
Book Reviews

The Autistic Syndromes. *Mary Coleman* (Editor). Amsterdam, North-Holland Publishing Company, 1976, 334 pp. Index. \$33.50.

This excellent monograph describes in considerable detail a series of clinical and laboratory studies on a cohort of 78 autistic and 78 normal children. As such it clearly constitutes a unique contribution to our knowledge of this tragic and distressing condition, and Dr. Coleman is to be congratulated on the industry, dedication and understanding she has brought to her task as principal investigator and editor.

Both in the selection of material and in her introductory comments Dr. Coleman adopts a broad and eclectic approach. Thus the book starts from the premise that autism is not a disease entity but, in the words of the editor, "a constellation of symptoms, i.e., a syndrome, one of the limited patterns the infant central nervous system has in reaction to injury or genetic misinformation." Despite this wide concept the 78 autistic children comprising the study were selected on the basis of well-defined diagnostic criteria: besides early age of onset and Kanner's "profound inability to relate to others," language problems, ritualistic behavior, stereotypy, and perceptual anomalies were required. With regard to etiology the bias is clearly towards organic factors, but in discussing the nature-nurture question the editor wisely takes a balanced view, recognizing that "even in patients with unequivocal organic etiologies of central nervous system disease, data is now available that demonstrates an environmental effect on the patients' biochemistry, particularly metabolic systems at risk in that particular patient."

Beyond Dr. Coleman's introductory essay and a chapter devoted to descriptive (demographic, historical, etc.) data on the patient and control populations, the book is divided into two sections of six chapters each on laboratory and clinical studies. There are also four chapters in a section inappropriately entitled "The Classical Autistic Syndrome" (which deals in fact with subgroups of the population exhibiting distinct symptoms), six appendices giving profiles of all the patients together with details of diets, codes, and questionnaires, and a very valuable correlative chapter (by H. A. Walker). The amount of detail given in this volume of some 300 pages is

truly impressive; it clearly represents a tremendous output of work by a team of dedicated scientists and clinicians who are never short of enthusiasm.

Turning to the scientific results accruing from this effort one is immediately struck by the lack of any pattern of pathology which might be even tenuously related to the cardinal symptomatology of autism. Rather the general picture that emerges is similar to the biological pattern in adult schizophrenia: one of minor (though often statistically significant) abnormalities in biological indices with a greater variability than recorded in controls. At least one of the deviations from biochemical normality—that of serotonin content in the peripheral fluids—seems to be general, but most were only seen in small subgroups of the patient population (constituting, however, some 40% of the total), suggesting in these subjects a distinct pathology. Particular examples are chapters on “celiac autism” and “purine autism.” Thus some 10% of the patient population, as compared to none of the controls, had a history compatible with celiac disease; these subjects exhibited on a normal diet low urinary and serum calcium concentrations. Moreover the symptomatology in this group tended to be intermittent and the intriguing possibility is posed that these patients may have a potentially treatable form of autism. While the evidence for a link between the deviant calcium metabolism in these subjects and their autism is slender indeed, more research in this area is clearly justified. Purine autism was defined by the occurrence of hyperuricosuria; this was found in 15 patients. Unfortunately it was not possible to maintain the subjects on a controlled diet while urine was being collected, so the significance of this finding remains obscure.

Of the other laboratory studies two deserve mention. Whole blood 5-hydroxyindole concentrations in the patient group were again found to be elevated by some 15%. However, the variance in the patient group was greater than in the controls and one feels that differences of this magnitude are more likely to be eventually explained by environmental factors. The same comments apply to the much more striking elevation of serum zinc concentrations in a population of 64 patients as compared to 69 controls (reasons for excluding some of both populations are not made clear). Here the increase in the mean was more than 50% ($p < 0.001$), but again the variance was larger in the patients. These results need repeating with strict dietary control; relatively little is known about the influence of dietary zinc on the serum content of this metal.

Clinical studies are mainly concerned with the incidence of minor physical anomalies and dermatoglyphic patterns in autism as well as familial and language studies. There is also a thorough study by Drs. Coleman and Walker using cinematographic techniques on the character of adventi-

tious movements in 55 autistic children; elbow flapping and head-level hand flapping were most commonly observed. An excellent discussion of this chapter puts the subject in perspective in relation to psychoanalytical and neurological concepts of the abnormal motor behavior in autism.

The book is well produced, although a more informative index would have been worth the extra trouble.

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Mental Retardation: Nature, Cause, and Management. *George S. Baroff.*
Washington, D.C., Hemisphere Publishing Company, 1974, 504 pp.
\$17.95.

