Conscience and conflict: Darwin, Freud, and the origins of human aggression

Myself against my brother
My brother and I against my family
My family against the clan
My clan against the enemy.[1]

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1. Introduction: us and them.

A striking feature of human life is the division we impose upon our psychological and social worlds between a self or us which we regard favourably, and an other or them which we take as correspondingly bad.[2]

This gives rise to a series of psychological and social phenomena, ranging from transient enjoyable rivalries involving one's home town or team, through serious corporate competition, to the intractable destructive hostilities of feud, tribalism, bigotry and racism, nationalism, intolerant aggressive religious fundamentalism, individual paranoid psychosis, and disputes among schools of psychology. And however we moderns think ourselves guarded against such modes of thought, the roots remain active. The sight of a black face is still liable to distress a white amygdala, and consideration of psychoanalysis or cultural anthropology to prompt an evolutionary psychologist to spleen.[3]

Social psychologists have described the readiness with which we form such groups, and the tendency to in-group cohesion and out-group aggression which accompanies this. Also they study the serial psychological misrepresentations -- including self- and group-serving biases, mirror-image perceptions, and systematic errors in psychological attribution -- by which the us is preferred, flattered, and exalted, and the them correspondingly denigrated.[4] In recent times the destructive hatreds which these divisions foster have come to seem a threat to humanity itself. Hence we can appreciate the question which Einstein put to Freud:

> ...man has within him a lust for hatred and destruction. In normal times this passion exists in a latent state, it emerges only in unusual circumstances; but it is a comparatively easy task to call it into play and raise it to the power of a collective psychosis...Is it possible to control man's mental evolution so as to make him proof against the psychoses of hate and destructiveness? (XXIII, 200-1)[5]

And we can compare this with a problem posed by William Hamilton:

> ...we would expect the genetic system...to provide not a blank sheet for individual cultural development, but a sheet at least lightly scrawled with certain tentative outlines. The problem facing a humane civilisation may be how to complete a sketch suggesting some massive and brutal edifice -- say the outlines of an Aztec pyramid -- so that it reappears as a Parthenon or a Taj Mahal.[6]

Progress in these matters requires better understanding of human agression. We can gain this by combining accounts descended from Darwin and Freud. The first concern the co-evolution of ingroup cohesion and outgroup conflict, and the second the mental processes by which individuals co-operate within groups to compete with those outside. Insofar as we can align our understanding of the forces which have shaped the overall ground-plan of the human mind with our knowledge of the depth psychology of individual motive, we can hope to triangulate more accurately on the points of connection between.

2. Evolution altruism and groups.

Darwin suggested that altruistic moral tendencies evolved via the advantages these gave to competing groups. A tribe possessing 'a high standard of morality' would be 'victorious over most other tribes'. This would have selective force, since 'At all times throughout the world tribes have supplanted other tribes; and this would be natural selection...'[7] Darwin's enthusiasm for morality remained unqualified by its role in perpetuating conflict; and his argument has recently been continued by Sober and Wilson[8], who dedicate their account of multilevel selection 'to altruists everywhere', while citing as favourable evidence the conquest of the Dinka by the Nuer. (Hamilton likewise emphasised 'the selective value of having a conscience', while linking the group behaviours facilitated by conscience with racism, xenophobia, and ecological disaster.)

Also recent work has considered the likely role of group selection on cultural as opposed to genetic variation.[9] With this has gone an emphasis on the transmission of culture within groups, and the use of cultural symbols to mark their boundaries. Thus according to Boyd and Richersen

> ....The propensity to cooperate with sympathy-inspiring ingroup members, and to use symbolic markers to define ingroups, is like the innate principles of language. The specific markers, size of group(s), and internal structure of the group(s) to which individuals belong are culturally variable parameters that generate a specific functioning instance of the innate propensities. Like innate language structures and adult lactose absorption, the social decision-making principles most likely coevolved as adaptations to an emerging cultural environment in which cooperation within culturally marked groups was becoming important. Success in intergroup competition came to depend upon within-group cooperation; an evolutionary arms race arose. The scale of cooperation-to-compete might escalate until ecological rather than evolutionary constraints bring a halt.[10]

Such work has also focussed upon the darker side of morality and conscience. Thus Richersen and Gil-White stress the role of both punishment and moral anger.

> ...If much group competition is active rather than passive (e.g. violent combat for land), then within-group altruistic norms maintained by punishment will confer dramatic advantages. This could make the production of new altruistic groups faster than the processes which dilute altruism within the group...The result would be a panhuman selection pressure for cognitive adaptations reducing the likelihood of 'mistakes' in order to avoid costly punishment (prosocial emotions such as duty, patriotism, moral outrage, etc. that commit us to predominant social norms even in the absence of coercion)...
>
> Clearly, the other side of the coin of group cooperation is group conflict. Groups that develop norms that channel their within- group cooperation towards outward bellicosity will force other groups to develop the same (or better) or go extinct. This process selects for ever-stronger forms of within- group cooperation and outward aggression and is likely an important force responsible for the creation of ever larger and more complex social human groups.[11]

3. Psychological mechanisms: identification and projection.

How should we understand the personal motives and mechanisms which regulate ingroup co-operation and outgroup conflict? The idea above is that together with 'the propensity to co-operate with sympathy-inspiring ingroup members' there has been a co-evolution of two forms of aggression. Ingroup moral aggression, involving ingroup punishment, has evolved in the service of outgroup aggression, involving potentially violent conflict. These developments should therefore appear in the individual as two

sides of the same evolutionary coinage; and if so psychological investigation should reveal connections between ingroup co-operation, cohesion, and moral anger on the one hand and outgroup violence on the other. As we shall see, these connections can be traced in detail by considering the psychoanalytic mechanisms of identification and projection, which inform the individual's images of self and other, and us and them.[12]

Identification effects 'the assimilation of one ego to another' (XXII, 63). In this it forms an image of the self as like an other who is worthy of emulation, so that self and other share desirable traits and perspectives.[13] This process informs many kinds of socialization and learning, including that of language. We can regard it as implemented by systems like the 'mirror neurons' which respond to observations of the behaviour of others by producing a first-person image of their activities in one's own motor system; and this goes with other tendencies to liken ourselves to those we are with.[14] Thus as Meltzoff and others report, newborn babies can imitiate adults who open their mouths, stick out their tongues, etc. This indicates the early working of an ability to assume an image presented by the other, which psychoanalysis finds basic to the formation of our self-images and selves. Projection, by contrast, forms an image of the self as unlike another, by dissociating motives or traits from the self. It represents the self as lacking, and the other as having, the trait or aspect in question, so that the other seems different and alien.

