COMMENTARY

Extreme Overvalued Belief and the Legacy of Carl Wernicke

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Individuals with extreme overvalued beliefs often carry out abhorrent and inexplicable acts of violence. They hold odd and bizarre beliefs that are shared by others in their culture or subculture. This creates a dilemma for the forensic psychiatrist because the definition of delusion may not be adequate. We discuss the evolution of the term "overvalued idea" first described in a forensic context by neuropsychiatrist Carl Wernicke in 1892. The overvalued idea is invoked in British scholarship as a definition for beliefs seen in anorexia nervosa, morbid jealousy, paranoid litigious states, and other disorders. This is sometimes referred to as delusional disorder by psychiatrists in the United States. The concept of an extreme overvalued belief has recently been validated and is separate from an obsession or delusion. It plays an important role in identifying fixation as a warning sign in threat assessment. We use this definition in three well-known cases (i.e., Anders Breivik, John Hinckley, Jr., and Ted Kaczynski) to emphasize how form and content of beliefs are critical to understanding the *mens rea* in violent criminal acts. The *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition*, would be enhanced by the addition of extreme overvalued belief as a definition to differentiate it from idiosyncratic, fixed, false beliefs seen in delusion.

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The lack of concise definitions in psychiatry can lead many forensic examiners to confuse interpretations of content with explanations of form. In this commentary to the article by Pierre[1] in this issue of *The Journal*, the main emphasis is on the form of extreme overvalued beliefs. The concept of *Ueberwertige Idee* (overvalued idea) by Carl Wernicke[2–3] has a historic lexicon in psychiatry, particularly in British scholarship.[4–6] It holds a prominent place in British texts,[4–6] yet it is not emphasized in the U.S. literature.[7] Pierre explores the ongoing struggle psychiatry has with classifying misbeliefs. He argues for utilizing dimensional approaches while acknowledging that forensic work requires more categorical approaches.[1] With this dimensional-categorical issue in mind, the definition of extreme overvalued belief was recently validated to advance the field of forensic psychiatry, particularly with regard to threat assessment.[8–11] We begin by discussing the evolution of overvalued idea in the literature. We apply the definition to lone-actor violence cases in psychiatry (i.e., Anders Breivik, John Hinckley, Jr., and Ted Kaczynski) to illustrate its application. We then discuss how presumptive evidence of a delusion, usually raised by the defense in criminal cases, poses a problem for rebuttal argument. Next, we discuss Carl Wernicke's seminal application of overvalued idea to cases, including murder and passion.[2–3] Finally, we introduce the application of extreme overvalued belief as a cognitive driver in lone-actor terrorism and other acts of targeted violence.

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Overvalued Idea

Psychiatrists often encounter patients whose convictions are distinguished from normal beliefs by their intensity, yet they do not fit the cardinal symptoms of a major psychotic illness such as schizophrenia.[3,5,6] Disorders such as anorexia nervosa, parasitophobia (e.g., Ekbom's syndrome or delusional parasitosis), and hypochondriasis contain this form of intense beliefs.[5,12,13] These patients are quite determined and passionate in their attitudes. Any challenge to their stance is met with counter-arguments. The patient with anorexia will insist that losing

weight is healthier and more attractive.[13] Patients with eating disorders may develop new maladaptive behaviors if they interact online with other like-minded individuals.[14] The Ekbom patient begins an intensive investigation to determine if bugs, mites, parasites, larvae, worms, nematodes, or some other specific organism is causing their skin ailment. The "infestation" can spread to other family members and on the Internet.[12]

Response to antipsychotic drugs is unsatisfying, although psychotherapies and separation from others with similar shared beliefs can reduce the contagion effect.[12,14,15] Fears of obesity or infestation are thoughts called overvalued ideas.[5] The beliefs are shared with others in a society, often online, but in the patient are held with an intense emotional commitment capable of provoking dominating behavior in its service.[8,9,13] Terms such as political or religious fanaticism or ruling passion also touch on the concept of overvalued idea.[8,13,16] Traditional approaches to these disorders in the United States consider them as stemming from delusions, thus implying that they are part of a psychotic spectrum of mental illness.[7,8,10,17]

