

The Origin of Humanness in the Biology of Love

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3. Human Origins (*selections*)

... Our basic question, as we indicated at the beginning, is: "How is it that we can live in mutual care, have ethical concerns, and at the same time deny all that through the rational justification of aggression?" We shall answer this basic question indirectly by providing a look into the fundamentals of our biological constitution. We shall do this through answering two other questions to guide our reflections as we inquire into our evolutionary origin. These two questions are: "How did humanness begin?" and "How did we become the kind of animals that we are as human beings?" ...

Neoteny

Animals in general, and mammals in particular, move in their relations between two extremes: one of mutual respect and mutual trust in total body acceptance in bodily nearness, and the other in a dynamics of relations of domination and submission. In mammals, the first manner of relating is usually confined to the mother/child relation and to the period of childhood or upbringing of the offspring, whereas the second is the usual manner of relation in adulthood, a period that begins in relation to the age of reproduction. The chimpanzees in their inter-individual relations in captive and wild communities resemble this standard pattern more than we human beings do. We think this indicates that the common ancestor that we share with them cannot have been different from the usual mammalian form. How did the two lineages diverge?

Our proposition (and this is, of course, a speculative proposition), is that the two lineages that gave origin to us and to the chimpanzees diverged through the conservation of a different emphasis in the two basic mammalian manners of relating mentioned above. We humans are the present form, we think, of a lineage that arose defined and constituted by the conservation of the progressive expansion of the mother/child relation of mutual body acceptance, nearness, and mutual care in playfulness and total trust, in a manner that also involved the male, and progressively extended beyond the age of reproduction into the adult life in a neotenic evolutionary trend. And we think that the chimpanzees are the present of a lineage in which the whole basic mammalian pattern of inter-individual relations was mostly conserved, perhaps even in a manner that put more emphasis on the opposing relations of domination and submission along the adult life than the original one.

That we belong to a lineage, or system of lineages, with neotenic characteristics (characteristics that result from an evolutionary history of expansion of childhood beyond the period of reproduction) is, of course, well known to biologists. Indeed, biologists emphasize this

by claiming that many of our human body features resemble those of chimpanzee children or babies more than those of adult chimpanzees. What we want to emphasize here now, though, is that this expansion of childhood into adulthood in the system of lineages that gave origin to us has entailed in a fundamental manner the expansion of the emotioning of the mother/child relation of mutual body acceptance and total trust into adulthood. And we also want to emphasize that the conservation of the expansion of the mother/child dynamics of love and play relations into the adult living has been the operational reference for all the body and relational changes that eventually constituted us as the kind of animals that we are as human beings.

We claim that it is as a result of this neotenic trend that we humans are cooperative animals dependent on love at all ages. The chimpanzee is not the present of a neotenic history and we think that the neoteny in the evolution of chimpanzees has not entailed the expansion of the emotioning of the mother/child relation as a central in the evolutionary shaping of their manner of living. On the contrary, the chimpanzee is, we think, the present of an evolutionary history in which adulthood has remained adulthood, or may even have been expanded into youth, as competition has been emphasized as a basic relational mood. It is chimpanzees who are in fact political animals, not us human beings.

...

Humanness

When did humanness begin? We have claimed that we humans exist in language, or, more precisely, that we exist in conversations that are the braiding of languaging and emotioning. And we also maintain that humanness arose when in a lineage of bipedal primates the living in conversations began to be conserved generation after generation in the learning of the children as the manner of living that constituted and defined that lineage. When did that happen? We think that happened - and humanness began - not later than about three and a half million years ago, and we propose that it happened in the following manner.

Some 3,300,000 years ago, some small bipedal primates (*Australopithecus afarensis*) lived in Africa, in the north of what is now Kenya. Their height was about the height of an 8 year-old child. Judging by their body anatomy and their teeth, these primates could have been our ancestors, or very similar to them (see Johanson and Maitland, 1981, and Johanson and Shreeve, 1989). The common ancestor that we share with chimpanzees was not bipedal, but their descendants in our lineage must have become so as they became ground dwellers in the savannahs at the fringe of the forests, as they moved, conserving from generation to generation the habit of moving erect as they looked around while moving among the tall grasses. We belong to a system of lineages of primates that as ground dwellers became bipedal, whereas chimpanzees belong to a system of lineages that remained quadrupedal on the ground.

