

The *It* Strikes Back

A Review of

[The Imprinted Brain: How Genes Set the Balance Between Autism and Psychosis](#)

by [Christopher Badcock](#)

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Reviewed by

[Eric Turkheimer](#)

The cause of schizophrenia has never been the important question. The real concern, or at least the question that must be answered before one is ready to start thinking about causes, is what schizophrenia is. The definition of schizophrenia is crucial not only in the mundane diagnostic sense of finding a set of criteria that conforms to the scientific evidence and on which people can agree, but also in the more essential sense of understanding the actual biological or psychological functions that are disrupted in the disorder.

The first task for a science of schizophrenia is to characterize it. Much recent scientific work trying to locate its causes, the particular experiences, or genes or neurons that give rise to it has been at best a distraction. Genomewide association scans and functional magnetic resonance imagery certainly have a role to play in the characterization of schizophrenia, but it has become increasingly clear that the key to schizophrenia's essence is not going to be found in quantitative trait loci or brain images because, if it were, it would have been found by now.

The same is true for autism, depression, and all the other great conundrums of psychopathology. The search for mechanistic causes has led us down one blind alley after another when, in fact, we still don't know what it is we are trying to explain.

Have we found anything? Although we have not identified genetic or neurological systems that are plausible candidates as answers to the question "What is schizophrenia," it is hardly the case that we have found nothing. Quite the opposite; we have found everything.

Current estimates of the number of genes involved in schizophrenia run into the thousands. At the neurological level, vastly complex networks of brain systems appear to be involved. But nothing ever seems to stand out as what Paul Meehl (who endorsed a quixotic, single major locus theory of schizophrenia) would have called the *specific genetic etiology* of schizophrenia (Meehl, 1972).

This state of affairs—a great many tiny associations that don't coalesce into systematic explanations—is pathognomonic (another Meehlianism; look it up, youngsters) of a search that is being conducted at the wrong level of analysis. What if we set out to find the causes of Republicanism? We wouldn't find a systematic neurogenetic cause, but we wouldn't confirm the null hypothesis, either. One way or another, Republicanism is reflected in the brain and the genome, but the essence of Republicanism, the meaning of Republicanism, cannot be found there. For that, we need new levels of analysis: psychology, history, and politics.

Christopher Badcock's *The Imprinted Brain: How Genes Set the Balance Between Autism and Psychosis* describes, refreshingly, a psychological theory of psychopathology. In this day and age, the idea seems almost radical. Although Badcock refers extensively to the literatures on the neurobiology and genetics of autism and schizophrenia, the central mission of the book is to define the essential deficits that define the two disorders, and those deficits are functional in origin.

The central idea is novel and intriguing: Autism and schizophrenia, which people have long recognized as being related in some way, are in fact mirror images of each other. Badcock suggests that there are two broad domains of cognition that are usually so integrated as to appear seamless: cognition about inanimate objects and cognition about people, especially about people's minds.

The Imprinted Brain begins with a sympathetic and relatively familiar modern account of autism as mind-blindness. Autistic people cannot rely on common intuitions about the mental intentions of other people, leaving them with profound difficulties in social relationships and ordinary daily communication. But, undistracted by the complexities of psychological life, they are free to nurture extraordinary abilities in memory, calculation, or visualization.

Even more interesting is the ability of some autistic individuals to overcome their psychological limitations and grow into functioning individuals with insight into both their limitations and gifts. Badcock relies heavily on the first-person accounts of Temple Grandin, a self-described autistic person who has become a highly respected engineer specializing in the design of animal slaughterhouses as well as a successful author.

In contrast to the world of autists deprived of psychological insight but gifted with compensatory gifts in the manipulation of abstract symbols and the physical world, one finds a world of psychotics (Badcock dubs them *mentalists*) handicapped in the world of common physical reality but gifted with psychological visions that the constraints of quotidian reality prevent ordinary people from experiencing. Mediating between the two extremes of psychological functioning, somewhat awkwardly, is sex, or, more specifically, the sexes. Drawing on contemporary theories of genetic imprinting, Badcock hypothesizes that there is something essentially "male" in the genetic predisposition to autism and autisticlike thinking, and something essentially "female" about mentalism.

This is the most speculative part of the book, and it suffers from a concrete view of the role of sex in both biology and cognition, with talk of male and female brains and maternal and paternal genes, as well as a facile acceptance of modern sex differences in performance as natural and inborn. There is also the uncomfortable fact that while the autistic spectrum is more commonly found in males, psychosis or schizophrenia is not more common in women.

This is not the only place where the contrast between autism and psychosis breaks down. Badcock tells us that the hallmark of his theory is balance. The final chapter of the book, titled "Beyond the Balanced Brain," begins with a somewhat self-congratulatory account of the "remarkable symmetry" (p. 189) of the theory, for which he finds comparisons in Copernicus, Darwin, and Newton. Autistic individuals favor the mechanistic, the male, if you like, while mentalists and the psychotic favor humanized, mentalistic thinking, which Badcock characterizes as female. The key to successful functioning is a balance between the two, an avoidance of the extreme solutions of autism and psychosis.

