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Reviews

All authors and editors of books and other resources are given the chance to respond to reviews. Where responses do not appear it is because the author/editor has chosen not to take up this opportunity.

Learning Through Interaction: Technology and Children with Multiple Disabilities. *Edited by* Nick Bozic and Heather Murdoch. London: David Fulton. 1996. Pbk. £14.99. ISBN 1-85346-377-9.

The main theme of this book is a presentation by a variety of authors on ways in which technology can help children with multiple disabilities to become active learners rather than passive recipients of teacher-led activities. The chapters vary considerably in terms of length and complexity but there is a general emphasis on involving adults in the learning process using technology and not leaving the child to work on a computer in the corner of a room alone.

Chapter 2 considers computer-based joint activities to help young children with multiple disabilities develop early functional communication. Assessments of children's current communicative functions are carried out and activities are selected to consolidate or extend their functions. Chapter 4 provides a rigorous description of a teaching method for the development of early reading skills. A 'scaffolding' approach of different levels of teacher input and computer support is employed using a raised line version of Roman print. Tasks were finely graded and it is likely that children with cognitive ability who can, for example, readily make a connection between a tactile node using a piece of towel and the floppy fabric found in the bathroom, are likely to derive the most benefit from the teaching programmes. Chapter 6 presents a qualitative study of social interaction in multi-sensory environments based on observation, self-report and interview measures. Uncharacteristically this chapter refers to relevant research which provides a useful background to the study. Handicapped infants may begin to lose interest in a world that they do not expect to control but the authors make the unlikely assumption that children with profound and multiple disabilities are similar to all infants in the early stages of development, ignoring the important influence of sensory channels to which they may not have access. Parents played a central role in the study sensitising observers to children's social signals.

Chapter 7 considers the development of competencies in multi-sensory rooms using a forthright pupil-centred approach and three targets were identified — relaxation skills, cause and effect work, communication. Educators are familiar with the evidence of stress but may provide alternative labels — self injury, aggressive behaviour and stereotypical mannerisms. In order to facilitate communicative behaviour for one child who was in danger of further withdrawal from social communication, all switches providing links between cause and effect were placed out of the child's reach and needed to be activated by social signs to the teacher.

Chapter 8 provides guidance on the use of switching systems where the child can cause a rewarding event such as a warm air flow, music or coloured lights and a short list of switch suppliers is also provided. Switching systems can involve a variety of stimuli, for example the child sits in a high chair with his feet in a warm vibrating footspa, popular music with a good drum beat bombards him from speakers from either side and an electric fan wafts scent of eucalyptus over him. Systems are artificially contrived and thought needs to be given to the development of skills useful to the child in his or her home/care environment. Chapter 9 advocates a child-centred approach in which the child is viewed as a whole being and not as a communications blockage, a mobility problem or a feeding difficulty. A variety of switches including vertically mounted, hand-held grip switches or inset lever switches are tailored to each child's most reliable movements.

Chapter 11 identifies a system involving a process of cyclical evaluation, planning, intervention and re-evaluation. It is pointed out that a communication problem does not belong to a child alone but also to all those who have significant contact with the child. The initial assessment aims to involve the

family, school staff and all the relevant professionals to establish a clear picture of the child's abilities. Carers are often so familiar with the child that they recognise and address the needs before the child has signalled them. Case studies appropriately focus on the role of technological aids and raised a number of questions regarding the way in which computer devices fitted with other essential parts of a programme such as providing advice on management for parents.

The theoretical framework is only occasionally glimpsed in many of the chapters but the book contains many useful practical ideas for adapting technology and authors focus on the individual pupils with empathy and understanding.

PETER LLOYD BENNETT (Educational Psychologist)

Psychology Discourse Practice: From Regulation to Resistance. *By* Erica Burman, Gill Aitken, Pam Alldred, Robin Allwood, Tom Billington, Brenda Goldberg, Angel Gordo López, Colleen Heenan, Deb Marks and Sam Warner. London: Taylor & Francis. 1996. Pbk. £13.95. ISBN 0-7484-0504-6.

In 1977, Paul Willis argued in *Learning to Labour* that young white working class 'lads' related to schooling, as to most other areas of their lives, through a collective culture based on working class pride and macho bravado (Willis, 1977). Willis highlighted a particular paradox, in that what could be seen as the lads' class-based cultural resistances to the patronising and demeaning treatment of them within the education system simultaneously led them to reject all things academic as 'cissy' and to 'choose' the type of exploitive, physically damaging manual jobs in manufacturing industry that were slowly killing their father and brothers. Those were the days when such jobs were available on a fairly widespread basis in the English West Midlands, where Willis's study was based.

Learning to Labour has had far greater influence within the sociology of education than in educational psychology, but it addresses key issues that remain of central relevance to both disciplines. Although *Psychology Discourse Practice* does not mention Willis's text, it does discuss many of the questions he was raising — and more besides — but in relation to contemporary debates within and concerning psychology. In the mid-1970s, debates about power, resistance and ideology were more likely to occur outside of psychology, but twenty years later some psychologists are drawing on Derrida's deconstructionism, Foucauldian analysis, psychoanalytic theories and postmodernism to consider the role of psychology itself within these debates. The result is quite different from Willis's grounding in Althusseiran Marxism, and the focus on the role of psychology is sharper, but I was struck by the similarity of some of the issues addressed in *Psychology Discourse Practice*, especially regarding the relationships between regulation and resistance.

The book is not 'only' about educational psychology, but it is certainly one that should interest many people who work in and around educational psychology, especially those of a critical persuasion. In the first chapter, Erica Burman describes the book as 'about the role psychological knowledge and practices play in shaping and governing our lives' (p. 1.) Although the various chapters cover a range of areas within psychology, there is an emphasis on the operation of psychological knowledge and practice in the clinical and educational spheres. The book is collectively authored, so that contributors of the nine main chapters appear in the list of ten co-authors of the text, including Erica Burman. Earlier books such as *Changing the Subject* (Henriques *et al.*, 1984) examined the theoretical and conceptual operation of psychology as a discipline that endorses certain knowledge about self in society. *Psychology Discourse Practice* draws on this and more recent work to consider some of the ways in which psychology operates in *practice*, and partially as a consequence of this, the book pays greater attention to the role of psychology in relation to *resistance* as well as regulation.

For me, it is in the latter arena that the book makes its most interesting contribution. Drawing on Foucault's argument that 'power produces effects that necessarily include resistance' (p. 9), the book includes a number of chapters that provide clear examples of psychological knowledge and practice at work in ways that can operate *simultaneously* as regulation and resistance. Robin Allwood's chapter on discourses of help in self-help books on depression argues that such texts manage to both challenge and reinforce dominant medical models, but can potentially offer strategies for action and change.

Located more firmly within the domain of educational psychology, Tom Billington examines the role of the educational psychologist as an instrument of government policy in pathologising individual children's lives. Billington draws on examples of 'everyday dilemmas' from his own work as an educational psychologist to look for points of potential resistance and change. Other chapters of particular interest for the readers of this journal include Deb Marks's analysis of her interviews with boys concerning their exclusion from school, and Pam Alldred's chapter on experts' advice to mothers about child-rearing. However, other chapters are equally interesting, such as Colleen Heenan's discussion of feminist therapy, Gill Aitken's piece on the position of black women in mental health services, Sam Warner writing on women and high security mental hospitals, Brenda Goldberg on carnivalesque aspects of women's humour, and Angel Juan Gordo Lopez on transsexuals and gender identity clinics.

Many of the contributions were clearly informed by feminist perspectives, so I was intrigued to note that feminism was not mentioned as one of the main theoretical resources in the book, along with deconstructionism, Foucauldian analyses, psychoanalysis and postmoderism. Perhaps there is a reluctance to treat feminism as sufficiently theoretical — or perhaps not all the contributors felt able to endorse feminism as a theoretical resource for their work. This is ironic, given the central role that feminist work has played in strengthening this type of critical perspective within psychology over the past few decades. However, this is an interesting and challenging book which makes an important contribution to critical debates in psychology.

CHRISTINE GRIFFIN (Department of Psychology, University of Birmingham)

References

Henriques, J. *et al.* (1984). *Changing the Subject: Psychology, Social Regulation and Subjectivity.* London: Methuen.

Willis, P. (1977). *Learning to Labour: How Working Class Kids Get Working Class Jobs.* Farnborough: Saxon House.

