

The Significance of the Persistent Prevalence of Major Mental Disorders

Nicholas Padiaditakis, Dominique M. Durand

¹Departments of Biomedical Engineering, Neurosciences, Physiology and Biophysics, Case Western Reserve University, USA, ²Clinical Research in Neurology. Department of Psychiatry, Brody School of Medicine, East Carolina University, Greenville, NC

ABSTRACT

On the strength of rational argument, a robust hypothesis is proposed explaining the paradox characterized by the persistent worldwide prevalence of schizophrenia and bipolar affective disorder (BPAD), in spite of evolutionary pressure for their extinction. Conciliating together recent findings from molecular genetics, evolutionary biology, and with a new, parallax view from the traditional narrative of the clinical phenomena making up the variable syndromes of major mental disorders (MMDs) the persistence is suggested. There exists a trade-off between the disadvantages of disorders occurring versus, the greater advantages conferred by the patient's underlying, temperamental traits. While a small number of individuals, on account of these very traits will develop the disorder, a much greater number will be enabled to express creativity due to them. These temperamental traits are called traditionally the "premorbid personality" when the disorders express themselves. Characteristically, those prone to developing these disorders have temperamental traits originating mainly from evolutionary pressures on the individual alone. However, there also exists a dearth of traits emanating from evolutionary pressures from the social experience of our species on those individuals. Normally, together, in a relatively, balanced mix, this constitutes our human nature. To reiterate, while "lopsided," excess traits from "the selfish" side confer vulnerability of the individual for the occurrence of a major mental disorder, they concomitantly confer flexibility, and a creative input on the group that benefits the human species to a greater degree, as a whole.

Key words: Major mental disorders, schizophrenia, bipolar affective disorder, temperament, premorbid personality traits

INTRODUCTION

The early onset,^[1] early death,^[2] and low fertility rate of the sufferers^[3,4] make schizophrenia and bipolar affective disorder (BPAD) targets of elimination by evolutionary forces. Yet, they persist at the combined prevalence of >4% worldwide, irrespective of culture.^[6,7] This paradox has been, thus far, unanswered - hindered by conceptual traps over the years as to how we define and study major mental disorders (MMDs) in their clinical expression.^[8] Clinicians fail to take into account the role of the sufferer's preexisting, temperamental traits, yet, they are crucial in conferring vulnerability for their occurrence. We also ignore the study of the existence of separate, inborn, social traits,

which together with the ones pertaining to the asocial traits of an individual's makeup and human nature.

DISCUSSION

Contrary to enduring belief from the recent past, traits defining sociability are not merely learned behavior (i.e. the result of responding to cultural demands), but, embedded in our genome.^[9] We are conflicted, and complicated, social animals from birth and the product of evolutionary pressures on both the individual's inborn temperament and their social experiences.^[10-12]

Normally, temperament with its variability is crucial for the survival of a species to confer robustness, and flexibility,

Address for correspondence:

Nicholas Padiaditakis, Department of Psychiatry, East Carolina University, Brody School of Medicine, Greenville, NC 27858, USA. Phone/Fax: (919)787-0710. E-mail: nicholaspediaditakis@gmail.com

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while bolstering the phenomenal success of humans. The components of eusociality, according to Wilson, consist of a permanent domicile or nest for a band or tribe, specialization of roles with the help of temperamental variability, cooperation, group cohesion, and altruism together with competition.^[10-12]

Temperament in this article is defined as the group of inborn traits expressed as flexible but, enduring behavioral propensities that are shaped by early experiences as longitudinal clinical observations are pointing out (scientific studies are lacking). Some are incomplete and completed after birth to various degrees by the influence of the environment.^[11,12] Some examples of yet to be completed after birth traits include self-identity, perceiving oneself in a unit, and the perception of being a member of a group.^[10-12]

