

Mini Review

Depression as a civilization-deformed adaptation and defence mechanism

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Abstract

Depression is currently one of the main barriers to further civilizational development. Despite intensive efforts, it is a growing health, social and economic problem. We still lack clarity regarding the ethology of depression and treatment is still mainly symptomatic. The authors postulate that depression has similarities with anxiety and from an evolutionary perspective is an archaic defence mechanism. Formerly, through the agency of complex psychological, biological and social mechanisms, healing was facilitated in conditions of an intense, short-term nature. Adverse civilizational and environmental changes have caused pathological changes in both the mechanism of depression and corresponding defence mechanisms such as the induction of an anxiety state. Related to depression is the mechanism of thanatosis, concerning chronic biological and psychosocial dysfunctions. It is a mechanism for activating self-eliminating processes to free the community from the burden of a dysfunctional individual.

Depression as a defence mechanism

Contemporary disorders of human functionality within the family, workplace, local communities and the global community leads to the pathological activation of mechanisms which originally benefited the individual but now prompt the emergence of anxiety and depressive disorders. Anxiety is an old phylogenetic protective mechanism invoked during the process of socialization, but which in a pathological environmental context develops a pathogenic profile. A similar situation occurs in the case of depressive symptoms, which originally constituted a defence mechanism to muster the human, biological and psychological resources of the individual to combat the original adverse condition. It also recruited people in the immediate environment to assist one's own efforts. Depressive symptoms usually occur together in association with somatic diseases and a significant percentage of patients require parallel psychotropic treatment [1]. Despite many years of research, the mechanism of depression and its nosological classification are still unclear [2]. The authors consider that the main barrier to understanding the phenomenon of depression is the dominance of the medical gaze where depression is viewed as a disease associated with pathological change in the body. The authors posit that most cases of depression, including those associated with somatic disturbances are manifestations of physiological adaptive mechanisms that herald the imminence of ill-health. They are similar to pain in prompting a reduction of social

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functioning and a stockpiling of one's energies to engage and overcome such life-damaging effects. Depression as a defence mechanism manifests itself not only in psychological and sociological terms, but also constitutes a significant regulatory and metabolic shift of the whole organism [3].

Thanatosis as a self-eliminating mechanism

Thanatosis (a concept introduced into medicine in 2004 by Bohdan Wasilewski [4]) is a separate, related mechanism that has also undergone a negative, civilizational transformation. Thanatosis involves the activation of biological mechanisms of self-destruction, analogous to apoptosis occurring at the cellular level. It is considered to be an archaic evolutionary self-eliminating mechanism [5-7] which tends to increase the pathogenicity of somatic disease or it may develop acutely, leading to sudden death or progress irrevocably to chronicity. This last is the dominant expression in contemporary society and is associated mainly with the suppression of immune-dependent defence mechanisms including those against cancer. Thanatosis established itself in the early development of our species as a mechanism to enable the survival and functionality of human communities. It achieved this through the self-elimination of individuals without a societal function who would otherwise burden the community and it thus enhanced group survivability. There are many indications



that an analogous mechanism operates for animals in which it operates as a defence-adaptive mechanism, simulating death to confuse a predator [8]. However, in some cases there is a lethal outcome resembling that devastating expression of Thanatosis in humans- namely suicide. An example of the auto-elimination mechanisms in animals which favour the community are "body explosions" in ants, who individually in defence of the colony secrete poisonous substances with great violence and in so doing- expire [8,9].

Man is now actively participating in the imminent 6th mass species extinction as evident from the barely suppressed panic in the climate debate [10,11]. Evidence is accumulating that western culture is exhibiting signs which portend grave consequences for its survival. There is for example a decrease in human fertility, a reduction in the efficiency of our innate defence mechanisms, an increasing incidence of chronic depression and activation of auto-elimination mechanisms, eg thanatosis. [12,13]. The gloomy future associated with mass extinction of species is increasingly described by prestigious scientists writing in scientific publications and respected journals such as Nature [14], who through rigorous research confirm the alarming drift towards mass extinction of the species [15].

Historically, analogous phenomena have threatened to extinguish life on earth, but fortuitously the point of complete extinction on this downward trajectory was never reached but whether such a resuscitation can now occur is unknown and some argue that we are already at the tipping point and beyond the possibility of recovery.

The human being as an integral element of the biotope

To ensure that biological life of the human individual continues, the countless other biological entities to which man is inextricably linked are necessary. These range from minute organisms of the microbial world, such as bacteria, fungi, viruses, prions, to the macro-organisms such as trees, animals, plants and other humans.

Man, in cooperation with the biotope, breathes, nourishes, warms and heals by absorbing products of other elements of the biotope of which he is part, as well as constantly exchanging atoms with it, tirelessly renewing his body and in effect donating his atoms for incorporation into other elements of that same biotope [10,16]. During his lifetime, several exchanges take place between the atoms which constitute his essence as a human and the biotope. The "Human" is a biotopic element with a fairly high degree of autonomy and he is able to move independently but not able to live independently outside of it. Thanks to the speed of scientific progress, we are now aware and understand how a human network of human relationships with other elements of the biotope is needed.