Response

We were pleased to see how Christine Griffin has identified the contribution of our book with the perspective outlined in Paul Willis's *Learning to Labour* (Willis, 1977), since this work was one of the first to explore the contradictory but powerful character of resistance enacted by disadvantaged groups in contemporary industrialised societies. In this case Willis was concerned with the ways the anti-intellectual identities adopted by working class young men functioned to maintain (white, male, heterosexual) working class pride whilst the anti-intellectual identity this fostered also disenfranchised them from competing within the meritocratic school system in which they were already stacked disadvantage. In *Psychology Discourse Practice* we were concerned to engage with the key political questions that surround the work of psychology: how to maintain a sufficiently complex analysis of the power of psychological practices (as both professional expertise and everyday commonsense knowledge) in a way that both acknowledges its pervasiveness in informing our identities and activities but that also produces and permits particular agencies and (albeit constrained) 'choices'. Our aim is to move beyond current complaints about the misdemeanours performed in the name of psychology to explore what it is we can, and do, do to limit, contest and change these.

As Griffin notes, we draw on perspectives currently associated with post-structuralism (particularly the work of Foucault), to characterise the complex and contradictory workings of 'the psy complex', and, while not exclusively concerned with educational psychology, we do see all the chapters as centrally concerned with the ways psychology impacts on children, women, families, schooling and professional psychological practice within a variety of institutional settings. Of particular relevance to readers of this journal is Tom Billington's discussion of the ways an individual educational psychologist can use his or her position to counter the institutional position of the educational psychologists to pathologise children and families, and Deborah Marks's account of the political and philosophical assumptions involved in researching young people's views — in this case of their experiences of being excluded from school — which highlight the intimate connections between methodological framework and political analysis: the project to 'listen to children' or 'hear young people's voices'

may be well-intentioned but when we abstract their words from research relationships and broader discourse of gender, class and schooling we are in danger of depriving young people of their inscription in the social fabric by the very act of claiming to include them within it.

Griffin's favourable comments on other chapters will, we hope, commend PDP to you better than we can here. We should like to finish by responding to her challenge about the absence of feminist perspectives in the list of theoretical resources we outlined at the beginning of the book. Feminist debates and ideas do form a key *political* resource for PDP, as reflected in the fact that 'feminism' is the longest entry in its index. Nevertheless, it is true that we did not name it as a theoretical resource in the Introduction despite the fact that some of the same authors have recently co-authored a book *Challenging Women* (Burman *et al.*, 1995) which did indeed make feminism a theoretical resource for the critical evaluation of psychological practices. However, in this book not all the authors' primary political identifications would lie with feminism (and this is not only because the writing group included three men). Indeed, as we state in the postscripts in relation to our conceptualistations of power, '[while] all are informed by post-structuralist ideas, further subdivisions might distinguish those who would primarily identify themselves with Marxist or feminist-inspired readings of post-structuralism and those more informed by the more recent work associated with queer theory' (p. 195). Hence we attempted to open the book by identifying commonalities of frameworks for our jointly authored enterprise, and to comment on emerging tensions and differences at the end. Notwithstanding its significance to all chapters, and unlike our previous work, no view of the primacy of feminism unites the book, nor is feminism taken as a theoretical topic of analysis (hence its place as political rather than theoretical resource), although feminist professional and therapeutic practices do form a key substantive theme. This does not in any way devalue the contribution of feminist theorising to debates within the critical applications of deconstructionist and discourse work.

Finally, Willis's (1977) book, may have created a new paradigm for the study of the complexities of class identities, schooling, agency and achievement that also took sociologists and psychologists beyond the simplifications of 'false consciousness'. However, it also reproduced the dominant preoccupations of 'progressive' educational and policy-oriented literature of the time by focusing on the educational orientations and aspirations of young white men. Feminist and anti-racist work of the last 20 years has greatly changed this so that such a focus is recognised for its partialities of gender, culture and sexuality. We believe that PDP — with its range of topics — is a vital contribution to this broader focus. Nevertheless our specific intervention is to return the evaluative gaze from the objects of psychology's scrutiny to its subjects; to us, the professionals and practitioners who dispense psychological knowledge, as a critical and constructive tool to help us analyse our own work.

ERICA BURMAN

References

Burman, E., Alldred, P., Bewley, C., Goldberg, B., Heenan, C., Marks, D., Marshall, J., Taylor, K., Ullah, R. & Warner, S. (1996) *Challenging Woman: Psychology's Exclusions, Feminist Possibilities.* Buckingham: Open University Press.

Mathematics Education: Models and Processes. *By* Lyn D. English and Graeme S. Halford. Hove, East Sussex: Lawrence Erlbaum Associates. 1995. Pbk. $34.50. ISBN 0–8058–1458–2.

The authors of this book apply results of recent research in cognitive science to the teaching and learning of elementary number and number operations. The development of algebra and proportional reasoning, and aspects of metacognition set in the context of elementary problem-solving are also considered. Following an introduction to recent developments in cognitive science and explaining how analogy can facilitate understanding and thinking the book develops and applies approaches that explore the utility of analogies used in the development of mathematical understanding.

The analysis of different analogies is detailed and thorough and the relative merits of different analogies are explained. Attention is given to the levels of relationships embedded within these analogies and the way in which their features 'map' onto the target mathematical concepts. The discussion is rooted in recent research with many references which would prove of considerable value to anyone engaged in or

contemplating research into the teaching and learning of elementary mathematics. An attractive feature of the book is that it does not stop at the analysis of the analogies but also considers how teachers might focus children's attention on their significant features and the mathematical concepts they model. Thus a powerful case is presented for the relevance and application of the theory to classroom practice.

Anyone concerned with mathematics in the initial training of teachers or INSET would certainly find something of value here, and there is much in the book which would prove valuable to student teachers and practising primary and secondary school teachers. However, without a sound background in mathematics many would find the text quite difficult to follow.

One feature which I found disconcerting is the frequency with which the text introduces a topic and then indicates that it will be discussed later. This led to an irritating repetition, on several occasions I found myself reading text met thirty or so pages earlier. I detected two errors possibly arising from proof reading, which could prove disconcerting to the insecure or unwary. However, of greater concern especially in a book with 'mathematics' in its title, is the use of the term 'mapping' which is at variance with a strict mathematical definition and the discussion of rational number in particular decimal fractions. These could prove misleading to the reader who does not have a sound background in mathematics.

It is not fair to criticise a text which sets out to develop a theory of instruction based on research in cognitive science for not including a thorough discussion of other theories of cognition. But it is not unreasonable to expect *fair* treatment of other theories when reference is made to them. In this respect, for example, the text fails in its treatment of Vygotsky. Acknowledging that Vygotsky was not a 'stage theorist', an interpretation of Vygotsky's notion of the zone of proximal development is given which glosses over Vygotsky's underlying belief in the dialectic between learning and development. Similarly the brief comments relating to the British National Curriculum do not reflect the criticism that has been articulated by many mathematics educators in the UK. However it should be recognised that these issues are incidental to the main thrust of the book.

The discussion would have been strengthened by including a critical appraisal of the techniques of cognitive science and a discussion of the criticism of these techniques. Without this the text provides an assertive, and over-confident account of the possibilities of learning from instruction. This could lead the teacher, dedicated to implementing its recommendations, to believe that any failure to communicate proper, functioning, understanding is the result of their own inadequacies rather than, possibly, the wide range of other influences upon children's learning and development. For example, there is no proper discussion of social and cultural influences although briefly mentioned in the context of metacognition where the reader is referred to other sources for a proper treatment. Also an issue of gender stereotyping that apparently misdirects children in their problem-solving activity is recorded but not considered in detail.

Despite my misgivings I do think the text has a valuable contribution to make to mathematics education and developing instructional models. The careful analysis of the mathematics and analogies provides a more detailed account of instructional techniques than is normally found in texts presenting and interpreting research. However, the title 'Mathematics Education' is misleading: the content represents only a part of mathematics education from a fairly narrow albeit important perspective. The book is about developing a theory of instruction and learning: of number, algebra and possibly problem-solving from the perspective of recent research in cognitive science — this is exactly what the authors declare as their purpose at the outset, and reiterate in their conclusion — so I ask why a title was chosen which raises expectations of something else?

Overall, the above criticisms notwithstanding, this is a valuable book in what it offers and deserves a place in the library of psychology, mathematics and education departments.

S. GOODCHILD (University College of St. Mark and St. John, Plymouth)

Actualizing Talent. A Lifelong Challenge. *Edited by* Joan Freeman, Pieter Span and Harald Wagner. London: Cassell. 1995. Pbk. £16.99. ISBN 0–304–33293–3.

As the title is promising this book has a general developmental approach. This approach leads as a red thread through all the papers, from birth to old age, in papers concentrating on a special period of life as well as in those dealing with a special field of activities or with distinct aspects of personality. What the book differentiates from other developmental workbooks, and makes it so unique, is the special focus on the development of (special) talents and on individuals of high ability. The authors

avoid the term 'gifted' because it is usually very closely linked to a traditional concept of intelligence with all its limitations according to its test biased research history.