These bipedal primates of somewhat more than 3 million years ago were not hunters, or if they did hunt occasionally, their prey must have been small animals. Their teeth, very similar to ours, were those of gatherers who eat seeds, nuts, roots, insects, and the remains of animals killed by large predators. Furthermore, the evidence given by paleontological findings indicate that these primates lived in small groups of some five to eight individuals of both sexes and of all ages. Their brains were about a third the size of ours now, and their faces were different, more like that of a young chimpanzee.

Their hands, however, were like our hands in that they had fingers that could be fully extended and opposed to the thumb. No doubt, judging by their manner of existing as gatherers, they were capable of complex and delicate visual and finger correlations in the handling of food. But human hands are much more than instruments for manipulation - indeed, they are caressing organs. The fingers of the human hand can be extended fully as well as delicately flexed, allowing the hand as a totality to accommodate to any curved surface of the body in a caressing touch, more or less in the same manner that the tongue of other animals does. In modern human beings, hand caresses occupy the whole hand with the fingers flexing adequately to fit the caressed surface in a gentle holding touch. The hand of the chimpanzee does not do so easily because the fingers cannot be totally extended. The hand of our ancestors 3 million years ago, although not identical in its proportions to ours now, had all the characteristics of a human hand, both as a manipulating and as a caressing organ.

Let us now reconstruct the possible manner of living of our ancestors 3.3 million years ago from what we know of *Australopithecus afarensis* as if our ancestors were very similar to them, and compare it with our present manner of living.

1. Judging by their teeth and their size, our ancestors must have lived as gatherers, eating seeds, roots, nuts, insects, small vertebrates, and occasionally scavenging the remains of big animals killed by large predators.

We modern human beings are still gatherers of seeds, nuts, roots, and fruits. Indeed, agriculture is a way of remaining a gatherer. That we are gatherers is shown also in the success of supermarkets, and in the fact that in situations of need we easily resort to gathering, and even scavenging.

2. Paleontological remains indicate that our ancestors lived in small groups of about five to eight individuals of all ages.

We modern human beings feel comfortable in families of that size, and even when we form larger communities, we live in intimacy in small groups.

3. Our ancestors may have shared food as a feature of their manner of living. Food sharing takes place in the direct passing of food from one individual to another. This is not a very rare phenomenon - many animals such as birds and ants do it as a central aspect of their manner of living, but it is not common among primates. Many parent birds feed their children by depositing the food directly into their mouths. In a neotenic lineage like ours, this practice may have been a feature of the mother/child relations conserved into the post-reproductive stage as part of the trend of neotenic expansion of our lineage, and is still present in the pleasure of a mouth to mouth kiss.

We modern humans share food. In some cultures women frequently pass what they are chewing directly from their mouth to the mouths of their babies, or to the mouths of old people who have lost their teeth. Our children often take food from their mouths to give it to an adult or to another child. Our food-sharing behavior is not cultural. That this is so is apparent in the just mentioned spontaneous food sharing of our little children - we have the biology of sharing animals.

Our genetic constitution (our biological primary structure) does not determine what happens in us in our lifetime as individuals, because whatever happens does so in an epigenetic manner in a historical process of interactions between organism and medium. But nothing can happen in the course of our epigenesis that our genetic constitution does not permit as a possible feature of our ontogeny. We are sharing animals now; therefore, we belong to an evolutionary history that conserved food sharing as a manner of living. We do not know when this history began, but we believe that it must have been already established in our ancestors of 3 million years ago in all ages as part of the evolutionary neotenic trend of their lineage.

4. We suppose that among our ancestors of 3 million years ago, males participated in child care through loving relations in the pleasure of living together. In what manner, we do not know; perhaps playing with the children in body contact, carrying them, feeding or sharing food with them, as well as being attentive to their play without restricting them. Male gibbons nowadays do so as they participate with the females in the care of their offspring.

