

# A Context for Classification in Child Psychiatry

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## Abstract

**Objective:** To provide a context for classification in child psychiatry over last 45 years including debate over different approaches. **Method:** The context for classification of child psychiatric disorders has changed drastically since the introduction of categorical classification and the multi-axial formulation in the Diagnostic and Statistical Manual (DSM) and the International Classification of Disease (ICD). The authors review some historical factors including the shift in psychiatry to a universal classification system spanning the lifespan. **Results:** The adaptation of categorical and universal diagnosis has resulted in a series of child-adult lifespan continuities and discontinuities about how problems are conceptualized within the categorical, multi-axial system. **Conclusion:** There is need for a more flexible classification system to incorporate emerging data from longitudinal and gene-environment (GxE) interaction studies within the framework of attachment, developmental and systems theory.

**Key words:** classification, categorical, multi-axial, dimensional, developmental

## Résumé

**Objectifs:** Présenter la classification des troubles psychiatriques de l'enfant au cours des 45 dernières années, en débattant des différentes approches. **Méthodologie:** La classification des troubles psychiatriques des enfants a évolué de façon radicale depuis l'introduction de la classification par catégories et de la formulation diagnostique multi-axiale du DSM (Manuel diagnostique et statistique des troubles mentaux) et de la CIM (Classification internationale des maladies). Les auteurs passent en revue divers facteurs historiques dont le glissement, en psychiatrie, vers un système de classification universelle couvrant la totalité de la vie du sujet. **Résultats:** La catégorisation et l'universalisation des diagnostics ont conduit à étudier le sujet tout au long de sa vie, et à exprimer différemment les problèmes au sein de la formulation diagnostique catégorique et multi-axiale. **Conclusion:** Il convient de mettre en place un système de classification plus souple qui intègre les nouvelles données issues des études longitudinales et des études sur l'interaction génotype x environnement dans le cadre de la théorie de l'attachement, du développement et des systèmes.

**Mots clés:** classification, catégorique, multiaxial, dimensionnel, développemental

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## Introduction

This paper provides a historical overview of the then new approach to classification in psychiatry which began with the Diagnostic and Statistical Manual (DSM) III by adapting four defining characteristics: universal, categorical, multi-axial and across the lifespan. While these growing pains were essential to operationalize definitions and establish a common language among clinicians and researchers, the need for a uniform system resulted in a series of arbitrary continuities and discontinuities more apparent to child clinicians and researchers who must deal with changing children and families on different developmental trajectories or life cycles. To illustrate this we use the examples of the categorical versus the dimensional approach and the continuities/discontinuities within the multi-axial system. We then review some of the clinical and social consequences from diagnoses derived from categorical classification as insufficient explanations in understanding case formulation and treatment planning.

## A Historical Context

The original impetus for a classification of mental disorders came not only from a need to obtain statistics on mental disorders but also to categorize disorders in the same manner as other branches of medicine and science. While this "modernistic" project of psychiatry can be decried, the tradition to separate out phenomenon into distinct, reliable and valid categories is typically the first step in the development of any science. When the concept of an organic mental disorder (derangement of the brain as opposed to demonic possession) was established at the end of the 18<sup>th</sup> century, classification of psychiatric disorders became intricately part of treatment (for a historical account of early classification in psychiatry see Goldstein, Console and Classify, 1987). French psychiatrist Phillip Pinel's classification system (Pinel, 1800), for example, distinguished between mental retardation and functional psychoses. This delineation had implications not only for diagnosis but also for treatment, affect-

ing the social and legal status of these patients. Subsequently, nosology evolved according to national tradition or schools of thinking (Berrios, 1996). The result was confusion amongst practitioners as there was no common language and different interpretations were given to the same phenomenon. While an oversimplification, the two contemporary schools of psychiatry can be linked back to the tradition of the organic/directive (Kraepelinean) versus the psychodynamic/ non-directive (Freudian) (Schowalter, 1989), with the ensuing divergent views towards classification (etiology) and treatment.

In the post world war II era in the USA there was an administrative need to categorize veterans who were occupying Veterans Administration hospitals as a result of stress related combat disorders. DSM-I and DSM-II were conceived with this need in mind. Categorization was heavily psychoanalytic in nature, reflecting the current psychiatric model of the day, where symptoms were conceptualized as “reactions” to psychological stimuli mediated by internal psychic mechanisms. Child psychiatrists working with children used dimensionally and ideographically informed formulations as the mainstay of assessment and treatment (Harper 2001). In DSM-II there were only a handful of diagnostic categories for children including mental retardation, childhood schizophrenia, and other reactions such as adjustment, hyperkinetic, runaway reaction etc, (Volkmar, Schwab-Stone and First, 2007).

