

## Overview and analysis of the behaviourist criticism of the *Diagnostic and Statistical Manual of Mental Disorders (DSM)*

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### Abstract

While a majority of cognitive behavioural researchers and clinicians adhere to the classification system provided in the *Diagnostic and Statistical Manual of Mental Disorders (DSM-IV)*, strong objections have been voiced among behaviourists who find the dichotomous allocation of patients into psychiatric diagnoses incompatible with the philosophy of behaviourism and practice of functional analysis. The aim of this paper is to give an overview of the current debate and to analyse the tension between the *DSM-IV* and functional analysis along the following contrasts: inductive versus deductive, idiographic versus nomothetic, contextualism versus mechanism, social constructions versus real entities, and dimensions versus categories. Finally, some suggested alternatives are discussed. It is concluded that there is a need for alternative systems to the *DSM* with treatment utility.

**Keywords:** *Behaviourism, DSM-IV, functional analysis, psychiatric diagnosis*

Among the most persistently debated issues in clinical psychology is the utility of psychiatric diagnoses (Nathan & Langenbucher, 1999), in particular, the *Diagnostic and Statistical Manual of Mental Disorders (DSM)* (American Psychiatric Association [APA], 1994; 2000), now in its fourth edition (Wakefield, 1997a,b). The issue has been brought up by many authors in the behaviour therapy literature (e.g., Haynes & O'Brian, 1988; Hickey, 1998). However, the field is not unified, and different standpoints have been expressed, from the view that functional analysis and the *DSM* are difficult to reconcile (Bissett & Hayes, 1999; Follette & Houts, 1996) to recommending peaceful coexistence (Hersen, 1988; Nelson & Maser, 1988; Nelson-Gray & Farmer, 1999).

In this paper we comment on some distinctions between the *DSM* and functional analysis along constructs such as inductive versus deductive, idiographic versus nomothetic, contextualism versus mechanism, social constructions versus real entities, and dimensions versus categories. Reviewing the current debate and the related empirical findings along these dimensions might bring the debate further, and shed some light on what efforts are needed to resolve the debated problems.

We use the term functional analysis instead of behaviour analysis or behavioural assessment. We do not claim that functional analysis consists of only one method or approach (Owens & Ashcroft, 1982), or is necessarily intertwined with behaviourist philosophy. Functional analysis has different connotations depending on who uses the term (Sturmey, 1996). However, in this presentation, functional analysis is characterised by understanding behaviours in terms of their functional relationships (Haynes & O'Brien, 1990) within the context in which they occur, using the classical and operant paradigms within the theoretical learning perspective. This characterisation portrays functional analysis as the identification of variables important to the client (i.e., high face validity), causal and ideally controllable, which are applicable to a specified set of target behaviours for the patient in question (Haynes & O'Brien, 1990).

### Behaviourist criticism of the *DSM* system

Hickey (1998) outlined five main points of behaviourist criticism of the *DSM*. The *DSM* is not a homogenous system and the qualitative distinctions that are implied between different diagnoses could be

better described as dimensions. Further, the diagnostic categories do not encourage exploration of factors that may explain or elucidate the maintenance of behaviour problems. Although Hickey saw a role of the *DSM* in bringing some order to the mental health field, he also found a host of problems embedded in the underlying principles of the *DSM* that are not often articulated. The first criticism was the classical behaviourist attack on mental disorders as explanations: "As explanatory concepts, however, the disorders are entirely circular" (p. 43). From a behavioural point of view, the *DSM* diagnoses are seen as reification of various concepts into entities with no real existence. An example is "pathological" gambling included in the *DSM-IV*. The extension of the medical model has resulted in inclusion of a number of areas of deviance, including problem gambling, subsuming a disease concept of "pathological" gambling, although there is no evidence that problem gambling is a disease (e.g., Dickerson, 1987; Rosecrance, 1985). Unfortunately, once a diagnostic concept such as schizophrenia or the Gulf War syndrome has come into general use, it tends to become reified (Kendell & Jablensky, 2003). The second critique was the lack of proper empirical support for many of the assumptions in the *DSM*, for example diagnostic specificity. One most recurring example is the extreme case of individuals receiving the same diagnosis, but not sharing a single diagnostic characteristic (Bissett & Hayes, 1999), and the lack of internal consistency of symptoms within the personality disorders diagnoses (e.g., Morey, 1988), although the most recent version of the *DSM* shows a slight improvement in the internal consistency of the most of the diagnoses. Admittedly, there are strong empirical validations of some of the *DSM* categories (Nathan & Langenbucher, 1999), but it is well known that the *DSM* to a large extent still is a consensus-based system. The third critique is that the concept of diagnoses fits uneasily with a behaviourist view. In this context, the pejorative "mentalism" was called upon; as Hickey wrote: "The behaviouristic perspective is scientifically more parsimonious, ethically less stigmatising, and clinically more efficacious than the mentalist approach." (p. 44). This statement is highly debatable, and many would not agree, but it is a common claim from the behaviourist community that suffering is part of the human condition and that diagnoses and mentalistic constructs can occasionally do more harm than good (Hayes, Strosahl, & Wilson, 1999). The claim regarding the superiority of behaviouristic approaches in treatment is, however, far from confirmed.

The diagnostic reliability to the *DSM* was targeted, as the fourth critique. Several of the terms used in the *DSM* are now here operationally defined (e.g.,

concepts such as "clinically significant impairment"; "depressed mood", etc.). The diagnostic labels were claimed to be imprecise. Finally, Hickey addressed the expanding field of biological psychiatry and the links between mental disorders and chemical imbalances. Typically, these studies search for biological markers for a certain disorder (e.g., panic disorder; Gorman, Kent, Sullivan, & Coplan, 2000), and the fact that pharmacological interventions can help is cited as proof for a biological explanation (or at least a neuroanatomically based one). This reasoning is flawed, argued Hickey. His counterexample was that small quantities of alcohol may help shy persons overcome social inhibition, but this does not make us believe that shyness is caused by lack of alcohol. Hickey concluded by stating that the neglect of fundamental issues of behaviour therapy is dangerous (e.g., its behaviourism). Probably the most fundamental issue of behaviour therapy in this context is its emphasis on looking for causation in the environment and in the history of the individual in contrast to causation from the inner pathology (Krasner, 1992). Incorporating the *DSM* and mentalist models poses a threat from within, and not from opponents of behaviour therapy (see also Krasner, 1992).