A better term for temperament is the term “idiosyncrasy” (i.e., *Gk.*, a particular mix of traits). Unfortunately, this word is also etymologically misused as “a peculiar, personality variant.” Temperamental traits, eventually, together with a developed ethos (i.e. the local manners, rules, attitude, and “cultural cloth,” of a particular tribe or group) constitute one’s personality or otherwise, the totality of one’s characteristics.^[13] The latter is also interchangeable with the term “character.” There exists a confusion in the plethora of overlapping terms referring to the same concept of temperament such as personality, idiosyncrasy, character, and physis. In addition, the concept has been commandeered and misapplied in testing for hiring practices by stereotyping people mainly by the industry. Even though some of these tests may contain a kernel of truth,^[8,13] they may lack a scientific basis.^[9] At present, we simply lack a scientific hold as to temperament, on account of the difficulty to study it.^[7] Furthermore, there is a distaste and avoidance built in us as humans for proceeding in understanding our own human nature. After all, contrary to the rest of our bodily functions, the brain is “us” as opposed to our other parts being just plain tools. Complicated and multifaceted creatures as we are, our brain utilizes “tricks” of its own, to avoid knowing our true nature with its contradictions interfering in our functions. Specifically, our brain enables us to do this with the faculty of controlling unconscious motivations augmented by a defensive mechanism such as repression, denial, and rationalization, while our conscious and incongruous behavior are often managed by hypocrisy. Efforts by insightful scientists to communicate some of their findings in this matter are met with serious resistance reminiscent to the reaction of faithful zealots. For instance, here are two glaring examples; Wilson during a lecture at Harvard on the subject was doused by a radical group called the International Committee against Racism with a pitcher of water by a student screaming, “You’re all wet!”^[14] And then, a colleague of his named Dawkins responded to Wilson’s findings on eusociality by pleading with the readers in a vociferous and irrational critique not to read Wilson’s book!^[14]

Recent findings regarding the study of premorbid personality of schizophrenics offer some insight as to the traits making up the sufferer’s temperament, though, in an extreme form.^[15]

Wilson and Hölldobler, correctly and importantly for psychiatric studies, state that human nature is the result of evolutionary composites of traits from two areas.^[10,11] The first area emanates from evolutionary pressures on an individual (e.g., selfishness, being calculating, ability to think autonomously, being self-reliant, displaying an aversion for interacting with other humans in a mutually contributory way, aloofness, and dearth or absence of both empathy and altruism). The second area, on the other hand, completing our human nature emanates from evolutionary pressures on the social experiences of humans such as the compelling trait to contribute and be contributed too, ability to create social identity, an eagerness to interact with members of a tribe, compete and belong, the presence of empathy, an eagerness to cooperate with others, and mixed with a competitiveness, including being a participant in an emergent group phenomena (e.g., mobs, military, cults, and gangs). The presence of these elements makes up the social part of human nature.^[16] He concluded that together, our human nature is constituted of an unamalgamated, chimera-like, and variable mix. It is expressed in endless, individual variability constituting temperamental types.^[16] In this view, Cloninger lists traditionally used measurements of temperamental traits - the so-called “big five.”^[8,17] They measure putative, personality traits, namely extraversion, agreeableness, openness, conscientiousness, and neuroticism, with their glaring faults. Where is the introversion? What does neuroticism and openness mean? Is agreeableness similar to learned civility? These are of some of the many, dubious in their merit, questions, our studies list made up from a mixture of learned behaviors - the result of early experiences, and partially from inborn traits. They should be replaced by an instrument that measures temperament derived from the findings of Wilson and Hölldobler.^[11,16]

Conventionally, we rarely consider the inborn social traits of humans in our studies of them as individuals. We do not take into account these sociobiological traits, yet, it is crucial to do so in understanding the causative factors in the development of major mental disorders. Clinical observations point out that these disorders express themselves, probabilistically on some individuals whose temperament originates mainly from the evolutionary pressures on the individual (i.e., the asocial part, though, in an extreme form and mainly during late adolescence).^[1]

Schizophrenia and BPAD should be considered as expressions of periodic, clinical epiphenomena, in addition to the aforementioned, preexisting, and lopsided temperamental traits.^[18] They are characterized by their frequent relapses and remissions - especially at the beginning of onset.^[19,20]

The symptoms of these syndromes are made up of antithetical substitutes such as: apathy alternating with explosivity, either-or thinking, ambivalence (i.e., rapidly alternating, antithetical, behavioral substitutes and feelings), intolerance of ambiguity, mismatch of feelings with thinking, ambivalence, and inappropriateness alternating with responses to an environmental situation (e.g., laughter replaced with irritability).^[18,19]

