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#A QUOTIENT OF AWARENESS

*J. Kearins

Since the development of psychological assessments of 'intelligence' at about the beginning of this century, many groups of people have been tested. By and large, most have performed at lower levels than people of north-western European origin or ancestry, who belong to the culture within which the tests were devised.

Among the poor performers, with average IQ's of 80 to 92, have been people of southern and eastern Europe and Caucasian people from further east (Greeks, Yugoslavs, Iranians, Iraqis, Turks, Indians), tested in their homelands, mostly in large numbers and by compatriots, on 'standard' non-verbal or translated tests.

These relatively poor performances demonstrate the extent of cultural learning of a particular type involved in most cognitive tests. Presumably, north-western European cultural learning is required for good performances on tests coming from this cultural background, so that children from different backgrounds, even those from other areas of Europe, are likely to be disadvantaged.

Children from more widely different backgrounds, such as those from hunting and gathering groups, can be expected to be disadvantaged even further.

Nevertheless, hunting and gathering people have been tested on Western-type tests, and poor performances interpreted as indicating inferior ability. Kalahari 'bushmen' people in the 1930s were assigned a mean mental age of 7.5 by Porteus as a result of their performance on his Maze Test.

In the same period, Aboriginal people of north-west Australia performed poorly on this test, with ages ranging from 8.22 years to 12.17 years for adults. Aboriginal people have performed poorly, but not invariably so, on other tests.

Fowler, for instance, using non-verbal tests of British and American origin, found a wide range of scores in the Gascoyne area of

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Western Australia, some individuals scoring at or above average white Australian levels. He considered the wide range important; it demonstrated that high Aboriginal scores were possible, even on alien material.

Kearney and McElwain, in extensive testing during the 1960s with the Queensland Test, modified from British and American tests, demonstrated clearly for the first time that Aboriginal test performance depended upon degree of European contact. Remote children performed very poorly, those with medium contact performed better, while urban children living in impoverished conditions performed almost as well as the low socio-economic white Australian children among whom they lived.

Similar effects of particular cultural experience are to be found in other test enterprises in Australia. Where language is required for responses (as in Piagetian testing), and English is the language used, these effects can be expected to be especially marked, with children from remote areas performing very poorly.

Yet, if information on how children perform within their own culture is required, then those from the most traditionally-oriented groups should be best able to provide it. For the effective testing of such children, however, more than culturally relevant test material is necessary; social approaches and behaviour familiar to the groups is also required.

Since the hunting and gathering tradition is far removed from a Western industrial culture, it is not at all likely that similar rules of courtesy should apply in both, or that children should behave the same way towards adults.

In psychological testing of all children, motivation and co-operation can be major problems. The tester asks children to produce on demand and for a stranger a very special sample of behaviour, often with time limits set for a response.

Ideally, maximum attention, high motivation, co-operation with the tester, and a degree of ease or relaxation most likely to permit effective problem-solving; are all required. These are mostly assumed to have been present, since results are treated as real indicators of level of ability, yet within Western culture inadequate attention has almost certainly been paid to these factors.

In the testing of children of another culture, the problem is of major significance although it is not often treated as important.

Given the wide differences between cultures *it is clearly unrealistic to take Western testing assumptions virtually unchanged to another culture - for example, that children will accept any adult as an authority figure, that they will 'work for' adults, that question-and-answer conventions are as in Western culture, or that all children are accustomed to injunctions to 'hurry' or 'be as quick as you can'.*

For all children, it is essential that the tester's task be seen as eliciting information about abilities and the careful drawing out of children so that they reveal these abilities, rather than simply applying a test. For people from different cultures, this is very difficult. The tester who sets out to do it must be ready to accommodate every indication of wrong social moves on her part; of polite disinterest in materials, tasks or procedures; of lack of comprehension; or of mistrust, dislike or amusement in relation to her. She must learn and practise the rules of courtesy used in the culture and how they apply between children and adults.

In traditional Aboriginal groups, polite behaviour for an outsider consisted of waiting to be approached and providing all personal information demanded before assuming acceptance. For all people, it required non-intrusiveness, quiet, self-contained and non-domineering behaviour and the recognition of each individual's right to make his own decisions. This applied to children, too, who were reared within a system allowing for their maximum freedom and independence. They were virtually free of the verbal constraints and requirements considered usual by white Australians, and were not expected to work for or with individual adults unless they chose to.

To gain children's confidence, motivation and relaxed attention, the psychological tester must become known to the group, be unhurried, non-mysterious and non-authoritarian, and must treat children as equals.