The editors, contributing themselves five out of 13 papers, have collected a distinguished set of authors like Michael Howe, Erik de Corte, and Arthur Cropley, who compared to other publications in the 'gifted scene' are representing a strong European background and focus, without neglecting internationally relevant literature and research.

In the first part, called the 'Origins of talent', Joan Freeman starts with a critical overview on current thinking on the development of talent; she is drawing special attention to new interpretations of twin studies, the foundation of early learning as prerequisite for advanced development, and the crucial role of verbal interaction with adults. Her second article on learning from birth on sheds light upon a holistic view of development. Michael Howe, from the UK, too, describes different ways in which geniuses have grown up and reached their eminent expertise in their special field of endeavours, particularly exploring the components of practice and preparation as well as the family background and their contributions to the acquisition of high abilities. Ulrike Stednitz from Switzerland offers a brief overview of current research on psychosocial aspects of high ability, specially the relationship between affect and cognition. The second part, 'Process of high-level learning', is very much relevant for teachers, Erik de Corte, Belgium, provides perspectives from instructional psychology on high-level learning skills under special consideration of designing powerful teaching-learning environments. Peter Span offers a very interesting review about the European history in research on self-regulated learning. Paying special attention to Vygotsky's cultural-historical theory he stresses the mediating role of the educator in the pupil's process of gaining self-control on learning and meta-activities. Jan Elshout from Netherlands, too, describes the long way from intelligence to expertise.

The third part, 'High-level achievement', starts with Arthur Cropley's contribution about actualizing creative potential, an essential component of 'true' talent, and an area which too long had been neglected in (early) research on the gifted. Two articles deal with development in special talent areas, in the field of pictorial talent by Norman Freeman, and in the field of sports by Stephen Rowley, both from Great Britain. Harald Wagner, director of the German foundation 'Bildung und Begabund', stresses the necessity of extra-curricular provisions in their various forms as complementary approaches; these measures need to include the components of inspiration, choice, challenge, incentives, counselling and co-operation. Peter Heymans and Gerard Brugman, both from Holland, present their Behavioural Management Approach and discuss its usefulness in the context of talented adults. Finally Joan Freeman advocates a strong policy in order to meet the needs of individuals and the society for actualizing talent.

Though the focus is on high ability the book is very helpful for psychologically interested 'normal' teachers, teacher students, even for curious laymen like parents; in its more general, educational and political starting and finishing articles it may give fruitful information to decision-makers and administrators in education and politics.

KLAUS K. URBAN (University of Hannover, FRG)

Response

As editors, we cannot but be pleased with the review which Professor Klaus Urban has written of *Actualizing Talent: A Lifelong Challenge*. He has recognised our long-term developmental approach — the aspect which makes this collection different from all other publications on the development of exceptionally high ability. Although, admittedly, we would have preferred to include more on the promotion of talent in adults, it is an area where research is still thin. So much of the current literature is only concerned with children, and school children at that, yet there is plenty of anecdotal evidence that talent can flower at all stages of life. Given the ageing of Western populations, the need for research into adult talent is clear.

Our major purpose in presenting this research-based material is to influence practice. That is why the final chapter on policy implications is such an important drawing together of the information in a form which is useful to politicians at local or central levels. Although there is growing enthusiasm for attending to the needs of the most able children, there is also a recognised lack of information as to what is likely to be effective in their education. For example, several local education authorities and

some private organisations offer summer camps for these children, but there is absolutely no evidence about the outcomes. In economic terms alone, one needs to know what the money is paying for. The upcoming Ofsted report, *Review of International Research on the Education of the Very Able*, which I am currently finishing will further update these ideas, and present clear well-founded practices for teachers and administrators.

Specific provision for the most able in school is a matter of contention — should there be any at all? — which is why long-term follow-ups of any intervention are vital. But then the arguments over whether to enrich or accelerate bright pupils, for example, vary with the culture and the basic level of educational provision. In order to select the best practice, each country has to know what is being done elsewhere, but at the same time to be able to understand the context in which the work has taken place. In Europe, we are heavily influenced by American research and practice. But if a gifted American child can (as is claimed) complete a whole year's high school maths in three weeks, is this equally true for Germany, Russia or Britain? *Actualizing Talent* tackles such questions across these European papers.

If the talented are in any way different from other children it must be in what they are able to do. But, of course, the emotional aspects of their development are important, both in the fulfilment of their potential and in their own happiness, and teachers often say they want to know how to treat their most able pupils in the classroom. The mythology about the gifted is strong and enduring, and false statements appear in teacher check-lists printed by LEAs. Tackling their development from a research base helps practitioners to distinguish between the often impressionistic literature and the evidence. Although there is still a long way to go, overall, it is clear that both for the individuals as well as for the society they live in there is a need for recognition of their potential and adequate provision to develop it. Good intentions are not enough; policy-makers need the facts.

JOAN FREEMAN

Teaching our Children to Read: The Role of Skills in a Comprehensive Reading Program. *By* Bill Honig. London: Sage Publications/Corwin Press. 1996. Hbk. £35.00. ISBN 0–8039–6604–8.

The opening sentence of this book provides an immediate indication of the content of the text. 'The first and foremost job of elementary school is to teach children to read.' If such a view is accepted, and most primary school teachers would do so, then what does that entail? First, there is a need to ensure that sufficient time is devoted to language and literacy activities. Honig suggests a 90-minute minimum per day, with 2–3 hours being a possibility. In the UK we would need to consider whether the National Curriculum has aided or hindered such an emphasis in our primary classrooms.

However, although a language/literacy emphasis is central — what does that mean for activities in the classroom? In the UK there has been a real books/phonics debate, although never with the intensity of the US argument. Yet HMI reports suggest that most teachers here, in primary classrooms, utilise aspects of both approaches. Honig aspires to do the same and create a balanced approach with both whole language and phonics approaches put into use in the US classrooms. And this is a book written for a US audience. Furthermore the references are, with very few exceptions, from the US. That Americanisation is pronounced especially where onset and rime are discussed. No acknowledgement of the work of Bryant, Bradley and Goswami is made — instead the secondary source of Adams has to suffice.

Although balance is the aspiration, this is a book which devotes the major part of the text to letters, sounds, phonemic awareness. That emphasis is at times irritatingly prefaced by 'respected educator', 'reading experts', 'leading experts in the field' etc. when a phonics-based reference is used, and no such preface for whole language views. Furthermore, a check through the references will indicate a dearth of whole language views, e.g., no Harste, Watson, Weaver, etc. Even when 'kid watching' is recommended no reference is made to Yetta Goodman — indeed none of her publications is noted.

Yet there are aspects of a whole language approach which are recognised for their benefits. In particular miscue analysis and invented spelling (sometimes referred to here as temporary or approximated spellings) are recommended. They provide a means of diagnosing the extent to which a

child has learned 'particular letter/sound correspondences or phonemic awareness' (p. 63). Of course, how that information is used by the teacher remains contentious. For Honig it can lead to activities that might emphasise opportunities for connecting sounds to letters. Others might argue for further diverse reading and writing opportunities for a real purpose. That after all is part of the whole language/phonics debate.

So, this is a book which wants to create a balance but does so largely by describing, debating and extolling the virtues of a skills programme emphasising the letter and sound aspects. Nevertheless, there are a number of important recommendations for UK teachers using such programmes. First, are the learning of formal phonic rules a help to pupils? No, suggests Honig and he reminds us of the low reliability rate of such rules and the inevitable exceptions that have to be considered. (Here again he refers to Adams rather than the key source of Clymer, 1963, — a seminal article recently republished *The Reading Teacher,* 1996, 50.3 pp. 182–187.) Second, he argues that strategies which include whole class phonic lessons are to be avoided. They 'are detached from reading and do not give students the opportunity to apply those decoding lessons in reading text' (p. 68). A third misguided instructional strategy he argues is the use of worksheets or workbooks with some groups of children while others work with the teachers — 'worksheets to teach the complicated letter/sound and phoneme system probably does more to discredit a skills approach than any other factor' (p. 69).

Where Honig does create a bridge between the two views is where he suggests that the skills should be taught 'in an active thinking, problem solving way' (p. 10). That leads to the possibility of considering other books including, for example, Mills, O'Keefe & Stephens (1992). Alternative texts such as this are not referenced here but they are by whole language teachers who are, of course, concerned to see that children acquire letter/sound knowledge of various kinds.

ROBIN CAMPBELL (Department of Education, University of Herefordshire)

Reference

Mills, H., O'Keefe, T. & Stephens, D. (1992). *Looking Closely: Exploring the Role of Phonics in One Whole Language Classroom.* Urbana, IL: National Council of Teachers of English.

The Psychology Research Handbook: A Guide for Graduate Students and Research Assistants in Psychology. *By* Frederick T. L. Leong and James T. Austin. London: Sage Publications. 1996. Pbk. £19.99. ISBN 0–8039–7049–8.

