

## The Biomedicalization of Psychiatry: A Critical Overview

*Carl I. Cohen, M.D.*

**ABSTRACT:** The biomedical model currently dominates psychiatric clinical practice and research. Unfortunately, this dominance had led increasingly to biological reductionism. This paper examines the historical and sociopolitical underpinnings of the biomedical model, and illustrates some of the common scientific distortions of reductionistic thinking. These observations are applied to recent directions in mental health policy and are used to provide a basis for alternative perspectives of mental illness and psychiatric research.

### INTRODUCTION

The ascendancy of the biomedical model in psychiatry is well illustrated by the fact that among 627 papers presented in the New Research sessions at the 1992 annual meeting of the American Psychiatric Association, 86% were biomedically oriented (American Psychiatric Association, 1992). Especially telling about psychiatry's future is that of the 227 papers presented by "young investigators," 88% were biomedically focused. Indeed, nearly all departments of psychiatry are now chaired by persons committed to biomedical research, whereas three decades ago, these positions were largely held by psychoanalysts (Bader, 1992). Of course, there is nothing inherently wrong with examining the biological underpinnings of mental disorders. Humans are biological creatures, and it is clear that biological factors have to be

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Carl Cohen, M.D., is Professor of Psychiatry, and Director of Geriatric Psychiatry at SUNY Health Science Center at Brooklyn.

Address correspondence to Carl I. Cohen, M.D., SUNY Health Science Center at Brooklyn, Box 1203, 450 Clarkson Avenue, Brooklyn, N.Y. 11203.

acknowledged in all human behavior, normal or abnormal. My concern here is with recent trends toward biological reductionism. That is, explanations of phenomena occurring at several levels (e.g., social, psychological) that are sought at a single level (biology).

The basis for biological reductionism stems from the Cartesian view of the natural world that begins with individual parts, each conceived as pre-given and existing in and by themselves. These entities are then assembled together to form the functioning whole system: "Lines of causality run from part to whole, from atom to molecule, from molecule to organism, from organism to collectivity. As in society, so in all of nature, the part is ontologically prior to the whole" (Levins & Lewontin, 1985). Although it is often necessary in scientific study to isolate and abstract objects for study, ultimately these objects must be reinserted back into the whole to understand their interaction with other objects and to the totality. For example, a researcher may study the limbic system in isolation, but any knowledge gained must then be placed in the context of other systems. Thus, an alternate approach to the Cartesian stance (often termed "positivism") is a relational (or "dialectical") approach which views objects in their interpenetration with each other and in relation to the totality.

It should be obvious that human needs and behavior are substantially determined by their social world as evidenced by the diversity of needs and behaviors across history and culture. However, there have been battles waged during the past few centuries between those who have maintained a fixed, atomistic view of human nature and those who have argued for an alterable, evolving being. In Western society, once capitalism gained a foothold, the former position was promoted and financed by the existing social structure because of its support for the status quo.

Biological reductionism in psychiatry accomplishes several functions:

- (1) It deflects problems from social/contextual issues onto the individual. By utilizing the individual or biological elements as the point of departure, human behavior is attributed to fixed internal qualities such as "drives," instincts, neurochemicals, and genes. The outside world is viewed as providing modifications to these pre-existing elements.

- (2) Under a scientific patina, human and social problems become professionalized and removed from the realm of public discussion, where it is discussed by experts (Conrad, 1980).

- (3) Objects for study are selectively determined. Thus, brain neurochemistry may be a legitimate object whereas the workplace may not

be. Bourdieu (cited in Thompson, 1984) has termed this phenomenon "Symbolic Violence," when attention is directed to some information while other sources are ignored. Often, certain sources of knowledge, certain kinds of logic, and various types of information such as context and meaning are discredited. Information that does not meet a specific requirement is excluded because it is "soft" or "subjective," and hence, a variety of options are undermined.

(4) Even in the case of some mental disorders that may have relatively more powerful biological components, the reductionist model tends to minimize the effects of the environment. For example, homelessness among those with severe mental illness is viewed as stemming primarily from their illness rather than the lack of inexpensive housing; similarly, high rates of unemployment among persons having schizophrenia are thought to be due to their illness rather than to factors of the economy such as high unemployment rates or the need to have highly efficient workers.

On first glance, it would seem that the biological reductionist model of human behavior would be an easy target for attack. Nonetheless, this perspective survives and flourishes for several reasons. First, although "human behavior" by definition suggests questions of norms and roles, the biological model of human behavior has touted its objectivity and scientific rigor. With the decline of religious and political authority, science is one of the few remaining legitimate authorities. Any model that can emulate the scientific methods of the physical sciences lays claim to legitimacy. The use of nosological classifications, esoteric terminology, and statistical procedures give the appearance of objectivity, free of biases of culture or class.