We modern human males care for our children in the manner described above, and we do so with natural ease and spontaneous pleasure when there are no cultural injunctions to the contrary in terms of control and instrumentalization through the demand for obedience. We think that the emotional dynamic that brings human males to participate in child care is also an evolutionarily conserved feature of our neotenic trend, not a new cultural one. As such, male child care is an epigenic behavior that can be fostered or repressed. Adult male care for children in the pleasure of playing with them, is not very frequent in primates, but it sometimes occurs as a juvenile behavior, as can occasionally be seen in a zoo.

5. We modern human beings are sensual and tender animals. We caress each other, we enjoy body nearness and contact. Caresses evoke in us physiological well-being. We caress each other not only with actual touches, but also with words, with the tone of our voices, with our regard, or with what we do. All these caresses evoke in us physiological changes that constitute well-being. In us the hand is, so to speak, a caressing organ, and the touch of the hand is physiologically healing. But not only that, we enjoy all sensorial dimensions as sources of pleasure and well-being, as features of what can be called the aesthetics of living.

We do not know how our ancestors behaved, but we can assume that as primates who possessed a caressing hand, and as members of a neotenic lineage, they were also sensual and tender animals that, like us, lived in the conservation of the relational configurations of caresses and mutual care in both adulthood and youth. We also think that such basic extended sensuality, with the sensorial curiosity that it brings, is part of the neotenic trend of our lineage through the conservation of the expanded sensuality involved in the extension of childhood.

As we look at this speculative but plausible reconstruction of the relational features of the life of our ancestors of over 3 million years ago and compare it with our own in the present (neglecting the particularities of how we do what we do), we discover that our manner of living and theirs must have been the same, save in one respect - namely, language and the features of the body associated with it. If our ancestors were as we suggest, how did language arise? ...

Biology of Trust and Nearness

Trust and nearness constitute intimacy as the fundament for doing things together in the pleasure of doing them with another. And doing things together in the pleasure of doing them with another, constitutes cooperation. Finally, intimacy - the pleasure and joy of trust and nearness in play in total mutual body acceptance - has its origin in the mother/child relation and its expansion in neoteny.

We humans belong to a neotenic lineage, a lineage defined by the transgenerational conservation of the progressive expansion of childhood characteristics into adulthood. As a result of this process, reproduction in us humans now takes place, so to say, in the middle of infancy. Yet as neoteny occurs in evolution, it is not infancy or childhood proper that is conserved or expanded, but rather some features of the child's body development and emotional dynamics are extended, so that the tasks of the adult life are progressively realized in the members of the evolving lineage by individuals that retain more and more infantile relational characteristics.

We think that in us this process of neoteny entails the conservation into adulthood of the relational dynamics of love proper to the mother/child and to the child/child relations in the mammalian basic emotioning. Love, as we have said already, is the domain of those behaviors through which an other arises as a legitimate other in coexistence with oneself. Love means or entails mutual trust in total body acceptance with no manipulation or instrumentalization of the relations. These relational features are central in the mother/child relation. Manipulation and instrumentalization of another are attempts to control the behavior of the other by illegitimate means; they are manners of aggression and denial of the other and thus entail a different emotion than love. And when the manipulated being becomes emotionally aware of this, mistrust and anger arise.

Modern human beings are love dependent animals at all ages, and we think that this is so because love as a feature of adult life has been conserved in our lineage as a neotenic feature. Of course, we do not say that we humans are unique in being loving animals. Certainly not. Indeed, mammals in general are loving animals at their infancy, and we humans in our loving behavior can relate and evoke loving behavior practically with all vertebrates, at least during their childhood, but also in their adulthood. What we say is that we are peculiar in that our evolutionary history is centered in the biology of love as a basic feature of our manner of living in a way that has expanded through our whole life span. But we think that there is more.