Sage Publications/SRM Database of Social Research Methodology on CD-ROM. London: Sage Publications. 1996. CD-ROM. Subscription (2 copies per year). US$750 Standalone; US$1125 Network.

With most social research methods texts showing considerable overlap, differences between them tend to be dependent on style and presentation. For edited texts these structural aspects become particularly important. In this *Guide for Graduate Students and Research Assistants* Leong and Austin employ 'cognitive scripts' as a unifying theme. These are 'knowledge structures that organize proceduralized knowledge of how to do something in a temporal sequence' (p. xiv). Their agents, the authors, are practising researchers from a variety of North American institutions and companies.

I espouse strongly the concept of practical utility so I started reading the book prepared to accept that it was possible, in 29 separately authored chapters, to maintain the cohesiveness and completeness that researchers in psychology and education need from a handbook. The design of the text allocates the chapters to five main parts (I: Research Planning, II: Design, Instrument Selection and Sampling, III: Data Collection, IV: Data Analysis, V: Research Writing) and a sixth part devoted to Special Topics. The five main sections match conventional views of the research process, but placing a chapter on Applying Theories in Research at the end in Part VI does seem inconsistent with the need to employ theoretical frameworks early in any piece of research.

Apart from a four-page introduction by the editors, there is no linking comment, although in some chapters there does appear to be sporadic editorial intervention in the form of cross-references to other chapters. The only time I edited a book I decided it was essential to include a substantial introduction, *and* to offer introductory and concluding sections for each part. The same need seems to apply here. Without commentary the repeated combinations of omission and overlap result in a problematic text. It does not provide exhaustive guidance for anyone reading the whole book, nor does it contain the specialised detail a student would expect of a reference handbook.

Since it is impossible to summarise 29 chapters in a brief review, the issues of omission and overlap are useful for generalisation purposes. Inevitably my position as a psychological educationist will influence my views on what should feature, but I am writing for a journal in psychology in education, and there has been a marked convergence in methodology in all the social sciences over recent years. So it is surprising to see so little space devoted to qualitative research, to case study or to evaluation studies. Partial salvation on the qualitative front appears in Highlen and Finley's excellent chapter on Doing Qualitative Analysis since it goes well beyond analysis with its systematic and detailed characterisation of qualitative approaches. In the quantitative domain, coverage of experimental design is concentrated within the 14-page chapter on Designing a Research Study, and the Test Construction chapter is too superficial to be useful.

Overlap is not in itself a failing, indeed with so many chapters it is almost inevitable. The problem for me is that repeated mention is not the same as completeness, nor does it necessarily engender coherence. so validity is discussed in several chapters (especially in Chapter 5, Design, and Chapters 6 and 19 on Test Selection and Construction) with very different emphasis in detail and depth. Such a vital construct does seem to deserve a higher priority for a separate chapter than, say, Diversity in Work Styles (Chapter 20) or journal publication, which is accorded four chapters.

Statistical issues suffer a similar fate, featuring in three central chapters (15, A Basic Guide to Statistical Research and Discovery; 16, Basic Statistical Analysis and 17, Using Advanced Statistics), but lacking the coherence this often daunting topic demands. In some ways the best statistical presentation is Dollinger and DiLalla's earlier chapter on Cleaning Up Data and Running Preliminary Analyses. It is both novel and apposite and could easily have been extended to form the main offering. A consequence of this separation of statistical topics is the unsatisfactory treatment of some important ones, most notably factor analysis. Its use and abuse is now so prevalent that a dedicated chapter is essential in any comprehensive handbook.

It would be unfair to emphasise the limitations without drawing attention to the strengths within the Handbook. In addition to the three chapters I have already praised, I would recommend Chen's chapter on Conducting Telephone Surveys, Cooper and Dorr on Conducting a Meta-Analysis, and Austin and Calderon's chapter on Writing in APA Style (even for readers outside the US). There is also a good deal of valuable guidance in Yaffee's Guide to Statistical Research, but it does require a fair background in statistics for a full appreciation. Nagata and Trierweiler provide sensible help on revising journal submissions, but the four chapters on journal writing really should be subsumed within one, or at most two. Gelso's discussion of Applying Theory (chapter 29) is helpful, so long as it is read first, not last!

Overall I seem to have identified about a third of the chapters as really worthwhile reading, with the rest being material covered at least as well elsewhere. That brings me to my frequent dissatisfaction with edited collections. How does a reader decide when only a minority of an extensive text seems attractive? Twenty years ago I tackled the conundrum by decomposing similar topics in educational research into 30 *Rediguides*. At around chapter length they sold cheaply, and students were able to select as many as they felt they needed. I still contend there is a market for a low-cost modular approach to publishing in this area. Some time ago I bought a PC magazine that included a CD containing a wide range of locked software. To purchase your selection you paid accordingly (by phone) and were then supplied the codes to access those programs. Maybe a componential subject area like social research methodology would benefit from such a development.

Reviewing the Leong and Austin book reminded me that I had still to complete my evaluation of the SRM Social Research Methodology CD-ROM. Whilst the SRM Database is only intended to be used as a route to actual texts, it could be said to fulfil a similar research function to that provided by the Handbook. The CD-ROM covers a wide range of social research methodology via references to

24,814 articles and 11,043 books. The access program is DOS based, with the associated screen format and no mouse facility. It is workable, but the more direct Windows style would seem more suitable since a good deal of moving between screens, menus and elements is required to make best use of the flexible searching facilities.

The search screen is based on the standard reference layout (authors, journal, year, publisher, language) with a categorised topic search tool accessed via the field Term or Free Text. Each field has an associated list or Thesaurus, available through the F2 key. So its use with the cursor in the Year field yields the number of entries for each year (1 for 1965, 40 for 1970, and over 11,000 in the 1990s). There are 1141 Terms listed for searching, although the Thesaurus for Terms contains 3268 entries.

From my limited testing of the searching procedures you do need to be reasonably flexible in your approach, and on balance I found the Free Text route (which locates all verbatim occurrences of your supplied text within any field, including Abstract and Title) to be most productive. For example, *Structural Equation Modelling* is not available within the Term field, but entering the same form of words from the Free Text field generates 12 references. *Structural Equation* produces 281. In fact the relevant categorised Term is *Linear Structural Equations Models*, which generates 726 entries. Versatile narrowing procedures are available whereby sub-categories within a Term can be applied to select more specifically. Starting from *Linear Structural Equations Models* I was able to reduce the initial 726 entries to 28 through the sub-category *Path Diagram*. Here two further categories were offered, *direct effect* and *indirect effect*, and the latter produced 13 references. Surprisingly I didn't seem to be able to go back one frame to change my choice from *indirect* to *direct*. To make the alternative choice appeared to require a restart. The result of a search can be listed onscreen in traditional reference format, or a single reference can be selected and listed in full. The expanded version includes an abstract which appears to be informative enough to decide whether the full source is needed. Both versions of the search are available in printed format.

For some reason my first impression was that this was a quantitative research resource, but the title and accompanying literature indicate social research methodology as the coverage. Checking this out, firstly through the 12 general categories offered, confirmed my assumption. There are no obvious qualitative research categories amongst them — the majority are solidly quantitative. However searching from the category *Types of Research*, through *Strategies of Research* to *Case Study* eventually located 488 sources. For *Linear Structural Equations Models* there are 726. Trying more specific topics, *ethnography* entered as a Term produced none, but as Free Text 108 references were located. Other qualitative terms prove more fruitful through the Free Text field than as a Term. At a subjective level, the qualitative search routes do not appear as productive compared with the quantitative ones. *Triangulation* registers 89, *grounded theory* 54, *content analysis* 64 and *deconstruction* none. Compare that with 303 for *sampling*, 140 for *item analysis*, 72 for *Likert scales* and 246 for *LISREL*.

The limited manual provided with the evaluation copy comprised 10 A5 pages, so I assume that the 'Comprehensive User Manual' referred to in the publicity is a different document. Nevertheless my confidence with the system increased over three or four uses to the point where I suspect that anyone prone to perseveration could become addicted. The search mechanisms are productive, and even reading the associated abstracts can be quite revealing. However, I could not get the Author field to work properly. No matter how I entered him (Cattell, R. B., Cattell Raymond etc.) I was always returned with a 'none found' message, even though two of my versions matched the Author list entries. Only by using the wildcard facility, Cattell* were the five references recognised. Unfortunately whilst this strategy might be OK for Cattell (only one is present on the database), it would be next to useless for a Brown or a Jones. On a constructive level, I did feel that a glossary of terms would be a useful addition. With only 1141 entries it would not be onerous to produce but it would enhance the instructional tone of the resource.