A second reason for the prominence of the biological perspective is, as Colletti (1975) observes, because "Capitalism is reality stood on its head." Thus, within capitalism, individuals often act as singular atoms, seemingly free to sell their labor, buy goods in the marketplace, and no longer bound by personal ties but rather through monetary exchanges. Human interaction takes the form of relationships between things—human thinking and physical power are bought and sold. People learn to conceptualize themselves through the accumulation of institutional products of all kinds, e.g., money, grades, titles. However, underlying this superficial level of independence are vast structures of social, economic, and political connections. For example, these forces compel persons to sell their labor to survive; the work situation is not an equal economic exchange, but one in which the owner greatly benefits from the laborer. This notion of individuality is bolstered by the prevailing

ideology and reinforced through advertisements, political rhetoric, and media.

Finally, whatever goes on in a society is selected and institutionally reinforced according to the degree it supports the principal mode of social production, e.g., capitalism (Kovel, 1980). This domination may often be subtle and veiled. The biomedical perspective has been one convenient way of mystifying certain aspects of social reality, and it has been rewarded and promoted.

The purpose of this paper will be to review some of the common distortions engendered by biological reductionism followed by an expanded discussion of the historical and socioeconomic underpinnings of the biomedical model. These observations present a means of considering current directions in mental health systems and provide a basis for alternative perspectives of mental illness and psychiatric research.

### *EXAMPLES OF DISTORTIONS OF BIOLOGICAL PSYCHIATRY*

#### *1. Myth of Objectivity*

Although it is clear that all science, including the physical sciences, are influenced by social factors (Aronowitz, 1988), the human sciences are especially prone to ideological distortions, and the claim that biological psychiatry is wholly objective cannot be substantiated. Barthes (1968) notes that there can be no such thing as an innocent reading of the world. Virtually all perceptions involve interpretation. Societies are held together in part by norms, roles, and laws, which entail social meanings conditioned by language. Thus, all knowledge stands in the midst of language (Vega & Murphy, 1990). To diagnose someone as "paranoid," the clinician must examine the behavior in its context and apply complex cultural norms to evaluate its reasonableness (Ingleby, 1980). This means that insanity ascriptions are perforce rooted in everyday cultural understanding, and to imagine that that could be grounded in something which transcends common sense (i.e., "neutral," scientific authority) is illusory (Coulter, 1973). Moreover, as noted above, the scientific enterprise selects which questions to ask and which variables to use. The very act of creating distinct variables is a statement about how one perceives and divides the world. Despite these obvious limitations, the biomedical model frequently utilizes complex classifications and statistical procedures to render the appearance of objectivity.

## 2. *The Fallacy of Biological "Triggers"*

By assuming the Cartesian position that the behavioral phenomena are "caused" or "triggered" at the molecular level, biomedicalists neglect the possibility that for any given behavior, phenomena are occurring at different levels simultaneously (Rose, 1982). For example, when I speak I am concomitantly undergoing neurochemical changes, electrophysiological changes, motor changes, thought processes, and so forth, as well as acting on my immediate environment. It is this totality of concurrent processes at various levels that create verbal thought.

## 3. *The Fallacy that Treatment Implies Causality*

The assumption that treatment implies causality is widely assumed in the psychiatric literature. For example, Jerrold Bernstein (1984), a prominent psychopharmacologist, writes: "Clinical and biochemical responses to administered drugs have provided most of the useful information supporting a biochemical etiology in affective illness." Although it is true that certain conditions are helped by biological interventions, we have no sense as to whether these interventions have anything to do with pathogenesis. That is, treatment does not imply causality. For example, we may use aspirin to treat the pain caused by a blow to the head as well as to treat pain caused by menstrual cramps. Furthermore, in some instances such as depression, psychotherapy may be as effective as pharmacotherapy (Goleman, 1989). Clearly, we are biological beings and therefore part of depression is physically-based. However, arguing that it is solely biological makes as much sense as arguing that a bullet wound is "caused" by a skin puncture or tuberculosis is "caused" by a bacillus. These phenomena cannot be separated from the environmental context.