The behaviourist critique of the *DSM* reached a peak with a special section in the *Journal of Consulting and Clinical Psychology*, edited by Follette (1996). In that issue, Follette brought together a number of authors, all sharing behaviourist affiliation, to present a theoretically organised challenge to the *DSM*. Although the different contributors hardly can be claimed to have come up with a unified alternative to the *DSM*, and some even were rather modest in their critique and suggested functional analysis as an adjunct to the *DSM* (e.g., Scotti, Morris, McNeil, & Hawkins, 1996), the special section represents an influential and thought-provoking challenge. In their article, Follette and Houts (1996) presented the following main points of criticism of the *DSM*: (a) the decision to present the *DSM* as being atheoretical is a mistake, and slows down scientific progress; (b) the growth in numbers of diagnostic categories (e.g., with respect to mental disorders the *DSM-II* contained 147 codeable diagnostic categories, whereas the *DSM-IV* contains as many as 322) is a sign that the *DSM* is not parsimonious but is expanding in a nonproductive manner; (c) successful classification requires some level of theory and the failure to acknowledge this is limiting the usefulness of the *DSM*; (d) despite its alleged atheoretical stance, the *DSM* is still based on a medical model and in particular a biological model of aetiology; (e) it is debatable to what extent mental disorders are real and to what extent they are definitions based on negotiation and agreement; and finally,

(f) competition between different theoretical approaches (e.g., biological, cognitive, behavioural, etc.) would lead to better progress.

### *Inductive versus deductive*

There are major philosophical and practical differences between the *DSM* and functional analysis (Follette & Houts, 1996). A significant difference between functional analysis and the *DSM* is that the former can be viewed as mainly an inductive method (Bem & de Jong, 1997; Bunge & Ardila, 1987; for a discussion of Skinner's behaviourism in relation to induction see Kitchener, 1996). Bem and de Jong (1997) defined induction as the "reasoning process or argument in which an empirical conclusion (a generalisation) is inferred from empirical premises, that is observation statements" (p. 162). Obviously, functional analysis does not take place in a vacuum; preexisting knowledge guides the analysis, but conclusions are clearly derived from data (bottom-up). In parallel to the qualitative – quantitative debate with regard to research methodology (Hayes, 1997; Henwood & Pidgeon, 1992), functional analysis (and qualitative methodology) has been criticised for being unreliable, difficult to reproduce, and above all difficult to communicate (Hayes & Follette, 1992). An additional critique is that functional analysis falls prey to all the pitfalls of cognitive bias such as availability heuristics and confirmative bias (Sternberg, 1996). Consequently it has been hard to conduct research on functional analysis (Sturmey, 1996). The *DSM* is associated with an expanding amount of research, and is (fairly) easy to communicate. In other words, it is less esoteric than functional analysis.

The *DSM* can be characterised as a deductive system (top-down). In the words of Bem and de Jong (1997) deduction is "the reasoning process or argument in which a conclusion is logically drawn, or deduced, from a set of premises" (p. 158). First, we know what symptoms to look for and decisions are made according to the fit between a preexisting category (which undoubtedly is informed by at least some kind of theory) and the observed symptoms. It has been also argued that the *DSM* has become more and more empirically sound (Nathan & Langenbucher, 1999), and the defining symptoms are nowadays often behavioural (i.e., observable). However, the *DSM* is often blamed for providing little information on what to do with patients, whereas a well-conducted functional analysis often is claimed to do this (Sturmey, 1996). This issue, often referred to as "treatment utility" will be discussed later on because it is related to other dimensions such as contextualism/mechanism, and the interrelation of that dimension with the inductive/deductive contrast.

As the number of diagnostic entities continues to increase (see Wakefield, 1999a for comment), covering a wider range of psychopathology, and psychological interventions take largely the same form regardless of the problem at hand (e.g., manual-based treatments for anxiety disorders), it might seem like functional analysis provides no further information over and above that given by the diagnosis. However, it is important to remember that manual-based treatments are not only a product of the information provided by diagnoses, but also a systematic accumulation of scientific clinical practice and research based on functional analyses of a large number of patients. The empirical support found for manual-based therapies (Wilson, 1996; for a critique see Garfield, 1996) is often presented as a troubling aspect when the utility of functional analysis is compared to the current diagnostic systems such as *DSM* (Eifert, 1996). This is an unjustified criticism of functional analysis because conducting treatment from a manual does not equal ignoring idiosyncrasies of the patient (Persons & Davidson, 2001), and treatment manuals are based on accumulated knowledge from numerous functional analyses. However, the effectiveness of functional analysis as an adjunct to manual-based treatment remains to be investigated more thoroughly in empirical studies. Again, we believe that the inductive and nonspecific character of functional analysis may be at least partly responsible for its minor impact on the recent developments in cognitive behavioural therapy. Qualitative researchers often claim that their methods yield more sensitive information than do quantitative methods (Hayes, 1997; Henwood & Pidgeon, 1992). The same argument can be traced in behaviourist writings on functional analysis (Wolpe, 1977, 1986). In actual practice, however, the *DSM* is often used as a first step, and "to formulate a treatment plan, the clinician will invariably require considerable additional information about the person" (APA, 1994, p. XXV). In addition, the manual for the Structured Clinical Interview for *DSM-IV* disorders (SCID; First, Gibbon, Spitzer, & Williams, 1997) is in some respects sensitive to contextual factors and to the idiosyncrasies of the interviewed patient. However, the sensitivity to the contextual factors and the idiosyncrasies of the patient is not consistently guided by empirically supported and sound general principles such as operant conditioning that makes the information useful for treatment purposes. Both the deductive and the inductive methods have their specific strengths and weaknesses. The two methods cannot be easily integrated. However, they might be combined and be used in such a manner that they inform each other. A meaningful combination, beyond what is actually done in practice by many psychologists and unfortunately not as many

psychiatrists, would be simultaneous instead of consecutive application of the methods. *DSM* as the deductive method is often used as a first step, and the professional is supposed to require much more information to formulate a treatment plan. Many professionals go on to use inductive methods after the diagnosis. However, there is a risk for the *DSM* diagnosis to become the "true cause" of the patient's problem and the inductive methods might be at risk of being used to verify the very same diagnosis. Simultaneous use of the methods might result in a provisional diagnosis that can be informed, and modified by the inductive method, and in some cases probably abandoned, in the same way that the diagnosis might help the professional with a starting point for using the inductive method more efficiently.