So I am sure there is a use for this resource although 34,000 references is not that extensive; a student of mine once generated a locus of control bibliography of over 1200 references. Starting at the year 1970 might be a limitation since much seminal work occurred before then and only new editions are likely to feature in the database. Aside from my suggestion of a quantative emphasis in the selections, the coverage of journals and topics does appear to be sufficiently broad to be eclectic. This is only the first full year for subscribers (who receive two CD-ROMs for their annual subscription) so we have yet to see how the resource develops. But for me the recurrent issue with academic software has to be pricing policy. At around £500 the clear message is that this is intended for libraries or large

departments. I'm afraid I don't agree. Just as statistical software remains overpriced on the false premise that institutions will weather the cost, so here I feel the providers are aiming at the wrong market. Over the past two or three years the PC has achieved the power that now makes it the preferred platform for most researcher resources. Once that concession is made it follows that, just as operating systems, word processors and integrated packages are priced between £50 and £100, so should all other student or researcher oriented computerised resources. My own library's evaluation of this package did not support purchase at £500. But at £50 this would be a superb tool for social researchers from a variety of disciplines.

MICHAEL YOUNGMAN (School of Education, University of Nottingham)

Response

After reading the review of Dr Youngman several times, I would like to say that I have mixed feelings about it. In the first place, I appreciate the extensive attention and fair remarks, but on the other hand, I am very sorry that the judgment of Dr Youngman is only based on the first 'launched' CD-ROM, and not on the complete information services of the SRM-Documentation Centre, that include the SRM-Thesaurus, 1996 and the printed SRM-Bulletins as well.

Concerning the CD-ROM, Dr Youngman has indeed mentioned to be curious as to how the resource develops. Now, I can give an impression, because the newest production (1997–1), and a new manual have now become available, both I think with considerable improvements.

I would also like to comment on several points of Dr Youngman's review:

Windows version. We agree that a Windows version must be an improvement. Many users have already asked us about that, and our software producer is already developing a standard version in Windows, so it will come in the near future for sure!

Authors field. The problem mentioned with directly typing in a name in the Authors field is right; you must type in an asterisk (*) behind the family name of the author. If a selection on family name in combination with a first name or abbreviation(s) is to be made, we recommend (manual, page 9) the use of F2: List to view in the list to all possible combinations that are available in the database with the respective numbers of references.

Glossary of terms. An alphabetical list of the authorised terms (categorised terms) can be found via the Search screen > 'Terms field' > F2: List > Terms, gives the alphabetical presentation of the 1145 index terms with their number of references.

A presentation of all Thesaurus terms can be found in the Thesaurus option (Search screen 'Terms' field > F2: List > Thesaurus > Thesaurus screen > F2: List) presents the complete list of 3268 terms. Putting on an unauthorised (UT) term gives directly the belonging authorised term, with the hierarchical (Broader Term, Narrow Terms) and referring Thesaurus relations (See also), as well.

Qualitative-quantitative coverage. The SRM-Documentation Centre is from origin based on the rather strong quantitative tradition in Dutch social research methodology, as is mentioned. But in the last 10 years we have been drawing our attention more and more to the qualitative fields of interest. Maybe these subjects are not so easy to find directly in the main categories of the SRM-classification scheme, such as 'Measurement', 'Statistical theory' or 'Multivariate analysis', but, on the more specific level of terms, many qualitative topics are integrated in the system. With the free text option one will also find a lot of references to qualitative research methods and techniques, as is mentioned by Dr Youngman.

Some examples of authorised (qualitative) terms:

phenomenological method	– 111 ref.
interpretation	– 93 ref.
ethnomethodology	– 195 ref.
action research	– 280 ref.
participant observation	– 178 ref.
field research	– 613 ref. (is used in our system for ethnography)
case study	– 228 ref.
life history	– 311 ref.

content analysis	– 434 ref.
qualitative content analysis	– 75 ref.
qualitative research	– 872 (can be used as the most general qualitative search entry)

In the free text field, examples of searches on qualitative topics such as: text* (22 ref.), conversation* (67 ref.), discourse* (95 ref.) — narrative* (82 ref.) — ethnography* (248 ref.) give many references to recent literature!

Pricing policy. Dr Youngman's remarks on this sensitive topic are very interesting, and we will discuss this seriously with the marketing people of Sage. The point of the matter is that the production of this kind of scientific and authorised information requires a highly specialised and continued effort of academic staff members through the years. The work has been done by a team of information specialists trained in social research methodology and is a rather time-consuming and expensive process.

In our situation it is not the price of the software or the technical innovations that determine the selling price, but the scientific knowledge and efforts that lie at the root of the compilation and updating of the SRM-Database and the SRM-Thesaurus.

I hope I have succeeded in giving your readers and Dr Youngman a better impression of the SRM-information services, especially of the Sage-SRM-Database on CD-ROM, and hope it will result in some adaptations of the review in a positive sense.

G. W. KANTEBEEN

The Balance Model of Dyslexia: Theoretical and Clinical Progress. *Edited by* R. Licht and G. Spyer. Assen, The Netherlands: Van Gorcum. 1994. Pbk. Dutch florins fl 49.50. ISBN 90–232–2936–3.

This book presents seven interesting studies that address both theoretical and practical aspects of the balance model of dyslexia. Bakker formulated his biphasic balance model for the first time in 1978. In a paper presented at the Orton Society, he introduced his model of learning to read and postulated the existence of two types of dyslexia. According to his theory, a child has to pay attention to the visual and spatial features of the text during the initial stages of reading. When reaching more advanced stages of reading skill acquisition, semantic and syntactic analyses of text become more dominant, as the perceptual analyses become automatised.

Evidence shows that initial and advanced reading are predominantly mediated by the right and the left cerebral hemispheres, respectively. As the learning-to-read process progresses, a shift from right to left hemispheric control will occur. From his research, Bakker (1979) proposes that at least two distinct subtypes of dyslexia exist. P-type dyslexics continue to rely on right hemisphere mediated visuo-spatial processing of text even in the advanced stages of reading: this results in a slow and fragmented style of reading. L-type dyslexics make the developmental shift to left hemisphere mediated reading strategies too early, leading to a hurried and inaccurate reading style.

This book, edited by Bakker's associates, presents some of the most recent investigations which have been carried out within the theoretical framework of the balance model. The selected studies look at the theoretical plausibility of the model, the validation of the subtype classification and the outcome of treatment studies with P- and L-type dyslexic children. The book is intended as a summary or compilation of the most refined works done by Bakker and his colleagues.

Chapter 1 presents the basic assumptions underlying the balance model and compares this model with more cognitively oriented developmental theories of reading and with models based on an information-processing approach. Chapter 2 focuses on the performance of P- and L-type dyslexic boys and their parents on a series of cognitive tasks. The data obtained did not allow for any inferences as to the development of P- and L-type dyslexia from childhood through adulthood. Chapter 3 examines differences in the word recognition strategies between P- and L-type dyslexics. L-type children may (have to) adopt a direct 'logographic' reading strategy to compensate for their problems in analysing letter features, whereas the lexical problems P-type children exhibit may lead them to rely on a slow indirect reading strategy. In Chapter 4, the use of electrophysiological methods

in assessing brain involvement in reading is discussed. The application of one such technique, the so-called probe-evoked potential (EP) method, is illustrated in an investigation of text reading in P- and L-type children.

The next three chapters deal with the outcomes of a number of neuropsychological treatment studies that have been performed in both experimental and clinical settings. Chapter 5 focuses on the early identification and treatment of preschool children at risk of developing dyslexia. Chapter 6 summarises the neuropsychological treatment methods used by Bakker and his colleagues in the out-patient clinic at the Paedological Institute of Amsterdam. Finally, Chapter 7 presents an extensive treatment study aimed at exploring aspects of hemisphere-specific stimulation (HSS). The study is in fact a replication of a previous study performed by Bakker and Vinke in 1985. It is heuristic and informative pointing out the virtues and drawbacks of Bakker's model. The authors offer a critical appraisal of the model and at the same time address the issues of internal and external validity. They also consider the possibility that Bakker's model of dyslexia is in need of revision. As Bakker (1990) himself admits, the L-P classification needs improvement and a standardised approach that is both reliable and valid must be developed.

This book discusses the development of the balance model, the etiology, validity and treatment of dyslexia subtypes as well as the theoretical and practical questions the authors are faced with at present. It examines some of the problems encountered in translating scientific theory and experimental evidence into the everyday practice of treatment. It gives both the research-oriented and the more clinical-oriented readers an idea of the progress made during the last 20 years in studying the validity of L-P type classification and the potential usefulness of the neuropsychological interventions for dyslexic children.