Although one generally thinks of textbooks as appealing to academicians and more pragmatic manuals as appealing to practitioners, this new and important book represents a synthesis of the best elements of each. It resembles most textbooks because of Baroff's scholarly and comprehensive coverage of the major issues in mental retardation. However, unlike most textbooks, this work is also quite relevant for those who are, or eventually will be, working in the field. It is Baroff's ability to focus on pragmatic issues without sacrificing depth or breadth that makes this an excellent book.

A quick glance at the table of contents illustrates the pragmatic focus of the book. It is divided into 10 chapters, only three of which are devoted to basic research issues such as the causes and nature of mental retardation. The remainder of the book is designed to demonstrate how our understanding of mental retardation can be applied by those working in real-life settings. For example, there are chapters on developing an array of services to meet the needs of all retarded citizens, education at different stages of the life cycle (preschool, school-aged, adult), vocational training, institutions, and community alternatives to institutional care.

Not only does Baroff discuss topics that are important to the practitioner, but he does it in a way that most people will find extremely useful. He does not oversimplify the existing data, yet manages to present them in a way that makes potential applications readily apparent. For example, in his chapter on institutions, he describes specific programs for severely retarded residents in self-help skills such as feeding, washing, and toilet training. He also presents some specific sensorimotor training programs that are quite useful. Another example is his chapter on continuum of care, in which he makes some excellent suggestions about recreation programs. As with most of the other topics he discusses in this book, Baroff cites many fine sources

for the interested reader to use in pursuing the topic in greater depth. The cited references are generally a combination of informational and practical guides.

Another strength of the book is that Baroff discusses some very important issues involving mentally retarded adults. His chapters on vocational status and residential alternatives to institutions are clear and should help to stimulate more needed discussion on these questions. His chapter on residential alternatives describes the various alternatives to institutions and how these differ from one another. He also describes the needs of the residents in these programs in depth and how these needs can be met very specifically. Baroff's succinct discussion of normalization is clear and shows his obvious concern and deep understanding of the issue. Similar incisive discussions of other important issues (e.g., mainstreaming, aversive conditioning) appear frequently throughout the book.

In spite of the pragmatic orientation of the book, Baroff's treatment of the basic issues is still scholarly and complete. The early chapters contain excellent discussions on the definition of mental retardation, different types of retardation, and specific syndromes like Down's and PKU. There is enough information throughout the book to make it a good choice as a text for almost any general course in mental retardation. Although the work is quite comprehensive, its applied emphasis does not allow Baroff to go into the same kind of detail concerning some basic issues as the more traditional texts. Therefore, the reader might not find in this book detailed information on some of the less common syndromes such as Lesch-Nyhan syndrome or about basic perceptual and/or attention processes in mentally retarded citizens.

One disappointment is the limited attention that Baroff gives to autism and/or the childhood psychoses. Baroff mentions the well-established fact that most children with this type of disorder are also mentally retarded (from 56 to 86%) and therefore "mental retardation and childhood psychosis are not mutually exclusive entities" (p. 134). He goes on to state "that at the level of severe and profound retardation, there may be little basis for establishing a meaningful distinction" (p. 134).

Although most people do not deny the similarities between the childhood psychoses and mental retardation and will in fact welcome Baroff's suggestion that they are not as different as their diagnostic labels might imply, it is regrettable that he uses these similarities to abbreviate his discussion of the psychoses. Baroff implies that his sections on working with mentally retarded citizens, especially those in the severe and profoundly retarded range, are adequate to the needs of those interested in the childhood psychoses. This assumption, though accurate to some extent, ignores some of the specialized needs, behaviors, and responses of the child psychotic (especially the autistic) and his/her family, and some of the specialized

treatment strategies that have been developed to meet these needs. Although the major focus of this book is obviously not intended to be the childhood psychoses, a little more discussion might have been devoted to this topic.

In spite of this disappointment, Baroff has written a book that those interested in the childhood psychoses, as well as those working with mentally retarded citizens, will find very useful and informative. It can be read in its entirety by those wanting a clear picture of what is happening in the field today, or it can be kept on the shelf as a valuable reference as specific concerns arise. Whatever one's needs, Baroff's unique ability to utilize existing research to solve practical problems, combined with his willingness to discuss important issues (e.g., adult services) even though adequate data are not always available, makes this an important work. I hope that we will see more books like it in the future.

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Review of Child Development Research. Volume IV. *Frances Degen Horowitz* (Editor). Chicago, The University of Chicago Press, 1975, 690 pp. \$17.50.

