-seeking side of things has come down the line of the individual Struggle for Life; almost the whole unselfish side of things is rooted in the Struggle to preserve the life of Others (p. 284).

After citing, like Darwin, numerous examples of co-operation in nature (including in the social insects), and also citing cases of inter-species co-operation, or symbiosis, as in the fertilization of flowers by insects, Drummond eloquently concluded:

Everything...came into being because of something else, and continues to be because of its relations to something else. The matter of the earth is
Drummond's bold assertions of a century ago have in fact been supported by research in a range of areas as biology in recent years. Symbiosis, or reciprocal altruism, is now well documented, as in various species of tropical fish for example, where 'cleanerfishes' (wrasses, gobies and others), which feed on parasites and necrotic tissue of other fishes, establish themselves at 'cleaning stations' on coral reefs to which host fish are attracted and at which the latter indicates their willingness to be cleaned by various visual cues, such as jerky and zigzag swimming patterns (Pitcher, 1993, p. 488). Even plants co-operate for their mutual benefit. A study by Dr. Wouter van Hoven and colleagues at the Centre for Wildlife Research, University of Pretoria, found that tannin concentrations in a number of plant species heavily browsed by kudu (a large spiral-horned antelope) in fenced-in game reserves increased to levels lethal to their predator, and that this concentration seemed to be triggered by chemical signals between the plants (see, e.g., van Hoven, 1991). And that mystery of mysteries, the emergence of life from inanimate matter in the early history of the earth, appears to have depended on 'co-operative' activity between organic compounds leading ultimately to the production of proteins and DNA—this, at any rate, was the conclusion of Dr. Paulien Hogeweg of the University of Utrecht, from computer-graphic simulations utilizing certain assumptions concerning the earth's early chemical environment (Hogeweg, 1992. See also Dixon et al., n.d.).

Co-operation, altruism—organic interdependence, then, would seem to be built into the natural. As Doug Ogilvie (1992) has expressed it, an "evolutionary model of reality" suggests that "interaction" is the primary law of life, and that human beings belong to a "living...whole". Lovelock's (1987) Gaia hypothesis is just another expression of this growing consensus in biological as well as in other thought (see also Sheldrake, 1991). But perhaps the most fully worked out philosophy along these lines is that of the Jesuit priest and eminent paleontologist Teilhard de Chardin, especially in Phenomenon of Man (de Chardin, 1965). This work will now be looked at more closely.

In the latter book, de Chardin utilizes an innovative vocabulary to trace the process of what he calls 'interiorization', the evolution of consciousness, or the subjective dimension of matter, from inanimate matter (minerals, etc., as in the Hindu and Sufi writings). Prior to the emergence of homo sapiens, this was an evanescent process, but with 'hominization', and noogenesis—the emergence of mind when, in de Chardin's words, "for the first time in a living creature instinct perceived itself in its own mirror" (but c/f Desmond, 1979; Denton, 1993) evolution took a quantum leap. And since that event in the history of life (which de Chardin agrees cannot be pinpointed, since "the 'first man' is and can only be, a crowd, and his infancy is made up of thousands of years"), the evolutionary process has gathered pace enormously. This is because the further evolution of the mind was (and continues to be) no longer strictly genetic, and has not been so ever since the appearance of spoken and (much later) written language. Information transfer to following generations no longer depended almost entirely upon the genetic code: to use a term alluded to (but not elaborated upon) by Maeterlinck (1927), and later much developed by writers like C.H. Waddington (1960) and Richard Dawkins (1976), information could now be transmitted by way of 'mnemes' (or memes)—individual memory units—as well as by genes. This new process depended entirely on social evolution, or, as Sir Julian Huxley has termed it (in Hardy, 1966, p 12), the psycho-social phase of evolution, with its cultural interactions which in turn, of course, assumed the process.

Eventually, according to de Chardin, with the spread of the human species over the globe and the inevitable confluence of ideas resulting from further cultural interactions, there appeared the beginnings of a noosphere, a mental mantle to parallel (and which is a further development
of) the biosphere. This process has, of course, been enormously accelerated with the development of telecommunications in modern times, beginning with the invention of 'wireless telegraphy' (radio) in the early 1900s (see Eugene Debs, 'Universal Kinship', Adelaide Daily Herald, 11 April 1914). As Hardy (1983) has expressed it, "it is not... just lines of individuals that are [now] evolving; it is whole populations. In the higher ranges of evolution...the mental side of life turns out to be a factor of cardinal importance with the process of Darwinian evolution."