These mechanisms work together in implementing the self- and group-serviing biases and mirror-image perceptions noted above. We identify with aspects of others we regard as desirable, so identification creates images of a good self at one in purpose with good others. We tend to project aspects of our selves which we take as bad or undesirable, so projection creates images of good self opposed in purpose to bad others. Since the projected badness located in others is dissociated from the self, the good self and bad others tend to confront one another with mirroring directness. Each party's response to its own projections tends to validate those of the other, so that these mechanisms lock suspicion and hostility in step. As identification regulates co-operation between self and other, projection likewise regulates conflict.

4. Self-esteem and outgroup hostility.

To see this better let us consider an observation from social psychology linking self-esteem and images of in- and outgroups. In several experiments, subjects are given a small setback or humiliation. After this they are probed for attitudes towards persons or groups they identify with or dissociate themselves from (members of their own or different sororities, differing national groups, etc.). People characteristically respond by feeling more favourably towards their ingroups, and less towards their outgroups, then they otherwise would.[15]

Such fluctuations in representation of us vs them are unconscious, but we can readily see how they might be effected by projection: traits regarded as bad or questionable would be unconsciously shifted from self and ingroup to others and outgroup, thus making the former seem better and the latter seem worse. Robert Trivers -- who takes projection as one of a series of mechanisms which have evolved in the service of the unconscious deception of others -- cites the example of homophobic men. Experiments indicate that heterosexual men who most energetically dissociate themselves from homosexuals, and who regard homosexual traits with particular discomfort and disgust -- that is, hetrosexuals for whom homosexuals are a bad them, as opposed to a good hetero us -- are in fact more likely than others to get erections while watching homosexual pornography, and also to deny that they have done so.[16] This is consistent with the idea that in condemning homosexuality they censure in others traits dissociated from their selves.

In this case we can see how identification and projection on a single topic can create both a cohesive ingroup and a well-marked outgroup; and how the tendency to condemnation and punishment may be magnified by the identifications binding the projecting group.[17] So we find group phenomena such as queer-bashing, the legal persecution of homosexuals, their organized murder by Nazis and Falangists, etc. Also it is clear that the projective defining of an outgroup need not rest on any particular internal conflict such as we find in homophobia. For since projection can always enhance the self-esteem of the projector, a group or invidual marked out for hostility is liable to be targeted by a wide range of projections which have little in common besides conflict in the individuals from whom they eminate.

5. Conscience and the externalization of internal conflict.

To understand projection in more detail we can consider the first specimen of Freud's Interpretation of Dreams, that of Irma's Injection (IV, 104ff). The afternoon before this dream Freud had met Otto, his family doctor, who had visited the household of Freud's former patient Irma. Freud had treated Irma for hysteria, and thought he had done enough by explaining to her the causes of her illness, which he took to include the sexual frustrations of widowhood. Otto mentioned that he had been called away to given an injection, and this reminded Freud that another patient had recently been given injections by another doctor, apparently with an unsterile syringe. Freud himself, as he had reflected, was always careful to keep his syringes clean.

Also Otto said something which impinged on Freud's self-esteem. He remarked that Irma looked 'better, but not yet well', and Freud thought this a reproof. He spent that evening writing up Irma's case history, so as to justify himself by discussing it with their senior colleague M. That night Freud dreamt that he and his wife were receiving guests, including Irma. On meeting Irma he said to her that if she still got pains, it was her own fault, for not sufficiently attending to his 'solution'. She replied that her pains were bad, and Freud, worried that he had failed to diagnose a physical illness, conducted an examination. They were joined by a number of colleagues from Freud's medical circle, including M; and it emerged that Irma indeed suffered physical illness. Otto had given her an injection of the toxic chemical trimethylamin. At the close of the dream Freud censured Otto, stressing that 'Injections of that kind ought not be made so thoughtlessly. And probably the syringe had not been clean.'[18]

Now this dream dealt with topics -- illness of a friend and patient, misdiagnosis, malpractice by the family doctor, etc. -- which were sources of anxiety to Freud. Still, by taking the context provided by Freud's memories and associations, we can see that it was wishful, in the sense that it actually represented things as Freud would partly have wished them to be. Freud had gone to sleep wanting to justify himself to M in respect of what he felt to be Otto's accusation of bad medical practice, and in the dream he received the most thorough justification, and in the presence of M and other medical colleagues. The psychotherapy about which Freud was now so enthusiastic could not be blamed for Irma's continued suffering, nor could Freud himself: for Irma had a physical illness, and this was caused by Otto's dirty toxic injection. Freud had felt guilty and privately reproached by Otto during the day; but by the end of his dream he was publicly vindicated.

Further analysis showed that Freud's favourable representation of himself as opposed to Otto also touched on guilts which were older, deeper and far more serious. For Irma was linked in his mind with another friend and another patient from years before. The patient was a woman Freud had killed, by repeatedly giving her what he took to be routine injections; and in that case, as details of the dream reminded him, he had consulted with M as well. The friend had suffered from incurable nerve pain and was addicted to the morphine he used to treat it. Freud had been an enthusiastic advocate of the medical use of cocaine, and had urged on his own experience that it was not addictive. This error, as he remembered, had brought 'serious reproaches down upon me'. He had persuaded his friend to use cocaine in place of morphine on this basis; and his friend became addicted and died a lingering and miserable death from cocaine injections. So by ending his dream with 'Injections of that kind ought not be made so thoughtlessly', Freud was turning towards Otto a reproach which, as he could realise on analysing the dream, he might well have directed against himself.

Finally, the misrepresentation of Otto went further still, and in a way which touched on sexuality and the boundaries of the self and body. Freud had placed particular emphasis in the dream on the chemical trimethylamine, and noted in his associations that it was connected with sexual metabolism. (It was thought to be a decomposition product of semen.) Sexuality, as he observed, was also linked with Irma's illness, which he took to be partly due to her widowhood. But as he later confided to Abraham, further analysis of the dream revealed his own 'sexual megalomania'. The women in the dream, including Irma, were all widows, and Freud had them all. As he said, echoing a physicians' joke common at the time, 'There would be one therapy for widowhood of course. All sorts of intimate things, naturally.'[19] Freud never seems to have acted inappropriately on sexual desire for a patient; but in the dream it was Otto rather than himself who harboured such desire, and Otto was depicted as satisfying it symbolically, by injecting Irma with a product of decomposed semen.

Taking this in relation to our present theme, we can say that Otto's remark pricked Freud's self-esteem, by reminding him of traits and actions which he was liable to condemn in himself. In waking life

Freud dealt with this in an ostensibly realistic and rational way, by writing a case report which would justify his present behaviour. In his dream, by contrast, his reaction was simpler and more comprehensive. He projected the characteristics in question into Otto, and self-righteously censured them there. This use of projection thus transformed an internal and moral conflict (Freud's knowledge of his own unthinking and occasionally lethal medical practice vs. his own standards on the matter) into a social conflict concerning the conduct of another (Doctor Freud vs. Doctor Otto, as witnessed by their medical colleagues.)