#### *Idiographic versus nomothetic*

Another related distinction that can be drawn between functional analysis and the *DSM* is that the former is an idiographic system, concerned with the unique individual. Again turning to Bem and de Jong (1997), ideographic is defined as "The method leading to understanding of individual, unique events..." (p. 162). Although the term refers to conception of knowledge and what is worth knowing, it is applicable for functional analysis. For example, the research tradition in functional analytic research commonly avoids statements about groups of individuals, instead focusing on the unique person (e.g., Dowrick & Dove, 1980). In practice, functional analysis is conducted from the point of view that behaviour is governed by the rules of learning. However, verbal behaviour has until recently been difficult to understand along the traditional learning principles in a way that yields treatment utility. This might be one of the major reasons for many behaviour therapists adopting the *DSM*, and more or less mentalist models of human behaviour in their work. A recent, post-Skinnerian theory (i.e., relational frame theory; see Hayes, Barnes-Holmes, & Roche, 2001) provides a more functional and plausible account of human language and cognition on a behavioural analytic ground that might help the functional analytic approach to increase its treatment utility in the majority of cases where the problems are strongly related to rule-governed behaviours.

The *DSM* can be described as a nomothetic system (Bissett & Hayes, 1999; Scotti et al., 1996). Nomothetic is defined as the opposite of the ideographic and is the way for finding general laws (Bem & de Jong, 1997). The *DSM* and functional analysis both can be described as ideographic or nomothetic systems. The alleged "theory free" *DSM* is based on some major assumptions about mental disorders as causes, and functional analysis

is certainly not free from its focus on the laws of learning. A combination of the nomothetic and the ideographic methods are more easily done than that of inductive and deductive methods. The current state of knowledge calls for the increased use of ideographic single-subject designs in clinical research (Hayes, Barlow, & Nelson-Gray, 1999), as a very valuable complement to between-group designs, the ideographic methods should be more often used in applied clinical settings in addition to nomothetic methods. For more detailed discussion see Hayes, Barlow et al. (1999).

#### *Contextualism versus mechanism*

In an empirical analysis of the impact of four different schools of scientific psychology, behavioural psychology showed a clear decline in impact over the years starting in the 1970s (Robins, Gosling, & Craik, 1999). There are a number of key commentators who believe that this decline is hardly surprising (e.g., Pennypacker, 1992). Overall, it can be claimed that behaviourism is constantly misunderstood (Ruiz, 1995; Todd & Morris, 1992), and the treatment of behaviourism in psychology textbooks is less than flattering (e.g., Sternberg, 1996). Admittedly, there are several conceptions of what behaviourism is and is not (Baum, 1994; Staddon, 1993), but the alternative we find most interesting is the idea that behaviour analysis is contextualistic in worldview (Hayes, Hayes, & Reese, 1988; Morris, 1988). Contextualism, based on the writings of the philosopher S. C. Pepper, is described by Hayes and Follette (1992): "Contextualistic behaviourists (e.g., interbehaviourists, contemporary behaviourists) take the view that what is of interest is the dynamic interaction between an organism and a context. This interaction is viewed as a totality. The interactive whole is primary and the parts are arbitrarily derived. They thus view analysis as an act of verbal construction, conducted for pragmatic purposes" (p. 346).

What follows from this perspective is that the truth criterion of contextualism is successful working (Hayes et al., 1988), which is a matter of contacting verbally specified consequences that are explicit, stated, specific, a priori goals (Hayes, 1993). This we would say is ultimately the criterion used for determining if functional analysis is correct or not: it must lead to the a priori defined goals! Of course, some basic notions of the underlying mechanisms behind suffering are helpful, and indeed some suggestions have been put forward (Hayes, Wilson, Strosahl, Gifford, & Follette, 1996; Friman, Hayes, & Wilson, 1998).

The contrast to contextualism, mechanism, ironically often injected as a basic problem with behaviourism (Chiesa, 1998), is more in line with a

dualistic medical model that separates the individual from his/her environment. Needless to say, the *DSM* is more of a mechanistic than a contextualistic system. As an example, the *DSM* often underlines the importance of stability of traits over situations and time (APA, 1994), disregarding the importance of the context. However, it has been argued that the *DSM* does leave some room for some contextualism, or individualisation, and the so called V codes is one example (APA, 1994). Although the V codes are structural and not functional, they can be used for a more contextualistic understanding of the patient's problem, as well as the possibility of multiple diagnoses (in itself a problem), making each diagnosed case potentially unique. However, creating a contextualistic understanding of the clients' problems is not inherent in the *DSM*, and the mere possibility of using the information for such an understanding does not lead to treatment utility. Furthermore, the mechanistic and deductive features of the *DSM* are in strong opposition to the contextualistic and inductive nature of functional analysis. The truth criterion of mechanism virtually demands deductive methods, while the truth criterion of contextualism is successful working, which by virtue of its definition necessitates an inductive and idiographic approach. Consequently, even if the *DSM* does not exclude the possibilities for creating a contextualistic understanding of the individual patient's problems, it will not result in such an outcome, because its truth criterion is tested by applying models to new phenomenon (i.e., deduction). Thus, a combination of the approaches, with stronger emphasis on the contextual one, might provide the best of the two worlds if the aim is to both understand, predict and to help the individual patient to change his/her behaviour for achieving higher quality of life.

#### *Social constructions versus real entities*

One strand of criticism in the literature directed against syndromal classification is that a person acquires labels when the *DSM* is applied (Haynes & O'Brien, 1988). Obviously, a psychiatric diagnosis can have unwanted behavioural, interpersonal, and legal consequences. However, clinicians can attest to the opposite when clients feel relieved and understood when finally getting the "right" diagnosis. Commonly, a diagnosis is the only way to get access to treatment, which sometimes forces psychiatrists to search the *DSM* for a diagnosis. There is much to be said on this topic, so we restrict the discussion to when a diagnosis can be beneficial or harmful. Diagnoses describing clearly harmful conditions that have empirical support and do not touch on the borders of normality (Wakefield, 1992) are often

useful. One example would be schizophrenia and anorexia, which are both life threatening, but admittedly both anxiety disorders and mood disorders can indeed be harmful too. Other diagnoses such as milder forms of personality disorders and generalised anxiety disorder are less clear in this respect (a fact acknowledged even by one of the leading researchers behind the *DSM*; Spitzer & Wakefield, 1999). When the *DSM* takes a step into the normal curve of "psychological traits" and starts to diagnose just everyone, then the risk of labelling or constructing entities that do not exist increases. Bentall (2003) gives an extensive list of examples where the *DSM* might fail, and even such a phenomenon as hallucinations has been found to be very common among ordinary people (up to 40% in some studies reviewed by Bentall). Mood swings and anxiety are two other examples that are far too common to be referred to as psychiatric states in all cases and circumstances.