Children should be seriously invited to participate in tasks, which must be sufficiently interesting to them to gain their willing attention. They should be allowed to work with the tester in familiar ways and surroundings and at a comfortable pace -- out-of-doors, in public view, sitting side by side and working on material at sitting height.

If Aboriginal children decide to attempt a task, they usually show high interest, motivation and unusual persistence, but if *expected* rather than invited to participate, will mostly not refuse. Resultant performances are likely to be poorly motivated, however, and the task may be completed rapidly so that the child is free of the requirement.

Before any serious testing is done, the tester should try to discover whether children are willing to work with her by using a simple task of local interest; poor performances on this are likely to indicate lack of interest in any joint endeavour. If such an attempt to establish a tester's acceptability is not made, poor results may be unjustly attributed to lack of ability in the children.

The abilities of a different cultural group are most likely to be revealed by tasks calling on the cultural learning of that group. The hunting and gathering lifestyle traditionally followed in Australia required skills, abilities, and probably ways of thinking, which differed in some ways from those required in settled agricultural and later industrial lifestyles.

As is the case for Kalahari people, Australian Aboriginal people have been noted (by early settlers as well as later writers) for certain types of knowledge and expertise unequalled in the white community. These include special skill in route-finding, spatial location and tracking, and in survival in inhospitable country and harsh seasons. The latter required high ability in finding and capturing game, finding and identifying edible vegetable foods and locating water.

These skills are still generally used by remote Aboriginal groups and called upon by outback police and white settlers. To a largely unknown extent they appear, also, to characterise Aboriginal groups no longer living in remote regions.

Since the child-rearing practices of any group lead to the sort of adult the group requires and admires, Aboriginal children's experiences can be expected to differ markedly from those of many white Australian children, and their cultural learning to differ in content as well as in style.

The tasks to be tested, or those likely to reveal strengths and thinking patterns of these children, need therefore to be based on known adult skills and the likely daily requirements of the hunting and gathering lifestyle - in the same way that intelligence tests long used in urban Western culture have been successful, in America, for example, because the items they contain are fairly representative of the intellectual tasks that American city dwellers are likely to be called upon to perform.

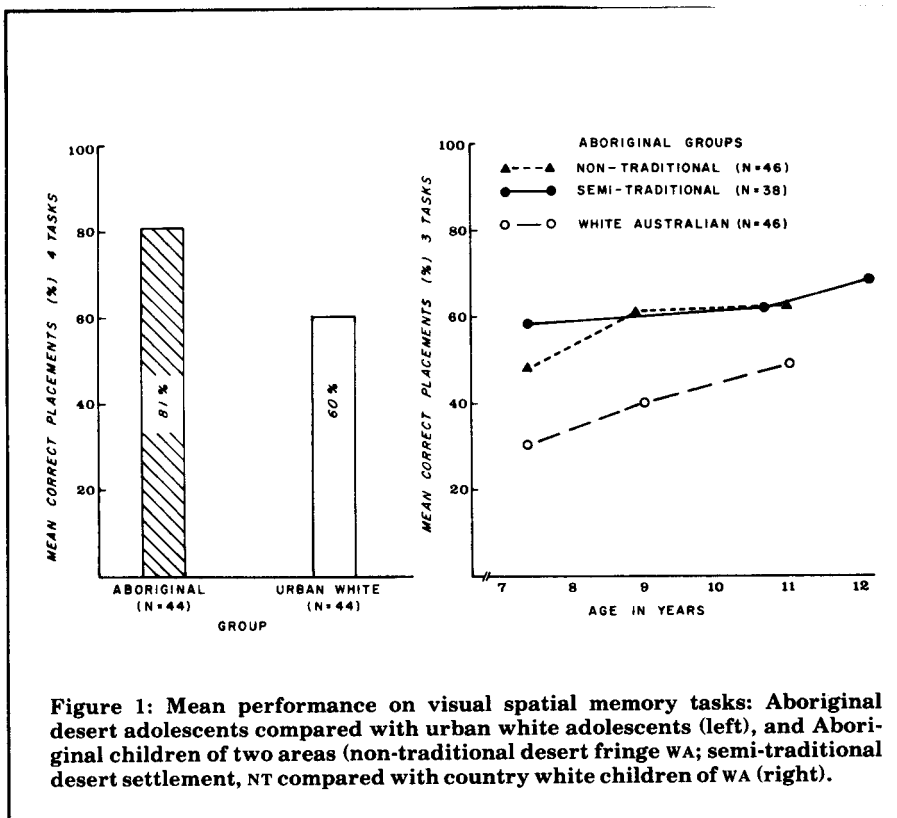
Many subtle features of abilities and thinking style are likely to escape an observer from another culture, but more obvious abilities can be investigated, and indication of style or skill incorporated in

later tasks. Although the process is slow, it should lead to a clearer and more useful picture. The following tasks have been tried in Western Australia and to some extent in two other States. They have provided information on visual spatial memory, verbal and pictorial memory, and some wildlife knowledge.