It is clear, however, that a number of questions still need to be addressed. The book is clearly written, has a sound theoretical basis and reflects the authors' own experience with the neuropsychological methods of hemisphere-specific stimulation. The fact that the contributors come from many different countries underlies the appeal of the model beyond the Netherlands. Bakker himself encourages further research on his theory with non-Dutch speaking dyslexic children as well as comparisons of hemispheric stimulation methods with other remediation techniques.

This selection of papers is primarily intended for researchers and/or clinicians dealing with dyslexia but it can also be read by those who are interested in knowing more about the subtyping typology of learning disabled children. One may find Chapters 4, 5 and 7 to be somewhat technical and difficult to understand. The authors critically evaluate the balance model and offer a number of suggestions for future research. Some of these suggestions are applicable to dyslexia research in general. Other suggestions are more specific to future studies of the balance model and the neuropsychological remediation techniques. Furthermore, those who favour a more traditional educational perspective of dyslexia might view Bakker's conceptualisation as having little relevance to how educational intervention is conducted.

In closing, Bakker's associates describe the normal learning to read process and the etiology of two subtypes of dyslexia in terms of cognitive processes and brain functions involved. They offer a neuropsychological explanation of dyslexia with well articulated ideas about the differences in brain functioning between the two subtypes. They clearly demonstrate how a theory (the balance model of reading) has been brought into practice (neuropsychological treatment of dyslexia) and what sort of problems still remain unresolved for the clinician. Future research into the balance model is warranted due to its sound theoretical basis and significant clinical implications for Dutch and other language speaking dyslexic children.

AGLAIA STAMBOLTZIS (University of Manchester)
KATERINA ANTONOPOULOU (University of Sheffield)

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Response

Reviewing a book is less easy than some might think. In order to do the author(s) justice, the reviewer should fully acquire the content of the work and, ideally, also its context. Having done so, the

reviewers should proceed by presenting a representative description of the book's organisation and content, including issues raised by the author(s) themselves. Of course, the reviewers may have their own critical remarks; if so these should be brought forward in a lucid and fair way. The reviewers of our book present all of this and they thus deserve a compliment. This being the case one is left with an inclination to begin a discussion with the reviewers on scientific matters of apparent mutual interest. It is evident, however, that this is not the place to do so; the invitation is there, however.

ROBERT LICHT

School for Women. *By* Jane Miller. London: Virago. 1995. Pbk. £8.99. ISBN 1–85381–713–9.

At a time when gender issues in education in Britain are thought of mainly in terms of boys' failure in reading, the threat of largely male unemployed and undisciplined youth, and girls' and boys' examination scores and their impact on school league tables, this book is a timely reminder of the power relationships within schooling that historically and in the present have diminished and undervalued the achievements of girls and women — in particular, those of women teachers.

As Jane Miller points out, there has been relatively little work on women teachers because 'women teachers are figures of such impossible familiarity that it can seem inappropriate to train any sort of searchlight on them' (p. xii). This reminds us of the one of the main goals of the women's movement and feminism which has been to make visible those aspects of women's experience which have not been thought worthy enough of scrutiny by conventional scholars.

As a teacher of English for many years in a London secondary school and of English teachers at the Institute of Education for the last twenty, Jane Miller's main aim has been to 'hear the voices of teachers themselves'. In this book, she synthesises her work with teachers and the literature about women teachers of her subject, English, into a seductive, sometimes autobiographical exploration of women teachers' experience. She revisits her first article, written in 1975, about her life as a teacher and as a response to *The Black Papers*, noting that current educational concerns were very much a preoccupation then — for example, how to deal with disruptive boys and how to recognise the pastoral duties that fall to girls in the mixed-sex classroom. Significantly, and I think her perception is accurate, she suggests that schools have not become better places for children — indeed the added pressures and in some cases, the dead hand of the national curriculum, has made the world of the classroom even more difficult for many children.

The book comprises a set of essays which revisit a number of themes: for example, the centrality of women's influence and work in education yet their marginality as power-brokers and policy-makers; the historical contempt of women teachers; the process of the feminisation of teaching in Britain and abroad; the lives and experiences of women teachers as portrayed in literature and research; girls' recent educational success and the lessons to be learnt; the contributions of women teachers to literacy and the subject called 'English'; the importance of autobiographical writing to women; and the nature of women teachers' work. For Miller, it is the mixture of the intellectual with the mundane that makes teaching so challenging a calling.

> What makes teaching both difficult and demanding as work, requiring very high levels of intelligence and judgment, is that the day-to-day pressure of the job must always be subordinated to the longer perspective (p. 111).

Miller ends the book with a plea for greater access to 'decent forms of educational provision' (p. 276) throughout life, and a more flexible sense of how that provision could develop — what might be called a Freirian feminist perspective, if that is not a contradiction in terms.

However, this is also an elusive book. Miller suggests that the story of women as teachers 'is a slippery tale but an important one' (p. 1) and this could be usefully applied as a description of the book. It includes some wonderful tales, and thought-provoking analyses, yet its themes and narratives are simultaneously wide-reaching, diverse, fragmentary and shifting. But perhaps this is the intention of the author, aiming more accurately to reflect and communicate the history and day-to-day experiences of women teachers — and so it does.

GABY WEINER (South Bank University, London)

Understanding Changes in Time: The Development of Diachronic Thinking in 7 to 12 Year-old Children. *By* Jacques Montangero. Basingstoke: Taylor & Francis. 1996. Pbk. £14.95. ISBN 0–7484–0471–6.

Before I read this book I must confess that I had no idea what 'diachronic thinking' was but, reading the final chapter, I see I am not alone for Montangero and his collaborators describe the diachronic approach as '...little known and largely uncharted territory' (p. 183). For the unenlightened such as myself, 'I consider the diachronic approach to be a perspective which is not content to describe things in time but instead attempts to understand their development and find in the temporal dimension the explanation of current affairs' (p. 2).

I found this book interesting, honest and intriguing but, as will become apparent, I have serious reservations about the 12 experiments conducted — for the most part — on 7- to 12-year-old children. Before discussing these in detail, however, it is important to acknowledge that the book is clearly written and, as far as I can tell, Pownall's translation is very good. That is not to say that non-Swiss readers will necessarily read it with the ease and understanding that the author intended. For example, I have no real knowledge of the Swiss educational system and, although this knowledge might not ultimately alter my impressions of the work, such a background would have given me a more informed basis on which to judge it. Another possible cultural hindrance was the ingenious idea of using jokes. Montangero argues that many jokes require an understanding of diachronic thinking for one is led to predict what might happen in a story only to be surprised by an unexpected and amusing test. Personally I did not appreciate the humour in the joke used in one of the experiments but then, apparently, nor did eight of the 15 adults in that particular experiment so perhaps more than simply cultural differences were a factor.

In many ways the experiments discussed were of classic textbook quality for they were inventive, they followed clearly specified principles and aims (pp. 15–16) and they evolved in an attempt to acknowledge problems and incorporate refinements as appropriate. Nevertheless the book left me with some serious reservations. The first was that there was insufficient experimental detail on which to base the validity of the procedures. That is not to say that the experiments were not valid but, having read various criticisms (e.g., Donaldson, 1978; Brown & Desforges, 1979), I have a tendency to view such a Piagetian approach with caution.

My second reservation is that some of the experiments may have neglected a full consideration of young children's thinking processes. For example, as part of one of the experiments, the children were asked, 'If someone is rich (poor) is it forever?' I acknowledge that the experiment did allow for additional questions to be asked '...to encourage the subjects to specify exactly what they want to say' but I wonder whether full account was taken of a child's possible need for a security in the belief that if a family is rich they will retain their wealth?

Thirdly, Montangero may have unwittingly expected too much of the children's knowledge and understanding. To illustrate: in Maurice-Naville's experiment, in effect, 7- and 8-year-olds were expected to differentiate between 85 and 1000 years to give an indication of the stage of their diachronic thinking. Kamii (1985), however, suggests that children of this age have very little understanding of the place value system thus, perhaps, mathematical — rather than diachronic — conceptions were being tested in this instance.

There is no doubt that *Understanding Changes in Time* raises some very important questions regarding children's development in diachronic thinking. A greater appreciation of the issues involved could prove extremely valuable when explaining such complex concepts as birth and death to young children. My main difficulty with the book however — the above remarks notwithstanding — is that I would have adopted an entirely different approach to the problem. Here is not the place to launch into a major discussion of the merits of a traditional experimental style versus a more child-centred qualitative approach. Suffice it to say that I have great respect for both traditions. I would argue, however, that Montangero has investigated diachronic thinking from an unnecessarily abstract perspective. Rather than presenting the children with objects and questions which may or may not have been part of their knowledge base, why did he and his colleagues not have conversations with them focusing on their lives and experiences? Could the children not have told their own jokes rather than relying on their sharing the experimenter's sense of humour? Granted such strategies would have made it more difficult to systematise the data but the researchers would have greatly reduced the risk of misunderstanding by interacting with the children in as clear and as meaningful way as possible. In

so doing they might have ascertained what the children were actually thinking rather than their reactions to a series of experiments.