The need to operationalize definitions and categories was paramount so that psychiatrists could reliably diagnose a person with schizophrenia whether they were in New York, London or Vienna. The dissatisfaction with the subjective and arbitrary psychoanalytic categories were in contrast to the scientific categorization of organic medicine. Scientific medicine was powerful precisely because it was universal. The appeal of describing universal phenomena as borrowed from the model of organic medicine inspired the then perceived renegades (also called neokraepelineans), who were responsible for changing the direction of DSM and heavily influenced by Feighner’s research criteria (Feighner, Robins and Guze 1972, Robins and Guze, 1970). These criteria operationalized specific symptoms for specific psy-

chiatric disorder categories, and were then further formalized as the Research Diagnostic Criteria (RDC) (Spitzer, Endicott and Robins 1978). DSM committees were established to reach consensus for each category of diagnoses (based on the RDC), spearheaded by the chairman of DSM-III, Robert Spitzer, who had a major influence on re-shaping the direction of the DSM and American psychiatry (for an interesting account of Spitzer’s life see Spiegel, 2005). For childhood disorders in DSM-III there was a shift in both the number of childhood psychiatric disorders and the conceptualization of disorders as “categorical” rather than “reactions”. Thus, a unified classification could be applied across the lifespan consistent with the adult classification.

Concurrently, there was interest internationally in improving psychiatric classification. Expansion of international contacts and the undertaking of several international collaborative studies contributed to this trend, such as the joint 1978 project between the World Health Organization and the Alcohol, Drug Abuse and Mental Health Administration in the USA. The aim was to improve classification of mental health and alcohol and drug related problems. One outcome of this international effort was the development of research instruments such as the Composite International Diagnostic Interview, an instrument suitable for conducting mental health epidemiological studies across different countries and the International Personality Disorder Examination. Consensus on definitions of mental and behavioural disorders, agreement on diagnostic criteria and measurement by standardized assessment instruments allowed field trials in over 40 countries which culminated in the clinical guidelines for ICD-10 classification of mental and behavioural disorders (Sartorius 1993) while harmonizing these changes with DSM 4 (Volkmar, Schwab-Stone and First, 2007).

An innovation in both DSM and the International Classification of Disease (ICD) was the incorporation of the multi-axial framework for both child and adult classification, a recognition of the fact that the diagnostic process involves several distinct aspects which are complementary but not necessarily alternatives to each other (Rutter and Tuma 1988). Having “disorders” on separate axes, forced

the clinician to direct their attention to different areas of concern such as the personality disorders for adults or developmental disorders for children on Axis II (Volkmar, Schwab-Stone and First, 2007). However the relative weight of each axis evolved differently for DSM and ICD; for example personality disorders are included in Axis I for ICD. Additionally there were different "hierarchical" inclusion and exclusion rules for DSM and ICD with DSM allowing multiple diagnoses under Axis I. With respect to child psychiatric nomenclature, there were important differences between the two systems with respect to inclusion and exclusion rules for conduct and anxiety disorders; the diagnostic implications are not trivial because different conditions evolve differently (ie transient developmental anxiety versus childhood onset anxiety disorder). Additionally the developmental logic is not immediately clear in multiaxial formulations either within or between each diagnostic system as to how to conceptualize enduring traits such as personality or learning/intelligence.

This international movement to operationalize diagnosis corresponded in turn with the waning influence of psychoanalysts in major teaching and research centers. The availability of new treatments for major psychiatric disorders such as chlorpromazine for psychosis, lithium for manic-depressive illness and imipramine for the treatment of severe depression were being increasingly utilized by psychiatrists as they abandoned the couch. Classification became more closely linked conceptually to diagnosis and treatment as DSM strove to be atheoretical, becoming, in essence, the de facto model. As can be seen from the above, a confluence of factors shaped categorically based universal classification. This also corresponded to a rapprochement of psychiatry with the medical model, including a broad based reintegration with epidemiology, in particular, and neurobiology and genetics (Munir and Beardslee, 2001).