VISUAL SPATIAL MEMORY

Studies during 1974 and 1975 showed Aboriginal children (from 6 to 16 years) to be superior in performance to white Australian children on tasks calling for memory of relationships between objects in spatial arrays - an ability hypothesised as useful to spatial location in relatively unmarked country; for instance, children were asked to inspect a rectangular array of twenty items for thirty seconds, then to replace the jumbled items in their original positions.

Figure 1 provides a summary of the data for desert children, non-traditional desert-fringe children and white Australian children.

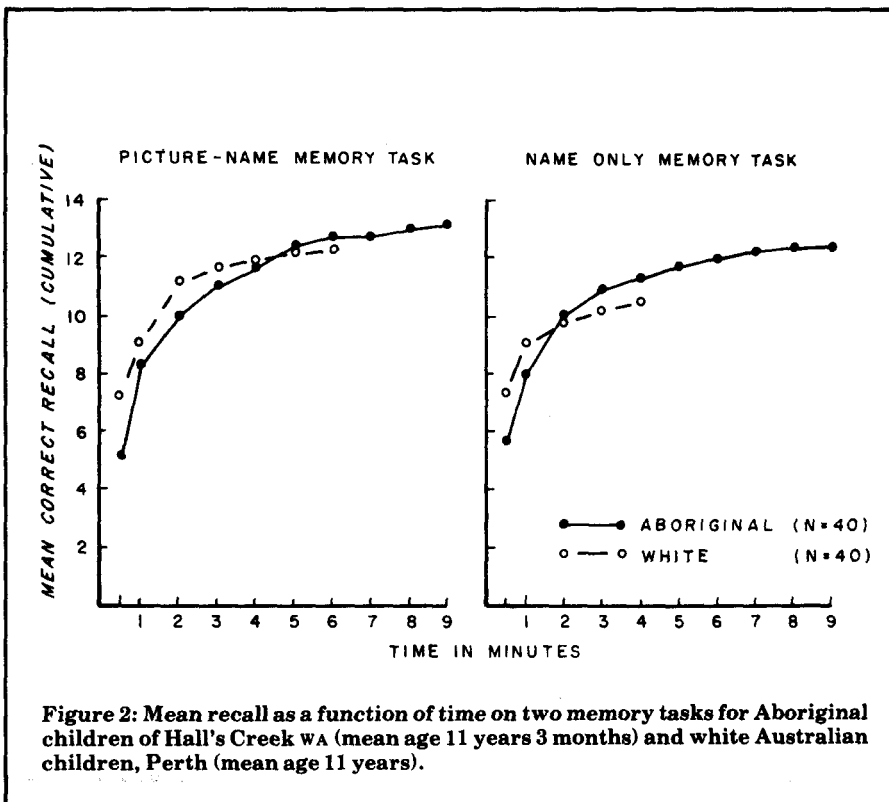


A notable feature of the performance of Aboriginal children was the use of apparently 'visual' strategies, since differences in content reflecting difficulty in naming did not affect their performances, whereas they did affect white Australian performances. The latter group found familiar and namable objects easier to replace than objects less able to be named.

MEMORY FOR NAMES AND FOR NAMES AND PICTURES

Aboriginal children from Hall's Creek and white Australian children from Perth attempted two non-spatial memory tasks, each of twenty items and involving verbal recall. In one task, children attempted to memorise the names of twenty familiar birds, mammals and reptiles read to them at the rate of one every three seconds and then reported the creatures they remembered by name in any order. In the other task, children saw small ink drawings of twenty different creatures, as well as hearing their names. The time course of children's responses was recorded, as well as items recalled.

On both tasks Aboriginal children responded significantly better than white Australian children; figure 2 provides a summary.



Both groups performed better on the picture-name task than on the name-only task, the improvement with pictures being greater in the case of the white Australian children.

Various features of performance and children's reports indicated that Aboriginal children were more likely to have used the same broad strategy on both tasks (probably involving imagery, self-induced on the name-only task), while many white Australian children seem to have attempted rote-learning on the name-only task, but to have been able to use imagery on the picture task.

Aboriginal children's responses were relatively unhurried, so they would have scored lower than the white children had standard time constraints of one or two minutes applied. They also continued to respond over relatively long periods of time and were loth to 'give up'.

