

## BOOK AND TEST REVIEWS

James Thompson

*Psychological Aspects of Nuclear War.*

Chichester: The British Psychological Society and John Wiley, 1985.

Pp. 127. £5.95

The Royal Society of New Zealand.

*The Threat of Nuclear War: A New Zealand Perspective.*

Wellington: The Royal Society of New Zealand.

Pp. 83. \$10.

*Reviewed by* Barrie G. Stacey.

"It may seem melodramatic to say that the US and Russia represent Good and Evil, Light and Darkness, God and the Devil. But if we think of it that way, it helps to clarify our perspective of the world struggle." Richard Nixon, 1980.

"While the Soviets preach the supremacy of the state, declare its omnipotence over individual man, and predict its eventual domination of all peoples on this Earth, they are the focus of evil in the modern world." Ronald Reagan, 1983.

*Psychological Aspects of Nuclear War* (PANW) was initiated at The British Psychological Society's Annual Conference in 1983. It is a statement published by the Society on the contribution of psychology to the issues of nuclear war and its aftermath. It is not about the immorality of such war, nor is it about the politics of disarmament or arms control (but see Markey, 1985; Prins, 1984). It is primarily about (a) the way people are likely to react to nuclear warfare; (b) human fallibility and the possibility of an accidental nuclear war; and (c) reducing the threat of nuclear war with particular reference to negotiations and conflict resolution.

The book has a good deal to say about human reactions to disasters, including the bombings of Hiroshima and Nagasaki, but it has little to say about the cognitive processes underlying the judgments and actions of key political, military and industrial governors of nuclear weapons. For example, both the thought processes and the power issues that relate to the perceived utility of nuclear weapons, deterrence theory, nuclear war-fighting postures, flexible-response strategies, worst-case assumptions, nuclear blackmail,

security, safer-defence strategies, non-provocative forms of defence and defence without nuclear weapons are not dealt with directly.

*The Threat of Nuclear War* (TTNW) is a NZ Royal Society report that presents a readable, multi-disciplinary, scientific description of the nuclear threat with reference to New Zealand. Auckland psychologist M.C. Corballis contributed to the report. Its contents overlap with the major themes in PANW though its treatment of these themes is much less detailed. It surveys what is known about nuclear weapons and the consequences of their use, drawing attention to the "importance of penetrating the language and examining the assumptions made in the propaganda about 'nuclear deterrence'" (p. 1). It examines the tasks involved in maintaining a state of absence of nuclear war (or "peace") and in attempting to achieve some reductions in nuclear armaments. It is highly critical of those scientists and technologists who have promoted nuclear weapons and strategies, and further their own career interests in this way (pp. 32-36). There is a suggestion that at bottom the momentum of the arms race has been maintained by the vested interests of these people in both government employment and the armaments industries.

The authors of both publications treat the USA and USSR as nuclear superpower equivalents. They clearly avoid the witless anti-Russianism which has been a pronounced feature of politics in the English-speaking world for many generations. They have striven for neutrality or non-partisanship, concentrating on the nuclear threat to humanity. This approach, however useful, generates some limitations stemming from the substantially different historical experiences of the nuclear powers. These include; (a) USA-USSR differences in experience of foreign invasion and occupation; (b) USA-USSR differences in the human and economic costs of warfare to their peoples; (c) past invasions of Russia/USSR by Britain, France and the USA which have not been paralleled by Russian/Soviet invasion of Britain, France or the USA; and (d) the rapidly increasing nuclear arsenals of Britain and France which are turning them into nuclear superpowers. The fears of the Soviets have very different bases from those of their opponents.

Neither publication discusses the Thatcher government's submarine transport of nuclear weapons to the Argentinian coastal area during the Falklands War and its alleged preparedness to use them against the Argentinians in order to win the war at any cost. This strategy was in accord with the Thatcher government's assertion that for nuclear weapons to be credible, there must be a resolve to use them. It is unrealistic to assume that Western powers will only use nuclear weapons against military targets when they face a nuclear attack (Chomsky, 1984). Further, NATO has consistently refused to make a "no first use" commitment regarding nuclear weapons and retained the option of "anticipatory nuclear retaliation".

Both publications conclude that the danger of an accidental nuclear war is not sufficiently appreciated and that this danger cannot be eliminated by improving safety measures. Human fallibility is a feature of the nuclear command, control, communication and intelligence (C<sup>3</sup>I) systems. Problems inevitably arise from environmental conditions that impair skilled human performance, from time pressure, emotional states of personnel, information ambiguity, information overload, stress, and alcohol and drug abuse by personnel. In addition, quick political decision-making in a nuclear 'crisis situation' may be no better than decision-making after the 1914 assassination at Sarajevo or during the wild, inflamed sitting of the 1982 British Parliament which launched the task force to the Falklands. In TTNW the authors point out:

In neither country [USA and USSR] do political leaders have the tight control over nuclear arsenals given in public relations statements . . . It is something of a paradox that we have to depend on the efficiency and reliability of *both* rival command systems in order to avoid an unintended or accident holocaust (pp. 40-41).

