## Evil, terrorism, and psychiatry

Donatella Marazziti<sup>1</sup>\* and Stephen M. Stahl<sup>2</sup>

Received 29 June 2017; Accepted 31 July 2017; First published online 5 September 2017

Key words: Evil, terrorism, innate morality, psychiatry, neuroscience, prevention.

Unavoidably, psychiatrists and criminologists have to cope with evil, as very often they are asked to provide psychiatric explanations for heinous behaviors that have nothing to do with our sense of humanity, except that they are perpetrated by men and also, although less often, by women (it is a real novelty of the last few decades that women may become as ferocious as men). The question of how to explain these behaviors as possibly the product of a mental illness or possibly due to "evil" becomes particularly pressing in several specific situations. This includes times of war (Why was there the Holocaust? Why has there been torture?), genocide, and murder rampages. More recently, situations often calling for psychiatrists to judge mental illness versus evil has included terrorist attacks carried out by suicide bombers, now perpetrated nearly everywhere, not only in traditionally recognized unstable regions like the Middle East, but also in Western countries, at the heart of what is considered the cradle of modern civilizations.

It may be useless to discuss whether evil exists or not—because it does exist. It may be similarly useless to discuss the philosophical or psychiatric conceptualizations of evil. It is certainly not a mental illness. We are all aware of terrorist attacks, and we all witness the carnage, following it with a deep sense of helplessness, even while relaxing on our sofas and watching the dreadful images of death and destruction that the media show without respect for or sensitivity to their audience.

Needless to say, evil certainly does exist, and we are increasingly suffering its deeds and their consequences. More important, as psychiatrists and neuroscientists, we cannot disregard the evidence that evil is part of human nature—as is good. Both are embedded in our nature, and what actually emerges is probably the result of an

(Email: dmarazzi@psico.med.unipi.it)

interplay between brain mechanisms and genetic, epigenetic, familial, societal, and contextual factors. We cannot therefore close our eyes to the brutality of evil's most extreme manifestations. To the contrary, we should try to disentangle its mysterious roots, including any possible links to mental illness. Obviously, there are many intrinsic obstacles to performing studies in the field of suicide bombers, and the limitations of the available studies have been widely highlighted in the literature. One of the paramount barriers, we feel, is the prejudice, reluctance, and even repulsion many of us feel, even in psychiatry, about investigating evil.

The present issue of *CNS Spectrums*, entitled "Evil, Psychiatry, and Terrorism," aims to fill a gap in psychology and psychiatry—namely, answering the question of what is the relationship between evil and mental illness, especially in suicide terrorists—while putting together different contributions that might be helpful in understanding the psychological and/or psychopathological processes that may transform an apparently normal individual into a suicide bomber. Our opinion is that, if we want to understand evil and its radical forms, we must first understand aggression and violence, as well as the main mechanisms regulating them.

Aggression can be defined as any behavior directed toward another individual carried out with the intent to cause harm. It is an innate mechanism. It may lead to benefits or negative consequences, while promoting or impeding survival and reproduction. Violence is aggression perpetrated with the goal of doing extreme harm, including death and destruction, and perhaps may be identified and overlap with evil. The counterpart of evil/violence is the good that might result from the entirety of the so-called socio-moral emotions, encompassing empathy, pity and guilt, indignation about wrong behaviors, horror in the face of murder, theory of mind, gratitude. To a certain degree, we are all mixtures of both. Hypothetically, violence is the consequence of our innate aggression that emerges when no longer balanced

<sup>&</sup>lt;sup>1</sup> Dipartimento di Medicina Clinica e Sperimentale, Section of Psychiatry, University of Pisa, Pisa, Italy

<sup>&</sup>lt;sup>2</sup> Department of Psychiatry, University of California San Diego and University of Cambridge, Cambridge, United Kingdom

<sup>\*</sup> Address for correspondence: Donatella Marazziti, Dipartimento di Medicina Clinica e Sperimentale, Section of Psychiatry, University of Pisa, Via Roma, 67, 56100 Pisa, Italy.

by the moral brain, so that it becomes "radical evil" and transforms "human beings as beings superfluous," as Hannah Arendt has described in a very exhaustive fashion.<sup>1</sup>

The questions raised by these considerations are many, and some are addressed by this issue of *CNS Spectrums*, particularly if there are any specific personality traits, psychological characteristics, or psychopathological conditions that may favor a lack of control of violence in terrorists, coupled with coldness, rationality, cruelty, lack of a moral sense, and, in some cases, self-celebration, leading some to deliberately choose to die in order to kill innocents. Unfortunately, the available data suggest that we really do not know the answer to this puzzle. Similarly unknown is the precise impact of familial poverty, economic factors, or level of education.