6. Ingroup cohesion and outgroup hostility.

We can see clearly how this way of thinking leads to an image of a good self as opposed to an other who may be censured or denigrated. Such thinking may also be co-ordinated within a group, as was that depicted in Freud's dream. Freud and Otto belonged to the same medical ingroup, whose members were identified with one another in respect of shared values relating to medical practice, and also formed an us with respect to local culture generally. This identificatory nexus enabled Freud to use his dream to find a satisfactory (imaginary) solution to his own internal conflict, by (imaginarily) having Irma examined in the presence of a group of his medical colleagues.

Where individuals are bound to one another by identification in this way, projection serves to balance each individual's liability to personal condemnation, guilt, shame, and loss of self-esteem, by directing moral aggression away from the self and towards others in the group, and in accord with the individual's personal version of the norms of that group. Projection thus works together with identification to create a group whose members are ready to feel guilt and shame in relation to one another, and also ready to allocate censure or punishment to one another, by reference to motives and standards which are psychologically shared as obtaining among them.

Inherent in this, howeveris a tendency to represent others and outgroups as liable to condemnation by the standards which give order both to the self and the groups with which the self identifies. As Freud observed, 'It is always possible to bind together a considerable number of people in love, so long as there are other people left over to receive the manifestations of their aggressiveness.' (XXI, 114). So the family -- which for most individuals constitutes their first and most basic ingroup -- also appears as the first of a series of social units which, like the individual, tend to maintain an idealised and co-operative image of things within, and a corresponding denigratory and conflict-inducing image of those without. As Freud remarks,

> Every time two families become connected by marriage, each of them thinks itself superior to or of better birth than the other. Of two neighbouring towns each is the other's most jealous rival; every little canton looks down upon the others with contempt. Closely related races keep one another at arms length...We are no longer astonished that greater differences should lead to an almost insuperable repugnance, such as the Gallic people feel for the Germans, the Aryan for the Semite, and the white races for the coloured. (XVIII, 101; cf also XVIII, 102)

And in accord with the role of projection he stresses that

> ...When once the Apostle Paul had posited universal love between men as the foundation of his Christian community, extreme intolerance on the part of Christendom towards those who remained outside it became the inevitable consequence...Neither was it an unaccountable chance that the dream of a Germanic world-dominion called for anti-Semitism as its complement; and it is intelligible that the attempt to establish a new, communist civilisation in Russia should find its psychological support in the persecution of the bourgeois. (XXI, 114-5)

Freud developed his thinking about this only in a schematic way. He held that the cohesiveness of many groups results from their taking a particular idealized figure -- such as a charismatic leader (or in the case of groups which are not led by individuals a creed or set of norms) -- as representing what they regard as good. (XVIII, 67ff). This identification ensures that each individual's self-esteem is regulated by reference to the idealised persons, creed, or norms which bind the group, so that aggression in service of these is a source of pride rather than guilt or shame. Individuals may also become identified by other means, such as the projection of their bad aspects -- and in particular their hostile and aggressive motives -- into some common locus, which therefore becomes a focus of legitimated and collective hate. In finding

or creating such internal good and/or external bad objects members of a group feel at once unified, purified, and able to focus aggression which is validated by common ideals. Thus the same formations of conscience which regulate aggression within the group also provide for its unbridled expression against others outside. Even without exploring the way these ideas have been refined by Freud's successors[20], we can appreciate that they complement the evolutionary considerations noted at the beginning in interesting detail. So let us now seek to gain better focus on these matters by taking up some further aspects of Darwinian theory.

7. Parental investment and family conflict.

The family seems the most basic of human groups which cohere to compete; and family co-operation is underlain by genetic relatedness, so that competition among families is reproductive competition as well. Parents share half their genes with each child, so that full siblings share half their genes as well. From the perspective of the genome of a parent each child constitute an instance of reproductive success; and from that of each child the reproductive value of two siblings or four half-siblings approaches one's own. This genetic overlap provides a basis for the unity of purpose shown by members of the same family, but also underwrites divergences. These can be investigated via the notion of parental investment, which encompasses any benefit provided by a parent towards the reproductive success of one offspring as opposed to that of others.[21] This includes the efforts of a mother's carrying a child in her body, those of providing food, shelter, protection, etc. -- all aspects of parental care which make for the success of one child rather than another.

As Trivers has argued, parental investment is an intrinsic source of conflict within the family. For roughly, whereas parents are selected to allocate investment to a number of offspring over the course of their reproductive lives, offspring are selected to seek benefits immediately and to the full extent of their individual (genetic) interests. Accordingly each infant seeks more from its parents -- particularly the mother -- than they are inclined to give, and at the expense of its own siblings, whether actual or potential. These conflicts may in turn be exacerbated by those between the parents themselves, for as the modes of investment of men and women differ so do their reproductive strategies. For example it may be to the advantage of either parent to shift burdens of investment to the other, or again to reproduce elsewhere. In consequence the means by which men and women allocate parental investment seem to include not only promiscuity, infidelity, and the desertion of partners, but also abortion, infanticide, abandoning children (e.g. to foundling homes), and varieties of selective neglect.[22]

These conflicts are interwoven, and can be observed from conception in the invasion of the mother's body by the placenta. The placenta is constructed by the activity of the father's genome to extract maternal investment on behalf of the foetus, discounting other children the mother might have. The placenta thus develops as 'a ruthless parasitic organ existing solely for the maintenance and protection of the foetus, perhaps too often to the disregard of the maternal organism.'[23] So, e.g., the placenta bores into the mother's blood vessels, secreting hormones which raise her blood pressure and blood sugars in ways may injure her but benefit the foetus; her body responds by producing hormones which counteract these; and so on. Here conflict between the parents becomes conflict between mother and child; and the placenta may be involved in sibling rivalry more directly, as when one of a potentially multiple birth aborts others.

