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The biological evolution of guilt, shame and anxiety: A new theory of negative legacy emotions

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ABSTRACT

Human beings are the most social and the most violent creatures on Earth. The combination of cooperation and aggression enabled us to dominate our ecosystem. However, the existence of violent impulses would have made it difficult or impossible for humans to live in close-knit families and clans without destroying each other. Nature's answer was the development of guilt, shame and anxiety—internal emotional inhibitions or restraints *specifically against aggressive self-assertion within the family and other close relationships.*

The theory of negative legacy emotions proposes the first unitary concept for the biopsychosocial function of guilt, shame and anxiety, and seeks their origin in biological evolution and natural selection. Natural selection favored individuals with built-in emotional restraints that reduced conflicts within their family and tribal unit, optimizing their capacity to survive and reproduce within the protection of their small, intimate societies, while maintaining their capacity for violence against outsiders. Unfortunately, these negative legacy emotions are rudimentary and often ineffective in their psychosocial and developmental function. As a result, they produce many unintended untoward effects, including the frequent breakdown of restraints in the family and the uninhibited unleashing of violence against outsiders.

Introduction

Human beings suffer enormously from painful emotional reactions. Regardless of whether these emotions have some redeeming features, they are often self-defeating and disabling, and fuel a great many of what are called "mental disorders" [9]. No one seems to escape from this array of painful feelings, and a great deal of human effort on an individual and cultural level has gone into reducing their demoralizing impact. These painful emotions first display themselves in early childhood, often during infancy, and then persist throughout adult life.

Clinicians and researchers usually conceptualize the basic negative emotions within one of three somewhat overlapping categories of guilt, shame or anxiety. Although there are nuances, such as the distinction between these emotions and grief reactions, or the relationship between these emotions and physical pain, it is possible to address most negative emotional reactions within these three categories.

A unitary concept of guilt, shame and anxiety

Observers of human relationship have long sought an explanation for what restrains aggression, selfishness, and competitiveness. Adam Smith [36] spoke of "sympathy" or "fellow-feeling" for others. Darwin [14] described "the social virtues" as initially based on "the praise and the blame of our fellowmen" (1981, p. 184). He described this "love of approbation and the dread of infamy" as derivatives of "the instinct for sympathy" acquired through natural selection. Although Darwin does not dissect these emotions, his description suggests that our baser instincts are or can be controlled by both positive feelings of sympathy and painful inhibiting feelings of shame and humiliation.

In the dawn of modern psychology, Freud [17] emphasized guilt as the controlling force over destructive instincts while Adler [1] emphasized social interest as the alternative to shame and inferiority. In a psychoanalytic study, Lewis (1971 p. 19 [27]) addressed both emotions and concluded "shame and guilt are ordinarily grouped together because of their common function as drive controls" and that they "alter the course of instinctual behavior." However, Lewis did not include anxiety as the third inhibitory emotion and her psychoanalytic theorizing was highly speculative. In a sociological approach, Scheff and Retzinger [33] saw guilt as a

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derivative of shame, again without giving much attention to anxiety. In recent times, evolutionary approaches have examined these issues, often in search of the origins of human morality. Most of these studies of the evolution of morality ignore guilt, shame and anxiety or give them passing mention (e.g., [3,12]).

Without unnecessarily subjecting the reader to a comprehensive review of the literature, the theory of negative legacy emotions appears to be the first unified theory of guilt, shame and anxiety, as well as the first theory that roots these emotions firmly in biological evolution and natural selection.

From shrews to infants

From an evolutionary viewpoint, we can view the first mammal as the big step in our biopsychosocial evolution. This shrew-like little creature, no larger than a child's pinky, was the first to nurse its young [13]. Eventually that led to a vast array of mammals, including humans. We developed our intense family lives around the necessity of nursing a helpless infant and then nurturing it toward maturity over many years.

Martin [30] observed, "After birth the pattern of human brain growth differs sharply from that of any other primate and any other mammal." He described how the "human brain size increases almost fourfold after birth rather than merely doubling as in other primates." Further, "the human brain continues to show a rate of growth as fast as that of a fetus for a year after birth." (p. 125). The human brain is born in what can be considered a fetal state and within the first year of life grows in response to the quality of nurturing that surrounds it. Our brain is literally a social fabric made up both by its inherited capacities and by environmental influences during its accelerated growth in the first few years of life. Our brain goes through massive development in response to early socialization weaving these experiences into the neuronal structure and function of the brain, creating a social brain. Humans are the most social, most cooperative, most empathic and most loving creatures on Earth, and possess the capacity to develop these qualities beyond the processes of biological evolution and natural selection.