In brief, I found this book intriguing and provocative but rather frustrating in its lack of much of the raw data. I am unclear as to its intended audience but I would hope that readers would approach it with scepticism and respect.

ANNE COCKBURN (School of Education, University of East Anglia)

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Response

In her review, Anne Cockburn carefully avoids mentioning any of the findings or ideas presented in my book, but she certainly takes great care to let readers know that the study was conducted in another country, that the book is a translation and that there are possible 'cultural hindrances'. Alien matter, in other words. May I point out that the hundreds of children we interviewed lived only some 500 miles from the coast of Great Britain, in a city of a Western European industrialised country? As a researcher, I am convinced that I belong to an international community whose members judge one another's writings not as imported merchandise but as vehicles of facts (more or less new or valid) and ideas (more or less original and interesting).

In fact, Dr Cockburn is fair to foreign authors: she makes a number of very positive comments about my book. However, she doubts the validity of the results. Is it because there is 'insufficient experimental detail'? For each of the 12 experiments, the book describes the material presented, the main questions asked, the criteria for categorising the answers, examples of answers and frequencies in each category. Do the reviewer's reservations stem from specific weaknesses? The rare examples she gives are not really relevant. Thus she wonders whether I considered a child's possible need for security in the belief that if a family is rich they will retain their wealth. But our results show that even the younger subjects did not think that the economic status of a family is necessarily permanent. They can perfectly well imagine changes in spite of their need for security. As for the inability of 7- and 8-year-olds to differentiate between 85 and 1000, this did not prevent the children interviewed acknowledging that 'in a thousand years' was a much longer time than 'in 85 years', and that was the purpose of the question. I think the main reason for Dr Cockburn's reservation is that, from the outset, she has, as she mildly puts it, 'a strong tendency to view such a Piagetian approach with caution'.

Our approach permitted us to observe innumerable drawings, verbal descriptions and explanations as well as choices of pictures, showing how children imagine the successive steps of evolving phemonena. The results gave a coherent overall picture, despite the fact that children had to imagine phenomena as diverse as the development of their own drawing or verbal skills, the growth or disease of trees, the melting of ice, the flow of automobile traffic, etc. The 7- to 9-year-olds could easily represent changes, but their representations were completely different from those of 11- and 12-year-olds. Only in the latter did we observe the ability to dissociate two connected changes (e.g., the permanent heat of the sun and the delayed and progressive thawing of the ice). They tended, much more than younger children, to represent qualitative stages of an evolution and to explain one stage by referring to what happened before. Naturally, we did not obtain a direct explanation by children of their thinking processes, but productions that revealed certain underlying principles of their representations of change.

The aim of the research was to understand the fundamental components of an evolved form of diachronic (or evolutionary, or developmental) approach, which can be so fruitful in science and enlightening in everyday thinking. These components are defined in the last section of the book and I frankly doubt that the conversation method advocated by Dr Cockburn could have yielded as much information about this question. However, I am convinced that her method is an indispensable

preliminary step to any research involving children and that, when compared with results obtained in a more systematic way, it would yield interesting complementary facts and possible confirmations or contradictions.

JACQUES MONTANGERO

Stress and Emotion: Anxiety, Anger and Curiosity. Volume 17. *Edited by* Charles D. Spielberger and Irwin G. Sarason. Washington: Taylor & Francis, 1996. Hbk. £45.00. ISBN 1–56032–449–X.

Volume 17 of *Stress and Emotion: Anxiety, Anger and Curiosity* is divided into four parts central to stress: (1) coping in daily life (2) the workplace (3) schools and (4) disease. As such it is a seminal research text for health psychology. Impressive data sets come from collaborative international research conducted in Singapore, Norway, India, USA, Russia, Canada, Finland and Germany. Each chapter is illustrated by friendly diagrammatic figures and tables. References are supplied at the end of each article. An author and subject index are the book's last entries.

Part 1 consists of five generalist empirical studies. The chapter on social support quickly provides the latest thinking by the highest quality researchers. This one is essential reading for anyone interested in understanding effects of stress associated emotions. Next comes work on stress and passionate love. Three following articles have anger as the central focus. A fascinating exposition of Singaporean anger, an illustration of the MMPI and a Norwegian adaptation of the STAXI (State-Trait Anger Expression Inventory) inventory are all there.

The story of social support is comprehensive, all major contributors are acknowledged and the links between critical concepts and empirical findings are matter-of-factly made for the reader. Such academic consideration guarantees frequent reading of this section by all levels of health practitioners and serious researchers. Explanations and demonstrations for using MMPI and STAXI inventories make the reader feel as if they are walking beside the researchers rather than lagging three paragraphs behind in comprehension. A superb example of accessible scientific writing.

Workplace stress and emotion consists of four articles with data coming from three diverse cultures. Occupational stress is presented Russian style: conflict experienced by employed women with family responsibilities is presented in an Indian context. The USA provides the scenario for two studies, one focusing on the impact of time urgency in nurses and doctors and the other is a work stress effects investigation looking at people with mental problems. This section aptly demonstrated that sustained negative emotions may predispose workers to diseases of adaptation. Having samples from very different nations demonstrate that the non-specific psychological stress response and psychological effects are not culture bound.

Part 3 contains two research studies on physiological and psychological ramifications of anger in an unusual population for health psychology research — that of high school students. An inclusion heralds a sensible step: that of examining how teenagers cope with the long-term poisonous emotions of anger in an achievement-orientated environment. Ineffective methods of coping such as holding 'anger in' begin in young populations. These findings endorse the need for preventative psychological and behavioural programmes for screened youth judged as vulnerable to long-term chronic health problems.

The jigsaw is completed in Part 4. Ominous warnings about the inevitability of chronic disease in populations with hypertension, good manners and post-traumatic stress disorder are to be found on these pages. Habitual creeping about trying not to offend those deserving of censure will probably kill you. Confronting sources of agitation are potentially life-saving behaviours. The PTSD chapter is posed to be a future first stop for the interested wanting a succinct coverage of theory, treatment and assessment of PTSD.

'Anger, Stress and Emotion' gathers first class research into a gripping scientific tale for global strand of health psychology. The message is that people who are complacent about their anger expression habits need to be more prudent about the wisdom of suppressing their strong emotions.

ANNE MCGOWN (Psychology Department, University of Canberra, Australia)

Response

Our thanks to Dr McGown for her excellent review of Volume 17 in our continuing series on stress and emotion. Her cogent and comprehensive overview of the contents of this volume, and her insightful comments on the significance of the theoretical issues and empirical findings that are reported in individual chapters are gratefully appreciated. We also concur with her general conclusion that one of the major messages of our book is that people who are complacent about their habits of anger expression '...need to be more prudent about the wisdom of suppressing strong emotions'.

There are several additional important messages in the chapters of our book that we would like to call to the attention of readers of the Journal. The initial chapter by I. G. Sarason *et al.* provides a detailed review and analysis of theory and research on social support, and breaks new ground in examining relations between social support and its impact on anxiety and coping. The chapter on 'Stress and Passionate Love', by Elaine Hatfield and Richard Rapson, also breaks new ground in directing attention to the turbulence that is often associated with passionate love, and how this may increase vulnerability to both mental and physical illness.

As Dr McGown has clearly noted, the major theme in our book is on assessing the experience, expression and control of anger, and on how anger and hostility are related to Type-A behaviour, elevated blood pressure, and heart disease. She also accurately notes the increasing cross-cultural interest in occupational stress as indicated by the chapters in Part II that report recent findings on the effects of stress in the workplace on managers, health care professionals and persons with severe mental disorders.

I would especially like to call the attention of BJEP readers to the longitudinal study of operator managers who monitored a complex telecommunications network in the former Soviet Union. In this unique study, Professor Leonova followed the same group of managers over a period of six years and recorded job performance and satisfaction, emotional strain, and the psychosomatic symptoms they experienced in adapting to technological innovations. Although technical modernisation and automation reduced boredom and fatigue, cognitive overstrain and anxiety were also experienced, which, over time, resulted in psychosomatic symptoms.

We heartily agree with Dr McGown's observation that the contributors to *Stress and Emotion, Volume 17*, have presented a 'gripping scientific tale' that we believe will have 'global significance' for clinical, industrial and health psychology.

CHARLES D. SPIELBERGER

Autism: An Inside-Out Approach. *By* Donna Williams. London: Jessica Kingsley. 1996. Pbk. £12.95. ISBN 1–85302–387–6.