Conflict continues after birth, for obtaining maternal care -- at whatever cost to others -- is a matter of life or death for the infant. It may be in the interest of either parent abandon a child from the start, as often happens with babies deemed defective. Feeding one child may entail neglecting another, and nursing tends to space conception, and so to delay the emergence of younger rivals, as would suit the interests of the mother as opposed to the father. So in sucking at the breast a baby may already be enforcing its own entitlements against the interests of its father and siblings; and if it stays long there it will conflict with those of its mother as well. By the time a baby is weaned its genetic interests are liable to have been opposed to those of every other member of the family, in conflict concerning the uses of the mother's body and potential rivals inside her.[24]

8. Infantile emotion and parental investment.

We can see the emotions, in Damasio's phrase, as 'part of a multi-tiered and evolutionarily set neural mechanism aimed at maintaining organismic homeostasis'.[25] This is roughly the role which Freud

assigned to what he called drives;[26] and the tiers include inbuilt capacities for distress at hunger, thirst, and other forms of bodily disequilibrium, and also 'emotional command systems', which we share with other mammals, and which direct manifestations of rage and fear, sexuality, maternal (and paternal) nurturance, separation distress and social bonding, and play and social affection. These in turn integrate with a general 'seeking system', marked, as Panksepp has urged, by the mesolimbic dopamine pathway, whose nocturnal activation seems, in consilience with Freud, to be a content-specific cause of dreaming.[27]

Thus many of the subcortical basics of drive and emotion are working at birth, and prepared for expression through the baby's face, voice, and movements. These start to obtain the focus and orchestration of the complex and thought-satruated forms of emotion which we find in adult life during the first year. This seems mainly accomplished by the development, under the impact of experience, of representations of the self, the world, and others, which are realized mainly in the cerebral cortex. So while the subcortical mechanisms come with certain inbuilt relations of excitation and inhibition, they attain further co-ordination and integration as the cortex develops through critical phases of synaptic extension, mylenation, and experience-dependent neural pruning; and these coincide with the infant's using its experience of relating with others -- and particularly the investing mother -- to build increasingly complex representations of the objects towards which its emotions are directed. This development of emotion via that of the representation of its objects, in turn, seems shaped by the demands of parent-offspring conflict, and of parental investment more generally.

The infant selected for such conflict -- and for later outgroup conflict as well -- is dependent upon its mother's will, and so must pursue its interests by psychological means. Since mothers are selected to respond sensitively to their children's needs and condition, the infant does this by expressing and eliciting emotion. Hence this aspect of evoultionary theory leads us to expect that the infant's emotions, and the neural systems which realise them, can be understood as selected initially to extract maternal investment. Speaking very roughly, it seems that the infant has two ways of securing what it needs: co-operatively, via the elicitation of affection and love; or coercively, via the infliction of anxiety and guilt. Hence the mother is the main focus both for the new-born's affection and gratitude, and also for its uniquely arresting and motivating expressions of rage, hunger, pain, and fear. (Also this extraction may be set to proceed in a particular way. Preliminary findings suggest that the father's genome may be primarily responsible not only for the placenta but also for the subcortical basics of emotion, whereas the mother's is pivotal for the cortex, which remains to be completed by her post-natal investing attentions.[28] If so, then we can see the subcortical mechanisms of emotion as assuming at birth the egotistic extractive role of the discarded placenta, and thereafter being modified as the cortex, under the influence of the mother's care, takes forward the task of directing co-operation with the mother and other members of the family.[29])

Since nothing in the infant's life will be more important than getting what the mother has to provide, we should expect both sets of emotions to be very fully engaged. From an evolutionary perspective the distress which such expressions cause to parents are part of their efficacy as instruments of duress on the infant's behalf. Wittgenstein remarked that in an infant's cry one could discern 'terrible forces different from anything commonly assumed. Profound rage, pain and lust for destruction.'[30] But insofar as such forces have enabled their possessors to thrive by coercing mothers (or others) to provide more than they otherwise would, we should not be surprised at their existence even in the adorable baby. Also, it seems, we should not be surprised if these first engagements of emotion were guided by infantile versions of identification and projection, as we find later to be the case.

This accords with psychoanalytic hypotheses about the infantile roots of adult aggression. Freud found that the earliest and most basic of the unconscious self-images which drove social cohesion and conflict derived from the infant's relations with its mother. These showed a particularly radical opposition, as structured by identification and projection. The identificatory, affectionate and co-operative aspect of the relationship apparently began with satisfaction at the breast and was extended to the caring mother as a whole. This aspect was 'laid down unalterably for a whole lifetime, as the first and strongest love-object and as the prototype of all later love relations -- for both sexes.' (XXIII, 188). On the other hand, there were projective images -- involving, as Freud stressed, 'the earliest parental <u>imagoes</u>' (XXII, 64) -- of the self as in constant conflict, either disguised or open, with a parental other who was harsh, punitive, and cruel. These images made up the most primitive aspects of the super-ego, and Freud regarded them as so suffused with 'merciless violence' (XIX, 53) as to suggest that they were formed under the influence of an innate capacity for lethal aggression, which would later show itself both in such extremeties of

conscience as depression and suicide, and also in the aggressions and cruelties of warfare and conquest, as noted above.

9. Parental investment and emotional development.

The differing positions of parent and offspring as regards parental investment also have far-reaching consequences for psychological development. The infant's role as a selfish extractor of investment is by nature preparation for a later role as an altruistic provider; and this transition is mediated by experience in a family in which parents tend to allocate benefits to children (and encourage them to act towards one another) in a way which is fairer than the infant's own genome would dictate. So we should expect psychological development overall to have an intrinsic character which psychoanalysis has long emphasised. It involves a transition, facilitated by parental care and family life, from something like infantile egotism (or narcissism) towards a capacity for non-self-regarding love (or altruism) for those with whom it is in relations of reproductive and ingroup co-operation, and also towards increasingly mature expressions of competition and aggression.

Accordingly the growth of motivation over the lifespan should show a parcular kind of continuity-in-difference, which the various forms of psychology should chart. Continuity would come from the more or less constant role of the deep subcortical bases of motivation, and differences and development from the way these components were reworked and reintegrated as representations of the objects of emotion change (and with the objects themselves) over the lifespan. These changes should both reflect and drive the transition from infantile egoistic extraction of parental investment through the co-operation required for family life to the reproductive, investment-contributing, and group-competitive stances of adulthood.[31] So the kinds of love or other emotions of co-operation started in infancy with parents, siblings, and other relatives or carers, should develop, with changes in representations and objects, from early self-regarding forms towards others which are more altruistic, and in which reproduction comes to play an increasingly dominant role. And early aggressions should likewise become representationally focussed on family and later reproductive rivalries, and finally on competing outgroups.[32] Such a developmental process would enable maternal care, family life, and later group interactions to produce a variety of psychological types suited to local conditions.[33]

Taking this in terms of identification and projection, we should expect the infant receiving parental care to identify with the adult who provides it, thus laying down images of itself as closely associated with another whose ways of caring, relating, and loving, it can ultimately assume as its own. These basic early images should then contribute to later forms of identification and reproductive co-operation over the remainder of life. At the same time -- and as we shall see in more detail below -- the infant should create projective images of others which are dissociated from this early <u>us</u>, and are potentially bad. As this dialectic proceeds the infant can again identify with these others, and thus represent itself in a more morally and motivationally complex way. Thus the initial focus of love and affection towards the mother will be carried forward by identification into later relations of reproductive co-operation, while that of anger and aggression will be channelled by projection towards ingroup moral co-ordination in the form of guilt, shame, and readiness for punishment, and towards outgroup conflict unrestricted by identification or moral emotion, and apparently characterized by spite.[34]