There is a long history of questioning the reality of psychiatric diagnoses, for example, in the work by psychiatrist Thomas Szasz (see Dammann 1997 for a review) and philosopher Michael Foucault (Foucault, 1967). Common in many of these texts is the notion that diagnoses can be seen as social constructions (Sass, 1999). Social constructionism is a movement in psychology and sociology that views the products of science as social artefacts, the idea being that all knowledge is conveyed by language and communication (Gergen, 1985). Interestingly, there are some similarities with radical behaviourism (Guerin, 1992), but there are also substantial differences (Zuriff, 1998), perhaps the most important being the positivist affiliation of behaviourists (Stenner & Eccleston, 1994). Social constructionists emphasise the role of cultural and historical factors and also pinpoint the situated character of our present day knowledge on psychiatric diagnoses: "As soon as new concepts are described, experts then 'discover' cases of it in the past in case descriptions of famous political, literary and religious figures. Such an approach betrays an essentialist and a contextual view of history. It ignores the existence of discontinuities in history and the fact that words may have different meanings in different historical contexts.... Depression, for example, is not the same as melancholia was" (Parker, Georgaca, Harper, McLaughlin, & Stowell-Smith, 1995, p. 58; for a critique see Andersson, 1997).

Given the similarities between social constructivism and behaviourism, including radical behaviourism and behaviour analysis, the distinction between the behaviourist approach and the *DSM* becomes more apparent. There are several examples in the literature of deconstructions of psychiatric labels (Parker et al., 1995; Wiener & Marcus, 1994). For example,

Hallam (1983, 1994) has targeted the anxiety disorders and in particular the concept of agoraphobia. His conclusion is telling and we assume consistent with the behaviourist standpoint: "It is therefore suggested that psychiatric 'disorders' should be treated as objects of study and not as independent variables determining the subject of study" (Hallam, 1983, p. 339).

In this context, the question of psychiatric labels as real entities needs to be discussed. If psychiatric diagnoses are only formed by agreement and "...what makes behaviour abnormal is a social judgment first and foremost" (Houts & Follette, 1998, p. 854), then one interpretation of the *DSM* is that it includes trivial distinctions between what people regard as inappropriate behaviour for the time being. Once again, the interconnections between the dimensions discussed so far become obvious. A social constructivism approach goes along with an inductive, idiographic, and contextual view, while viewing psychiatric disorders as real entities follows from a mechanistic, nomothetic and deductive approach.

#### *Dimensions versus categories*

The *DSM* is a categorical taxonomic system, and it is unlikely that institutionalised psychiatry could afford losing this classification scheme (Carson, 1996). However, in contrast to the behavioural critique that has mostly been confined to psychology journals, the idea that psychopathology is better seen as dimensional rather than as categorical has been extensively debated within both psychiatry and psychology (Widiger & Sankis, 2000). The question was of much concern when the *DSM-IV* was prepared, and recent research and writings on the subject, including genetics, have indeed indicated that susceptibility to disorder can be heritable whereas actual disease expression need not follow. Moreover, personality disorders have been claimed not to be qualitatively distinct from normal personality functioning and have been conceptualised as extreme variants of common personality traits (Widiger & Sankis, 2000). For example, the Eysenck (1986) alternative to syndromal classification was based on his personality theory, and he suggested that assessment of extraversion, neuroticism, and psychoticism could be used instead of categorical classification. Evidently, these personality factors are continuous in nature, and for Eysenck mental illness was seen as a deviation along one or more of his personality dimensions. Eysenck argued that the classification system of the *DSM* was based on the fallacy of inferring categorical differences between groups. The problem lies in assuming that the categories of the *DSM* correspond to natural boundaries, when no

such boundaries are to be found. Here again we see the interconnections between the discussed dimensions. Categorising disorders is a result of or at least strongly related to a mechanistic, deductive approach considering disorders as real entities. The Eysenck system, on the other hand, is more related to the underlying essences of disorder rather than the more apparent clinical manifestations. It might be argued that these two systems need not be incompatible; for example, a continuous personality factor can predispose to categorically defined condition. However, such a statement necessitates ignoring the underlying philosophies of these systems. As Eysenck saw it, the categorical system of the *DSM* and his dimensional model were incompatible. Wakefield (1997b) summarised Eysenck's contribution and concluded: "*DSM* is intended to be a manual of mental disorder, not a theory of predispositions to disorder. If the above analysis of Eysenck's misdiagnosis of *DSM* is correct, then, far from *DSM* committing the 'categorical fallacy' of which it is accused by Eysenck, in which mental disorders are mistakenly assimilated to physical disorder, it is Eysenck himself who is committing a fallacy, namely, the 'essentialist fallacy'. That is, Eysenck mistakenly assimilates the concept of disorder to purely theoretical, essentialist concepts that do not have the practical, evaluative component of 'disorder', as delineated by the harmful dysfunction" (p. 664). From a strict behavioural point of view, Eysenck's dimensional model lacks the functional, contextualistic qualities that add treatment utility to a classification system, and there is also a strong tendency to regard these dimensions as real entities. However, if such a dimensional model can be related to environmental factors (i.e., if the behaviours along these dimensions are seen as acts in and controlled by a context) then it theoretically might be a useful approach for classification and for guiding the treatment.

Somewhat surprisingly, little has been written on the problem of studying syndromes versus studying symptoms (Costello, 1992). The latter should be a necessary prerequisite for the study of dimensionality. However, it is not difficult to see how immensely complicated a system would be if each patient were assigned a score on several dimensions, and the net result of the diagnosis would be a highly unique constellation. It is unlikely that just three or even five dimensions would suffice, and the problem of selecting the appropriate target behaviour would be difficult. As with categorical classification, a diagnosis of say major depression may be related to widely different contexts for two individuals, and the same problem of nonfunctional classification would also concern dimensional scoring of symptoms. In addition, again looking at how the *DSM* is actually

used, there is plenty of room for dimensionality in severity grading, comorbid diagnoses, and qualifiers. The APA is sponsoring a series of international conferences to set a research agenda for the development of the next edition of the diagnostic manual (Widiger, Simonsen, Krueger, Livesley, & Verheul, 2005). The first conference in this series was devoted to reviewing the existing research and setting a future research agenda that would be most effective in leading the field toward a dimensional classification of personality disorder. Thus, it should be acknowledged that the *DSM* is moving towards having a dimensional classification system of personality disorders in the *DSM-V*, which is a very positive development in the right direction.