Sims' guidebook, *Symptoms in the Mind*,[5] the *Oxford Textbook of Psychiatry*,[4] and Fish's *Outline of Psychiatry*[6] are examples of British publications that prominently feature overvalued ideas as a major type of psychopathology. These texts categorize the following conditions as disorders with overvalued ideas: anorexia nervosa; paranoid state, querulous or litigious type; morbid jealousy; hypochondriasis; dysmorphophobia; and parasitophobia (Ekbom's syndrome).[4–5] By contrast, the *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition* (DSM-5), and other U.S. texts place many of these disorders under delusional disorder (with subtypes of erotomanic, grandiose, jealous, persecutory, and somatic).[17] Thus, major categorical disparities exist between the U.S. and British lexicons. True delusions are generally unshareable and are associated with a disintegration of personality, while overvalued ideas are shareable and occur in an intact personality without such disintegration.[5,18]

Randomized controlled trials of antipsychotics compared with placebo in anorexia nervosa have reported minimal or no effect on psychological fixation symptoms such as body shape. A different neurobiological mechanism is postulated to be responsible for this disorder than for delusions and obsessions.[15] Psychological and behavioral therapies are considered the primary treatment interventions for anorexic patients.[13,19]

Wernicke stated that the overvalued idea is fundamentally different than a mental illness. He argued that any criminal act could wrongly be attributed to insanity.[2] Paul McHugh, the former chair at Johns Hopkins Hospital in Baltimore, Maryland, applied overvalued ideas as a motivation for terrorism in the wake of 9/11 and the Unabomber attacks, and he stated that Adolf Hitler, Carry Nation, and John Brown held overvalued ideas that led to their violence.[13] To confuse matters, the DSM-5 has a vague and difficult to trace definition of overvalued idea. The manual describes it as a belief held with "less than delusional intensity" (Ref. 17, p 826) and not shared by others in their cultural or subcultural group.[17] This definition substantially differs from British definitions described above.[5–7] This also places the current DSM-5 definition in opposition to key tenets of Wernicke's classic description, which explicitly states that it is a belief that may be shared by others.[8–10] Therefore, we reached back over a century and utilized previous international work[8–11,13] to define and validate extreme overvalued belief as follows:

> An extreme overvalued belief is one that is shared by others in a person's cultural, religious, or subcultural group. The belief is often relished, amplified, and defended by the possessor of the belief and should be differentiated from an obsession or a delusion. The belief grows more dominant over time, more refined, and more resistant to challenge. The individual has an intense emotional commitment to the belief and may carry out violent behavior in its service.

Delusional Disorder

The DSM-5 criteria of delusional disorder requires that delusions are present, but Criterion A for schizophrenia has never been met, functioning is not markedly impaired, and behavior is not obviously bizarre.[17] This diagnosis largely stems from the work of George Winokur, the former chair of the University of Iowa Psychiatry Department. Winokur used Kraepelin's description of paranoia to study delusions in 29 patients out of 21,000 treated at the University of Iowa psychiatric hospital since its founding in 1920.[20] These patients held rigid beliefs categorized as litigious, conjugal, persecutory, and jealous. He described these individuals as having "no marked depressive symptomology, although they may be unhappy. They are not euphoric although they might

be grandiose as a natural response to the delusion. They are neither blunted, nor inappropriate in affect. Their minds are clear. They do not have sensorium difficulties. They are not incoherent" (Ref. 20, p 511). Kraepelin[21] and Jaspers[18] described the paranoid state, litigious or querulous type. Jaspers emphasized delusions as being impossible and unshareable.[4,6,18] Fish described abnormal personality states and delusion-like beliefs as giving rise to overvalued ideas, which ultimately become delusional in intensity. He clarified that such delusional states are not due to functional psychoses.[6] Thus, patients matching similar symptoms are diagnosed as delusional disorder by investigators in the United States and as disorders with overvalued ideas by British investigators.