We think that in the conservation and expansion of the emotioning of the mother/child relation in the neotenic history of our lineage, and prior to the beginning of the conservation of language as a manner of living, there was a transformation of sexuality in our female ancestors. In the course of this history, the short annual period of female desire for and enjoyment of body contact and sexual intercourse expanded and became continuous. At what historical moment did this happen? We do not know, but we think that its happening had a fundamental consequence that made the origin of language and its conservation as a manner of living possible. Such a happening separated sexual intercourse from reproduction for our ancestors, allowing sex as the domain of acceptance and enjoyment of body contact in general, and genital intercourse in

particular, to operate as an expanded source of pleasure and stability in the formation of interpersonal relations, particularly in couples and small families.

Sexuality as a source of joy and pleasure in the nearness of the body of a particular other gives permanence to the close relations between the members of a couple or of a small group. And as the expansion of the female sexuality expands the joy of nearness, it creates a possibility for the enjoyment of doing things together in the pleasure of mutual acceptance through the conservation of that nearness. Accordingly, we think that the expansion of the female sexuality as part of the neotenic trend of our lineage created a space of stable intimacy, pleasure, and trust around her, in a dynamics of mutual acceptance and enjoyment of recurrent body contact that drew together females, males, and children in small families of a cooperative living together.

Sexuality does not entail only sexual intercourse; it includes, in greater or lesser degrees, all aspects of body acceptance in total trust and in the enjoyment of body nearness and contact, regardless of the sex of the participants. Thus, sexuality is involved in platonic friendship, in friendly embraces, in the acceptance and enjoyment of the nearness of another, implying in each situation different dimensions of body mutual acceptance in nearness and contact than those involved in genital sexual coupling, regardless of whether these are heterosexual or homosexual. Accordingly, what we say is that the expansion of the sexuality of the females of our ancestors is peculiar because as it occurred, and the females became as continuously interested and desirous of sexual nearness and genital intercourse as the males, a domain of coexistence appeared in which living together in small intimate groups became a permanent source of pleasure, of joy in the company of the other, and of playfulness around the realization of the chores of daily life in cooperation and not in competition.

Neoteny entails also the expansion beyond the reproductive age into adulthood of features of the mother/child relation such as sensuality and tenderness. Sensuality entails sensorial expansion and openness to see, touch, hear, smell, whereas tenderness has to do with the behavior of care in relation to others, a typical although not exclusive mammalian mother/child behavioral feature. A mammalian mother (and in fact, all animal adults when they care for their offspring) senses more when with children. This is easily observable in a female cat with kittens as she is ready to see, hear, touch and smell, what she would not see, hear, touch, or smell, if she were not mothering. A female cat with kittens is also ready to protect her kittens, to let them climb on her body, or to lie on the ground so that the kittens can nurse. When one sees these behaviors, one easily says that the cat is behaving with tenderness. The same is obviously apparent in a hen with chicks. This emotional appreciation is not a projection of our own emotioning; it is a distinction of the relational domain in which these animals are.

We claim that the neotenic trend in our lineage resulted in an expansion of the mother/child relations of body acceptance, sensuality and tenderness into the adulthood of our ancestors as relational features of their daily life. And we also claim that those features have been conserved in our lineage, and are still present in us in our daily behavior at all ages, unless we deny them specifically through some ad hoc rational argument, or through some mishandling of the emotional upbringing of our children. Furthermore, we think, as we said above, that the expansion of female sexuality as part of the conservation of the neotenic trend in our lineage resulted in the intertwining of sensuality, tenderness, and sexuality that gave, and still gives, stability to family coexistence. The expansion of female sexuality constituted the joy in doing

things together in cooperation as a manner of living cultivated and conserved generation after generation in the learning of children.

