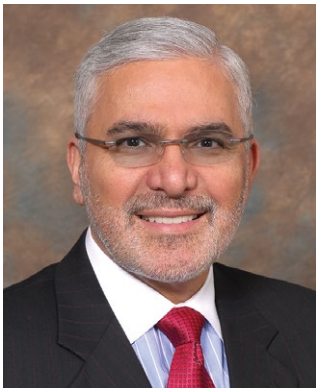
Stop blaming 'demons' for bizarre delusions or behavior!



Henry A. Nasrallah, MD
Editor-in-Chief

I shudder when I read a newspaper or magazine article that describes a person with a psychiatric disorder—often, a celebrity who has fallen from grace—as "struggling with his inner demons."

That expression is a residue of the absurd belief during the Middle Ages that mental illness is caused by evil spirits—that justified burning the afflicted person at the stake. (Remember Joan of Arc?)

This ignorant, even maliciously unscientific, portrayal of psychiatric symptoms is an appalling disservice to all our patients who struggle with a potentially disabling neuropsychiatric disorder. Regrettably, some religious entities still propagate the fallacy of possession by an evil spirit and call for exorcism of bizarre behaviors sometimes associated with psychosis.[1] What is really needed is an exorcism of unscientific and harmful misconceptions that mental illness is the nefarious work of Beelzebub or Lucifer.

Strange manifestations beget weird explanations

I can understand how ignorance about the neurologic basis of unusual delusions and behavior can trigger absurd religious explanations for their cause. Sometimes, brain pathology can have strange clinical manifestations that are beyond the ken of the average layperson, which invites metaphysical, religious, or philosophical explanation. Here are examples of neuropsychiatric symptoms in the category of "very unusual" that might summon a demonic malfeasance.

Delusion of possession or alien control. Some people complain of being possessed[2]; delusional people who have a strong religious background might believe they are possessed by Satan himself. Some of my patients with psychotic depression believe this, expressing great guilt and anguish about being doomed to go to Hell.

Alternately, patients with schizophrenia often think they are under the control of an "alien force" that shapes their behavior, feelings, and thoughts (a Schneiderian first-rank symptom). In a 2012 editorial, I proposed that this "alien intruder" is the unintegrated right hemispheric consciousness,[3] and that disintegration of the 200 million interhemispheric white matter fibers of the corpus callosum might be the cause of the loss of integration of the right hemisphere into the dominant left hemisphere.

Some people attribute external control on their lives to a government agency, a foreign country, or a spiteful neighbor; others believe it is the work of evil spirits. Whereas the foundation of the delusion is brain pathology, the content of the delusion is colored by the affected person's cultural and religious background.

continued

Brain pathology can have strange clinical manifestations that invite metaphysical, religious, or philosophical explanation

To comment on this editorial or other topics of interest, visit www.facebook.com/CurrentPsychiatry, or go to CurrentPsychiatry.com and click on the "Send Letters" link.

Current PSYCHIATRY

Editorial Staff
EDITOR John Baranowski
MANAGING EDITOR Erica Vonderheid
ASSOCIATE EDITOR Patrice Kubik
WEB ASSISTANTS
Connor Kennedy, Kathryn Wighton

Art & Production Staff
CREATIVE DIRECTOR Mary Ellen Niatas
ART DIRECTOR Pat Fopma
DIRECTOR, JOURNAL MANUFACTURING
Michael Wendt
PRODUCTION MANAGER Donna Pituras

Publishing Staff
PUBLISHER Sharon J. Spector
ASSOCIATE DIRECTOR, eBUSINESS DEVELOPMENT Joshua Norton
MARKETPLACE ACCOUNT MANAGER
Linda Wilson
CONFERENCE MARKETING MANAGER
Kathy Wenzler