Depression from the evolutionary perspective

From an evolutionary point of view, depression is often

treated as a negative phenomenon resulting from adaptation to a pathological environmental situation, or as a result of natural selection leading to disorders in the functioning and elimination of the least adapted individuals. A review of concepts that analyse depression from an evolutionary point of view is provided by D. Nettle [17] and others [18,19]. The disadvantage of formulated concepts on depression from such an evolutionary perspective ignores the possibility of understanding depression as an active, positive phenomenon which has evolved as a mechanism to counter "disease". In this sense, slowing down the body's biological and psychological functions associated with a depressive reaction, allows time and space to recruit more resources to combat disease and accelerate rehabilitation. External manifestations of depression also signal other group members to demonstrate solidarity with the distressed individual. The depressive response in mammals and other animals does not differ significantly from that seen in humans and was used as a model for the experimental effect of antidepressant drugs.

Depressive reactions in primary cultures are more rapid and more dynamic than in the case of modern man, as will be discussed later while examining the cultural aspects of depression. The author posits that the "modern" understanding of depressive disorders is that of a condition which occurs as a consequence of pathogenic influences originating in cultural factors and an accelerating rate of evolution which detaches man from his natural environment [20]. It is important to emphasize the greater efficiency of self-healing processes in primary cultures and their need to quickly restore functionality to a member of the migration group who will only survive while maintaining their mobility due to the small amounts of food in the immediate vicinity.

The "Human" during hundreds of thousands of years of the species existence evolved to mobilize the maximum group support to enable quick recovery, or failing that (in the interests of the group) activated the process of auto-elimination, which the authors designate as Thanatosis. The term is used by ethologists to describe a defensive reaction during which the animal "plays dead" to optimise the chances of individual or group survival. However, there are instances in which the animal dies (as in some species of ants and termites) whereby a defense mechanism is invoked (for the good of the colony) and triggers a sequence of violent and lethal body explosions [9].

The author's observations [4,21] of similar processes in humans prompted him to expand the concept of Thanatosis and extend its application to the human population. The hypothesis is that the existence of Thanatosis constitutes an archaic evolutionary expression of auto-elimination, which is triggered when the interests of the group conflict with that of the individual. Thanatosis can also be considered in the sense used by ethologists ie where people exposed to intolerable stress for example may "self-destruct" as was described above in the case of animal auto- detonation [9].

The period of civilizational breakthrough and depression

The industrial era trumpeted a number of achievements: the stellar achievements of modern medicine heralding significant increases in life expectancy, lives without suffering and disease, where a coverlet of societal happiness effectively smothers any disturbing thoughts of death which recede now in the consciousness of our species. But such an ideal is no nearer as Man's natural defence mechanisms have been replaced by a panoply of artificial procedures related to current civilizational transformations [16,22]. The "New Man" has been immobilized, bonded to a seat behind a computer screen or steering wheel, the air-waves blare health warnings which generate more anxieties, as they prompt the obsessional monitoring of physiological and metabolic parameters. All of which further recycles stress, creating a fixation with repeated (and stressful) preventive and therapeutic interventions which tend towards chronicity of both depression and anxiety. An image is illustrative of the change: Up to relatively recent times, man enjoyed the daily ritual of dining on appetising and nutritious home cooking, modern man however, is serving a life-long sentence to consume a bland mash filtered through a dosimeter controlled by a computer. On the positive side however, there has been some noticeable progress in the field of technical intelligence, which in spite of a regressing "societal" intelligence is the fundament of creativity and innovation necessary to meet the great challenges of our time. Living as we are in an unstable world, in a period of civilizational breakthrough, the transition from the industrial to the post-industrial age is now well advanced. However, our functional thinking and patterns of action from the previous epoch still persist and stable thinking patterns and behaviours have not adapted to the new era [2,20,23]. The instability of our social structures is related to the specificity of the current period and impacts not just society, but the individual as its constituent unit [6]. This summons up a stable but more primitive view of the world [13], in which aggressiveness and authoritarian thinking dominates as it sacralises oppositional struggle rather than one directed toward reconciling different arguments and opinions.

Summary

In this review, the main thesis is that the causes of the contemporary depression epidemic should be sought at the confluence of several adverse factors. The main factor is the pathological transformation of the adaptive and defence mechanisms of anxiety and depression. Another, which has a triggering and indeed accelerating effect is dysfunction of the biotope of which man is an element. Other factors include the non-specific activation of the Thanatosis cascade leading to anxiety and depression and also the phenomenon of "civilizational breakthrough" that facilitates the emergence of emotional instability and again depression.

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