There is a place for psychologists in meeting the problems posed by the accidental threat of nuclear war, including the dissemination of information about it (see also Markey, 1985).

These publications report that the total number of nuclear bombs exceeds 50,000 and is continuously increasing. There is general

scientific agreement that a nuclear war between the super-powers would be a global catastrophe because of its long-term climatic, ecological, medical, economic and psychological consequences. There is also growing acceptance of the conclusion that such nuclear warfare would defend nothing; but would destroy our world, even if some human life were to continue.

In the event of a nuclear war, though the fatalities and casualties would number thousands of millions of people, currently scientists believe there would be human survivors. This assessment had led some analysts to be greatly concerned with the aftermath of a nuclear war, and this is evident in both publications. Psychologists have contributed a great deal to our knowledge of human reactions to disaster. They are beginning to consider the implications of disaster research for civil defence. Together, PANW and TTNW indicate the consequences of a nuclear war for New Zealand, the massive problems that survivors would have to deal with after the sudden catastrophe, and the preparations we could initiate to help survivors cope with their situation without any outside help (see also Locker, 1985). In TTNW it is argued that survivors would have to create a mixed, self-sufficient, socialist, pioneer economy somewhat like that of Albania. Within Civil Defence, to aid chances of survival after a nuclear disaster, research and planning specialist Dr George Preddey has proposed a two-tier, subsistence/high-technology economy for New Zealand with strategic civil defence objectives given precedence (Preddey, 1985).

Given that a nuclear war will result in a global catastrophe, then superpower use of nuclear weapons will be catastrophic for the user even without any retaliation from the victim. This appalling outcome indicates the highly dangerous futility of present doctrines about defence, deterrence and a winnable nuclear war. In 1979 Earl Mountbatten declared:

The nuclear arms race has no military purpose. Wars cannot be fought with nuclear weapons. Their existence only adds to our perils because of the illusions which they have generated (TTNW, p. 43).

And in 1981 George Kennan, former US

Ambassador to the USSR, stated:

To my mind the nuclear bomb is the most useless weapon ever invented. It can be employed to no rational purpose. It is not even an effective defence against itself" (TTNW, p. 44).

Paradoxically, reliance upon the alleged defensive value of nuclear weapons inhibits national defence in its traditional sense in many countries, including Britain, Australia and New Zealand. The Royal Society of New Zealand calls upon scientific and professional associations "to inform and educate government and the public in the various specialist aspects of the potential dangers of nuclear war" (p. 45).

Since the end of the Second World War the USA and USSR have had over 6,000 official meetings, and failed to halt the increase in nuclear weapons. It appears that negotiations have often been badly conducted by participants primarily concerned with vested political, weapons and military alliance interests. PANW states that these participants could make far more use of known bargaining techniques and suggests a number of ways in which nuclear negotiating could be improved. In these suggestions there is a stress upon effective communication, avoiding distorted perceptions, the legitimate expression of emotions (rather than angry rhetoric), moving away from entrenched positions, focusing upon the interests of all rather than vested sectional interests, crisis consultation, prevention of crises, and nuclear accident prevention. It is argued that private negotiating is less fraught with difficulties than negotiating in public. Further, PANW suggests the nuclear powers would benefit from engaging in common tasks; for example, establishing a jointly staffed, crisis control centre, collaborating to reduce the possibility that terrorists may obtain nuclear weapons, and jointly supporting mediation efforts in other conflicts.

TTNW refers positively to the McNamara and Spencer programmes for reducing nuclear arsenals as "attractive proposals" (p. 44). However, as both programmes seem to assume an American military presence in Europe not matched by any Soviet presence in Canada and Mexico, and both call for massive increases in non-nuclear arsenals of

weapons, they look politically unrealistic. The Russians are geographically located in Europe and, 300 years since Peter I became Tsar, Western governments have not yet come to terms with this location. Soviet reactions to an American presence in Europe as part of its policy of USSR Military encirclement cannot be ignored. In addition, there are problems associated with the imbalance of power between the superpowers for "the international system is dominated by the US and its interests" (PANW, p. 90). Surprisingly, TTNW does not examine the possibility of enhancing 'third-party', non-nuclear nation participation in negotiations and conflict resolution. PANW does not examine this possibility either.