### **Continuities and Discontinuities in Child Classification**

While there can be many advantages of a universal classification system, housing child and adult disorders under the same rubric and imposing the same set of rules for "caseness",

i.e. what is categorized on each axis and how it is categorized, has implications for theory building, research and clinical practise of child and family problems. More so than with their adult counterparts, child psychiatrists are asked to look at a myriad of problems which have differing etiologies ranging from cultural, social, psychological, developmental and neurobiological. This section examines how continuities and discontinuities between child and adult problems are handled by the DSM and ICD categorical classification system and how this has hindered some aspects of theory and classification development in child psychiatry while raising awareness in other instances.

### *Categorical versus Dimensional Approaches*

Although the DSM claims to be "atheoretical" by choosing to keep its descriptions at the behavioural level, any system of classification becomes the lens through which the world is apprehended. The lens that the DSM has chosen, consistent with the axial system, is the categorical as opposed to the dimensional approach. Aberrant, maladaptive behaviours or symptoms are counted until they reach a threshold for determining "caseness" or severity. The diagnosis of a "case" of, for example, Attention Deficit Hyperactivity disorder (ADHD), or Conduct Disorder (CD) is then made. The convention of thinking of individuals as "cases" rings true with the accepted nomenclature of medicine; for example a "case" of tuberculosis or pneumonia. Thinking about cases leads to categorical, yes/no answers with the accompanying sense of certainty: you either have a case of TB or not. These conventions are useful in epidemiology where cases can be counted at the population level to determine broad indices of disease such as prevalence. However, an alternative and not necessarily contradictory approach, is to think of behaviour or traits as varying along a continuum or a dimension. Traits such as aggression, hyperactivity, extraversion, shyness and intelligence all vary along a dimension. Examples of medical parameters varying along a continuum include blood pressure, blood sugar level, cholesterol levels and so forth, with the extreme end of a continuum, such as elevated blood pressure or blood sugar, defined as a maladaptive or disease state.

Even within a categorical diagnosis there are dimensional aspects such as risk and resilience factors, both environmental and genetic, which vary along a continuum to modify outcome in a categorical sense, such as thresholds (or cut offs) and cumulative risk (Appleyard et al 2005). As a child is constantly undergoing development and interacting with his/her environment, disorders or adaptations are best conceptualized as sharing both categorical and dimensional aspects; for example severity as a dimension within a categorical diagnosis. Although conventions of talking about a “case” of ADHD may facilitate communication among clinicians and researchers, there exists a risk of prematurely excluding other important mitigating factors affecting the case formulation. The application of “caseness” or thresholds to achieve an Axis I diagnosis has also biased the DSM towards privileging Axis I factors over other, just as significant, risk/adversity or protective factors on Axis IV (Rutter and Tuma 1988) or developmental factors on Axis II of the multi axial formulation. While there are specific DSM criteria for guiding the clinician or researcher on Axis I, it is left to individual discretion as to how to conceptualize risk and resilience from Axis IV in the multi-axial or case formulation. The clinician, depending on his/her background, may simply list the stressors and forget about protective factors including psychosocial, religious, cultural and political factors.

As it applies to child psychiatry, the DSM categorical approach has been helpful in raising awareness of the onset of various serious psychiatric disorders in young children. It is now known that in the majority of patients with anxiety disorders, such as obsessive compulsive disorder (OCD), there was either a partial or a full onset of symptoms in childhood (Swedo & Pine, 2005). Mood disorders can have their onset in childhood although it appears that in a considerable number of cases, a child or a young person’s mood is more reactive to environmental stressors and certainly influenced by attachment status and developmental period (Duggal et al 2001). While the DSM has also raised awareness of first episode mood disorders and psychosis, the hunt for precursors (early signs of psychosis) or variants (paediatric bipolar disorder)

has had mixed results, generating controversy about subjecting children and youth to the effects of labelling and long-term psycho-pharmacological treatment. Another concern has been “diagnostic creep” where the elastic margins around defining “caseness” have led to varying estimates of prevalence and incidence, eg ADHD prevalence from 5% to 15% (Barbarese et al 2000). When symptoms are normally distributed with the cut-off defining the pathological at the tail end of the curve, a small difference or change in the interpretation of a categorical definition, will inevitably lead to large shifts in prevalence or incidence.