Cooperation is doing things together in love, in trust and mutual acceptance, in the pleasure of the doing together. As such cooperation constitutes a relational space completely different from that in which relations of domination, submission and competition, take place. In other words, we use the word "cooperation" in daily life to refer to doing things together for an explicit or implicit common purpose in a space of full behavioral freedom, in trust, and in implicit or explicit mutual acceptance. Cooperation does not take place in a space of demands, mistrust, and control. Moreover, cooperation constitutes a relational space in which intelligence is spontaneously opened to continuous expansion without effort, as a simple result of love as the very emotioning that makes it possible as a manner of living. Finally, we think that it is only in the relational space of intimacy, in the acceptance of the body nearness of the other in cooperation, where living in language could arise, and in fact arose. Language could only arise in such a relational space, because it is only closeness in mutual acceptance and intimacy that makes it possible for occasional coordinations of consensual coordinations of behavior to begin to be conserved as a manner of living together. And we think that such a space of stable intimacy in love and cooperation was created in our lineage by the expansion of the sexuality of the females, as it opened a space for the expansion of sexuality in general.

Furthermore, we think that as the sexuality of the female expanded within the neotenic trend of the lineage, the sexuality of the male expanded as well in the domains of tenderness and sensuality, and female and male became co-participants in these dimensions. Male and female constituted each other in sensuality, tenderness and sexuality through participating in sensuality, tenderness, and sexuality. In this process they became systemic partners in living in cooperation, each one becoming a systemic participant in the conservation of sexuality as a source of pleasure and playfulness with the other (playfulness as the joy of doing in the joy living, see Maturana and Verden-Zöllner, 1993). Indeed, we think that it must have been male/female playfulness in the neotenic trend that permitted and conserved the progressive expansion of female sexuality that made living in language possible. These are not romantic claims; it is enough to observe ourselves in our relations of friendship to see love undistorted by cultural injunctions or recommendations.

In the lineage that gave origin to the chimpanzees, things must have been different precisely because there was little expansion of neoteny after their lineage and ours separated some 6 million years ago, or because neoteny did not become the trend that defined their lineage. And we think that due to the absence of a neotenic trend there was not an expansion of the mother/child love relation into adulthood. Furthermore, we also think that due to the absence of such a neotenic trend, as well as due to the conservation of intense relations of domination and submission in the adult life of the members of the lineage that gave origin to chimpanzees, the members of that lineage never developed in their living together the degree of intimacy and permanence of the interpersonal relations in a coexistence that would have made it possible for them to live in cooperation and eventually to fully adopt languaging as a manner of living. When Frans de Waal talks in his writings about "chimpanzee politics," he directly refers to the life of chimpanzees as a manner of living centered in the struggle for domination and submission. In summary, we think that as chimpanzee remained political animals centered in the

struggle for domination and submission in their adult life, they could not live enough recursive intimacy for languaging and living in conversations to become their manner of living.

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Love is our grounding, nearness our fundament, and when we lose love and nearness we try again and again to recover them because without them we disappear as *Homo sapiens-amans* even if our bodies may still remain *Homo sapiens* as zoological entities. Even health, our psychic and physiological health, depends on love and the acceptance of the body nearness of other human beings, and a word in love or a touch intended as a caress, may reestablish a lost physiological and psychic harmony. If we do not realize this, if we do not see that ethical concerns arise in love, and we believe that they belong to the domain of our rationality, in our desire for a harmonious social life we begin to use rational arguments or even force to secure something that looks like ethical behavior. As we lose respect for our emotions we begin to use rational arguments to hide, deny, or justify them. We do so in a path that progressively leads to the negation of the other through manipulation as we become *Homo sapiens aggressans* in the expansion of the patriarchal passion for control. We know all this, but we forget it in the delusion of omnipotence through a misunderstanding of intelligence as we think of it as an instrument of control and manipulation. But now that we are aware that our own behavior determines what we are and what our children become, we can choose: do we prefer to conserve a lineage of *Homo sapiens-amans* or a lineage of *Homo sapiens aggressans*? (See also Bunnell 1997, Bunnell and Sonntag, 2000.) This choice is a matter of emotions, that is, it is a matter of desire - what do we indeed want to conserve?

These reflections seem to fall outside biology, but they do not, because they deal with the essence of phylogenetic drift - namely they deal with the constitution of lineages through the systemic reproduction of a manner of living basically defined by the preferences that the living systems have at every instant in the course of their living.