Broadly, both publications promote the political option of improving the international climate by constructive diplomacy. Given the massive problems that have continually set direct negotiations on nuclear weapons and international conflict, and the fact that not one weapon has been destroyed by agreement, in both publications more attention should have been given to unilateral initiatives. PANW refers to Osgood's (1962) negotiating proposal called graduated reciprocation in tension reduction, whereby each power effects its own initiatives on the basis of reactions to actions taken by the other side. This proposal is apparently acceptable to the Soviets who use the phrase "the politics of reciprocal example" (Shorokhova, 1985). In fact, the nuclear powers have taken some very small unilateral initiatives to improve international relations. Further, in 1963 the Kennedy and Khrushchev governments carried out a series of unilateral moves within constrained limits. But the US government became alarmed at the speed of Soviet reciprocation and Kennedy's assassination ended the process. It is claimed that military activities in the USSR can be unilaterally monitored by the USA, which means that the USA can adequately verify a wide range of agreements (Hafemeister, Romm & Tsipis, 1985). Unilateral initiatives, like other strategies, do allow the participants to aim at least for some "small wins" and thereby avoid being paralyzed by the scale of the nuclear threat (Wagner 1985).

Neither publication deals explicitly with the

option of unilateral nuclear disarmament (and nuclear-free defence). Political movement in favour of this option has taken place in the recent past, and it is increasingly being taken seriously by politicians, high-ranking military figures and other specialists. The unilateral argument that risk of the very worst possible political consequences of unilateral nuclear disarmament is preferable to the risk of a nuclear holocaust is not necessarily naive, irresponsible, subversive or treacherous (Clifford, 1984). Hard-headed, pragmatic, nuclear-weapons realism has brought us to the present perilous situation. It is a pity that these publications did not examine closely the thinking and behaviour of those political, military, business and scientific figures who contemplate world-wide cataclysmic destruction by use of nuclear weapons to protect their positions, establishments, and way of life.

The appearance of these two publications dealing with the greatest threat to humanity is welcome, notwithstanding their omissions and shortcomings. Each brings together a good deal of useful material in an easily digestible form. They have appeared at a time when official circles in New Zealand have begun to take the 'nuclear winter' research findings seriously, and to become concerned both about the nuclear arms race and the possibility of more international proliferation of nuclear weapons. Clearly some people will dismiss much of their content because they believe a nuclear war will result in the death of the human race. These people will also reject any proposals for expenditure directed towards helping potential survivors of a nuclear war as a complete waste of resources. However, if there is the slightest chance of people surviving such a war, is it not worthwhile devoting a proportion of our defence resources to this possible contingency? Finally, there are fatalists who believe New Zealand is insignificant on the world scene, totally incapable of influencing events or doing anything about the threat of nuclear war, and that everything else is irrelevant including publications about nuclear war. As a profession, surely psychologists should be actively resourceful in contributing to the human effort to deal with this nuclear threat, rather than helplessly wait for doomsday.

## References

- Chomsky, N. (1984). The United States: from Greece to El Salvador. In N. Chomsky, J. Steele & J. Gittings. *Superpowers in collision*. London: Pelican, 2nd edition.
- Clifford, P.R. (1984). *Politics and the Christian vision*. London: SCM Press.
- Hafemeister, D., Romm, J.J. & Tsipis, K. (1985). The verification of compliance with arms-control agreements. *Scientific American*, 252, 29-35.
- Locker, R. (1985). After the nukes. *NZ Listener*, July 6, 22-24.
- Markey, E.J. (1985). The politics of arms control. *American Psychologist*, 40, 557-560.
- Osgood, C.E. (1962). *An alternative to war or surrender*. Urbana: University of Illinois Press.
- Preddey, G. (1985). *Nuclear disaster*. Wellington: Government Printer.
- Prins, G. (1984). *The choice*. London: Chatto & Windus.
- Shorokhova, E.V. (1985). Psychologists of the world for the prevention of nuclear war. *Psikhologicheskii Zhurnal*, 6, 3-8.
- Wagner, R.V. (1985). Psychology and the threat of nuclear war. *American Psychologist*, 40, 531-535.

Nirbhay N Singh and Keri M Wilton (Eds). *Mental Retardation in New Zealand: Provisions, Services, Research*

Christchurch: Whitcoulls, 1985

Pp. 308, \$23.50

*Reviewed by Ivan L Beale*

According to the preface this book has been written for parents, students, researchers and practitioners in the field. It is also intended as a resource for professionals and those who teach others about mental retardation. The book includes descriptions and some evaluations of the wide (yet insufficient) services available to the mentally retarded in New Zealand, some comment on relevant professional training, legal, ethical and educational aspects of mental retardation, chapters on behavioural and pharmacological management, and most importantly, a parent's view of provisions, services and research.

Up till now, the several areas covered in the book have either not been reviewed at all or have been reviewed in inaccessible places. Demand for the book is therefore likely to be strong, and Drs Singh and Wilton must be congratulated on conceiving a book of such potential value.

How well does the book meet the aims of its editors? Perhaps the most important consumer is the parent of a retarded child.