Mens Rea and Presumptive Evidence

Federal Rules of Evidence (702) state that "when facts are in dispute, experts sometimes reach different conclusions based on competing versions of the facts."[22] In a criminal case, experts may disagree on the interpretation of a defendant's beliefs. If one expert opines that beliefs in question are delusions, another expert may be burdened with having to disprove such presumptive facts. The result can become an epistemological debate that may further confuse matters. The DSM-5 does not provide a definition for political, religious, or cult-like shared beliefs. What may appear to be bizarre, such as the motives seen in lone-actor terrorism by Anders Breivik (i.e., the Knights Templar), John Hinckley (i.e., fixation on Jodi Foster), or Ted Kaczynski (i.e., ecoterrorism) might lead a trier of fact to assess the peculiar nature of the beliefs, along with inexplicable deaths of many innocent victims, as being delusional or delusion-like on a spectrum of psychosis.[8,11,23] Media and popular culture often fuel such concepts of a "psychotic mass killer" with no clear motive. Applying facts gathered during an investigation and utilizing the definitions of delusion and extreme overvalued belief would provide more calibrated views. Evidence that is presumed to be true can then be refuted by a different, equally valid explanation for the odd or bizarre beliefs in question. The courts have generally not considered shared beliefs (such as those seen in cults) to be delusional, regardless of how bizarre they may seem.[24] To better illustrate this point, we applied the concept of extreme overvalued belief as a hypothetical forensic construct in the cases of Anders Breivik, John Hinckley, Jr., and Ted Kaczynski.

Anders Breivik

Anders Breivik, a Norwegian right-wing extremist, was never diagnosed with a severe mental disorder prior to his attacks. He had bizarre and rigidly held beliefs that were found to be motives behind his bombing and mass shooting attack, resulting in the deaths of 77 mostly young people in Norway. This was the country's worst terrorist attack and had a profound impact on the country. Breivik told investigators that he was a member of the Knights Templar, a 12th-century Catholic military order. A team of examining psychiatrists believed that he held delusions stemming from schizophrenia. After reviewing a second team's findings that he was legally responsible for the crimes, a Norwegian court declared that he, in fact, held extremist beliefs shared by other right-winged groups in Norway, and not idiosyncratic, fixed, and false beliefs from delusions.[8–11,25]

The term extreme overvalued belief, when applied to this case, could have contributed to a different understanding. Mr. Breivik held extreme overvalued beliefs regarding right-wing ideology in Norway. He relished, amplified, and defended his behavior, often conducting Nazi salutes in the courtroom. He did not have obsessions or delusions. Prior to his offense, he was never treated for a psychotic disorder. His beliefs, shared by others in his political subculture, grew more dominant, refined, and resistant to challenge over time. He had an intense emotional commitment to right-wing extremist beliefs and carried out violent behavior in its service.[9,25]

John Hinckley, Jr.

During the trial of John Hinckley, Jr., much attention was given to his odd beliefs as a motive for attempting to assassinate President Ronald Reagan. Hinckley viewed the movie "Taxi Driver," in which Jodi Foster played a young prostitute who becomes friends with a lonely, unstable, and paranoid cab driver named Travis Bickle, played by Robert DeNiro. Bickle stalked, prepared, and failed to assassinate a U.S. presidential candidate. The defense experts argued that Mr. Hinckley held delusions stemming from schizophrenia. The defense expert stated, "a delusion is a mental process and it is not possible to have direct access to observe it . . . you learn about delusions from learning about the person" (Ref. 26, p 17). The defense drew parallels between the movie and Mr. Hinckley and that he "identified with Travis Bickle and picked up in

automatic ways many [of his] attributes" (Ref. 26, p 18). The jury was shown disturbing letters written by Mr. Hinckley to Ms. Foster in which he professed his love for her and planned to win her heart by "getting Reagan."

During rebuttal, the prosecution expert, Dr. Park Dietz, was cross-examined about Mr. Hinckley's fixed, false beliefs and his imagined relationship with Jodi Foster. Dietz testified that Mr. Hinckley was not delusional, but was attracted to Ms. Foster and interested in her through her movies:

> Dietz: No, he didn't have a fixed belief, and it is hard to find evidence that he had a false belief. He had unrealistic hopes.
>
> Defense Attorney: What is that called besides . . .
>
> Dietz: That is called being a dreamer.
>
> Defense Attorney: Is being a dreamer a manifestation of a serious mental disorder?
>
> Dietz: No, it isn't. (Ref. 26, p 21)

We offer this alternative response to the question, which the jury could have considered. Mr. Hinckley held extreme overvalued beliefs, not delusions or obsessions, regarding his relationship with Jodi Foster. He relished, amplified, and defended his affection for her in the letters he wrote her. The belief grew more dominant, refined, and resistant to challenge over time. He had an intense emotional commitment to Jodi Foster and carried out violent behavior against President Reagan in its service. Many people in society share Mr. Hinckley's passionate attitude toward celebrities, including Jodi Foster. His overinvolvement, however, commonly seen in borderline personality disorder, became maladaptive to his overvalued love object (Ms. Foster). He held a wishful fantasy as opposed to a loss of reality testing that is found in psychosis.[27] Mr. Hinckley does not exhibit other cardinal symptoms of schizophrenia. Therefore, his belief was a passionately held attitude, often shared by others in society, and not a psychotic illness.