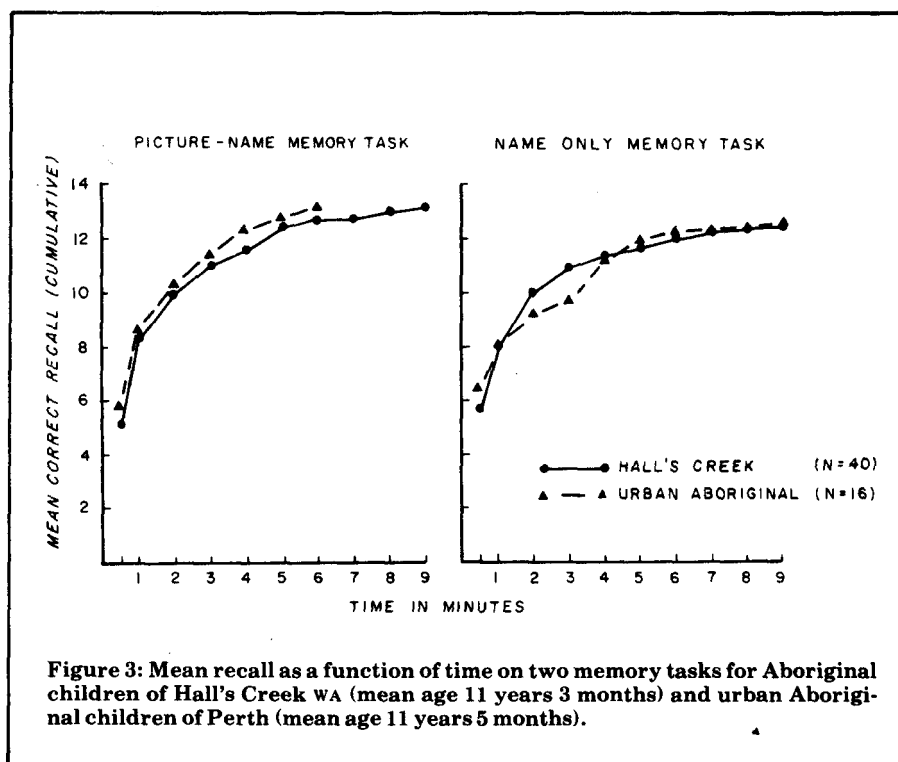
Overall, Aboriginal children appeared to be using well-trained memories and strategies in which they had considerable confidence; this seemed not to be the case so often with the white children. Cultural factors, especially child-rearing procedures and other features of a hunting and gathering tradition, seem very likely to be involved.

Similar influences may affect cognitive skills and information processing habits of 'urban' Aboriginal children, though it should be noted that children considered to be in this category in Perth were often born in the country, and visited and sometimes stayed for long periods in the country with or near relatives.

Sixteen such children attempted the two memory tasks. All were attending school in Perth, although at least half were born in country areas, mainly of the south-west. Almost all lived with their families in various Perth suburbs and all were familiar with the city environment and city life.

These children performed at approximately the same levels as Hall's Creek children (see Figure 3), and like them, recalled items over a long period of time and appeared to have unusual confidence in their ability to do so.

Both Aboriginal groups showed remarkable persistence, and children of both groups were equally reluctant to admit defeat (since twenty items had been presented, most children seemed to consider they should be able to recall this number).



BIRD RECOGNITION

Relative to the Aboriginal wildlife knowledge, the bird recognition task must be considered insignificant. However, it provides some data on out-of-school learning where none have been available for Aboriginal children.

In this task, Aboriginal children from Hall's Creek (WA) and a NSW country town, and white Australian children from the same NSW town, sorted colour photographs of birds into two heaps of local and non-local birds, the score being based on correct discrimination.

Both the more traditionally oriented children of Hall's Creek and the non-traditional NSW Aboriginal children scored significantly better than the white Australian children, the NSW Aboriginal scores falling between those of the other two groups (see Figure 4). The Hall's Creek children provided a great deal of detailed information on bird life beyond that required by the task.