The provision of a chapter giving a parent's perspective allows some insight into the needs that a parent might hope would be met by this book. In her moving and lucid essay, Lesley Max not only gives the reader some feeling for the parent's ordeals, but makes a number of cogent suggestions about existing services and points out vital areas in which information to parents is lacking. In particular, she writes of the need for "... a thorough survey of present services, including who is teaching what, to whom, in what setting and with what results." This book, one might hope, would provide just that. The chapters on services and behavioural and pharmacological management do meet this need to a fair degree, although the descriptions of content of some programmes are a bit thin and the analyses of efficacy are not strong or clear. The research oriented chapters (15 and 16) are perhaps the best in this respect, although there seems no reason to restrict the review of behavioural techniques to New Zealand studies while that of pharmacological management is international in scope. Incidentally, I thought that in the review of drug effects (Ch. 16) undue emphasis is placed on negative results. For example, it is concluded that stimulants have little therapeutic effect with the severely retarded. While this may be true in general, there are certainly some individuals in this category who respond well to methylphenidate and perhaps parents and physicians should not be deterred from trying it, on a trial basis, with careful scrutiny of effects.

Returning to the "parent's view", a plea is made for evaluations of treatment that weigh the possible gains against parental and child effort. A realistic cost-benefit analysis of this sort has not been attempted in this book, nor is it easily gleaned from accounts of treatment offered. The beginnings are there, but it is probably too soon for a realistic analysis of this sort. This issue points up an omission from this book that I found surprising. There is no mention of Doman and Delacato's "sensor-motor patterning" therapy, despite the considerable interest shown in New Zealand in the past decade. Sure, it has been widely discredited on several grounds, especially cost effectiveness. But new parents have to learn this from somewhere, so why not include it here?

In her documentation of parents' problems, Lesley Max asks for clarifications of parents' rights of access to medical and other records relating to their child. One might hope that the chapters on legal and ethical aspects of retardation would be helpful on this point, but it seems to have been overlooked. By the way, the chapter on ethics, while excellent theoretically, makes little reference to current practices in this country. It tells parents what they have a right to expect, but does not prepare them for what they will find.

As someone with research and teaching interests in mental retardation, I find this book a valuable resource. I have already had recourse to my review copy on several occasions, usually in response to students' enquiries. My only minor criticism from this point of view is that there are too few items in the subject index. Some important material in the book is not indexed, at least not where I expected to find it, so prospective purchasers should not take the index to be a complete guide to the content.

The book has its greatest strength as a handbook for professionals. It tells them what's going on in the field locally and how to get access to it. Everyone concerned with mental retardation, especially medical practitioners, should have a copy at hand. At only \$23.50 it is really excellent value.

Hazel E. Nelson

*National Adult Reading Test (NART)*

Berkshire: NFER-Nelson Publishing Company Ltd., 1982

Supplied through NZCER

*Reviewed by Helen Fearnley*

The aim of this test is to predict premorbid intelligence in patients with dementia. It is not usual for patients presenting with dementia to have been intellectually assessed premorbidly, and it is often a problem for the psychologist faced with a patient who is either possibly or clearly demented, to get an idea of their previous level of functioning. An estimate of premorbid intelligence is often made from the age-scaled vocabulary subtest of the WAIS. However Nelson (1982) has found that vocabulary subtest scores of the WAIS are more likely to be affected by

dementia than are scores on a word reading test.

Because of the difficulties in trying to estimate premorbid levels of intellectual functioning, Nelson looked for a universally applicable indicator of premorbid intelligence. She had noticed that during routine assessments, patients with dementia appeared to be able to read well. However before using reading ability as an indicator of premorbid intellectual level, it had to be shown that reading ability is highly correlated with general IQ level in the normal population. It also needed to be shown that reading ability is maintained at (or near) its premorbid level in patients with dementia. Nelson and McKenna (1975) went on to demonstrate that the product-moment correlation between the WAIS full scale IQ (prorated from seven subtests) and the Schonell Graded Word Reading Test (Schonell GWRT) was 0.75 in a group of normal adults. There is no reason given why only seven subtests of the WAIS were used (and these were not a recognised short form of the WAIS), nor is the correlation between these seven subtests and a full WAIS given. Nelson and McKenna (1975) also found that a group of 45 dementing non-psychiatric patients performed significantly less well on the WAIS (prorated) than normal subjects, but that their scores on the Schonell GWRT were not significantly different. From this they deduced that the reading ability of dementing (non-psychiatric) subjects was generally well maintained in the face of more widespread dementing processes. However the Schonell GWRT had two major limitations for estimating premorbid intelligence levels. It could not reliably predict premorbid IQs higher than 115, and it contained many long words which could be too complex for a dementing subject to contend with. It was following this that the NART was constructed and standardised.

When discussing the NART rationale, Nelson (1982) says that for a word reading test to be useful in estimating premorbid intelligence levels, it must provide "a sensitive measure of previous familiarity with words rather than a measure of continuing ability to analyse a complex visual stimulus". The majority of English words follow common rules of grapheme-phoneme representation and pronunciation. Because of this the

average literate adult will be able to read these words aloud correctly, even although he/she may not recognise them or be aware of their meanings. These are "regular" words. "Irregular" words were therefore chosen as they could only be read correctly if the subject knew them and recognised them in written form. Short words were chosen so as not to overload the dementing subject's capacity for handling information.