In the case of major depression (MAD), it expresses itself with symptoms in a rather spectacular way while its manic phase is transient and hardly experienced by the patient other than a short lived, emotional rush overlooked in its significance by the examiner.^[19,21] The patient readily acknowledges this phenomenon when asked. Nevertheless, the MAD diagnostically is maintained erroneously as a separate syndrome. These symptoms are present, in addition to the usual coexistence of psychotic phenomena while common to all disruptive events of brain function (e.g., toxicity, high fever, poisoning, heart surgery, Parkinson's disease, and others). They are erroneously currently psychosis and often assigned pathognomonic significance only for schizophrenia and BPAD disorders.^[19] Actually, the only difference in their clinical expression is the "narcissistic and autistic" nature of their content. As in the case of MMDs, importantly, the overall, clinical expression of these disorders is the result of a phase or a shift from the normal, overall, synchronizing mode of brain function in the expression of all higher faculties to that of an "either-or, pathological phase" - a kind of "psychic-Parkinsonism."^[19,21]

The synchronizing property of brain functions that ensure coordination and smoothness during the expression of higher brain faculties is acknowledged in the literature,^[21] but we do not consider its causative role in the clinical expressions of these disorders in their uncoordinated nature. The successful application of electroconvulsive therapy (ECT) bolsters the above explanation since it easily restores the normal synchronizing function, at least in the beginning.^[19,21] The significance of the phenomenon is overlooked and is similar to the application of ECT in the occurrence of atrial fibrillation, which again often restores the normal rhythm of the heart as a result of restoring the synchronizing function maintained by the complicated, neural arrangement in the myocardium. Following the successful application of ECT, the premorbid temperament of the sufferer remains the same.

The preexisting, lopsided temperament constitutes the premorbid personality of the patient.^[19,22,23] It usually is termed as such after the expression of the disease, yet again not taken into account for its crucial, causative role in the development of mental disorders as it makes the system unstable with the possible entrapment of "either-or-ness."^[21] Individuals with the preexistence of premorbid personality mainly asocial personality traits. constitute a pool of

vulnerable individuals.^[19,22,23] emotional flatness alternating with periodic explosivity and rapid ambivalence. Even though the above clusters of symptoms constitute the various syndromes, nevertheless their antithetical nature has been ignored in its significance.^[24,25] These antithetical expressions suggest a switch from the normal operating mode of brain function insuring synchrony with smoothness, subtlety, and more-or-less-ness to a phase shift of either-or-ness.^[18,19] In the case of BPD, there are frequent bouts of undo emotionality or "paraphora" (Gk., being beside oneself).^[24,26] The existence of unconnectedness is felt as an inner void, which is readily admitted by the sufferers if asked, as a cardinal, felt symptom - often masked by learned civility and the presence of social skill for interactions.^[24] This "selfish" part was named aptly, by a now obsolete term by S. Freud as "the narcissistic neuroses."^[27] Individuals with this premorbid personality, also if tenacious, intelligent and curious tend to feel free and unencumbered from the constraints of social algorithms. They are now able "to-think-in-alternatives." They perceive novel patterns and re-write new and more encompassing scientific narratives for studied phenomena, as well as create and perform emotionally steering music and poetry. As leaders, they inspire and mobilize the masses for great deeds or conversely guide them to their perdition.^[28-30] Expressing creativity in all areas of human endeavors benefits the group as a whole while only some will develop the disorders as well.^[28] Here is a list of notable creative geniuses documented in their biographies as possessing extreme, and lopsided temperaments while some even ended up with one of the MMDs. It includes: Nikola Tesla, Winston Churchill, Albert Einstein, Michelangelo Simoni, Allen Turing, Elon Musk, Ludwig Van Beethoven, Wolfgang Amadeus Mozart, Leonardo da Vinci, Steve Jobs, John Adams, Paul Gauguin, Vincent Van Gogh, Pablo Picasso, Alexander Hamilton, Alfred Wallace, Theodore Roosevelt, Abraham Lincoln, Isaac Newton, Robin Williams, Charles Darwin and Kay Jamison.^[28-31] The latter as a clinician successfully studied her own suffering of BPAD. The list is long indeed. The shared traits for all these creative geniuses include autonomy in action, aloofness, inner directness, independent thought, an ability to making novel solutions for seemingly intractable problems, curiosity, aversion for everyday social interactions, and tenacity, but, above all having a kind of inner aloofness masked with learned civility. The latter makes them a kind of "Robinson Crusoe's of the spirit," to use an analogy. While small, interspersed, and different temperamental variabilities among geniuses make them to appear dissimilar, all are visited by periodic bouts of a felt loneliness, sadness, transient self-doubts, bleak, black moods, and an inner void while some having dialogues with themselves, as it were. These creative people should be considered by society as major contributors to the welfare of our species.^[28,30] They are separate from the merely, down-to-earth, intelligent, and contributory functionaries. The majority of these geniuses will enjoy longevity and fecundity, similar to the rest of the