### Is there a behaviourist alternative?

Several proposals have been made regarding alternatives to the *DSM*, but the impact of this endeavour has been rather poor, given the dominance of the *DSM* in spite of the lack of treatment utility. Hayes and Follette (1992) proposed a system of functional diagnostic categories (e.g., emotional avoidance) that they suggested could be a middle alternative between purely functional and topographical (like the *DSM*) systems. In addition, they also suggested that expert systems could be used that would be feasible to resolve diagnostic dilemmas and to derive coherent decision rules when conducting functional analyses. Finally, they also saw a role for what they called "logical functional analytic systems" in which the functional analysis components are specified beforehand in the form of a decision tree.

Koerner, Kohlenberg, and Parker (1996) argued that in order for a classification system to be valid, it should be able to enhance the clinician's influence on the process associated with client change. In other words, a diagnosis should say something not only about which treatment to use, but also how the treatment should be implemented. Functional analysis has failed to progress as a system of case formulation, classification and treatment guidance primarily because of lack of replicability and unclear rules about how it should be conducted (Bissett & Hayes, 1999).

Despite this, the recommendation to focus on individual case formulation by means of functional analysis is probably axiomatic for the majority of the behaviourally oriented clinicians (Wilson, 1996). In a sophisticated reexamination of the uncritical acceptance of individual case formulation, Wilson (1996) discussed several important issues that relate to the weak empirical status of functional analysis. Most important among these issues is the validity of clinical judgment (i.e., selecting appropriate target behaviour or technique

that comes from the clinician's earlier social learning experiences and not so much from empirical knowledge). A large number of studies have shown that the experienced clinicians are no less immune to cognitive biases in drawing inferences about behaviour and that they find relationships between variables based on their prior expectations instead of what relationships actually exist (Wilson, 1996).

There is little evidence to suggest that manual-based therapy is worse than individualised treatment. After reviewing available empirical studies, Chambless and Ollendick (2001) concluded: "For now, the data do not support the assertion that manualised treatments will be detrimental to clients".

In a thorough review of the literature, Haynes, Leisen, and Blaine (1997) concluded that the incremental treatment utility for individualised formulation has been convincingly demonstrated for self-injurious behaviours, but not for other behavioural problems. Establishing empirical support for the treatment utility of functional analysis would be one of the steps needed for its progress as a system of classification and treatment guidance. Functional analysis was abandoned by some behaviour therapists because of the difficulties in understanding and effectively treating patients whose problems were strongly related to verbal behaviour, using the same principles that could explain nonverbal behaviour. Recent developments within behaviour analysis, especially the recent progress regarding verbal behaviour (i.e., relational frame theory; see Hayes et al., 2001) in combination with the proposals that might make functional analysis more replicable and user friendly (e.g., logical functional analysis) might lead to a promising era for functional analysis to progress as a system for classification with treatment utility.

The results of one of the most sophisticated studies evaluating the efficacy of individualised versus standardised treatment (Schulte, Kunzel, Pepping, & Schulte-Bahrenberg, 1992) showed that the standardised treatment was significantly superior to the individualised treatment. The individualised condition comprised two groups, one in which the therapists were free to select whatever cognitive or behavioural techniques they assumed were optimal for each client, and a yoked control group in which each patient received the therapy tailored to a patient in the individualised therapy condition. There were no differences between the individualised and yoked treatment condition, either at posttreatment or at the 2-year follow-up. More interesting, the subgroup of patients in the individualised condition who received in vivo exposure achieved results comparable to that of standardised treatment. Wilson (1996) argued that these findings indicate the importance of the

consistent use of standardised, empirically validated techniques, not individualised case formulation. However, adequate use of empirically validated techniques requires some form of functional analysis, otherwise there will be a great risk of building a technological approach that maintains the illusion that complex clinical problems can be treated easily and quickly (Malesta, 1995). Furthermore, the study by Schulte et al. (1992) was an isolated study, and the kind of functional analysis employed was not informed by the recent developments concerning verbal behaviour. Most clinicians and researchers are well acquainted with cases in which empirically validated techniques initially succeed only to be followed by a complete relapse. As suggested by Woolfolk (1992, p. 221), we cannot be certain that the nomothetic experimental findings based on aggregated data will apply to the specific idiographic situation with which we are confronted. A thorough functional assessment can elucidate what factors are maintaining the problem behaviours, and gives the clinician the necessary knowledge for employing treatment strategies and techniques adequately.

An alternative to functional analysis is the cognitive behavioural case formulation suggested by Persons and Tompkins (1997). Although a functional analytic approach to case conceptualisation treats psychopathological behaviours as serving a function and controlled by contingencies in the environment, the cognitive behavioural case formulation applies a structural view of psychopathology based on Beck's model, which views psychopathological symptoms as caused by underlying schemata (Persons & Davidson, 2001).

Persons and Davidson (2001) suggested that standardised protocols and individualised-formulation-driven treatments are complementary, not conflicting. Because little empirical evidence supports the utility of developing a formal case conceptualisation to guide treatment, these authors suggest that clinicians adopt an empirically validated formulation as an initial working hypothesis to reduce the risks of therapeutic work based on an individualised formulation, and to strengthen its empirical foundation. It is worth mentioning that psychiatric diagnosis according to the *DSM* is included in a cognitive behavioural case formulation for several reasons. Among others, it can lead to some initial formulation hypotheses. The evidence-based therapist will want to rely on results of randomised trials, and such trials are generally organised around diagnoses. In a similar way, some behaviour analysts suggest (e.g., Wulfert, Greenway, & Dougher, 1996) that it might be prudent to, currently, view the *DSM* system and functional analytic approach as potentially complementary and to examine how both could inform each other.

Because heterogeneous diagnostic classes are the norm rather than the exception, a functional approach can make significant contributions to the current *DSM* system, especially if functional clusters of behaviours can be identified within existing structural classes. In contrast, other researchers such as Krasner (1992) regard efforts to integrate functional analysis and syndromal classification as a weakening of the behavioural movement's commitment to a nonmentalistic model.

Follette, Naugle, and Linnerooth (1999) argued that functional analysis is necessary in some clinical situations and unnecessary in others. For example, treatment of some well-known restricted problems such as specific phobia might not benefit much from a functional analysis, whereas more complicated cases might. This view is in line with other suggestions from other proponents of functional analysis such as Haynes (2002). However, beyond opinions, the treatment utility of functional analysis remains an empirical question. More research is definitely needed.