It is impossible to do justice to the richness of Teilhard de Chardin's ideas (which were much discussed in the 1960s but which since appear to have fallen out of favour—though why, I cannot ascertain) in a paper of this kind. What is perhaps finally worth drawing attention to is what can be argued to be de Chardin's place in the continuum of ideas originating in the mystical visions of the ancients, through the metaphorical concept of the 'social organism' and most recently articulated in the writing of Thomas Berry (1988, 1993). de Chardin's evolutionary ideas were first developed at a time when 'modernism' had as yet to be condemned by the Catholic Church (as late as 1950 de Chardin was refused permission to publish his Le Groupe Zoologique Humain, later recast as The Phenomenon of Man and published posthumously). Before being ordained, in 1912, de Chardin had read Bergson's Creative Evolution, which contains much discussion of ancient mystical conceptions as well as the ideas of more modern writers like Herbert Spencer (Bergson, 1911, Huxley, 1965); and in any case, he would have been very familiar with the writings of important Christian mystics through his training for the priesthood—as is clear enough from his citations of some of these writers in his own semi-mystical Le Milieu Divin (de Chardin, 1964).

In this book de Chardin, firstly, speaks of Christians as belonging to the "mystical body" of Christ, as in St. Paul's writing, and he also goes on to talk about "the supreme and complex reality" in which "the substantial one [de Chardin's emphases] and the created many fuse without confusion in a whole" (de Chardin, 1964, pp. 122-3). de Chardin expands on these rather nebulous (the mathematician Bertalanffy [in Koestler, 1972] would have said "muddy" notions by explaining that "[f]rom the dynamic and biological point of view it is quite as impossible to draw a line below... the human layer of the earth... as to draw a line between a plant and the environment that sustains it" (pp. 124-5). Moreover, elsewhere in the book de Chardin links these ideas with specifically evolutionary understandings (partially gained, no doubt, from his scientific training, but partially also (as he acknowledged [de Chardin, 1965a]) from his reading of the mystics as well as Bergson and others), as in the following extract:

Where are the roots of our being? In the first place they plunge back and down into the unfathomable past... In each one of us, through matter, the whole history of the world is in part reflected. And however autonomous our soul, it is indebted to an inheritance worked upon from all sides—before ever it came into being—by the totality of the energies of the earth: it meets and rejoins life at a determined level (p. 59).

By 1916 de Chardin was writing that "the moral and social development of humanity is... the authentic and 'natural' consequence of organic evolution", and he had also become interested in Maeterlinck's ideas (1965a, pp. 110-11, 115). In the meantime (in 1913) Bergson had been condemned by the Pope (The Modernist [New Farm, Queensland], October 1913,) but it is interesting that in 1915 de Chardin was still speaking of Bergson as "that great man" (1965a, p. 62) and discussing him in the same contest as figures such as St. Augustine. The early twentieth century was an intellectually vigorous period in the Catholic Church, when books like Catholic Socialism (Nitti, 1908) could appear, inspired in part by the liberally-minded Pope Leo XIII's Rerum Novarum, and which could canvass ideas like Darwin's concept of the evolutionary function of collectivism (Nitti, 1908, pp. 23-4, 362). In Queensland, Australia, a locally produced journal, The Modernist, promoted the ideas of Maeterlinck and Bergson, as well as people like Bernard Shaw, G. K. Chesterton, The German philosopher Eucken (see also Jones, 1914) and the Indian poet Tagore, and sponsored lectures on subjects
like 'The Evolution of Worlds' and 'The Evolution of Life' at the Brisbane School of Arts and other venues (The Modernist, April, October, December 1913, June 1915). In the context of a Harvest Thanksgiving service, The Modernist spoke of the "beauty and the intense reality of the life of man and of Nature in their wonderful interdependence and mysterious companionship" April 1913.

All this, sadly, was soon to end (the theory of evolution itself was to be condemned by the Pope by 1925—see Inge, 1925), as encapsulated, for instance, in the Rev. J. Kennedy's (1912) Gordon Grandfield: The Tale of a Modernist, in which readers learnt that attempted adaptation of Christianity "to the materialistic trend of twentieth-century would-be reformers is but a sign that the old Paganism is again rampant", notwithstanding misguided claims that there might be "a good deal in Darwin’s theory after all" (pp. 40, 50). As is so often the case, however, Teilhard de Chardin's intellectual growth seems to have been fostered, if anything, by this ensuing atmosphere of repression. (In a letter from the trenches to his cousin, Margeurite de Chardin, in 1916—he was a stretcher-bearer in the French army during World War 1—asking for books by Maeterlinck, de Chardin added the word "hush!" [1965a, p. 115].) Perhaps the 'political correctness' and other absurdities of the present time might have similarly productive effects.

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BIBLIOGRAPHY


Gross, P.I., & Shapiro, S.I. (1993), 'Leap into the boundless knowledge, wisdom, and liberation in the Chuang-Tzu'. International Journal of Transpersonal Studies, 12, 1-21/1


Ogilvie, D. (1992). Revelation by education. St. Lucia, Queensland: Department of
Education, University of Queensland.


Footnote

1 Renner notes anthropological studies, for example in Madagascar, which have shown the importance of sustaining rituals in tribal communities