The NART is a list of 50 "irregular" words of increasing difficulty. The subject reads the words aloud and the psychologist records the number of errors. There appears however, to be an error in the instructions. They start "... 'I want you to read slowly down this list of words starting here.' Indicate ACHE ...". However, *ache* is in fact the second word in the list and no mention is made of the first word and whether you score it as correct. Presumably this is a misprint and the instructions should read "Indicate CHORD" (which is the first word in the list). WAIS verbal, performance and full scale IQs are predicted from the number of errors by using the appropriate formulae, or by reference to a supplied table. This predicted premorbid IQ can then be compared with current performance on the WAIS to give an idea of the probable extent of intellectual deterioration. There are standard instructions for this test, and the psychologist is able to give reassurance and reinforcement, it appears to be less stressful for dementing subjects than many other cognitive tests.

If less than 10 words of the NART are read correctly, it is recommended that the examiner combine the results with the Schonell GWRT. A table is given which shows the predicted full scale IQs from the number of errors from both these tests combined. The reason for using the two tests for subjects who are poor readers, is that the Schonell GWRT "contains many easier words so that whereas the NART can only be used reliably to predict IQs in the average range and above, the addition of the Schonell GWRT words extends the range of prediction down to the borderline defective range". The reliability of the NART was assessed by a split-half technique (Cronbach alpha) and gave a reliability coefficient of 0.93.

*Standardisation.* The NART was standardised on 120 inpatients at the National Hospital for Nervous Diseases, London. The

inpatients had extra-cerebral disorders, mainly spinal cord disorders and peripheral neuropathies. There was no mention of whether these patients were having medication, and, if so, the possible effect it might have on their performance, e.g. concentration and attention. The subjects were unselected except no-one younger than 20 years, or older than 70 years, was included. An effort was made to ensure that all age decades had approximately equal numbers in them, but the actual numbers in each decade are not given. The mean age was 48 years (with a standard deviation of 12 years). Subjects were also classified for social class. Subjects were all given seven subtests of the WAIS and from these, verbal, performance and full scale IQs were prorated. Nelson's (1982) only comment about using seven subtests instead of the full WAIS is "since the standardisation group were normal non-dementing subjects one would expect the prorated IQs to approximate closely to their IQs calculated from the full set of subtests". The Schonell GWRT and the NART were both given to the subjects.

No significant correlation was found between age and the number of errors made on the NART (product-moment  $r=0.14$ ), and this was consistent with Nelson and McKenna (1975), who also found no correlation between age and the number of errors made on the Schonell GWRT. Nelson concludes that age has no effect on reading ability in the age range of 20-70 years.

The mean I.Q. level of the standardisation population was above average and the higher social classes were over-represented and the lower social classes were under-represented. Nelson went on to investigate the effects of social class on reading ability and concluded that there is no evidence to suggest that social class has a significant effect on reading ability. As age and social class were not found to be relevant variables in the relationship between general intelligence and reading ability, the simple regressions of intelligence on to reading ability were calculated and equations obtained for predicting premorbid full scale IQ, verbal IQ and performance IQ.

*Test validation.* The Schonell GWRT and NART tests and seven subtests of the WAIS were administered to 40 patients from the National Hospital, whose E.M.I. Scan records

showed evidence of bilateral cortical atrophy (Nelson and O'Connell 1978). Their scores were compared with the 120 normal subjects who were in the standardisation study. The "atrophy" group of subjects had lower IQs than the control group (as measured by the prorated WAIS) (atrophy group — mean full scale IQ=92, SD=16; control group — mean full scale IQ=109, SD=11;  $t=5.4$ ;  $p<.001$ ). The scores of the two groups on the NART were very close (atrophy group-mean error score =23.9 SD =11.2; control group-mean error score =22.4, SD=10.1;  $t=0.6$ ). The scores of the two groups on the Schonell GWRT were also close, but not as close as the two groups on the NART. Nelson concludes that this study, and the earlier Nelson and McKenna (1975) study, demonstrate "that the use of reading ability to estimate premorbid IQ levels in dementia is a valid and useful technique". Nelson accepts that the NART has limited utility for certain subjects. IQs of 125-plus cannot be predicted with good reliability. "At the top range of the test-predicted IQs should be interpreted as lower limit estimates, they should be taken to indicate a premorbid IQ of at least the predicted IQ". The test is also of limited utility with low IQ subjects. Incorrect interpretation of NART results near the base of the test is potentially more serious than incorrect interpretation near the ceiling of the test as it may lead to a false conclusion of dementia in low IQ subjects. The addition of the Schonell GWRT to the NART makes it possible for lower IQs to be predicted. However Nelson (1982) recommends that "if the predicted IQs are less than 80 then the results should be treated with caution because at the present time we do not have enough data to determine how reading ability and IQ level may be related at these lower levels".