This is indeed an appealing idea, but Badcock winds up taking sides. The early chapter on autism is written with an appealing sympathy for autistic people and their abilities. Badcock admires clinically autistic individuals, as well as the many well-known, highly successful contemporary and historical individuals he identifies who may fall somewhere on the autistic spectrum. At times, Badcock's sympathy almost crosses over to a preference for the autistic experience, an intuition that the world would be a better place if we were all a little more autistic.

Autistic individuals, we are told, are empathic, nonjudgmental, musical, artistic, down to earth, in tune with the natural world. Temple Grandin is quoted as saying, "The problem with normal people is they're too cerebral" (p. 41) and "Autistic people are closer to animals than normal people are" (p. 55). At another point Grandin allows that without autism, "the world would be populated by very social people who accomplish very little" (p. 137).

One waits for the equally sympathetic accounts of the functioning mentalists, the near-psychotics, and the insights they bring to the world, but they never arrive. There are several reasons for this. It may be, as Badcock speculates, that schizophrenia and psychosis are simply more disabling than autism is, making it more difficult to find examples of people capitalizing on their limitations to achieve greatness in other domains. But it is also the case that the possibilities for a romantic, empowering view of psychosis were used up long ago by the Laingians, with mostly disastrous results.

More troubling is that the admiration Badcock expresses for autistic people doesn't extend so easily to the psychotics. Whereas the account of autism is unfailingly sympathetic, even laudatory, when discussing psychosis, Badcock lapses again and again into language about failure and handicap.

It seems odd: Surely there are examples of great artists or prophets who risked madness while extending themselves to the outer reaches of human experience, but we never meet

them. In part, this is because Badcock so favors autistic traits over psychotic ones that anyone who might seem like a candidate for psychotic genius—Van Gogh, for example—winds up being credited as an autistic for his technical skill rather than as a mentalist for his visionary gifts.

Badcock also allows himself to get sidetracked by other concerns. In the last chapter of the book, “Beyond the Balanced Brain,” I expected to find the usual wrap-up of a speculative yet empirically grounded account of a new scientific theory: consideration of the broadest applications of the theory and suggestions for future research programs. Instead, the chapter wanders off into a vitriolic attack on psychoanalysis. Freud is skewered but spared the harshest attacks, which are reserved for Klein, Jung, and Reich.

What is Wilhelm Reich even doing here? The answer is telling: Psychoanalysis itself comes up as an example of mentalism. It is, I think, a good example. Freud’s (1933, p. 111) famous dictum “Wo Es war, soll Ich werden” (Where It was, there shall I be) was the culmination of a great romantic attempt to animate the whole world with the human spirit. At its furthest extensions, in Jung, even in Reich, and most admirably in Norman O. Brown’s (1959) magnificent *Life Against Death: The Psychoanalytic Meaning of History*, all of history comes to be seen as a manifestation of the human spirit, as a potential location for human consciousness.

Sure, all of psychoanalysis ran into trouble finding justification on the earthly, mechanistic, autistic side of the ledger, and in the hands of someone as deeply troubled as Reich it crossed over into feverishness and quackery. But Jung was no crackpot, any more than all the autistic people Badcock writes about so compellingly are mental defectives. Jung was a flawed visionary, exactly the kind of thinker Badcock should be looking for to balance the autistic world of savants.

In a world run by autistic people, the abattoirs might run on time, but it is worth remembering that in an autistic world there would also be no poetry, no art, no theater, ultimately no life at all. There would be only a literal-minded, materialist equation of the living with the dead. Although flighty romanticism may need to be grounded in humankind’s animal, biological, and ultimately chemical origins, in this materialist era it would be disastrous to lose sight of the beautiful, dare one say the sacred, aspects of humanity to which the autistic are tragically blind.

Badcock’s failure to find a true balance between autism and psychosis finally aligns him with a broad swath of modern psychobiological thinking that can be seen as a concerted materialist reaction against romanticism in its many forms. The biological and genetic reductionism of much of contemporary psychiatry, the belligerent defenses of stereotypical masculinity in evolutionary psychology, the fervent denial of all things religious in writers like Dawkins (2006), and, of course, the absolute rejection of everything psychoanalytic in most of modern psychology are all of a piece.

Taken one at a time, they are all justified. No one would want to return to the days when arrogant and misguided analysts attributed autism and schizophrenia to bad parenting or

repressed homosexuality or when human behavior was thought to somehow float free above the constraints of genetics and evolution. Sometimes a cigar is just a cigar, inanimate and dead, but not always.

Taken together, the modern movements in favor of the inanimate, the unconscious, the masculine, and the mechanistic start to acquire a distinctly autistic feel. One can sense that the pendulum has swung too far, and sooner or later our repeated failure to find mechanistic causes of human behavior in the inanimate world will force us to admit it. Real balance still eludes us.

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