## 4. *Categorical Errors*

Biomedical investigators are also vulnerable to what Ryle (1949) has termed, "Categorical Errors." This is a form of reductionism in which social phenomena are misplaced into biological categories. For instance, there has been a recent trend to viewing personality traits as representing an underlying biological (genetic) trait (Presidential Lecture, 1989). However, there is a question of logic as to whether a complex set of human behavioral patterns and dispositions that by definition involves cultural and social descriptions, and which take many years to be fully formed can be attributed to one underlying

biological factor. Thus, as we move to higher levels of organization such as personality, a whole new set of relationships must be considered that have no relevance at other levels. It makes no sense to talk of aggressive, altruistic or passive genes. Furthermore, dichotomizing persons into positive or negative for a trait, although neat and tidy, obscures all the gradations that exist in the real world (cf. Mirowsky & Ross, 1989).

#### 5. *The Misinterpretation of Statistics*

Statistics have often been used to imply causality. For example, my age and the national debt are highly correlated, but it is not likely my age is causing the debt to rise. Another distortion has been to "control" for the environment and then to presume that it has no effect. Thus, adoptive twin studies are used to demonstrate "nature *versus* nurture," when in actuality they merely show effects of genetics within a particular set of environments. If these twins had been exposed to another range of environments, the genetic effects may have been quite different. The point being that environment can have profound interactive effects on genes. Despite evidence that genetic factors account for a significant but relatively small percentage of the variance in most mental illness (Lewontin, Rose, & Kamin, 1984; Weiner, 1985), it is common to find statements such as this one: "Mental illness is probably in large part genetically determined . . ." (Lamb & Zusman, 1979). This issue is not whether genetics or biology is associated with mental illness; certainly they must have a role as we are biological creatures. The issue is the distortion in terms of considering a statistical association to be causal or to ignore the other factors that account for as much as 90% of the explained variance. The latter, often treated as "noise," is precisely where environmental or interactive effects of environment and biology are located.

#### 6. *Biases of Research Instruments*

Many instruments tend to emphasize those elements that are improved by biological interventions, and minimize or ignore elements that are less easily ameliorated. Moreover, even those elements that are targeted may only show partial, albeit statistical, improvement. For example, the Brief Psychiatric Rating Scale, often used in pharmacology research, examines symptoms such as delusions or hallucinations, but neglects questions as to how the drug may affect interpersonal functioning, vocational functioning, quality of life, other organ systems (i.e., side effects) and so forth. There may be nothing wrong with targeting

certain symptoms, but clinicians and the lay persons are often led to believe that the drug may be more broadly efficacious. The recent rise and subsequent fall of Prozac as the latest "drug du jour" illustrates this point.

### *Historical and Economic Forces*

Several events occurred during the first two decades of this century that ultimately served as driving forces in the biomedicalization of psychiatry. There was a transformation of health care from home remedies and patent medicines to professional care provided by physicians, hospitals, and pharmacists. According to the Ehrenreichs (1979), "Services which had been an indigenous part of working class culture were edged out by commodities conceived and designed outside of the class" (p. 15). The hegemony of allopathic medicine, the new dominant form, was secured by the Flexner report of 1910 which established stringent controls over medical education and licensure, and essentially eliminated any competing forms such as homeopathy or osteopathy. In tandem with these changes among physicians, there was a dramatic increase in the use of prescription medications and of the pharmaceutical industry. Between 1930 and 1960, the sale of drugs increased ten-fold. During this period the real per capita expenditure for professionalized medicine doubled (Caplan, 1989).

Although psychiatry lagged behind other branches of medicine, several historical events paralleled changes in medicine. Kovel (1980) identifies the years 1905-10, when American Psychiatry assumed its modern form. It was in this period that psychoanalytic theory became fused with the Mental Hygiene Movement to become the ruling ideology of medically controlled mental health. These two movements allowed for the objectification of the "mind" and the creation of a new discourse of psychology, which is separated from the historical setting and context in which mind develops. This process also allowed for the commodification of mind. Thus, if condition A can be measured and determined to be worse than condition B, these distinctions can be quantified in time and/or money.

Moreover, Freud's visit to the United States in 1909 provided a timely component in the effort to broaden the realm of psychiatry from mental hospitals into everyday life. Such a broadening was already afoot as a consequence of the gloomy state of mental institutions, which served as monuments of therapeutic failure (Grob, 1983). Thus, organized psychiatry attempted to establish a legitimate base outside these institutions

in places such as mental hygiene clinics, child guidance centers, outpatient units, and research institutes (Scull, 1990). In this country, however, the more radical social implications of Freudian theory were scuttled as attention was directed to treating emotional disorders by bringing the unconscious to consciousness where it could be condemned by the civilized self and/or sublimated into acceptable pursuits (Kovel, 1980). Importantly, the biological base of Freudian theory was retained as was its medical focus: "The basic model upon which psychoanalysis is constructed is the disease model, in that it portrays neurotic behavior as unfolding relentlessly out of a defective psychological system contained within the body" (Scheff, 1966, p. 9). By the 1920's, the psychoanalytic movement was accommodated to the categories of mental hygiene, and the American Psychoanalytic Association had become a medically dominated guild (Kovel, 1980).