Review of Child Development Research. Volume V. *E. Mavis Hetherington* (Editor). Chicago, The University of Chicago Press, 1976, 615 pp. \$17.50.

These two volumes are the latest in a series of collections of research reviews sponsored by the Society for Research in Child Development. The overall goal of the series has been to provide researchers, clinicians, educators, and anyone with a professional interest in children a statement of the current status of research on a particular topic in child development. Choice of topics has been governed by the appropriateness of the area for an integrative review and the availability of an author sufficiently expert to provide such a review. Volumes I and II were published in 1964 and 1966 by the Russell Sage Foundation; Volume III, published by the University of Chicago Press, appeared in 1973 and had as its theme "Child Development and Social Policy." Overall, the quality of the reviews in the first three volumes ranges from competent integration of research to several brilliant syntheses. Neither of the present two volumes is organized around a single theme; but, if anything, they surpass the level of the previous three and represent a significant achievement in bringing together in a well organized manner a wide range of information on child development.

Volume IV begins with two articles on genetics. Sandra Scarr-Salapatek reviews research in the methodologically difficult and politically sensitive area of the relationship between heredity and intelligence. She focuses on defining the research problem and concludes from her review of the literature that a majority but not all of the variance (a difference she emphasizes) in IQ scores in white populations can be attributed to genetic differences. Little, however, is known about the source of variance in non-white populations. The article is a helpful guide to a complex topic. Elizabeth Wagner Reed reviews various genetic anomalies in children, e.g., Down's, Turner's, and Klinefelter's Syndromes; and, while somewhat elementary for the medical reader, this is an excellent overview for the non-medical person. The next two articles focus on the increasingly important area of early child development. Tina Appleton, Rachel Clifton, and Susan Goldberg provide an excellent review of behavioral development in the infant, complete with a brief annotated reading list. The review covers auditory and visual competence, language reception, and sensorimotor and cognitive skills. Unfortunately, their concluding comments on planning environments for developmental competence in infants suffer from their relative inattention to qualities of the caretaker and the role of attachment in expediting developmental competence. The authors comment, "there are probably innumerable ways in which the caretaker facilitates the infant's development . . . almost no research is available concerning the long-term effects of either specific experiences or groups of experiences." That depends on how one defines development and research! The clinical literature, of course, is replete with descriptions of the mutual interaction between emotional and cognitive development, and a number of researchers are currently investigating this and related topics in a systematic way. [See for examples recent reviews by Ainsworth (1973) and Rutter (1974).] In a second article Arnold J. Sameroff and Michael J. Chandler provide a useful review of the concept of developmental risk as defined by perinatal variables, e.g., anoxia, prematurity, and emotional health of mother, and postulate a concept of "continuum of caretaking causality" to explain the effects or lack thereof of these variables on subsequent developmental course.

Two articles in Volume IV are on language and communication. Lois Bloom provides a comprehensive if somewhat technical review of the increasingly exciting area of language development, while Sam Glucksberg, Robert Krauss, and E. Tory Higgins survey the development of verbal communication. These two articles complement each other and will be of special interest to the clinician working with children with language difficulties. Two reviews of techniques of intervention follow. L. Allen Sroufe examines the use of drugs in treatment of children with behavior problems, and James A. Sherman and Don Bushell, Jr. discuss the use of behavior modifi-

cation in education. Sroufe's article is limited to children who fall along the continuum of disorders labeled hyperactivity-minimal brain dysfunction-learning disorder and focuses largely on the use of stimulants; he reviews methodology in assessing drug efficacy and rightly emphasizes the current lack of specificity in drug treatment and consequent overmedication of children with behavior problems. (The critical approach of this article nicely complements the article by Joseph Torgesen on learning disabilities in Volume V.) Sherman and Bushell's article focuses on the use of behavior modification techniques in increasing social behavior and academic task performance in a school setting, e.g., manipulation of teacher attention, the use of prizes, special activities, and tokens. The relevance of this approach remains to be seen. The authors state that they do not wish to enter the debate on the ethics of this approach and would propose that the school setting be monitored by committees of parents and teachers. These comments only obscure the broader issue of whether school is primarily for development of specific competencies or whether it should also focus on more general considerations of personality development. Any discussion of the relevance of behavioral techniques must speak to that necessarily complex question. Sherman and Bushell's review of what can be done to modify social behavior and specific task performance is nevertheless an intriguing one.