## Discussion

The later versions of the *DSM* (from *DSM-III-R* and later) were designed to be atheoretical, to be acceptable to clinicians and researchers of many theoretical persuasions. Instead of various theoretical principles, the concept of mental disorder itself in the *DSM* is thought to provide the direct and exclusive intellectual justification for deciding what is a disorder (Wakefield, 1992). Wakefield (1992) has raised serious criticism concerning the conceptual validity of the *DSM* when it comes to discriminating disorder from nondisorder. Two fundamental principles guide the *DSM's* definition of mental disorder. The first is that a disorder is a condition that has negative consequences for the person and the second is that a disorder is a dysfunction, defined as failure of a mechanism to perform a naturally selected function (Wakefield, 2001). Consequently, these two principles can be incorporated into a conceptually valid definition of disorders as "harmful dysfunction" according to Wakefield (1992). However, there are many statistically deviant conditions that cause distress and other harms, but that are not dysfunctions. The V codes in the *DSM* provide a good illustration of instances where the *DSM* correctly goes against its own definition of mental disorder, while in other cases (e.g., adjustment disorder) any reaction to a stressor that is above the mean in intensity is classified as a disorder. This is incorrect because it fails to distinguish disorder from normal variation (Wakefield, 1992; Wakefield, Pottick, & Kirk, 2002). The inclusion of V codes in the *DSM* and the problems with the definition of mental



disorder illustrate the need for a system that can take the normal variation into account and at the same time provide clear guidelines for when and how to intervene. The *DSM* system has failed as much in providing such guidelines, as the functional analysis in providing a functional classification system. In some places, the *DSM* diagnosis has already become a thing in itself, the main goal of clinical practice (Tucker, 1998). The patient's history and context might be lost in this process. As Tucker (1998) suggested, the time has come to merge the empirical psychiatry of *DSM-IV* with the story and actual observation of the patient, which we assume is much closer to what clinical psychologists and other clinicians actually do in their clinical practice (Persons & Davidson, 2001). The circular nature of mental disorders (e.g., Goodman & Poillion, 1992), as diagnosed by *DSM*, and the lack of a contextualistic view that helps to identify the factors maintaining mental disorders discourage further inquiry and might act as a barrier to genuine understanding and effective treatment.

In sum, it is concluded that the *DSM-IV* and the practice of functional analysis need not be incompatible in clinical practice, whereas the philosophy behind them can be construed as radically different. If the goals of the classification systems such as the *DSM* and methods such as functional analysis or cognitive behavioural case formulation that are strongly connected to the intervention are not mixed, then there is no need for the behaviourist movement to come up with some competing alternative to the *DSM*.

If the choice of assessment method is based on the treatment utility of the assessment, then the *DSM* should be abandoned because it provides very little information regarding how the treatment should be conducted (Eifert, 1996). Manual-based treatments are not developed as a result of the information given by a diagnosis per se (e.g., panic disorder or eating disorders). They are the result of accumulated clinical experiences and research guided by a functional approach. Yet the growing number of diagnoses and treatment manuals presents an untenable situation for clinicians. Considering the fact that psychological interventions take largely the same form regardless of the diagnoses within certain areas (e.g., anxiety disorders), it is understandable that unified treatment protocols/manuals are called for by researchers and clinicians. If the medical model is to be followed (i.e., the diagnoses provide both a way of classification and guidance for treatment), then there is a need for an alternative system to the *DSM* that possesses treatment utility. Although such a system covering both the classification and treatment utility aspect for psychiatric problems is not currently available, the alternative approaches (e.g., functional

diagnostic categories and expert system: see Hayes & Follette, 1992) seem to have the potential to become a useful alternative. Expert system or logical algorithm approach (Hayes & Follette, 1992) would allow for a systematisation of the analytical process, which is the basis for the development of functional diagnostic categories (Bissett & Hayes, 1999). Such categories would naturally emerge from the repetition of individual functional analyses, all conducted in accordance with a standard analytic process (Bissett & Hayes, 1999). Bissett and Hayes provide several examples of potential categories including disruptive behaviour (such as inappropriate requests for attention or assistance), self-injurious behaviour (such as attention-getting, escape-maintained, tangibly maintained, and sensory-maintained behaviours), emotional avoidance, and disordered rule-following (for references on each category see Bissett & Hayes, 1999). The *DSM* system is a helpful parallel to these other approaches as long as it is used for relevant issues (e.g., reimbursement and organising clinical research) until these functions are handled by a new systems or possible further developments within the *DSM* system (movement toward dimensional diagnoses, as it seems to be forthcoming, and incorporating the context of the individual instead of major focus on internal variables and symptoms, more ideographic approach, etc). As is the case within most areas of science, more research is needed to investigate the utility and workability of these alternative systems.

## References

- American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington, DC: American Psychiatric Press.
- American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders – text revision* (4th ed.). Washington, DC: American Psychiatric Press.
- Andersson, G. (1997). Review of the book “Deconstructing psychopathology”. *Clinical Psychology and Psychotherapy*, 4, 214–215.
- Baum, W. M. (1994). *Understanding behaviorism*. New York: HarperCollins College Publishers.
- Bem, S., & De Jong, H. L. (1997). *Theoretical issues in psychology*. London: Sage.
- Bentall, R. P. (2003). *Madness explained. Psychosis and human nature*. London: Penguin.
- Bissett, R. T., & Hayes, S. C. (1999). The likely success of functional analysis tied to the DSM. *Behaviour Research and Therapy*, 37, 379–383.
- Bunge, M., & Ardila, R. (1987). *Philosophy of psychology*. New York: Springer Verlag.
- Carson, R. C. (1996). Aristotle, Galileo, and the DSM taxonomy: The case of schizophrenia. *Journal of Consulting and Clinical Psychology*, 64, 1133–1139.
- Chambless, D. L., & Ollendick, T. H. (2001). Empirically supported psychological interventions: Controversies and evidence. *Annual Review of Psychology*, 52, 685–716.