10. Consolidation and continuity of attachment.

To focus more specifically on the infantile roots of outgroup aggression we may consider the appearance of the interrelated phenomena of <u>separation distress</u>, <u>stranger anxiety</u>, and <u>social referencing</u>. As Schaffer observed:

> ...crying or some other form of protest on termination of contact with an adult was apparent from the early months on...in the first half-year infants were found to cry for attention from anyone, familiar or strange, and though responsiveness to strangers tended to be less immediate and less intense than to the mother, both could quieten the infant and the departure of both could evoke protest. At the age of approximately seven months, however, a change took place. The infants still protested at the same situations, but now their protests were directed solely at certain <u>specific</u> individuals. The departure of these alone elicited crying and only their renewed attention terminated the infants' distress. Strangers, quite on the contrary, upset the infant by <u>approaching</u> him.[35]

At this time infants also begin to rely on their mothers as trusted sources of information about what is safe as opposed to dangerous, and hence about strangers. As Campos reports,

> ...the communication between mother and infant becomes extended to include a whole event in the environment. During this period the infant can appreciate what in the environment is the target of the other person's emotional reaction, much as the infant at this age can appreciate the referent of the mother's pointing or gaze behaviour...Accordingly, during this period social referencing begins...the deliberate search for emotional information in another person's face, voice, and gesture, to help disambiguate uncertainties in the environment...a two-person communication about a third event...[36]

These developments mark the consolidation of attachment, as studied in contemporary developmental psychology.[37] Their emergence just precedes the time at which infants start reliably to show the varying responses to being left alone with a stranger which are characteristic of empirically well-defined categories of secure, avoidant, ambivalent, and disorganized attachment. These responses can in turn be seen to reflect the infants' differing initial resolutions of their own internal emotional conflicts, and hence they way they project these conflicts into social life[38]; and as a wide range of empirical studies are beginning to demonstrate, they mark the inception of basic and potentially enduring patterns of relationship to others.

These patterns of early feeling seem to show themselves in a whole range of later transformations: in childhood phantasy and art, and relations to teachers and other children; in adolescent social behaviour, in courting, choice of reproductive strategy, and sexual partnership; in parenting; in adult patterns of grieving and other responses to abandonment and loss; and in the tendency to various kinds of psychopathology. So tracing these patterns through time enables us to track the development of emotion and relate it to early conflict. As regards aggression we can note that children who are securely attached -- and therefore relatively free of emotional conflict within themselves -- do not seem prone to aggressive conflict with others. When secure children play in pairs with others of any category, they neither victimise their playmates nor become victims themselves. By contrast pairs of insecurely attached children almost always fall into such patterns; and those whose initial relation to the mother is so conflicted as to be disorganized tend to become controlling and coercive as childhood unfolds.

Also the patterns pass from parent to infant. The categories of secure and insecure attachment observed for year-old babies map, among others, to counterparts discernible in the ways adults talk and think about their own childhoods. The category of an infant's attachment can be predicted with impressive regularity from the counterpart category assigned to its mother (or adoptive mother), even before the infant is born. The best explanation for this would seem to be that infants start to acquire basic patterns of emotional expression and relationship by identification with their parents, as considered above.

11. First representations: self and other, us and them.

The correlation between the seven-month-infant's newly affectionate and communicative relation with mother on the one hand and its new fear of strangers on the other indicates that the infant has now imposed upon its experience both a form of distinction between self and other, and a related distinction between a good us and a potentially bad them. These are linked; for as the emerging I of the infant self is a locus of individual feeling and will, so the emerging we of the mother/infant pair is a locus of shared feeling and collective will, particularly in relation to threats from outside, such as strangers apparently represent. The infant's emerging distinction between self and other thus resolves out of a prior but less focussed sense of contrasting relationships, with the self already anchored in affectionate and information-gathering relations with carers, kin, and other local familiars.[39]

Together with the material noted above, this strongly suggests that the innate propensity which Boyd and Richerson describe -- 'to cooperate with sympathy-inspiring ingroup members, and to use symbolic markers to define ingroups' -- begins with relations of identification with the mother, and has its initial parameters set before the end of the first year.[40] The same applies to the other side of the coin, the infants' projective distrust of the alien. But although this development seems clearly marked in the infant's behaviour, we should note that there is something paradoxical about it. The infant distinguishes its mother from other people from birth, and by the fourth month has developed many special ways of relating to her,

including elaborate and affectionate 'proto-conversations', which it conducts only with her.[41] So the question arises: if the seven-month infant already has a longstanding specific relationship with its mother, why does it now so sharply distinguish between mother (and other familiars) and strangers? And why does it so vigorously protest the departure of the one, and so readily fear the approach of the other?

The best explanation for this seems to be that the infant's prior sense of relationship includes its directing both its strongest affections and fiercest hostilities towards the mother herself, but without yet grasping that these emotions are directed towards one and the same enduring individual, or indeed towards a person at all. The change observable at seven months would thus result from the infant's working out that its mother was a single continuing communicating being, and thus unique and irreplaceable, so that her presence became uniquely valuable and her absence likewise threatening.

This is in effect the hypothesis advanced by Melanie Klein, in her account of the paranoid/schizoid and depressive positions of infancy.[42] From our current perspective what is most important about this development is that it represents the infant's bringing together in the representation of a single, unique and lasting other both identificatory and the projective images which it has previously not had occasion to unify. Thus the infant's initial consolidation of an image of itself as in a co-operative (as opposed to an hostile) relation with its mother, which we see in separation distress and social referencing, has as its projective corollary the initial consolidation of an image of others who were bad and threatening, which we see in fear of strangers. The work we have considered above gives us reason to suppose that this original (and Kantian) synthesis of the object in the imagination plays a significant role in the way the infant henceforth conceives itself and others. The opposition between good us and bad them would thus lie near the core of human individuality. It would be a consequence of the interaction of identification and projection with the infant's attainment of the ability to represent itself and others as single and continuously existing.

Specific behavioural manifestations of this development may be observable in experiments conducted by Bower and Bell.[43] Bower describes

> ...A simple optical arrangement that allows one to present infants with multiple images of a single object...If one presents the infant with multiple images of its mother -- say three 'mothers' -- the infant of less than five months is not disturbed at all but will in fact interact with all three 'mothers' in turn. If the setup provides one mother and two strangers, the infant will preferentially interact with its mother and still show no signs of disturbance. However, past the age of 5 months (after the co-ordination of place and movement) the sight of three 'mothers' becomes very disturbing to the infant. At this same age a setup of one mother and two strangers has no effect. I would contend that this in facts shows that the young infant (less than five months old) thinks it has a multiplicity of mothers, whereas the older infant knows it has only one.