Three articles complete Volume IV. Barclay Martin examines the area of parent-child interaction and its effect on personality development. Edith D. Neimark treats intellectual development during adolescence, and Joseph Glick reviews cross-cultural research in cognitive development. Martin's article will be of special interest to the general clinician since (as he notes in a concluding comment) his review of research supports so many clinical hypotheses. Neimark's article is important, among other reasons, for documenting the fact that at least in our culture cognitive development continues during adolescence, a simple fact not properly appreciated by many professionals working with adolescents. Glick's discussion is a highly theoretical one, focusing largely on cross-cultural studies of perceptual and conceptual development.

In Volume V there seems to be a more consistent attempt to apply the findings of basic research to policy and clinical practice. Also, a helpful innovation in this volume is the practice of beginning each article with an outline. The volume begins with an absorbing and illuminating review by Robert Sears of the history of child development research. It is an important article, and will be valuable to anyone with a professional interest in children. Paul V. Gump has contributed a review of the area of interrelationships between physical environment and child behavior. This topic has been a confused one with disjointed contributions from many disciplines, and has hence suffered from a lack of definitional clarity. Gump's article

provides an organizing statement, disappointing only in revealing the inherent limitations of this approach. James H. Bryan reviews research on the development of cooperation in children, a topic which will be of special interest to clinicians working in preschool settings; and Aletha Huston-Stein and Lynette Kohn Friedrich contribute an important chapter on the impact of television on children and youth. They emphasize that research in this area has focused almost exclusively on the relationship of television violence to aggressive behavior and has neglected the effects of television on social and cognitive learning. Somewhat surprisingly, they barely consider the significance of the process of watching television on overall emotional development. Carolyn Uhlinger Shantz provides a review of research in the development of social cognition, a topic which should be of special interest to practicing clinicians and clinical researchers working in the area of childhood psychosis. Studies of the normal development of understanding other persons provide a baseline to judge the deviant development of psychotic children, and Shantz's chapter suggests a variety of hypotheses in this regard. Anne D. Pick, Daniel G. Frankel, and Valerie L. Hess consider the area of attention, a topic which leads easily into Joseph Torgesen's review of research on learning disabilities. These two chapters will be of special interest to clinicians, as will Catherine P. Meadow's article on the development of deaf children. The concluding chapter of Volume V is a review by Ross D. Parke and Candace Whitmer Collmer of the area of child abuse. It is both succinct and comprehensive.

Some general comments might be made. A refreshing aspect in the approach of several of the reviews is a shift in emphasis away from formulating hypotheses in terms of either an interaction between variables at one point in time or a single variable over several points in development by attempting rather to conceptualize multiple interactions between variables and different points in the course of development. The articles by Scarr-Salapatek and Sameroff and Chandler are particularly noteworthy in this regard. The latter, for instance, emphasize that neonatal trauma should not be thought of as a single determining factor but must be seen as a variable whose effects will vary at different points in time depending on other developmental events. In reviewing recent research in child development one is increasingly drawn to a truly epigenetic way of thinking; unidimensional constructs or emphasis on the enduring influence of one variable fail to capture the manifest complexities of growth and development in the living organism. While one sacrifices the illusion of certainty and hence must learn to live with some ambiguity, this theoretical approach is a much more accurate reflection of the real world of the developing child.

Many of the writers approach their subject matter through the framework of social learning theory; and, while learning theory is of increasing interest to clinical child and adolescent psychiatrists, it is difficult to trans-

pose this framework into the more familiar psychosocial models of child development. Shantz's chapter in Volume V, for example, would have been more helpful to many clinicians by relating the concepts she uses to psychosocial developmental constructs.

How well these volumes fulfill their objective of providing research reviews for general use will depend on the reader's background. The researcher in cognitive development will be looking for something quite different in a review of language development than will a clinician or educator. Overall, these volumes are characterized by their focus on objective data. Clinicians may find this simultaneously refreshing and disconcerting. On the one hand, it is refreshing to see hypotheses limited to their relationship to objective data. On the other, this approach is disconcerting because these hypotheses do not always encompass the most relevant clinical issues. For example, intellectual development during adolescence is an area of increasing concern to conceptions of adolescent psychopathology. Neimark's article should offer more helpful insight here. The fact that it does not reflects neither the level of scholarly presentation nor the synthesis of ideas that she presents. Instead the reader faces the frequently encountered problem of integration. Hypotheses related to cognitive developmental theory are not the same as those relating to clinical practice. Perhaps this is an unfair expectation. However, the need for integration is sufficiently important to make such an effort most desirable. Nevertheless, the approach of most of the reviews is in the tradition of theoretical child development, which presents potential difficulties for the clinician attempting to apply the material directly to clinical issues.

Overall, these two volumes are important sourcebooks on the current status of research on some critical areas in child development, and any professional working with children will want to consult them in his areas of special interest.

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