Donna Williams is autistic, and author of two previous books, *Nobody Nowhere* (1992), *Somebody Somewhere* (1994), famous as poetic and challenging representations of her life. Donna also scripted a TV self-portrait, *Inside Out* (Channel Four, 1995), which with grace and humour showed the fascinating but disconnected world she shares with Paul, who has Asperger's syndrome, starkly representing her clashes of experience in the world of non-autistic people. Now she analyses further what being inside autism is like, to explain what autistic people can do for themselves, how to accept and live with autism's confusing effects, and how clinical and psychological experts with their pet theories can misunderstand, adding problems. Her world presents an immediacy that it rings bells in us 'non-autistic persons'. Maybe we are all echoing one another in our words.

'Mono' (one-track) sensory processing, fragmented reality, fragile self-perception and bewildering social situations are abundantly described, and dozens of treatments (including special diets), sensory aids (such as coloured spectacles), and practices or 'artificial limbs' that aid her memory and self-control are reviewed. These are very valuable, but Donna Williams' convictions can be puzzling. Sensible do-it-yourself remedies or behavioural strategies are mixed with doubtful ones. Most unhelpful is her coolness toward any interpersonal approach, such as music therapy, or the Option Method, that relies on responsive communication. She portrays non-verbal communication as intrusive, warning against 'false affection'. Psychoanalytic methods are rejected.

Carers and teachers trying to support autistic children's education, hoping to help them to grow with joy in their lives, especially if they work with toddlers or with persons who have little or no speech, may be discouraged by these negative beliefs. The final chapter on education, shortest of the lot, is almost entirely devoted to advice about how to organise the teaching environment. There is no place for the active support of others, so important with young autistic children, let alone the 'energy, excitement and enthusiasm' advocated by the Options Method. I offer these cautionary remarks diffidently, because I am one of the academic psychologists she heartily mistrusts.

Donna Williams understands herself as hampered by disorganised senses and unstable impulses, which she seeks to regulate. She says that typing her books with no conscious constructing or logical plan, let free self-discovery. Authorship exposed a rich and fragile consciousness that she must protect. She wants to give voice to others with more profound autism, to explain their hyper-sensitivities, emotional outbursts, confusions, fears, needs for integration, and for protection from bewildered separateness from other humans with their collective 'other' world. She finds solutions in the new psychology of autism.

Autism is big news in cognitive science, developmental psychology, brain science and philosophy. Could it be the key that unlocks understanding of human mental machinery? Cognitive abilities of autistic subjects have been measured against those of individuals with different mental handicaps or mind disorders. Brain scans show local neural activity of autism with increased precision. Post-mortem examinations locate abnormal brain cells and connections. Diagnosis is precise and rigorously standardised, and statistical analysis shows a great range — a 'spectrum' of autistic disorders. Surveying this explosion of knowledge one observes that it theorises about restricted features of human consciousness in certain tests, or narrow biochemical or neurophysiological questions. An articulate account from 'inside' autism should be a valuable corrective to one-sided models.

But Donna Williams is modern not just in her fluency on a microprocessor keyboard and her sense of a right to social 'liberation' as a person. She is a convert to the rational cognitive and medico-biological view. She explains autism in terms of sensory information thresholds, processing pathways, categories in context and accessing of memory reservoirs, describing a factory of consciousness, a machine intelligence. Emotions and body chemistry problems are not mental and are to be treated by dietary regulations. Autism is not 'psychological' because it is a 'processing disorder', not an emotional disorder. For Donna Williams, as for ourselves, living in an increasingly technology-managed reality, it is so easy to treat the muddled mind as a badly programmed information processor — to think that our confusion is a structural fault in channelling of sensory systems and informational resources; to forget that we are born and remain all our lives something more sympathetic and creative than any cognitive system that IT engineers have conceived. Mind is more coherent in its regulations, and autism touches more than just the perceiving and thinking process.

The author, deeply suspicious of 'outside' knowledge, from books, also scorns the clinical insights of Kanner and Asperger and all efforts to find reliable diagnostic criteria. In mistaken belief that everyone should behave the same, and desiring to be kind, experts try to instruct 'autistic' people in 'more normal' behaviour and thinking. The 'jam jar' labelled 'autism' is a myth or conspiracy of the 'outside' view. Most treatments manage the needs of the treaters, rather than the treated. The approach of the so-called 'normal' world, however well-meaning, is represented as usually insensitive and unhelpful, even persistently handicapping. We are told how it feels, and appears and sounds to someone who cannot integrate the events of others' frantically changing, information-rich world, and its 'blah, blah, blah'.

The book is at its captivating best when metaphors and neologisms stretch the language almost out of recognition, manufacturing meaning — and especially in fictionalised summaries of cases, different from her own, in an imaginary special school — to illustrate the variety of predicaments persons with different conditions of autism get into, and how to circumvent, make right, or allow them to find more satisfying and autonomous functioning. It is truly remarkable in imagination and richly informative. It offers a valuable bridge — or half of one. There is yet more to understand about developmental origins and education of autism, about its emotional side, about how to minimise its effects and enhance the development of minds that can communicate and share the world richly with companions who are not different in this way.

COLWYN TREVARTHEN (Department of Psychology, University of Edinburgh)

Response

Last century, the hearing wrote of the perception of the deaf, how they would learn, what they were capable of and what not and the deaf very often lived down to these expectations rather than up to them, some achieving, in spite, rather than because of the practices of the time. Since then, the deaf now inform about the reality of the deaf and how they are taught and brought up and deaf people have made big advancements ever since, and largely, in Colwyn's review he speaks of my puzzling convictions.

Autism today is like deafness last century. Only recently have people with autism been listened to. Even then this was often only to be asked not how they perceived the world with a hope to enlighten current therapies and practices. Instead, largely, they were more often directed to tell how they'd got their driving licence, got married, got a job. I, myself, when first asked to speak publicly, was more often than not asked to talk of my achievements, not of my mechanics (my reply was this would waste valuable space where I could actually get to the issues of mechanics). Useful stuff to raise awareness of ability within the label but not very challenging to the status quo with regards current therapies for many so called high-functioning people who achieved such things did so in spite of current approaches and therapies, not because of them, particularly those born in the sixties and before.

Colwyn Trevarthen has some good things to say about my book but has cautioned people to consider that it is a personal book, not a professional one. He, himself, is a person who values highly his formal qualification and his particular discipline. My philosophy is that there is no one size fits all approach to autism, that there are many faces of it and no one approach can address them all nor even address any one of these 'autisms' adequately full stop as the condition is too dynamic, the therapeutic needs often changing with different phases because it is a *developmental* disorder. I believe strongly that text books and approaches which dictate they are THE way to understanding and working with autism have started with the false premise that there is some kind of ONE autism, able to be fathomed by non-autistic theory rather than read from the walking-textbook subject themselves. So philosophically, Colwyn Trevarthen and I live in different worlds.

He criticises me as slamming certain approaches. My book is not about this but in order to clear the way to the rest of the book, current approaches had to be considered. I see myself as having not so much slammed certain approaches as suggested the drop the religion-type dogma and consider accommodating flexibility in their approaches. I suggested ways of adapting current approaches in certain cases so they could be more useful. Why, for example, can't an Option technique accommodate an indirectly-confrontational approach with people with exposure anxiety if this is what the person themselves is displaying? Why can't psychotherapy consider utilising the useful technique of play therapy without then reading everything back through psychoanalytic assumption? Why can't music therapy get away from the instruments and back to sound itself if the very focus on the conventional use of instruments freezes people with exposure anxiety out of using them yet they may be well able to tap the drum stick rather than tap with it — it's all music isn't it and the path to the directly-confrontational may be via an indirectly-confrontational route. Even holding therapy, which I dare criticise without the mercy in a way a non-autistic professional may not dare, I considered an adapted use for, albeit not the use the technique itself promotes itself as using.

Colwyn Trevarthen suggests I am a convert to a rational cognitive and medico-biological view as though this were some criticism. My view is if your car is slow on a fast motorway there are two ways to speed it up: get the fuel system sorted so the motor can run better if possible and find ways to make the rest of the traffic appear slower at least some of the time so the slow vehicle experiences itself as part of things, as keeping up. Like many slow cars on a fast motorway who struggled to get from the depth of processing that is the literal to that of the significant, I can think in structures and pure logic often rules. To a non-autistic mind this may translate into 'rational-cognitive' or medico-biological but perhaps it's a good thing to be so detached as to be able to see the structures and assess them without the dogma. I tread on toes with little apology though I try to be polite about it. That professional politeness in the field of autism has so far preserved a lot stagnation. It is the field of autism, more than the autism itself, that has a developmental disorder and if a toe-treader shakes that up a little for some tiny point in time, so be it. As someone very afraid to think or feel for so long, let me tell you, we can survive the challenge. Growing is scary but we can do it.

DONNA WILLIAMS