This admits interpretation as showing that while at four months the infant takes its mother as a psychological other to whom it relates, it does not yet regard her as a single enduring person, as opposed to a potential multiplicity of presences whose spatio-temporal dimensions are as yet indeterminate. By five months, however, the baby opposes uniqueness to episodic multiplicity, and starts to view the mother (and by implication/identification its own self) as individual, continuous, and lasting.

We can also observe related changes in the infant's expressions of emotion. Thus when someone makes a four-month baby angry by impeding its movements, the baby directs its anger at the impeding hand. The four-month-old seems not to have worked out that the hand is part of, and so animated by, another person.[44] A seven-month-old, by contrast, directs its anger to the impeding agent's face. By this age the baby is capable of monitoring others' expressions and responding in complex ways to the feelings they show; and the identity of the frustrating person now apparently matters as well. The seven-month-old protests at being impeded by either its mother or a stranger; but it apparently expects its mother to comfort it after frustration by the stranger, and so is especially upset when she does not do this.[45] So by seven months the infant's anger towards its mother has been modified by the representation of itself as requiring, and her as providing, comfort and protection where strangers are concerned. Such representationally and cortically modified anger thus already differs from the newborn's initial subcortical rage.

Before the infant represents itself and its mother in these ways, however, it evidently makes her the target of anger and fear. A newborn, for example, can be provoked to rage simply by the sight of its mother's immobile face.[46] Indeed the young infant seems particularly prone to experience anger or fear whenever its mother is unresponsive or alien. (Few things are more objectively threatening to an infant than a mother who will not respond, and since mother is such an important cognitive/emotional target her familiarity would seem important also.) Carpenter describes how infants presented with their mother's face in strange circumstances 'would tense as they averted their gaze appearing to keep the target in peripheral view. From this position they would frequently take furtive glances. Sometimes they would turn ninety degrees away.' She noted that looking right away, as if trying to end the episode, was particularly frequent when infants were shown their mother's face speaking with a different voice. Again, Cohn and Tronick observed babies of just over three months, comparing the ways they related to their mothers in normal circumstances with their responses when the mother's deliberately behaved in a expressionless way. Normally the babies alternated between watching the mother, showing positive feeling, and playing interactively with her. In the abnormal circumstances, by contrast, they were fearful and suspicious, and alternated between attending warily, protesting, and turning away.[47]

This is how infants later act with strangers, as they consolidate their images of self and other as unique lasting beings. So these observations are consistent with the idea that strangers -- and by extension members of outgroups generally -- inherit the fear and rage directed at mothers who seems strange or unresponsive in the first months of life. This provides a continuity between the 'merciless violence' which Freud ascribed to the earliest parental imagoes at the basis of conscience, and the violent outgroup aggression apparently characteristic of our species life. We noted at the outset that Darwin and his successors have indicated how the formations of conscience might have evolved by binding humans in internally cohesive and externally rivalrous groups. We can now see that Freud and his successors have complemented this, by describing in detail how these same formations create a moral unity encompassing punishment within groups who co-operate via identification, and also set these groups against one another in projection-driven conflict.

If the present discussion is on the right lines, psychoanalysts also have traced these conflicts to their individual psychological roots. These lie in the infant's early pre-personal and fragmentary projective images of the other, and hence in its first confused unknowing fears, and desperate primitive extractive rage. If this is correct, then work in psychoanalysis and attachment should have a particularly central place in the perspective of evolutionary psychology. For these disciplines are unique in addressing the task of moderating these emotions in infancy, overseeing their continuities in the course of development, and altering the images that channel them into destructive conflict as life unfolds.

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1 This proverb has many versions. That quoted is Somali; the Bedouin omits clans but ends with 'All of us against the foreigner'.

2 Thus as President Bush reminded the American electorate: 'When I was coming up, with what was a dangerous world,,,it was us versus them, and it was clear who the them were. Today we're not so sure who they are, but we know they're out there.' Unfortunately he was right. The problem is not just the blindness of these mechanisms but also their ubiquity.

3 For unconscious racism and the amygdala see Phelps, et. al. 'Performance on Indirect Measures of Race Evaluation Predicts Amygdala Activation' Journal of Cognitive Neuroscience 12.5, 2000, 729-38; for evolutionary psychology and anthropology see Pinker's critique -- as based, astonishingly, on a protocol from an anymous graduate student -- in The Language Instinct (London: Penguin, 1994) at 412 ff.

As Miller and others have observed, Pinker's version of evolutionary psychology is ill-equipped to explain the varied and expressive aspects of human culture upon which the social anthropologists Pinker caricatures have focussed. These require to be understood in terms of mate choice and sexual selection, and by implication via the symbolic value of many aspects of behaviour and culture. These latter seem to me best understood by combining psychoanalysis and recent work in conceptual metaphor. For sexual selection see G. Miller The Mating Mind, New York: Doubleday, 2000, and 'Mental traits as fitness indicators' Annals of the New York Academy of Sciences 907:62-74 (2000). For links between psychoanalysis and conceptual metaphor see Hopkins, 'Psychoanalysis, Metaphor, and the Concept of Mind', in M. Levine, ed, The Analytic Freud, London: Routledge 2000.

4 For discussions and references to emprical work on groups see for example D. Meyers, Social Psychology, Boston: McGraw Hill, 1999. For the relation of individual and group identify see this book 41ff, and for the readiness for group formation and subsequent ingroup bias see the work by Tajfel at

353ff. For the readiness with such divisions can become violent see the experiments by Sherif and Zimbardo at 576 and 138. For the self-serving bias and the accompanying false consensus and false uniqueness effects 51ff; and for the related group-serving bias and the manipulation of the fundamental attribution error in service of it 68 and 371-3, and for the outgroup homogeneity effect and mirror-image misperceptions 365 and 529-31.

[5] This reference to Einstein, and those which follow to Freud, are by volume and page (in parentheses) to The Standard Edition of the Complete Psychological Works of Sigmund Freud, trans. and ed. J. Strachey et. al., London: Hogarth Press, 1958.

[6] W. Hamilton, 'Innate Social Aptitudes of Man: An Approach from Evolutionary Genetics' in The Narrow Roads of Gene Land, Oxford: Spektum and W. H. Freeman publishers, 1995, p 330. In addition to Hamilton's articles this collection includes biographical material on the influence of George Price and his approach to group selection, and Price's advocacy of the connection between altruism and spite. Hamilton's reference to the social, otherwise explicit in this essay, is here conveyed via the fact that Aztec temples were used for the blood sacrifice of captives from other tribes, sometimes in groups of hundreds or thousands. (The architect of the Taj Mahal, by contrast, sacrificed only his hands.)