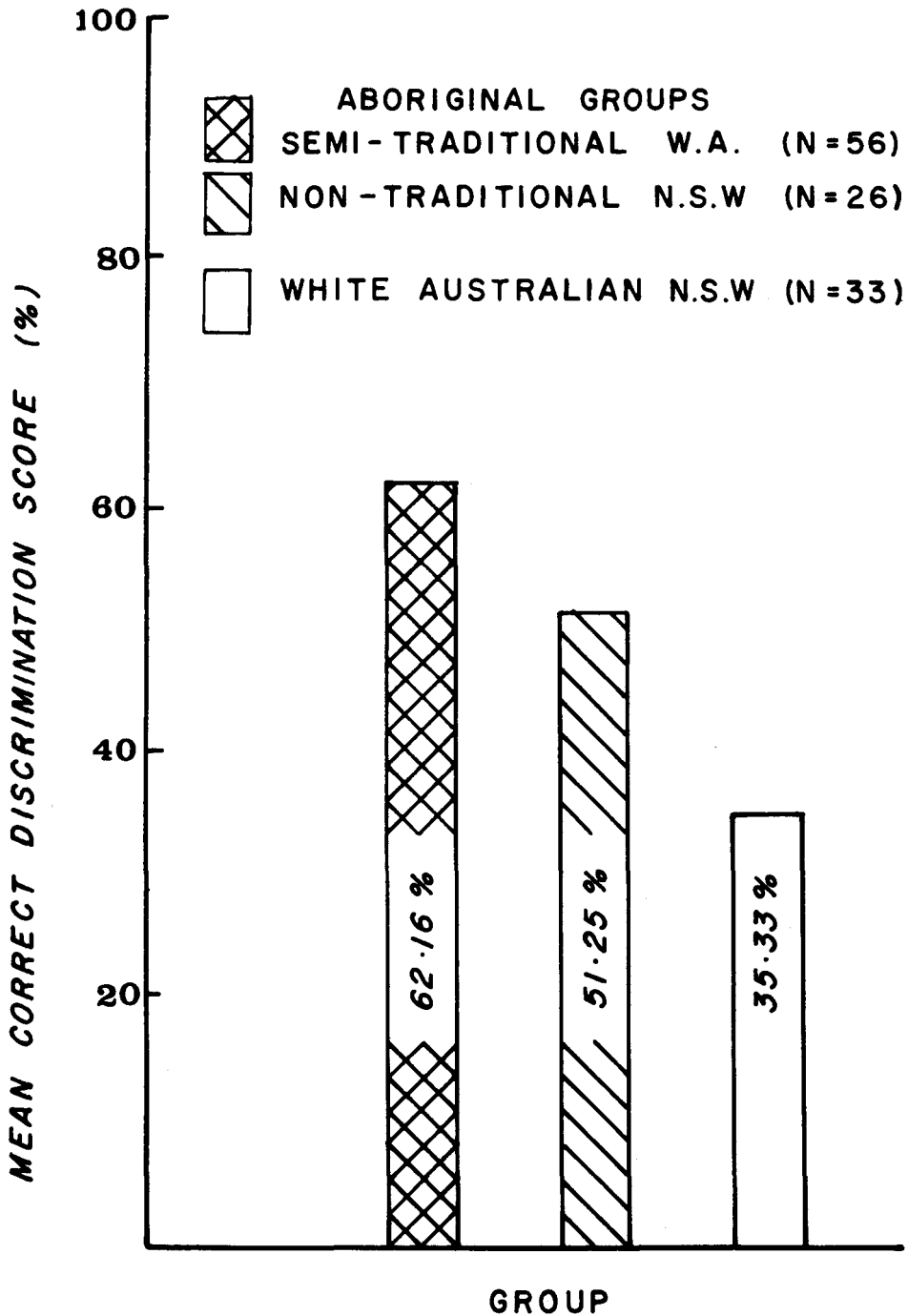


Figure 4: Correct discrimination scores on bird recognition task for three groups of children.

The remarkable knowledge demonstrated by these children indicated a continuing and strong interest in wildlife in the settled groups to which they belonged, and suggests (since both the information and children's possession of it were unknown to teachers) that much out-of-school learning by Aboriginal children concerns wildlife and the natural world.

The fact that the NSW Aboriginal children scored significantly better than white children of the area, even though the latter had greater access to the bush (in a farming community) suggests that these children also belonged to groups who maintained their earlier interest in the natural world, and who were thus likely to have retained other, and perhaps unexpected, elements from traditional times.

If some basic attitudes to children and to child rearing have been retained, for instance, children will be more likely to develop habits and skills for processing visual information, as suggested by the bird recognition data.

Knowledge by teachers of the likely differences in experiences and approaches of Aboriginal children can lead to useful modifications, sometimes minor, of teaching style, and to an appreciation of some of the out-of-school learning of these children, such as wildlife knowledge, which can then be introduced to the classroom to the benefit of all.

As a result, Aboriginal children might enjoy greater opportunity for school success, and consequent increased motivation for school work than is likely when the school system revolves exclusively around experiences and knowledge they do not fully share.

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