In any case, how can we consider young and often well-educated subjects "normal"—at least in the sense of lacking a specific type of mental illness—who become religious fanatics who prefer to die while anticipating a possible reward after death? Doesn't this seem like a real cognitive distortion? What factors contribute, and in whom does this cognitive distortion become favored? What are the tools used by charismatic leaders to transform people in this manner? Indoctrination? Drugs?

It should be underlined that all societies and groups have nourished innate human morality and regulated innate aggression, while establishing a code of conduct and laws to decide what is right and wrong, primarily focusing on not harming others while accepting authority and respecting group rules. In the terrorist, there is a total reversal even of this normative morality, so that killing others who are labeled as impure, corrupted, heretical, and enemies according to rigid religious and group norms becomes their main ethical value, and not murder.

According to us, terrorism and violence in general should be approached by gaining a thorough understanding of the neurobiological mechanisms at the basis of human aggression and moral sense, as well as by understanding the contextual factors that may nurture or impoverish the correct balance between the two. We have attempted to do this already in two special issues of CNS Spectrums on inpatient violence in psychiatric patients.<sup>2,3</sup> Here we venture further afield to look at violence in terrorists, who may be evil but not necessarily mentally ill. Nevertheless, terrorism may still have a neurobiological basis since recent data indicate that early alterations in brain development, following environmental stressors or genetic liability, may impair brain circuits, pathways, and differentiation, and constitute a sort of basic "vulnerability" toward a greater risk of developing psychopathology or perhaps deviant behavior. 4 In this case, subsequent life events should act through the epigenetic mechanisms modulating the stress response and regulation of emotion. Of interest, both serotonin transporter SERT-s allele carriers and sensory processing sensitivity are associated with greater sensitivity to environmental stimuli in humans.<sup>5</sup> Taken together, these data suggest that the prevention of terrorism may require a strong interplay between different specialties, including psychiatry, with careful monitoring of risk factors during childhood and adolescence supported by reshaping political choices.

Last, but not least, as mental health professionals and neuroscientists, we should never get used to or remain indifferent to terroristic violence, as if it is a "normal" phenomenon modern society. On the contrary, terrorism should be acknowledged and stigmatized on every occasion and, more important, investigated, starting with its basic roots.

## **Disclosures**

Donatella Marazziti, MD, does not have anything to disclose.

Stephen M. Stahl, MD, PhD, is an adjunct professor of psychiatry at the University of California-San Diego, an honorary visiting senior fellow at the University of Cambridge (UK), and director of psychopharmacology for the California Department of State Hospitals. Over the past 12 months (January-December of 2016), he has served as a consultant to Acadia, Alkermes, Allergan, Arbor Pharmaceuticals, AstraZeneca, Axovant, Biogen, Biopharma, Celgene, Forest, Forum, Genomind, Innovative Science Solutions, Intra-Cellular Therapies, Jazz, Lundbeck, Merck, Otsuka, PamLabs, Servier, Shire, Sunovion, Takeda, and Teva. He is a board member of Genomind, and he has served on speakers bureaus for Forum, Lundbeck, Otsuka, Perrigo, Servier, Sunovion and Takeda. He has also received research and/or grant support from Acadia, Avanir, Braeburn Pharmaceuticals, Eli Lilly, Intra-Cellular Therapies, Ironshore, ISSWSH, Neurocrine, Otsuka, Shire, Sunovion, and TMS Neuro-Health Centers.

## REFERENCES:

- Arendt H. The Origins of Totalitarianism. San Diego: Harcourt; 1951.
- 2. CNS Spectrums, 14(4), October 2014.
- 3. CNS Spectrums, 15(3), June 2015.
- Marazziti D. Psychiatry and terrorism: exploring the unacceptable. CNS Spectr. 2016; 21(2): 128–130.
- Homberg JR, Schubert D, Asan E, Aron EN. Sensory processing sensitivity and serotonin gene variance: insights into mechanisms shaping environmental sensitivity. *Neurosci Biobehav Rev.* 2016; 71: 472–483.