[7] Charles Darwin, as quoted on p 4 of Sober and Wilson, cited below.

[8] E. Sober and D. S. Wilson, Unto Others, London and Cambridge Massachusetts: Harvard University Press, 1998.

[9] This does not entail that gentic influences have played no role. Provided that genetic relatedness among members of family-composed ingroups sufficiently exceeded that among members of competing outgroups, spiteful aggression might have evolved in accord with the rules specified by Hamilton. See Hamilton, 'Spite and Price', 'Selfish and spiteful behavour in an evolutionary model', and 'Innate Social Aptitudes of Man' in The Narrow Roads of Gene Land Oxford: Spektum and Freeman publishers, 1995.

[10] P. Richersen and R. Boyd, 'The Evolution of Human Ultra-Sociality' in I. Eibl-Eibisfeldt and F. Salter, eds. Ideology, Warfare, and Indoctrinability, New York: Berghahn Books, 1998, Pp. 71-96.

[11] Gil-White, F., & Richerson, P. 'Cooperation and Conflict, Large Scale Human', Encyclopaedia of Cognitive Science, London and New York: Macmillan, in press. See also Boyd & Richerson (1992) 'Punishment allows the evolution of cooperation (or anything else) in sizable groups.' Ethology and sociobiology 13: 171-195.

[12] Here I am taking projection to encompass what is now called projective identification. For discussion of this see H. Segal, Introduction to the Work of Melanie Klein, London: Hogarth, 1972.

[13] Such ingroup phenomena as the group-serving bias, discussed by Meyers above, are readily related to identification, as are observations about how we llike those we take to be like us (614); while others, such as mirror-image misperceptions, outgroup homogeneity, and readiness to group hostility, are likewise relatable to projection. For some phenomena more specifically related to identification see

[14] On mirror neurons see Rizzolati, Fogassi, and Gallesi, 'Neurophysiological mechanisms underlying the understanding and imitation of action', Nature Reviews Neuroscience, Sept 2001; and Blakemore and Decity 'From the perception of action to the understanding of intentionality' Nature Reviews Neuroscience, August 2001. On the role of imitation see A. Meltzoff, 'Born to Learn' in Fox & Worhol, eds, The role of early experience in infant development, Skillman, N.J.: Pediatric Institute Publications, 1999. On other forms of assimilation of self and other see Meyers 158.

[15] See Meyers 65-6, 361.

[16] See Trivers, 'Self-deception in the service of deceit' in , Evolution and Social Theory, Oxford: OUP 2002; and Adams et al 'Is homophobia associated with homosexual arousal?' J. Abnorm. Psychol. (1996) 105:440-45.

[17] Compare the polarizing effect of group thinking at Meyers 311 and deindividuation at 304.

[18] For a fuller account of this dream, and of Freud's method of analysis and the kind of support it can be taken to enjoy, see Hopkins, 'Patterns of Interpretation: Speech, Action, and Dream' in L. Marcus, ed, Cultural Documents: The Interpretation of Dreams, Manchester: Manchester University Press, 1999.

[19] For this aspect of Freud's dream see H. Abraham and E. Freud, eds., A Psychoanalytic Dialogue: The Letters of Sigmund Freud and Karl Abraham, 1907 -1926, London: Hogarth Press, 1965, p 20. This also indicates how the dream is constructed around a pun on 'solution', which is a crossing point for a conceptual metaphor which maps mind to body. For discussion of the relation between psychoanalytic symbolism and conceptual metaphor see Hopkins, 'Psychoanalysis, Metaphor, and the Concept of Mind', in M. Levine, ed, The Analytic Freud, London: Routledge, 2000.

[20] For some more recent views on this matter see Segal, 'From Hiroshima to the Gulf War and after: A psychoanalytic perspective' in Elliott and Frosch, eds, Psychoanalysis in Contexts, Routledge: London and New York, 1995.

[21] The term 'parental investment' was introduced by Trivers in 'Parental Investment and Sexual Selection' (1972). For this paper as well as 'Parent-Offspring Conflict' and others discussed below see Trivers, Evolution and Social Theory, Oxford: OUP 2002. Trivers also provides overviews in Social Evolution, California: Benjamin/Cummings, 1985. For recent discussion see Mock and Parker, The Evolution of Sibling Rivalry, Oxford: Oxford University Press, 1997.

[22] For basic theory see Trivers 1972, 2002, cited above; for a wealth of related biological social and psychological detail see Hrdy, Mother Nature, London, Vintage, 2000.

[23] Quoted in Hrdy, cited above, p 433. For discussion see D. Haig 'Genetic Conflicts in Human Pregnancy', Quartery Review of Biology 68 (1993), pp 495 - 532.

[24] These conflicts appear vividly in psychoanalytic accounts of infancy. See Klein, The Psychoanalysis of Children, in The Collected Works of Melanie Klein, London: Hogarth, 1974; and Segal cited above.

[25] Damasio et. al. 'Cortical and sub-cortical brain activity during the feeling of self-generated emotions', Nature Neuroscience Vol 3 no 10 October 2000 p 1049.

[26] This role was constant from his Project of 1895 onwards, and is closely related to that in terms of which Damasio and his colleagues consider emotion. As Freud described his conception,

> ...the nervous system receives stimuli from the somatic element itself -- endogenous stimuli...These have their origin in the cells of the body, and give rise to the major needs: hunger, respiration, sexuality....They only cease subject to particular conditions, which must be realized in the external world (Cf., for instance, the need for nourishment). In order to accomplish such...an effort is required...' (I, 297).

The 'endogenous stimuli' of which Freud speaks can be seen as those which initiate processes for returning to equlibrium, and the 'effort' is that expended in attaining it. How Freud took this process to work and develop can be seen by considering what he says about the hunger drive in the human infant. The internal stimuli which result from a lack of nutrients constitute a departure from equilibrium, which is felt as unpleasurable; and the requisite equilibrium can normally be restored only by the satisfaction of the need. During restoration, say by feeding, the neural pathways activated by the disequilibrating stimuli are perforce linked into a fuller network with those activated by the processes through which need is satisfied; and these include the perceptual networks active in perception of the external satisfying object, the intermediate networks involved in synthesizing information about this, and the networks for generating the motor activities of meeting the breast, sucking from it, and so on. The processes which lead to the recovery of neural equilibrium are felt as pleasurable, and strengthen neural connections throughout these networks. Thus the neural disequilibration caused by unmet need comes to cause the kind of activities through which the need is satisfied in the external world, so that such disequilibrim comes to be self-righting.