- Chiesa, M. (1998). Beyond mechanisms and dualism: Rethinking the scientific foundations of psychology. *British Journal of Psychology*, 89, 353–370.
- Costello, C. G. (1992). Research on symptoms versus research on syndromes. Arguments in favour of allocating more research time to the study of symptoms. *British Journal of Psychiatry*, 160, 304–408.
- Dammann, E. J. (1997). "The myth of mental illness": Continuing controversies and their implications for mental health professionals. *Clinical Psychology Review*, 17, 733–756.
- Dickerson, M. (1987). The future of gambling research: Learning from the lessons of alcoholism. *The Journal of Gambling Behavior*, 3, 248–256.
- Dowrick, P. W., & Dove, C. (1980). The use of self-modeling to improve the swimming performance of spina bifida children. *Journal of Applied Behavior Analysis*, 13, 51–56.
- Eiefert, G. H. (1996). More theory-driven and less diagnosed-based behavior therapy. *Journal of Behavior Therapy and Experimental Psychiatry*, 27, 75–86.
- Eysenck, H. J. (1986). A critique of the contemporary classification and diagnosis. In T. Millon, & G. L. Klerman (Eds.), *Contemporary directions in psychopathology* (pp. 73–98). New York: Guilford Press.
- First, M. B., Gibbon, M., Spitzer, R. L., & Williams, J. B. W. (1997). *Structured clinical interview for DSM-IV Axis I Disorders (SCID-I)*. Washington, DC: American Psychiatric Press.
- Follette, W. C. (1996). Introduction to the special section on the development of theoretically coherent alternatives to the DSM system. *Journal of Consulting and Clinical Psychology*, 64, 1117–1119.
- Follette, W. C., & Houts, A. C. (1996). Models of scientific progress and the role of theory in taxonomy development: A case study of the DSM. *Journal of Consulting and Clinical Psychology*, 64, 1120–1132.
- Follette, W. C., Naugle, A. E., & Linnerooth, P. J. N. (1999). Functional alternatives to traditional assessment and diagnosis. In M. J. Dougher (Ed.), *Clinical behavior analysis* (pp. 99–125). Reno: Context Press.
- Foucault, M. (1967). *Madness and civilization. A history of insanity in the age of reason*. London: Routledge.
- Friman, P. C., Hayes, S. C., & Wilson, K. G. (1998). Why behavior analysts should study emotion: The example of anxiety. *Journal of Applied Behavior Analysis*, 31, 137–156.
- Garfield, S. L. (1996). Some problems with "validated" forms of psychotherapy. *Clinical Psychology: Science and Practice*, 3, 218–229.
- Gergen, K. J. (1985). The social constructionist movement in modern psychology. *American Psychologist*, 40, 266–275.
- Guerin, B. (1992). Behavior analysis and the social construction of knowledge. *American Psychologist*, 47, 1423–1432.
- Goodman, G., & Poillion, M. J. (1992). ADD: Acronym for any dysfunction or difficulty. *The Journal of Special Education*, 26, 37–56.
- Gorman, J. M., Kent, J. M., Sullivan, G. M., & Coplan, J. D. (2000). Neuroanatomical hypothesis of panic disorder, revised. *American Journal of Psychiatry*, 157, 493–505.
- Hallam, R. S. (1983). Agoraphobia: Deconstructing a clinical syndrome. *Bulletin of the British Psychological Society*, 36, 337–340.
- Hallam, R. S. (1994). Some constructionist observations on "anxiety" and its history. In T. R. Sarbin, & J. I. Kitsuse (Eds.), *Constructing the social* (pp. 139–156). London: Sage.
- Hayes, N. (1997). Qualitative research and research in psychology. In N. Hayes (Ed.), *Doing qualitative analysis in psychology* (pp. 1–8). Hove: Psychology Press.
- Hayes, S. C. (1993). Analytic goals and the varieties of scientific contextualism. In S. C. Hayes, L. J. Hayes, H. W. Reese, & T. R. Sarbin (Eds.), *Varieties of scientific contextualism* (pp. 11–27). Reno, NV: Context Press.
- Hayes, S. C., Barlow, D. H., & Nelson-Gray, R. O. (1999). *The scientist practitioner: Research and accountability in the age of managed care* (2nd ed.). Boston: Allyn & Bacon.
- Hayes, S. C., Barnes-Holmes, D., & Roche, B. (Eds.). (2001). *Relational frame theory*. New York: Kluwer.
- Hayes, S. C., & Follette, W. C. (1992). Can functional analysis provide a substitute for syndromal classification? *Behavioral Assessment*, 14, 345–365.
- Hayes, S. C., Hayes, L. J., & Reese, H. W. (1988). Finding the philosophical core: A review of Stephen C. Pepper's World hypothesis: A study in evidence. *Journal of the Experimental Analysis of Behavior*, 50, 97–111.
- Hayes, S. C., Strosahl, K. D., & Wilson, K. G. (1999). *Acceptance and commitment therapy*. New York: Guilford Press.
- Hayes, S. C., Wilson, K. G., Strosahl, K., Gifford, E. V., & Follette, V. M. (1996). Experiential avoidance and behavioral disorders: A functional dimensional approach to diagnosis and treatment. *Journal of Consulting and Clinical Psychology*, 64, 1152–1168.
- Haynes, S. N. (2002, 13–17 November). *Next-step behavioral assessment strategies with treatment nonresponders*. Panel discussion at the 36th annual Convention of the Association for Advancement of Behavior Therapy, Reno, NV.
- Haynes, S. N., Leisen, M. B., & Blaine, D. D. (1997). Design of individualized behavioral treatment programs using functional analytic clinical case models. *Psychological Assessment*, 9, 334–348.
- Haynes, S. N., & O'Brien, W. H. (1988). The Gordian knot of DSM-III-R use: Integrating principles of behavior classification and complex causal models. *Behavioral Assessment*, 10, 95–105.
- Haynes, S. N., & O'Brien, W. H. (1990). Functional analysis in behavior therapy. *Clinical Psychology Review*, 10, 649–668.
- Henwood, K. L., & Pidgeon, N. F. (1992). Qualitative research and psychological theorizing. *British Journal of Psychology*, 83, 97–111.
- Hersen, M. (1988). Behavioral assessment and psychiatric diagnosis. *Behavioral Assessment*, 10, 107–121.
- Hickey, P. (1998). DSM and behavior therapy. *The Behavior Therapist*, 21, 43–46.
- Houts, A. C., & Follette, W. C. (1998). Mentalism, mechanisms, and medical analogues: Reply to Wakefield (1998). *Journal of Consulting and Clinical Psychology*, 66, 853–855.
- Kendell, R., & Jablensky, A. (2003). Distinguishing between the validity and utility of psychiatric diagnoses. *American Journal of Psychiatry*, 160, 4–12.
- Kitchener, R. F. (1996). Skinner's theory of theories. In W. O'Donohue, & R. F. Kitchener (Eds.), *The philosophy of psychology* (pp. 108–125). London: Sage.
- Koerner, K., Kohlenberg, R. J., & Parker, C. R. (1996). Diagnosis of personality disorder: a radical behavioral alternative. *Journal of Consulting and Clinical Psychology*, 64, 1169–1176.
- Krasner, L. (1992). The concepts of syndrome and functional analysis: Compatible or incompatible? *Behavioral Assessment*, 14, 307–321.
- Malesta, V. J. (1995). Technological behavior therapy for obsessive compulsive disorder: The need for adequate case formulation. *The Behavior Therapist*, 5, 88–89.
- Morey, L. C. (1988). Personality disorders in DSM-III and DSM-III-R: Convergence, coverage, and internal consistency. *American Journal of Psychiatry*, 145, 573–577.
- Morris, E. K. (1988). Contextualism: The world view of behavior analysis. *Journal of Experimental Child Psychology*, 46, 289–323.
- Nathan, P. E., & Langenbucher, J. W. (1999). Psychopathology: Description and classification. *Annual Review of Psychology*, 50, 79–107.
- Nelson-Gray, R. O., & Farmer, R. F. (1999). Behavioral assessment of personality disorders. *Behaviour Research and Therapy*, 37, 347–368.