#### *The Problem of Continuity Within the Multiaxial System*

There is much debate about whether Axis II will be substantially changed to adopt a more dimensional definition of personality in DSM IV (Bagby, 2008). With this potential evolution, one of the most prevalent personality disorders, borderline personality, may change or “disappear” (Charland 2004). Why should child psychiatrists be concerned? As a classification system claiming to be atheoretical it is difficult for the DSM to incorporate at a meta-level a theory of development which could well explain later patterns of enduring behaviour such as predicted by Bowlby’s theory of attachment (Bowlby 1988). Many well designed longitudinal studies have documented the long term effect of disrupted attachments in infancy and childhood on later adaptation in humans (Sroufe 2005, Masten and O’Connor 1989, Masten, Best and Garmezy 1990, Werner and Smith 1992, Egeland, Jacobvitz and Sroufe 1988, McGloin and Widom 2001) and in animals (Sapolsky, 2004). There are sufficient data now to incorporate attachment disruptions as etiologic factors in various childhood disorders.

Attempting to solve problems within the categorical framework has led to changing rules between various editions of the DSM as committee members debate about the boundaries of the normal and abnormal; personality disorders have appeared, disappeared or seen their prevalence rates increase or decrease. For example, the prevalence rate of schizotypal personality disorder has seen its prevalence shrink from 11 to 1% from DSM 3 to 4 to 4-TR (First et al 2002). Some experts argue that



while the overall concept of a personality disorder is a good one, there is no good data to support the different personality categories (First et al 2002). Other experts argue that a dimensional approach should be adopted to personality traits rather than a categorical approach since in some instances there is continuity between axis one and two (conduct disorder of childhood and antisocial personality disorder of adulthood) (First et al 2002). Even though there is overwhelming evidence of a link between childhood trauma and some cases of borderline personality disorder, there is still reluctance to change one's perspective and let go of familiar categories despite contradictory data (van der Kolk, Perry and Herman, 1991, Herman 1992, Grilo et al 1999, McGloin and Widom 2001, Bolger and Patterson 2001 a, 2001 b, Perry 2002).

As child psychiatrists are aware, the most prevalent reason for consultation is not for a disorder but for the "child-parent relationship problem". The DSM as an individually oriented, categorical classification system, has reached its limits when dealing with relationships as this enters a more complex level of discourse. We must ask ourselves whether, in our zeal to harmonize child with adult categorization, is it valid that such complex interactional patterns be conceived as "categorical disorders" in the first instance and perhaps may be better handled by ideographic formulations. Alternatively many of these relational "problems" may be influenced by internalized attachment-based working models of the mind (Main 1985, Fonagy et al 2002, 2005).

Once the whole categorical personality disorder concept is broken open to overcome the artificial barriers imposed by the age of onset rule and by the narrow definition of enduring patterns of behaviour, new information and theories can be tested. Certain childhood conditions improve with age (ADHD) (Hechtman, Weiss and Perlman 1984) others may desist (conduct disorder), (Romano et al 2005, Shaw et al 2003, Brame, Nagin and Tremblay 2001, Broidy et al 2003, Nagin and Tremblay, 1999) whereas others tend to worsen or have their onset later (mood disorders) with marked gender differences (Zisook et al 2007). Certain traits in childhood are highly correlated with disorders in adulthood such as behavioural inhibi-

tion and anxiety (Kagan 1971), conduct disorder (especially callous-unemotional traits) and antisocial personality disorder, (Frick, 2006) and perfectionism and eating disorders, (Nilson, Sundbom and Haqqlof 2007). As genetic evidence also emerges for a link between the severity of adult disorders and their onset in pre and peripubertal years, various authors have postulated neurobiological links to explain so-called personality disorders such as the depressive personality (MacQueen, 2008). In addition, enduring patterns of behaviour can be aided or abetted by the balance of interactions between environmental and genetic endowments (Caspi et al 2002, Foley et al 2004, Kaufman et al 2004, Moffit 2005). The child related concepts of temperament, and goodness of fit are additional concepts to explain developmental adaptations (Chess and Thomas, 1986). Clearly, once the constraining label of a categorical personality disorder is removed then the multiple interactions among developmental forces can be explored to explain the outcome of various developmental trajectories.