Ted Kaczynski

Similar to the Breivik and Hinckley cases, Ted Kaczynski's defense expert and the government-appointed psychiatrists diagnosed him with schizophrenia. Mr. Kaczynski targeted those he saw as advancing technology in society and sent through the mail a total of 16 package bombs. He wounded 24 people and killed three. He did not experience hallucinations or grossly disorganized speech or behavior, leaving the content of his odd theory about the Earth as the solitary symptom.[23] His unusual choice to live off the land in a desolate cabin might raise concerns about negative symptoms. Andrew Sodroski, co-writer of Discovery's "Manhunt: Unabomber," offered contrasting data:

> What's interesting about Ted is he really did tutor the librarian's son in math, and he really was friends with the local librarian. This is one of these paradoxes of Ted, which is that he lived totally alone in the woods, he cuts off all his ties with everyone who loves him, and yet he still bicycles into town, he tutors this kid, he's friends with the librarian. People who knew him kind of liked him; they thought he was a little odd but was a nice guy.[28]

Mr. Kaczynski was not so cooperative with his attorneys and refused several psychiatric examinations. He insisted that his anger toward modern technology was not a delusion over which he had no control, but rather a theory to which he adamantly adhered.[23] He ultimately negotiated a plea deal with the prosecution, thus avoiding the death penalty. Had his case gone to trial, the prosecution experts would have encountered presumptive facts of delusions, with limited options to understand those beliefs based on the current psychiatric lexicon. Applying the definition of extreme overvalued belief to this case, the trier of fact might have had another reasonable explanation to consider, namely that Mr. Kaczynski held extreme overvalued beliefs in which he shared views held by others in U.S. society. Radical environmentalists, in the manner of a religious movement, view technology and environmental degradation as an assault on the sacred, natural world. Mr. Kaczynski relished, amplified, and defended his overvalued beliefs, and he discussed them in his manifesto. His beliefs grew more dominant, refined, and resistant to challenge over time. Although others in society share his passionate views, Mr. Kaczynski held an intense emotional commitment to the beliefs and carried out violent behavior in its service. His beliefs were neither delusions nor obsessions. He received no prior treatment for schizophrenia and has not exhibited such symptoms while held in custody.

Pathological Overvalued Ideas

Carl Wernicke is best known for Wernicke's aphasia and Wernicke-Korsakoff syndrome. Our historical research has uncovered another important Wernicke contribution, specifically for forensic psychiatry. Wernicke first mentioned overvalued idea in 1892 in a German medical journal.[2] He described it

in the context of criminality and insanity. He later described two remarkable examples from the largely neglected *Grundriss der Psychiatrie*.[3] The first is a murder case from Dostoyevsky's novel, *Crime and Punishment*.[29] The second case is one in which the subject perceives having been judged unfairly by the government and court. Dr. Robert Bauer, a German native and fourth-year resident at Washington University in St. Louis School of Medicine, translated several chapters of the text.[3] This allowed us to describe Wernicke's analysis in that text, which to our knowledge has not been described previously.

The terms delusion and overvalued idea have been shaped differently through time and across continents. Wernicke used the term pathological overvalued idea in his discussion of *Crime and Punishment*. Inspired by his earlier discoveries about the aphasias, Wernicke understood the brain as an "organ of association," and in his textbook he described psychopathology in terms of dysfunction of this activity of association among perceptions, thoughts, and memories. According to Wernicke, overvalued ideas are ideas that influence behavior to a pathological degree. The change from "normal valued-ness" to overvalued-ness occurs because of a particularly affect-laden experience (or a series of such experiences). Normally, countervailing ideas balance the influence an idea has on determining behavior. It is a lack of association of a variety of thoughts, in a broader context of conscience, which allows ideas to become overvalued.[3]