The survival and successful development of infants and young children depends on a safe, nurturing environment [5]. Unfortunately, another aspect of human nature, the potential for self-assertive aggressiveness, has throughout our history been a constant threat to the infant and child's successful upbringing.

Human beings: inherently violent and potentially self-destructive

Biological evolution, human history, cultural anthropology, as well as contemporary times, confirm that human beings are and have always been the most social and the most violent creatures on Earth. In prehistory, human ancestors were hunting and butchering animals much larger than modern elephants and doing so with pointed sticks as weapons half-a-million years ago ([18,42]; also see [37]). Assaulting and killing these giant creatures while armed with untipped spears entailed the capacity to express enormous ferocity, along with courage and social cooperation.

Hare and Woods ([21], p. 27) argued that when humans arrived in Europe they were "the socially dominant carnivore." They do not examine this built-in divide within human nature between our being social and being a dominant predator, but their phrase "socially dominant carnivore" captures those potentially conflicted aspects of human nature that to this day cause us such difficulty in our mental life and personal relationships.

This conflict between sociability and aggressive self-assertion is apparent in every healthy infant and child. Anyone who has spent a few hours in charge of toddlers knows that even the most loving and cooperative child, when frustrated, can instantly become a self-assertive, violent and tyrannical creature who requires all of our patience and skill to manage.

Because self-assertive aggression is innate within us, throughout human history there has been a risk of turning our violence not only against animals and strangers, but also against ourselves. Our social nature and our tendency to live in small groups of families would lead to inevitable frustrations and conflicts, and the risk of dangerous outbursts. As noted above, even small children can become violent toward siblings and parents, increasing the threat of violent reactions to them. Furthermore, as children reach adolescence, they become a physical threat to their parents and other adults.

Human-on-human violence

Few other creatures show such a significant tendency to harm their own kind. Like us, our nearest relatives the chimpanzees are both social and potentially violent. They are capable of interpersonal abuse and internecine warfare with the butchering of chimpanzees who had established a separate group, albeit on a much smaller scale and with less animosity than humans [19,41]. We are far ahead of all other creatures in having this unique combination of craving for social life and propensity for violence.

Stone-Age peoples who inhabited North and South America before the arrival of Europeans were constantly at war with each other and the Iroquois League was a cultural achievement aimed at limiting intertribal warfare. Captured warriors were tortured with unspeakable cruelty that went on for hours and days [32]. War-like violence against our own kind dominates ancient historical accounts such as the Homeric poems and the Hebrew Bible.

Human history is littered with violence against our own species and other creatures. These conflicting human impulses toward socialization and willful aggression are to this day perpetually in conflict everywhere on Earth. One need only read history or look at the examples of modern genocide to grasp the scope of our self-destructiveness. Without a doubt, we are the most violent and in particular the most self-destructive creature known to exist on the globe.

Unfortunately, we also express aggressive willfulness and outright violence in our personal and domestic lives, and in the raising of our children. For evidence we need only look at the frequency of child abuse to see how often parents turn on their own children.

Limits on sympathy and empathy

Nearly all modern psychology and sociology emphasizes our social nature and an increasing body of theory and practice in psychotherapy focuses specifically on our empathic qualities. The term "sympathy" used by Adam Smith [36] and Darwin [14] has increasingly been refined into the concept of empathy ([4,6–9,38]).

Although flickering signs of empathy begin to show perhaps as early as the "contagion" of crying in nurseries, by the exchange of smiles in early infancy, and more certainly in acts of kindness by children age one or two, it is insufficient to control the self-centered frustration and aggression which can take over a small child, sometimes at the merest frustration. Further, many adults lack sufficient sympathy or empathy for others to restrain themselves, especially when faced with the frustrations of living in close physical and emotional contact.

This author [8,9] and many others promote empathy as the ultimate solution to human conflict; but an honest assessment demonstrates that the human race remains far away from such a cultural achievement. Without a built-in inhibition on expressing willfulness and aggression within close relationships, human beings would probably have killed each other off within their families and clans, and humanity would have become a lost blip on the evolutionary screen. Hence the need for guilt, shame and anxiety