The NART as yet, does not have any data for subjects over 70 years of age. It is not an appropriate test for people who have not developed their reading skills to a level commensurate with their intellectual level, or for subjects whose first language is not English. Although the NART does not yet have data from subjects with psychiatric disorders, Nelson (1982) believes "there is no reason to suppose that word reading ability would be impaired by psychiatric disorders". Hopefully New Zealand norms will soon be collected, including norms for "psychiatrically

disordered" people, and for those over 70 years of age.

As the dementing subjects were not assessed premorbidly, one cannot be sure that they were not originally of higher intellectual ability than the controls. It seems that word reading ability is not affected until dementia becomes severe. Ideally a longitudinal study is needed to confirm this and also to define at exactly what level of dementia reading ability may be impaired.

Replication studies are also necessary, but on the limited data so far available, the NART does seem to have potential in the difficult area of estimating premorbid intelligence. It deserves the attention of clinicians and further investigation.

#### References

- Nelson, H.E. (1982). *National Adult Reading Test (NART) for the assessment of premorbid intelligence in patients with dementia. Test. Manual*. NFER — Nelson Publishing Company Ltd., Berkshire.
- Nelson, H.E. and McKenna, P. (1975). The use of current reading ability in the assessment of dementia. *British Journal of Social and Clinical Psychology*, 14, 259-167.
- Nelson, H.E. and O'Connell, A. (1978). Dementia: The estimation of premorbid intelligence levels using the new adult reading test. *Cortex*, 14, 234-244.

A. Pattie & C. Gilleard  
*Clifton Assessment Procedure for the Elderly (CAPE)*

Kent, England: Hodder and Stoughton

*Reviewed by Ruth Ross, Freda Walker & Eric Shelton.*

The authors' principal aim in developing this measure was to provide a brief method of screening the cognitive and behavioural competence of elderly psychiatric patients. It attempts to relate the patient's level of dependence to the likely need for intervention, and thus assumes that there is a continuum of dependency that can be catered for by a continuum of services from community-based social services through hospital care. Subsequently the authors decided the measures could be usefully applied to a wider range of elderly persons, especially in relation to deciding on suitable placement.

The assessment consists of two independent parts which can be administered together or separately. The first measure, the Cognitive Assessment Scale (CAS), was published originally as the Clifton Assessment Schedule (Pattie and Gilleard, 1975) and evaluates the existence and degree of gross impairment in mental functioning. It comprises three sections: The Information/Orientation Test is made up of twelve questions, which relate to time, person, place and general knowledge. The Mental Ability Test assess four well-established skills, reading, writing, counting and reciting the alphabet. The Psychomotor Test utilises the Gibson Spiral Maze (Gibson, 1977) with amended administration and scoring.

The second part of the assessment, the Behaviour Rating Scale (BRS) is a shortened version of the original Stockton Geriatric Scale (Meer and Baker, 1966), and was first published as the Shortened Stockton Geriatric Rating Scale (Gilleard and Pattie, 1977). It consists of eighteen items providing measures of physical disability, apathy, communication difficulties, and social disturbance. The BRS can be completed by anyone familiar with the elderly person to be rated.

The information obtained from these two scales is recorded on the CAPE report form and can then be evaluated on a five-point grading system to establish a level of functioning and dependency, as well as the degree of care and support that is appropriate.

#### *Normative data*

The groups on which the CAPE's norms are based comprise several hundred elderly persons whose level of functioning ranged from independent community tenure, to those who were permanently hospitalized in long stay geriatric and psycho-geriatric wards. The norms are presented in three forms:

1. In terms of a grading system which is derived from the average rounded scores for nine groups of the elderly, each of these subsamples corresponding to a specific level of dependency.
2. By presenting means and standard deviations of the CAS and BRS scores for various groups. The groups represented include those in warden-supervised accommodation, those attending social service programmes by day, and elderly psychiatric and mentally handicapped patients.



3. With BRS ratings alone using quartile ranges of scores, where the subsamples have been drawn from several different institutionalised groups. In this instance, an evaluation of possible misplacement can be made by comparing an individual's score with those of an appropriate placement group.

#### *Reliability*

With respect to reliability, the test manual presents measures for the CAS, and BRS separately. In the case of the CAS, test-retest reliability was measured over a short time (four days) for acute settings, and over a longer time for those in stable residential settings. The rationale for these time spans was that patients being acutely admitted tend to present with greater variability than those in long-term residential settings. In the manual, Pattie and Gilleard (1979) reported correlations of between 0.79 and 0.89 after an interval of three to four days, between 0.56 and 0.90 after two to three months and 0.69 and 0.84 after six months. Test-retest reliabilities were calculated on the scores of thirty-eight (four days) and thirty-nine (six months) subjects, respectively. The numbers of subjects for the two to three month interval was not indicated. The reported reliabilities fall within an acceptable range, however, the authors' claim that a difference of two points or more on retest represents a significant short-term change is unsupported.