Wernicke also considered two other symptoms where patients become fixed on thoughts: autochthon ideas (primary delusions) and obsessions. While acknowledging that there are instances where there are transitions between these concepts, making the assignment problematic in some cases, he also stated that they were easily distinguishable on clinical grounds.[3] In contrast to autochthon ideas, which are experienced as suddenly appearing in consciousness, patients experience overvalued ideas as an expression of their true essence and are fighting for their own character. He also contrasted them to obsessive thoughts, which he stated are experienced as anxiety-producing, unwelcome, unjustified, or even nonsensical. Overvalued ideas are experienced by the patient as normal and justified, fully explained by the events that led to their formation. Despite this latter point, overvalued ideas are sometimes experienced as torturous and patients complain that they cannot think of anything else.[3] Wernicke also stated that overvalued ideas can be shared and, in fact, can be normative for a society, such as honor, modesty, and cleanliness.[3] Furthermore, there are common causes of overvalued ideas, such as the perception of having been "slighted or judged unfairly by the government or a court" (Ref. 3, p 142). Thus, overvalued ideas may be shared by others in society, as when several individuals all perceive they have been wronged in a similar way, with intense feelings of injustice, and coordinate their behavior and actions under the influence of essentially the same beliefs. Wernicke also described pathologic overvalued ideas, in which the overvalued idea develops delusions of reference around it. He believed this was caused by an inability to assimilate new memories formed from experiences and behaviors driven by an overvalued idea with older content of conscience.[3]

Dostoevsky's novel *Crime and Punishment* focuses on Rodion Raskolnikov, an impoverished former law student in Saint Petersburg who uses an axe to kill an unscrupulous elderly pawnbroker, then steals a few items and flees.[29] He had recently learned that his family's difficult financial circumstances forced his sister to seek employment at an estate where she is subject to the constant sexual advances of a well-known womanizer. Raskolnikov writes a manifesto in which he identifies with individuals like Napoleon. He believes that he can make exceptional contributions to humanity, and thus has the right to break the law, including murder, in pursuit of making such exceptional contributions. This motive can be attributed to an overvalued idea, with the affective component provided by the danger to his sister's chastity. After Raskolnikov commits the murder, he develops a fever and delusions of people following him and talking about him. Wernicke states that the overvalued idea becomes pathological, and that the reason for this change lies in Raskolnikov's inability to integrate the memory of having murdered the pawnbroker with the anxious, tender, and compassionate man he knew himself to be before the murder. Had he been a callous, violent, and selfish man, the overvalued idea would have remained just that. Thus, Raskolnikov acted against his own morals. It is clear from Wernicke's work that he is using this classic literary example to describe a criminal motive stemming from an overvalued idea.[3]

"Sexually Colored" Overvalued Idea

Wernicke highlights a second case involving a passionate fixation.[3] A 40-year-old, unmarried science teacher at an all-girls school, whom he describes as keen and intense in her profession, believes that a male colleague is interested in her. She believes that this started because he could gaze at her through a window to her classroom. She believes that his interest in her is confirmed by random encounters that arouse strong affect and turmoil for her. Eventually, the belief results in a disturbance involving her supervisor and she is admitted to a psychiatric hospital where she is declared insane. Wernicke, on examination, stated that the woman does not strike him as odd, either in behavior or her expressions, and the news that she had been declared terminally insane by the director of the institution astonished him. The woman recovered after the man left the school for an overseas trip. Wernicke concluded that there was no "psychopathic basis" for her "sexually colored" overvalued idea.[3]

In Wernicke's earlier work,[2] he described an eccentric and intelligent photographer who is interested in marrying a 12-year-old girl. After his repeated attempts to access her are blocked by her father, he continues to insist that she loves him. He is eventually institutionalized. Wernicke makes the argument that the content of overvalued ideas can be anything and emphasizes the form of the fixed ideas as overvalued.[2]

Fixation

The term *Idée Fixe*[2,30] (now called fixation) has emerged in threat assessment research as a pathological preoccupation with a particular cause or person that is accompanied by deterioration in social and occupational life.[31] Its importance as a correlate of lethality risk in threats to the British Royal Family and western European politicians[32] led to its incorporation as one of eight proximal warning behaviors for targeted violence in multiple studies (including mass murderers, school shooters, public figure attackers, and lone-actor terrorists).[33] The other seven warning behaviors are pathway, identification, last resort, energy burst, novel aggression, leakage, and directly communicated threats.[33–35] Research continues to support these warning behaviors as both correlates and predictors of targeted attacks, including ideologically motivated attacks (terrorism).[35]

Pathological fixation is behaviorally based because there must be an accompanying deterioration in work or love for it to be coded as a risk factor. Normal fixations abound and are usually quite harmless; hobbies, a new romance, sports teams, celebrity figures, vacations, and motherhood are a few examples where fixations are quite clear among many in the general population. Pathological fixations, however, offer the forensic psychiatrist one indicator among several for proximal risk of an intended, targeted attack. The forensic psychiatric task is a two-stage process: first, to determine if a fixation exists; and second, to determine if it is motivated by obsession (e.g., ego dystonic, anxiety-provoking, unwelcome), delusion (e.g., nonfactual certainty and not shared by others), or extreme overvalued belief. In Wernicke's model, the latter should not be considered a mental disorder qualifying for the insanity defense, similar to the common exclusions of antisocial personality or criminal personality disorder from eligibility for an insanity defense.