The socially-oriented philosophy that arose in psychiatry during the 1960's occurred as part of a larger social movement. (See paper by Thompson in this issue for an extensive discussion of this period.) By the 1970's, the government had changed gears and the emphasis on socially-oriented programs had waned. Psychiatry also underwent substantial change. A convenient mythology was devised that justified the transformation to a biomedical model on the basis of the dismal "failure" of the community mental health movement. Biomedical oriented psychiatry was well-suited for the new ideology. It emphasized internal mechanism rather than external social factors.

Economically, this transformation was driven by forces at three levels: third-party reimbursement, the pharmaceutical industry, and government funding. With respect to the former, during the 1970's the cost-effectiveness of high-priced psychiatric services was being increasingly compared with similar less expensive services being offered by psychologists, social workers, and counselors. By arguing that mental illness was biologically based, psychiatrists could reintegrate psychiatry into mainstream medicine as well as command higher fees because they were treating a biomedical condition (Bader, 1992). Efforts were made to ensure the centrality of physician-psychiatrists in all aspects of mental health by convincing insurers that initial evaluations by psychiatrists were imperative in order to rule out biological conditions.

The biomedical model likewise enjoyed the large financial support of the pharmaceutical industry. Drug companies have financed a considerable amount of research at medical centers, and this enables them to encourage physicians to add their products to the list of drugs available through in-hospital formulary. As one sales manager stated, "I can get



any drug on a university hospital formulary. I just find some fertile soil—the right person who is hungry for some research money . . . I know that the researcher will help me get it on the formulary in exchange for research money” (Wilkes & Shuchman, 1989). Kessler (1991) observes that the number of drug-sponsored symposium of the 16 leading pharmaceutical companies rose from 7,519 in 1974 to 34,688 in 1988, the cost of the latter exceeded \$85.9 million. Kessler added that industry-sponsored symposia are especially vulnerable to biases by presenting uncontrolled studies, by unduly focusing on a sponsor's product, or by being accompanied by ancillary promotional activities such as the passing out of flyers about a sponsor's product. Although the relationship between researcher and drug company should be a reciprocal one, the scarcity of research funds make academic physicians easy prey to industry manipulation.

Medical journals also receive considerable advertising support from pharmaceutical companies. In many journals, a series of advertisements often precede the table of contents. Messinger (1990) notes that the *American Journal of Psychiatry*, the official journal of the American Psychiatric Association, sells for \$4.65 and contains 51 pages of advertisements; similarly, the *Archives of General Psychiatry* has 41 pages devoted to advertisements and sells for \$4.15. Conversely, *Biological Psychiatry* and *Comprehensive Psychiatry* which have zero and three advertisements, respectively, sell for \$24.85 and \$19.50. There are also reports, especially among smaller journals which need drug revenues for survival, that articles have been heavily edited to avoid offending their advertisers or that include special supplements that are industry sponsored studies that lack any peer review (Kessler, 1991; Wilkes & Shuchman, 1989).

The expectation that a doctor will write a prescription at the end of a visit (and indeed this is usually so), helps maintain the biomedical dominance in psychiatry. The act of prescribing suggests a biological basis for a problem. Not only does it deflect the patient from contextual causes of psychological difficulties, but similarly tends to lead prescribers to minimize psychosocial etiologies. Kleinman and Cohen (1991) have pointed out how this is reinforced by drug advertisements to physicians that tend to individualize mental illness, and to assume that economic and social contexts are irrelevant.

The dramatic shift in government toward biomedical approaches is reflected by Lewis Judd, then director of the National Institute of Mental Health, who hailed the 1990's as “The Decade of the Brain.” Judd, in noting that the NIMH already sponsors an “enormous amount

of neuroscience and psychological research," indicated that he would build on this base, expand it, and move it forward (Sargent, 1988). Concretely, this meant that in 1987, for example, only 6 of 97 NIMH awards in schizophrenic research were devoted to psychosocial treatment rehabilitation or non-biological prevention strategies (Schizophrenia Bulletin, 1989). As Senator Harkin of Iowa declared, "We're spending \$700 billion a year on health care, but less than 1 percent is directed toward prevention" (Psychiatric News, April 5, 1991, p. 1).