- Nelson, R. O., & Maser, J. D. (1988). The DSM and depression: Potential contributions of behavioral assessment. *Behavioral Assessment*, 10, 45–65.
- Owens, R. G., & Ashcroft, J. B. (1982). Functional analysis in applied psychology. *British Journal of Clinical Psychology*, 21, 181–189.
- Parker, I., Georgaca, E., Harper, D., McLaughlin, T., & Stowell-Smith, M. (1995). *Deconstructing psychopathology*. London: Sage.
- Pennypacker, H. S. (1992). Is behavior analysis undergoing selection by consequences. *American Psychologist*, 47, 1491–1498.
- Persons, J. B., & Davidson, J. (2001). Cognitive-behavioral case formulation. In K. S. Dobson (Ed.), *Handbook of cognitive-behavioral therapies* (pp. 86–110). New York: Guilford Press.
- Persons, J. B., & Tompkins, M. A. (1997). Cognitive-behavioral case formulation. In T. D. Eells (Ed.), *Handbook of psychotherapy case formulation* (pp. 314–339). New York: Guilford Press.
- Robins, R. W., Gosling, S. D., & Craik, K. H. (1999). An empirical analysis of trends in psychology. *American Psychologist*, 54, 117–128.
- Rosecrance, J. (1985). Compulsive gambling and the medicalization of deviance. *Social Problems*, 32, 275–284.
- Ruiz, M. R. (1995). B. F. Skinner's radical behaviorism. Historical misconstructions and grounds for feminist reconstructions. *Psychology of Women Quarterly*, 19, 161–179.
- Sass, L. A. (1999). Analyzing and deconstructing psychopathology. *Theory and Psychology*, 9, 257–268.
- Schulte, D., Kunzel, R., Pepping, G., & Schulte-Bahrenberg, T. (1992). Tailor-made versus standardized therapy of phobic patients. *Advances in Behaviour Research and Therapy*, 14, 67–92.
- Scotti, J. R., Morris, T. L., McNeil, C. B., & Hawkins, R. P. (1996). DSM-IV and disorders of childhood and adolescence: Can structural criteria be functional? *Journal of Consulting and Clinical Psychology*, 64, 1177–1191.
- Spitzer, R. L., & Wakefield, J. C. (1999). DSM-IV diagnostic criteria for clinical significance: Does it help solve the false positives problem? *American Journal of Psychiatry*, 156, 1856–1864.
- Staddon, J. (1993). *Behaviorism: Mind, mechanisms and society*. London: Duckworth.
- Stenner, P., & Eccleston, C. (1994). On the textuality of being. Towards an invigorated social constructionism. *Theory and Psychology*, 4, 85–103.
- Sternberg, R. J. (1996). *Cognitive psychology*. Forth Worth: Harcourt Brace College Publishers.
- Sturmey, P. (1996). *Functional analysis in clinical psychology*. Chichester: John Wiley & Sons.
- Todd, J. T., & Morris, E. K. (1992). Case histories in the great power of misrepresentations. *American Psychologist*, 47, 1441–1443.
- Tucker, G. J. (1998). Putting DSM in perspective. *American Journal of Psychiatry*, 155, 159–161.
- Wakefield, J. C. (1992). Disorder as harmful dysfunction: A conceptual critique of DSM-III-R's definition of mental disorder. *Psychological Review*, 99, 232–247.
- Wakefield, J. C. (1997a). Diagnosing DSM-IV- part I: DSM-IV and the concept of disorder. *Behaviour Research and Therapy*, 35, 633–649.
- Wakefield, J. C. (1997b). Diagnosing DSM-IV- part II: Eysenck (1986) and the essentialist fallacy. *Behaviour Research and Therapy*, 35, 651–665.
- Wakefield, J. C. (1999a). Philosophy of science and the progressiveness of the DSM's theory-neutral nosology: Response to Follette and Houts, part 1. *Behaviour Research and Therapy*, 37, 963–999.
- Wakefield, J. C. (2001). Dysfunction as a factual component of disorder. *Behaviour Research and Therapy*, 39, 1099–1132.
- Wakefield, J. C., Pottick, K. J., & Kirk, S. A. (2002). Should the DSM-IV diagnostic criteria for conduct disorder consider social context? *American Journal of Psychiatry*, 159, 380–386.
- Widiger, T. A., & Sankis, L. M. (2000). Adult psychopathology: Issues and controversies. *Annual Review of Psychology*, 51, 377–404.
- Widiger, T. A., Simonsen, E., Krueger, R., Livesley, W. J., & Verheul, R. (2005). Personality disorder research agenda for the DSM-V. *Journal of Personal Disorders*, 19, 315–338.
- Wiener, M., & Marcus, D. (1994). A sociocultural construction of “depressions”. In T. R. Sarbin, & J. I. Kitsuse (Eds.), *Constructing the social* (pp. 213–231). London: Sage.
- Wilson, G. T. (1996). Manual-based treatments: The clinical application of research findings. *Behaviour Research and Therapy*, 34, 295–314.
- Wolpe, J. (1977). Inadequate behavior analysis: The Achilles heel of outcome research in behavior therapy. *Journal of Behavior Therapy and Experimental Psychiatry*, 8, 1–3.
- Wolpe, J. (1986). Individualization: The categorical imperative of behavior therapy practice. *Journal of Behavior Therapy and Experimental Psychiatry*, 17, 145–153.
- Wollfolk, R. L. (1992). Hermeneutics, social constructivism and other items of intellectual fashion: Intimations for clinical science. *Behavior Therapy*, 23, 213–223.
- Wulfert, E., Greenway, D. E., & Dougher, M. J. (1996). A logical functional analysis of reinforcement-based disorders: Alcoholism and pedophilia. *Journal of Consulting and Clinical Psychology*, 64, 1140–1151.
- Zuriff, G. (1998). Against metaphysical social constructionism in psychology. *Behavior and Philosophy*, 26, 5–28.