## **Drawbacks or Consequences of DSM Classification**

### *The Case Formulation*

Harper (2001) commented on the child case formulation; "currently assessment is often limited to making a DSM diagnosis; DSM diagnoses are often used as if they were sufficient for treatment planning." Since the theoretical link between classifying and diagnosing has been narrowly re-defined after DSM III, hence changing the goals of assessment, other variables such as familial and environmental factors are poorly integrated into the assessment and hence case formulation. Assessors are focused more on eliciting key behaviors to reach a DSM diagnosis rather than understanding underlying factors. The behavioral symptom description and counts fulfilling diagnostic criteria are seen as sufficient explanations without regard to exploring other mediating factors.

Critical skills necessary for synthesizing the different strands of information together in the formulation, i.e. holding and weighing several competing models or schools of thought simultaneously, are limited by the framework of cat-

egorical thinking. The DSM limitation to incorporating theory has had the effect of confining the case formulation to observables or rating scales without allowing hypothesis generation and testing through family, systems, attachment or developmental history. "Data" about interactions or relationships or context are still observable and "valid" but require a different skill set than eliciting behaviors or symptoms from a category or checklist.

Categorical diagnoses offer the clinician criteria by which to compare children to other children in groups in terms of shared characteristics of family history or clinical course. However case formulation involves the simultaneous incorporation of what makes this case similar to others and how is it different. The critical exercise in case formulation should not pit these two processes against each other but seek to integrate them.

#### *Behavioral Rating Scales*

Behavioral rating scales have been enormously helpful for clinicians and researchers, since they can provide evidence of multiple domains of functioning such that important areas are not neglected. Unfortunately the trend has been to key the scales to DSM categorical diagnoses as the gold standard, in the pursuit of whether an individual reaches a threshold for "caseness" or not. In this view rating scales are interpreted as further supporting evidence for a categorical diagnosis and as such garner more "objectivity" since a numerical value is now assigned to a diagnosis. As any clinician will report, rating scales are proxy instruments to guide the assessment process but meaningless in and of themselves. The danger of "reification", in the same way an individual is totalized as a "case", i.e. a case of schizophrenia rather than a person struggling with schizophrenia, but in this situation reified even more abstractly as "scores" or "profiles" on a rating scale obviously carries the problem of "mistaking map for country", as rating scales become more pervasive in busy practices, and on the internet.

#### *Diagnosis and the Internet*

An unintended consequence of psychiatry's emphasis on diagnosis has been a cultural obsession with labeling. Some diagnoses are

powerful enough that the opposite of reification happens; self-identity becomes organized around a diagnosis especially if there is a community or virtual community supporting that identity. Charland (2004) has described how private internet chat rooms and web sites have permitted more patient autonomy over who prescribes and removes labels (eg pro-anorexia or pro-cutting sites) and the reluctance of patients to give up labels after re-definitions or nomenclature changes by official organizations. This is an example of what Hacking (1995) has called the "looping effect" where people defined in a certain way tend to conform or grow into the ways they are described, an unintended consequence of the social effects of classifying human beings.

#### **Conclusion**

Undoubtedly the advances in classification have served as a great impetus for research and practice in child psychiatry. Classification systems are not theories, nor are they raw data. However they do reflect the values and biases of their builders. Psychiatry before Spitzer, Feighner, Robins and Guze suffered from a reliability problem which in turn seriously affected credibility. By aligning themselves to the values of universal medicine in general and epidemiology in particular, the value of "reliability" was elevated to the level of a theory guiding a massive program of research and clinical practise over the last 35 years.

What is the role of classification with respect to theory, research and practise in child psychiatry? As Volkmar, Schwab-Stone and First (2007) have pointed out; "it is often assumed that classification systems are developed to approximate some ideal diagnostic system in which the cause could be directly related to clinical condition. This is not, in fact, the case, in that no single ideal system is waiting to be discovered..." However it would be naïve as well to ignore the enormous impact of DSM categorical classification on research and clinical practise. The imposition of a universal classification system across the lifespan has necessitated certain trade-offs for child psychiatrists as outlined above.

As DSM V is gestating on the horizon, it will have solved some problems and created others. While the values of enhanced commu-

nication and operational definitions are desirable goals for all practitioners whether child or adult practitioners, child psychiatrists are called upon to treat a myriad of situations across the lifespan and need a few or possibly several frameworks to deal with both extremes of the "normal" and pathological developmental trajectories (Carrey and Ungar 2007). As new and exciting data emerge from longitudinal infant to adulthood studies or interactional gene-environment studies, a classification system to suit the needs of child psychiatrists must remain flexible as it mediates between theory, practise and research.

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