Editor-in-Chief Emeritus
James Randolph Hillard, MD

Frontline Medical Communications
CHAIRMAN Stephen Stoneburn
EVP DIGITAL BUSINESS DEVELOPMENT/CFO
Douglas E. Grose
PRESIDENT/CEO Alan J. Imhoff
PRESIDENT, CUSTOM SOLUTIONS JoAnn Wahl
VICE PRESIDENT, FINANCE Dennis Quirk
VICE PRESIDENT, OPERATIONS Jim Chicca
VICE PRESIDENT, AUDIENCE DEVELOPMENT
Donna Sickles
VICE PRESIDENT, CUSTOM PROGRAMS
Carol Nathan
VICE PRESIDENT, CUSTOM SOLUTIONS
Wendy Raupers
VICE PRESIDENT, HUMAN RESOURCES & FACILITY OPERATIONS Carolyn Caccavelli
VICE PRESIDENT, MARKETING & CUSTOMER ADVOCACY Jim McDonough
VICE PRESIDENT, SALES Phil Soufleris
VICE PRESIDENT, SOCIETY PARTNERS
Mark Branca
CORPORATE DIRECTOR, RESEARCH & COMMUNICATIONS Lori Raskin
DIRECTOR, eBUSINESS DEVELOPMENT
Lee Schweizer
EDITORIAL DIRECTOR Karen J. Clemments

Subscription Services: (800) 480-4851

In affiliation with Global Academy for Medical Education, LLC
VICE PRESIDENT, MEDICAL EDUCATION & CONFERENCES Sylvia H. Reitman, MBA
VICE PRESIDENT, EVENTS David J. Small, MBA

FRONTLINE MEDICAL COMMUNICATIONS
7 Century Drive, Suite 302
Parsippany, NJ 07054
Tel: (973) 206-3434
Fax: (973) 206-9378
www.frontlinemedcom.com

Published through an educational partnership with Saint Louis University
SAINT LOUIS UNIVERSITY. EST. 1818

Apotemnophilia. A neurologic disorder that manifests in a bizarre clinical symptom that invites faulty explanation: A person demands amputation of a leg because "it doesn't belong to my body."[4] The cause of this strange and confusing disorder has been misinterpreted as a paraphilia, a desire by the affected person to achieve greater sexual satisfaction by having a stump. It was first reported in the September/October 1972 issue of the magazine *Penthouse*, where it was described as the motivation to heighten one's sexual appeal because stumps can be sexually exciting to their partners.

It took many years of neurologic research to demonstrate that apotemnophilia is caused by pathology in the parietal lobe, where the physical representation of the body is located. Incomplete neurodevelopment of the parietal lobe can cause a person to fail to recognize a leg as a "legitimate" part of his body, and he (she) then desperately seeks amputation of the so-called alien limb (see the description of *xenomelia* below) that is attached to his body.

When an affected person is asked to delineate the borders of an alien limb, he draws a line on the skin at the precise border between the alien limb and the rest of his body—where the amputation should take place. Requests for surgical amputation were adamantly denied when the disorder was thought to be a weird sexual practice, but elective amputation in the context of neuropsychopathology is seriously debated now—and has, in fact, been reported.[5] The term "body impaired integrity disorder" has been proposed, but neurologists consider the disorder an example of xenomelia.

Xenomelia ('alien limb syndrome'). An odd neurologic disorder produced by brain pathology, in which a person has a sense of estrangement about 1 or more limbs.[5] The disorder can be caused by a neurologic lesion such as tumor, Creutzfeldt-Jakob disease, hereditary diffuse leukoencephalopathy, demyelinating disease, progressive dementia, corpus callosotomy, intracerebral hemorrhage, or thalamic degeneration.[6]

So-called "alien hand syndrome," or *asomatognosia*, is a widely recognized example of xenomelia, and is associated with medial frontal lobe damage.