The BRS has inter-rater reliability presented both for each subscale and each individual item with acceptable levels of agreement. As Cooper and Bickel (1984) observed, although the CAPE has good levels of test-retest and inter-rater reliability reported, nothing is known about its internal consistency. This needs investigation for the CAPE to fulfil an important requirement of the British Psychological Society technical recommendation for psychological tests (BPS, 1980).

#### *Validity*

Most of the validity data has been established on groups of elderly patients admitted to acute psychiatric wards. For these groups of patients the validity of the CAPE appears to be good. CAS and BRS total scores as well as subscale scores showed significant differences between patients assigned to broad diagnostic categories of functional or organic

psychiatric illness. This was most efficient using the CAS Information/Orientation subtest, where up to 92% of the patients could be correctly classified (Pattie and Gilleard, 1975, 1976, 1978).

CAPE scores have been demonstrated to be reasonable predictors of outcome. A highly significant difference was found on all CAS subtests and the BRS, between the scores of patients who were discharged home within three months of admission and those who remained hospitalised (Pattie and Gilleard, 1978). In their 1978 paper, Pattie and Gilleard reported a moderate degree of predictive accuracy when patients' outcome was assessed at two years, although the practical usefulness of this data as presented is doubtful. Despite rather complicated sets of criteria, many patients were misclassified.

Concurrent validity of both scales has been demonstrated. Both the CAS and the BRS differentiated between groups of elderly people sampled from a wide range of environments, ranging from independent living to chronic geriatric and psychogeriatric ward (Pattie and Gilleard, manual 1979). The manual reports a .90 correlation between scores on the CAS Orientation/Information subtest and the Wechsler Memory Scale (WMS). Prediction of functional status at one year was similar for both measures, with an overall correct classification of 84.5% for the 1/0 scores and 87% for the WMS. The CAS has also been compared with the shortened version of the WAIS (Savage et al. 1973), again reported in the manual. Correlations between CAS subscale scores and the WAIS Verbal and Performance IQs were generally low, particularly for the VIQ where they ranged from .22 to .47. CAS and PIQ correlations were from .35 to .74. At two years follow up it was found that there were significant differences in CAS scores for the three outcome groups, but the WAIS scores did not differentiate the groups. Johnson et al. (1981) reported a correlation of +.80 between the CAS 1/0 and the Test for Reality Orientation with Geriatric Patients (TROG) which measures reality orientation and the patient's knowledge of ward environment and routine.

Wilcock and Wiltshire (1982) used the BRS to establish criteria to be used when assessing the suitability of an elderly person for welfare

home accommodation. Both the Physical Disability score and the total BRS score were useful, with a BRS cutoff score of 13 correctly identifying 90% of the residents considered appropriately placed. However the authors found that Pattie and Gilleard's cutoff score of seven was too stringent and only identified 49% of those correctly placed. This finding is supported by Masterton et al. (1980) and indicates a need for users to establish a cutoff score which is appropriate for their area.

Construct validity of the BRS has been examined in a number of factor analytic studies (Gilleard, 1978: cited in manual Twining and Allen, 1981). The results do not support the existing subscales of the BRS, since the number and substance of the factors which emerge differ with the population being studied. While Pattie and Gilleard (1979) did not believe that this was a major problem in the practical usefulness of the BRS, Twining and Allen have questioned this assumption and pointed out that users of the scale should exercise caution when interpreting BRS scores in terms of the published subscales.

Overall the CAPE seems to have promising psychometric properties, although the evidence for the reliability and validity of the instrument is largely restricted to groups of elderly psychiatric patients, and those properties not reported require further investigation.

#### *Survey version of the CAPE:*

A shortened version of the CAPE has been developed (Pattie, 1981). A series of principal component analyses were conducted on the intercorrelations of CAPE subscale scores. In each of these analyses the consistent finding of a strong first factor accounting for up to 60% of the variance suggested that the CAPE was measuring a central dimension of disability that included both cognitive and behavioural deficits. The shortened scale incorporates the CAS Information/Orientation subscale, and the BRS Physical Disability subscale, since these subscales had the highest loadings on the first factor in all analyses. Reliability and validity of the shortened scale appear to be adequate (Pattie, 1981) and its ease of administration makes it suitable for inclusion in large scale surveys.

#### *Uses:*

The uses reported in the literature are

consistent with the original purpose of the CAPE, which focused on measuring the degree of impairment in elderly people with cognitive or behavioural disability. The CAS has been used as a screening device to exclude subjects with substantial cognitive impairment (eg Simpson et al., 1981) and to establish the degree of impairment associated with various patient subgroups (eg Ballinger et al., 1982). The BRS has been employed when assigning patients to appropriate living accommodation (eg Wilcock and Wiltshire 1982), and, in conjunction with the CAS, in assessing overall dependency in patient groups (eg Mackie and Gledhill, 1982). No studies were found where either scale has been used to monitor changes in functioning, or has been used on a community-living sample.