Only some individuals driven by extreme overvalued beliefs would meet DSM-5 criteria for antisocial personality disorder. Extreme overvalued belief can be coupled with the DSM-5 dimensional model that represents personality disorders with specific problematic personality traits. For instance, a person with no premorbid antisocial personality disorder who was radicalized on the Internet could be diagnosed with problematic personality traits, with extreme overvalued belief as the cognitive driver for violent behavior.

Shaping Overvalued Ideas Online

Overvalued ideas are enhanced by innate and normative cognitive biases, such as availability and confirmatory bias, along with newly acquired sustenance and acceleration.[1,8] Social media has become the host and the vector for the virus of extreme overvalued beliefs. The vulnerable user refines his belief over time and begins to relish, amplify, and defend it. The process can occur quickly with the addition of online group effects (e.g., thousands or millions of retweets, "likes," or emoticons).[36] Emotional contagion is present and measurable in social media.[37] Such group popularity can also be faked in the message itself. Messages received from close friends are given more credibility than those sent by strangers. Unwittingly, the user becomes an infectious host for the propaganda.[36] Asch studied conformity to group ef-

fects and discovered that people conform for two main reasons: because they want to fit in with the group (i.e., normative influence), and because they believe the group is better informed than they are (i.e., informational influence). Similar effects can be seen online, creating an illusion of reality that even journalists may latch on to. Recent trends show that many people no longer trust mainstream news reporting.[38] During World War II, the United States created posters stating, "Loose lips sink ships." In an online world, loose message shares or retweets can change an election.

Radicalization of online followers of jihadist and white supremacist propaganda have also recently escalated. These have resulted in terror attacks in the United States and around the globe. While most people would not jeopardize their careers or lives for overvalued ideas, some will, and they may be secretly regarded as heroes by those less inclined to fight for an idea.[16] Violent, predatory behavior[39–41] such as a terror attack is more likely to be taken on the basis of overvalued ideas than on the basis of delusions, simply because the former are much more frequent and welcome. The brain, like any organ, tries to use as little energy as possible to maintain homeostasis, hence stereotyped, short-cut thinking and rituals are relatively energy sparing. The introduction of online material allows the brain to take repeated and rapid cognitive short-cuts. Wernicke postulated that, normally over time, counter ideas slowly eliminate the overvaluedness of the extreme belief.[3] Because the algorithms of online social media marketing search engines provide the user with content that he "likes," there is no such counterbalancing of the extreme overvalued belief, and it is nurtured in his own fantasy-based echo chamber.

Concluding Thoughts

Forensic decision-making is often categorical, if not binary, and the forensic psychiatrist can aid the trier of fact by more carefully calibrating categories. As Pierre stated, "Forensic experts face a conundrum when attempting to explain abnormal and sometimes criminal behavior in pathological terms when there is no clear mental disorder to speak of" (Ref. 1, p 000). We support the use of the term overvalued idea, which has a strong provenance in psychiatry, particularly in the British literature. The DSM-5 needs a clear definition of such rigidly held, shared beliefs that contrasts with delusions, so that a trier of fact can choose between the two definitions. The content of beliefs, especially in an online world, can involve odd and even bizarre beliefs that may become refined through time. Such content at times can be strikingly peculiar and can become coupled with acts of inexplicable and abhorrent violence. Anders Breivik's defense attorney summed up this discordant sentiment: "As Norway as a whole seeks to regain its soul intact, a verdict of insanity might offer some comfort to a nation traumatized by the events of last July and wanting to avoid the conclusion that Mr. Breivik reflected a political trend in society" (Ref. 10, p 39). The temptation to define a belief as a delusion may be more satisfying to explain the deaths of many innocents but must be avoided if the facts are not sufficient to warrant such a conclusion.

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