[27] This particular set of designations is taken from D. Watt, 'The dialogue between psychoanalysis and neuroscience: alienation and reparation', Neuro-Psychoanalysis, International Universites Press, Vol 2 No 2 2000, p. 187. Such terms of course give only a very tentative and approximate indication of the naure of the neural sytems in question. For a fuller account, with reference to a range of neuroscientific research, see J. Panksepp, Affective Neuroscience, Oxford: Oxford University Press, 1998. The circuity of sexual motivation is discussed in more detail in Pfaff, Drive, London and Cambridge Massachusetts: MIT Press, 1999. For an overview of these topics and discussion of the role of dreams see Solms and Turnbull, The Brain and the Inner World, London: Karnac 2002.

[28] For accounts of infancy which bring out the role of maternal investment vis-à-vis the cortex see A. Schore, 'Effects of a secure attachment relationship on right brain development, affect regulation, and infant mental health', Infant Mental Health Journal, Vol 22 (1-2) 7 - 66 (2001); and C. Trevarthan and K. Aitken, 'Infant intersubjectivity: research, theory, and clinical applications', Journal of Child Psychology and Psychiatry, Cambridge University Press, 2001. For more on intersubjectivity and the infant's sense of self see the essays by Trevarthan and others see the essays in S. Braten, ed., Intersubjective Communication and Emotion in Early Ontogeny, Cambridge: Cambridge University Press, 1998.

[29] On the mechanism responsible for this see W Reik and J Walter,'Genomic Imprinting: Parental Influence on the Genome' Nature Reviews Genetics, January 2001; as regards imprinting and the cortex see R. Trivers and A. Burt 'Kinship and Genomic Imprinting', R. Ohsson, ed, Genomic Imprinting, Springer Verlag, 2000. This suggests that psychological conflict within the individual may be a continuation of that between maternal and paternal genes. This is discussed by Christopher Badcock in his Evolutionary Psychololgy: A Critical Introduction, Oxford: Blackwell, 2000.

[30] L. Wittgenstein, Remarks on Culture and Value Tr. P. Winch, Oxford: Blackwell Publishers, 1977, p 2e.

[31] This bears on the thesis of 'massive modularity' sometimes associated with evolutionary psychology. While the emotions might be regarded as modular (but not encapsulated) in their basic subcortical organization, they clearly serve a number of differing and interacting roles throughout the lifespan, as mediated by the kinds of maturation and changes in representation discussed here and below. We can clearly gain deeper understanding of emotion by studying these, as psychoanalysis, neuroscience, attachement theory, and other forms of developmental psychology aim to do. Whether further emphasis on modularity will contribute to actual research, as opposed to group-marking ideology, is questionable.

[32] Sulloway has stressed how competition among siblings within the overall co-operative structure of the family results in the allocation of individual roles or niches, which differ according to sex, order of birth, etc. This involves a dialectic between identification and differentiation similar to that discussed here, except that Sulloway concentrates on identification and ignores projection and the development of aggression. Thus he stresses that first-borns tend to be highly idendified with their parents, while laterborns, having elder siblings also to identify and compete with, are less so. See F. Sulloway, Born to Rebel: Birth Order, Family Dynamics, and Creative Lives,

[33] This might be done, for example, by interactions which selectively encourage or arrest the growth of one or another emotional component, or by altering the way emotions are integrated by representations of their objects. The maintenance of conflict, or again of early or regressive forms of feeling, would thus be among the ways such variation might be produced.

[34] For spite see the materials cited in footnote 9 above.

[35] H. R. Schaffer The Growth of Sociability Harmondsworth, Middx: Penguin, 1971, p 117. For the cultural universality of stranger anxiety (and its relation to men with beards) see Hrdy, cited above, pp 414 ff.

[36] Campos et al. 'Socioemotional Development'. In P. Mussen, ed, Handbook of Child Psychology, vol 3. New York: John Wiley, 1983, p 825.

[37] For two recent surveys of empirical work on attachment which bear on the claims made in this section see J. Cassidy and P. R. Shaver, Handbook of Attachment, New York and London: Guilford Press, 1999, and S. Goldberg, Attachment and Development, London: Hodder, 2002.

For introduction to the Strange Situation procedure and the categories linked with it see the Handbook Ch 14 and the summary tables 14.1 and 14.2; for relations to teachers and childhood bullying etc. see Ch 4, and for the development of disorganization into coercion, and some examples of phantasy see Ch 23; for the adult attachment interview and correlations between adult and infant categories see Ch 19 and the summary table 19.2.; and for further discussion of attachment and evolution see Ch 6, which includes a discussion of parent-offspring conflict, and Ch 7 which both considers heritability and links attachment categories to reproductive behaviour. Goldberg's economic and thoughtful presentation covers most of the same topics, and her table 3.1 perspicuously displays some of the work on continuity of attachment patterns.

[38] This claim in particular needs more explication and justification than I can provide here. Still the connection between avoidant/dismissing and conflict about the mother's significance has long been noted, and those for ambivalent/preoccupied and disorganized/unresolved are explicit in the descriptions of the categories themselves (see Chapters 14, 19, and 23 in the Handbook cited in the next note).

[39] On the social background of the infant's sense of self see the essays in Braten, ed, cited above.

[40] Taking this further, and in connection with the theory of conceptual metaphor, we can glimpse the possibility that markers of ethnic boundaries ultimately symbolize those of the infant's or mother's own bodies ('motherland' etc.). Again this may seem incredible, but the most basic forms of punishment and aggression are bodily, and the hypothesis under consideration is that the regulation of ingroup punishment and outgroup aggression is formative of the individual (and body-protecting) mind.

[41] For description of these developments see Trevarthan and Aitken cited above, and for a fuller account see Travarthan and others in S. Braten, ed., cited above.

[42] For more detailed discussion of these see Segal, cited above, and Hopkins, 'Synthesis in the Imagination: Psychoanalysis, Infantile Experience, and the Concept of an Object', in J. Russell, ed, Philosophical Perspectives on Developmental Psychology, Oxford: Blackwell, 1987

[43] See T Bower, Development in Infancy, San Francisco: W. H. Freeman, p 217; and S. Bell, 'The development of the concept of the object as related to infant-mother attachment' Child Development 40, 291-311

[44] This is also an instance of the psychoanalytic notion of an emotional relation to a part-object, which applies to the mother generally, including the breast.

[45] See Campos et. al., cited above, p 824 and Sternberg et al., in Mussen ed, cited above, p 181.

[46] Personal communication, Professor Peter Molnar.

[47] J. F. Cohn and E. Z. Tronick, 'Three-month-old infants' reaction to simulated maternal depression' Child Development, 54, 1983, pp 185 – 93. Travarthan cites a number of related experiments in 'The concept and foundations of infant intersubjectivity' at p 31 of Braten, ed, cited above.