The present authors, working in the New Zealand geriatric and psychogeriatric field, have found the CAPE to have limited utility as its usefulness is mainly confined to restricted groups of moderately to severely impaired elderly patients. The CAS does not replace a full cognitive assessment, since it is not intended to detect subtle changes or the presence of focal lesions. The ceiling effect at quite low levels of cognitive functioning, the lack of an alternate form, or even evidence of what constitutes a significant change in scores, restricts its usefulness as a monitoring device. The CAPE or the BRS alone could be used to help streamline placement decisions. This would require the establishing of cutoff points for each type of accommodation in the area, in conjunction with the staff of the institutions and the other professional groups involved. Whether this would be cost effective in this country is doubtful. Surprisingly, the CAPE was not included in several major summaries of assessment tools for the elderly (eg Storandt, Siegler and Elias, 1978; Crook, Ferrus and Bartus, 1983; Kane and Kane, 1981).

The CAPE is a useful tool when checking whether a specific person's placement is appropriate. It is also a simply administered and efficient device to be used when screening for gross impairment in large samples of elderly persons.

#### References

- Ballinger, B.R., Reid, A.H. and Heather, B.B. (1982).

- Cluster analysis of symptoms in elderly demented patients. *British Journal of Psychiatry*, 140, 257-267.
- British Psychological Society (1980). Technical recommendations for psychological tests. *Bulletin of the British Psychological Society*, 33, 161-164.
- Cooper, B. and Bickel, H. (1984). Population screening and the early detection of dementing disorders in old age: a review. *Psychological Medicine*, 14, 81-95.
- Brook, T., Ferris, S., and Bartus, R. (Eds.) (1983). *Assessment in Geriatric Pharmacology*; New Canaan: Mark Powley Assoc.
- Gibson, H.B. (1977). *Manual of the Gibson Spiral Maze* (first edition). London: Hodder and Stoughton.
- Gilleard, C.J. and Pattie, A.H. (1977). The Shortened Stockton Geriatric Rating scale: a shortened version with British formative data. *British Journal of Psychiatry*, 131, 90-94.
- Johnson, C.H., McLaren, S.M. and McPherson, F.M. (1981). The comparative effectiveness of three versions of 'classroom' reality orientation. *Age and Aging*, 10, 33-35.
- Kane, R.L. and Kane, R.A. (1981). *Assessing the elderly: a practical guide to measurement*. Lexington: D.C. Heath.
- Mackie, J.E. and Gledhill, K.A. (1982). A comparison of problems and coping reported by supporters of elderly day-hospital patients with similar ratings provided by nurse. *Bulletin of the British Psychological Society*, 35, A14.
- Masterton, G., Holloway, E.M. and Timbury, G.C. (1980). The behavioural characteristics of local authority home residents referred to a geriatric psychiatry service. *Journal Epidemiological Community Health*, 34, 102-5.
- Meer, B. and Baker, J.A. (1966). 'The Stockton Geriatric Rating Scale'. *Journal of Gerontology*, 21, 393-403.
- Pattie, A.H. (1981). A survey version of the Clifton Assessment Procedures for the Elderly (CAPE). *British Journal of Clinical Psychology*, 20, 173-178.
- Pattie, A.H. and Gilleard, C.J. (1975). A brief psychogeriatric assessment schedule validation against psychiatric diagnosis and discharge from hospital. *British Journal of Psychiatry*, 127, 489-493.
- Pattie, A.H. and Gilleard, C.J. (1978). The two-year predictive validity of the Clifton Assessment Schedule and the shortened Stockton Geriatric Rating scale. *British Journal of Psychiatry*, 133, 457-460.
- Pattie, A.H. and Gilleard, C.G. (1979). *Manual of the Clifton Assessment Procedure for the Elderly*. Kent: Hodder and Stoughton.
- Pattie, A.H. and Gilleard, C.J. (1976). The Clifton Assessment Schedule — further validation of a psychogeriatric assessment schedule. *British Journal of Psychiatry*, 129, 68-72.
- Savage, R.D., Britton, P.G. Bolton, N. and Hall, E.H. (1973). *Intellectual functioning in the aged*. London: Methuen.
- Simpson, S., Woods, R. and Britton, P. (1981). Depression and engagement in a residential home for the elderly. *Behaviour Research and Therapy*, 19, 435-438.
- Storandt, M., Stegler, I.C., and Elias, M.F. (Eds.) (1978). *The clinical psychology of aging*. New York: Plenum.
- Wilcock, G.K. and Wiltshire, M. (1982). Criteria for assessing a client's fitness for admission to a welfare home; a practical proposition. *Journal of Epidemiology and Community Health*, 36, 303-305.