population. Nevertheless, some of them, on account of their temperamental vulnerability will develop the disorders,^[28,29] possibly triggered by pruning, social pressure, and hormonal upheavals of the late adolescence. Thus, this persistence can be considered an evolutionary, downside trade-off. From the above, it is predicted that the group, gene/loci^[32] associated with these disorders will also be found in the premorbid personality of these individuals, in spite of that the majority of them will be spared in developing the disorders.

CONCLUSIONS

This paper's premises are based on the discoveries by Nowak *et al.* whom outlined the evolutionary development of our eusociality defining our human nature as a species.^[12] According to them, the temperamental traits (i.e., the ones making up our behavioral propensities and nature) originate from dual, evolutionary pressures. First, from pressures on the individual alone, such as; selfishness, aloofness, and autonomous thinking. Second, the other component originates from the evolutionary pressures on the social experience of humans such as cooperativeness, empathy, an eagerness to socially interact, and following and accommodating rules of the tribe. In conclusion, together the ones from the individual and social pressures form an unamalgamated, and "chimera-like" mix that constitutes human nature in an uneasy and conflicted state between ourselves and society.^[11-16]

The aforementioned, temperamental traits originating from these dual, evolutionary pressures are often expressed in an uneven, lopsided, manner creating different temperamental types with endless variabilities. Sufferers with lopsided, temperamental, components - emanating mainly from the pressures on the individual - create a pool of vulnerable individuals who probabilistically develop major mental disorders. At the same time, such individuals with this lopsided, temperamental configuration if intelligent and tenacious are now enabled to express creativity and independently able to create novelty and scientific narratives explaining nature's problems. Some of these individuals may end up mentally ill, but, more importantly, not all individuals will become mentally ill or create novelty. This will depend on yet, another factor, circumstances of the zeitgeist, such as affluence, social permissiveness, and early childhood experiences (e.g., freedom of action, and being unencumbered by severe, social constraints). The extreme lopsidedness of temperamental traits by evolutionary pressures on individuals constitutes a vulnerable pool whom develop MMDs. Conversely, this lopsidedness confers creativity and autonomy to these individuals. They also feel loneliness from within, an inner void and an aversion to social interactions. It is predicted that gene loci associated with the five major mental disorders will also be similarly associated with people whose temperamental types are from

the evolutionary pressures on an individual constituting the premorbid personality.^[19,32]

The question remains as to why the persistence of the prevalence remains at this particular rate of 6% worldwide for the five major mental disorders combined?^[7,32] According to the National Institute of Mental Health, schizophrenia afflicts 1% of the population and bipolar disorder 2–3% of the population.^[25]

In closing, an adage attributable to the Greek philosopher, Aristotle aptly stated, "There is no creative genius without a touch of madness," and it should be considered correct in its entirety.^[33] Indeed, very few geniuses will end up mentally ill, though, they far outnumber the ones with MMDs from the general population. However, all geniuses are indeed "touched," expressed by their peculiar temperament - the enabling factor for their creativity as well as vulnerability to developing these disorders.^[28,29]

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How to cite this article: Pediaditakis N, Durand DM. The Significance of the Persistent Prevalence of Major Mental Disorders. *Clin Res Neurol* 2018;1(2):1-5.