Although technology in psychiatry has not developed as rapidly as technology in the rest of medicine, there is clearly a potentially large market for various new techniques such as the PET, BEAM, Evoked Potential. Even though many of these methods have very little diagnostic values, there has already been extensive marketing among practitioners.

Psychiatry's growth and power during the twentieth century also can be traced in part to its alliance with Western science's goals of control and domination of nature—human and non-human (Aronowitz, 1988). These goals have mirrored the needs of the socioeconomic system. For example, during this century, capitalism has simultaneously needed to increase consumption and the technical control of social reality in order to maximize profits. This creates a paradox in which morality is slackened to increase permissiveness, and consequently, consumption. Alternately, increased control is required in society to forestall rebellion as well as in the workplace, as workers are consigned to simple, boring, non-mental tasks which are divorced from decision-making. Ideally this control must be kept as invisible as possible. The Mental Hygiene ethos helped to secure a technical control of deviance by redefining people not as morally unfit (i.e., bad, possessed), but as sick and requiring a technically skilled practitioner (Kovel, 1980).

Scientific rationality and control are also manifest in the use of diagnostic categories and of "objective" (external) symptoms as markers of illness. Thus, the DSM III calls for an "objectifying gaze" rather than an intersubjective dialogue (Kovel, 1980). Indeed, the five digit DSM III diagnostic codes that allow for two digits to the right of the decimal point give the impression that diagnoses are precise to within one-hundredth of each other (Brown, 1987). Mirowsky and Ross (1989) have likened the elements of diagnostic categories to constellations of stars; that is, they seem to form something distinct, but they may have no real connection to each other. The emphasis in the DSM-III on uniformity, predictability, and orderliness is an attempt to "banish the unexpected" (Farber, 1990). Also, it provides a type of "control from above" within

the profession (Brown, 1990), in which practitioners are compelled to follow a uniform taxonomy and a way of viewing the world much as factory line workers are compelled to follow the creations of upper echelon professionals.

### *BREAKING THE BIOMEDICAL DOMINANCE*

At this historical moment, the biomedical model has attained considerable economic, ideological, and political hegemony over alternative paradigms. Prospects for diminishing this dominance, albeit not imminent, may lie within the contradictions of the biomedical model itself. The tenet that humans are akin to animals and that their behavior can be fully predicted (and controlled) is belied by the multiple contingencies and forces in everyday life that make predictability illusory (Scheibe, 1979). Modern psychology, which deals with averages and abstracted generalities, and which is more suited to industrial society's need to manipulate the masses, has found it increasingly difficult to be relevant to the experience and problems of particular individuals (Tolman, 1991). Finally, the biomedical model relies on high-cost medical therapy and technology. Moreover, because current strategies do not seriously consider the non-biological roots of mental illness, the number of new mentally ill continues to grow, and similarly, biological psychiatry has not reduced significantly the number of persons who are currently suffering from psychiatric disorders. Consumers will likely look to alternative sources of care as costs continue to rise, the number of mentally ill increases, and the availability of mainstream clinicians to treat mental health problems remain low (Albee, 1990).

Inevitably, the political agenda in the country will shift towards addressing social problems, and biological psychiatry will be especially vulnerable to attack because of its insensitivity to social issues as well as its allegiance to the status quo. New paradigms will be needed that examine the dialectical interpenetration of biological, psychological, and social forces. Specifically, such a paradigm's point of departure would be that of the social world, akin to the Aristotelian notion that humans are social animals or the Marxist thesis that social being determines consciousness. This model would be able to explain the tension between broader social and historical forces and personal biography. Such a paradigm would require sensitivity to personal meaning and communications, to networks of family and friends, to gender differences, and to cultural life (Messinger, 1990; Tolan, Keys,

Chertok, & Jason, 1990). A new psychiatry would reflect the richness and variety of our world. Finally, unlike today's psychiatry, a new psychiatry must be self-critical and self-reflexive; that is, to be able to account for observer biases such as ideology, percepts, and concepts as well as the effects of clinician/researcher interactions with the patient/subject.

Biological psychiatry's rush to transmogrify much of human life into clinical or biological entities has become increasingly suspect on scientific as well as sociopolitical grounds. In reviewing biological psychiatry's limited perspective on human affairs one is reminded of the words of the great chanteuse, Peggy Lee, who lamented, "Is that all there is?"

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