Another variant of xenomelia is *somatoparaphrenia*, unawareness of a part of one's body.[7]

Cotard syndrome. A nihilistic delusion of the nonexistence or dissolution of a body part; in extreme form, the delusion of being dead or nonexistent.[8] The syndrome sometimes occurs in the setting of severe depression. Research has shown an association with atrophy of the insula,[9] which is responsible for internal proprioception (interoception).

Delusional misidentification syndrome. A set of neuropsychiatric conditions in which a person misidentifies people, places, objects, or events[10]:

- Capgras syndrome (one perceives a familiar person as an imposter)
- Fregoli syndrome (one perceives that a familiar person is repeatedly disguised to change appearance)
- intermetamorphosis (one perceives that a person changes his external appearance and personality or identity)
- lycanthropy (one delusionally misidentifies one's self as an animal—eg, a wolf, rabbit, or snake, and behaves accordingly)
- Ekbom syndrome (delusional belief of being infested with parasites)
- delusion of hermaphroditism (one has merged in the same body with another person of the opposite sex)
- delusion of sexual transformation (one has changed to the opposite sex)
- delusion of being the Antichrist.

continued on page 22

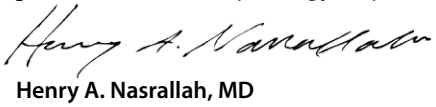
continued from page 20

Researchers have reported an increased risk of violence in delusional misidentification syndromes

Delusional misidentification syndrome can develop after the onset of focal or diffuse brain pathology, such as right hemispheric stroke, multiple sclerosis, hyperparathyroidism, traumatic brain injury, dementia, and schizophrenia. In several studies, researchers have reported an increased risk of violence in delusional misidentification syndromes.[11]

Neurological, not diabolical!

A disruption in brain anatomy, neurodevelopment, or circuitry/interconnectivity can produce odd beliefs and bizarre behavior that might prompt a lay observer to believe that a demon or an evil spirit is responsible for the incomprehensible symptoms. I have one response to the "blame-the-devil" proponents: *It's the brain pathology, stupid!*



Henry A. Nasrallah, MD
Editor-in-Chief

References

1. Irmak MK. Schizophrenia or possession? J Relig Health. 2014;53(3):773-777.
2. Goff DC, Brotman AW, Kindlon D, et al. The delusion of possession in chronically psychotic patients. J Nerv Ment Dis. 1991;179(9):567-571.
3. Nasrallah HA. Impaired mental proprioception in schizophrenia. Current Psychiatry. 2012;11(8):4-5.
4. Brang D, McGeoch PD, Ramachandran VS. Apotemnophilia: a neurological disorder. Neuroreport. 2008;19(13):1305-1306.
5. McGeoch PD, Brang D, Song T, et al. Xenomelia: a new right parietal lobe syndrome. J Neurol Neurosurg Psychiatry. 2011;82(12):1314-1319.
6. Graff-Radford J, Rubin MN, Jones DT, et al. The alien limb phenomenon. J Neurol. 2013;260(7):1880-1888.
7. Feinberg TE, Venneri A, Simone AM, et al. The neuroanatomy of asomatognosia and somatoparaphrenia. J Neurol Neurosurg Psychiatry. 2010;81(3):276-281.
8. Ramirez-Bermudez J, Aguilar-Venegas LC, Crail-Melendez D, et al. Cotard syndrome in neurological and psychiatric patients. J Neuropsychiatry Clin Neurosci. 2010;22(4):409-416.
9. Chatterjee SS, Mitra S. "I do not exist"-Cotard syndrome in insular cortex atrophy. Biol Psychiatry. 2015;77(11):e52-e53.
10. Cipriani G, Vedovello M, Ulivi M, et al. Delusional misidentification syndromes and dementia: a border zone between neurology and psychiatry. Am J Alzheimers Dis Other Demen. 2013;28(7):671-678.
11. Klein CA, Hirachan S. The masks of identities: who's who? Delusional misidentification syndromes. J Am Acad Psychiatry Law. 2014;42(3):369-378.