

COMMENT

Riley's overview reminds us that social change and ageing interact. Social policy which has been informed by research undertaken in earlier decades may no longer be appropriate. Not only might the expectations and perceptions of more recent cohorts of elderly people differ, but the social, political, economic and cultural systems have changed. What is apposite in the 1960s may not be right for the 1990s. We should therefore discount neither studies like this which provide contra-indications nor those, like that reported in the previous abstract, which replicate earlier studies. Sociology and social policy are not static: both disciplines are constantly evolving new theories and methods to maintain relevance in our ever-changing world.

NOTES

- 1 Markides, K. S. and Martin, H. W. A causal model of life satisfaction among the elderly. *Journal of Gerontology*, **34** (1979), 86–93.
- 2 Salamon, M. J. and Conte, V. A. *The Life Satisfaction in the Elderly Scale*. Psychological Assessment Resources, Odessa, Florida, 1984.
- 3 Neugarten, B. L., Havighurst, R. J. and Tobin, S. S. The measurement of life satisfaction. *Journal of Gerontology*, **16** (1961), 134–143.
- 4 United State of America, General Accounting Office. *The Elderly Should Benefit from Expanded Home Health Care Services But Increasing These Services Will Not Insure Cost Reduction*. Document Handling and Information Services Facility, GAO, IPE-83-1, Gaithsburg, Maryland, 1982. Weissert, W. G., Livieratos, T. W. B. and Katz, S. Effects and costs of day care services for the chronically ill. *Medical Care*, **18** (1980), 567–584.

Health Care Research Unit,
University of Newcastle upon Tyne

Cognitive Psychology of Old Age**Patrick Rabbitt**

F. I. M. Craik and Joan McDowd, 'Age differences in recall and recognition'. *Journal of Experimental Psychology: Learning, Memory and Cognition*, **13** (1987), 473–479.

The generalisation that memory becomes less reliable in old age is true, but unhelpful. Memory for what? And how assessed? Do we mean the ability to take in new information, to retain information indefinitely without loss, or to retrieve information still somewhere potentially available in the brain? Are we discussing merely quantitative changes? Do we mean that as people with 'good' memories grow old their

efficiency declines until they perform precisely like young people with 'poor' memories? Or does memory efficiency change *qualitatively* with age, e.g. do ageing individuals gradually become less selective or more rigid in the sense that they remember only new information which agrees with old knowledge or opinions? Most importantly, do the young and the old require characteristically different kinds of help to remember better?

Craik and McDowd's neat experiment illustrates how an apparently picayune methodological problem can be resolved in a way that illuminates all these disparate questions. It is a commonplace that people of all ages can recognise previously encountered information much better than they can recall it. Some experiments have suggested that this difference between recognition and recall becomes more marked with age, others have found no difference. A methodological difficulty has been that recognition and recall must be assessed by different experimental paradigms which yield different, and incommensurate, performance indices. Fit people of any age very seldom confabulate in tests of recall by giving back items they have not been asked to remember. Thus recall efficiency can reasonably be assessed as a simple percentage of previously learned items correctly produced on demand. But in recognition tests, besides failing to recognise items they have previously seen, people often claim to recognise items which they have not encountered. Evaluation of these very different kinds of errors requires computation of indices of overall accuracy (d') and the degree of caution (β) of the responses which they make. Thus statements of *relative* efficiency of recall and recognition have involved comparisons between performance on quite different scales.

Craik and McDowd solve this problem by a neat use of co-variate analysis. They gave the same groups of elderly and young people immediate recall and delayed recognition tests for similar material. When variance associated with individual differences in recognition scores had been partialled out, the older group remained significantly worse at recall than the young. To ask why this should be, Craik and McDowd introduced conditions into the experiment in which volunteers responded as fast as possible to letter and digits continuously presented on a computer screen while they tried to recognise or recall information they had previously learned. Both groups, but to a significantly greater extent the old, responded to the letters and digits more slowly during recall than during recognition tests.

This is Craik's latest experiment in a series which documents the idea that age differences in memory can be explained by a simple assumption that, as people grow older, they suffer a general decline in information-

processing resources which reduces their accuracy at both recognition and recall.¹ Craik and McDowd suggest that the effort to recall demands more information-processing capacity than efforts to recognise; it therefore interferes more with other, simultaneous activity. Does this support for an apparently simplistic generalisation about memory have anything to do with real life, or with any of the questions with which we began?

The current zeitgeist, for which Craik is an exceptionally clear medium, is that this apparently simplistic quantitative assumption explains seemingly complex qualitative changes in memory efficiency with age. For example, Zacks *et al.* find that people of all ages recall facts from short prose passages, resembling one-paragraph news items, much better when they are directly stated than when they are implicit and must be inferred, and that this difference is more marked in the elderly.² If we consider the extraction of valid inferences as an additional task which competes for cognitive resource with the demand to commit data to memory (or vice versa), this is a quantitative and not a qualitative change, exacerbated by time pressure and probably mitigated by slower presentation.

Other recent studies, while showing loss of memory efficiency in age, also challenge the idea that the old organise and retrieve remembered information in characteristically different ways than do the young.³ Hess *et al.* show that when people try to remember information about the sex-role in marriage of a series of imaginary couples, both young and old people read statements inconsistent with their stereotypical expectations more slowly, but subsequently remember stereotype-inconsistent better than stereotype-consistent information.⁴ Elderly individuals remember all kinds of information less well than the young, but show the same degree of bias in recall of unexpected information.

COMMENT

Evidence increases that age does not change the way in which information is selected and organised for later use; this implicitly undercuts the assumptions of increased 'rigidity' in selection and retrieval of remembered information to which value judgements, such as attributions of undesirable age-changes in personality characteristics, have frequently been attached. There is evidence for a general reduction in memory efficiency with age. But the literature suggests that, in healthy individuals, this is probably slight, and certainly morally neutral.

NOTES

- 1 Craik, F. I. M. and Byrd, M. Age and cognitive deficits: the role of attentional resources. In Craik, F. I. M. and Trehub, S. (eds), *Aging and the Cognitive Process*. Plenum Press, New York, 1982, pp. 191–211; Rabinowitz, J. C., Craik, F. I. M. and Ackerman, B. P. A processing resource account of age-differences in recall. *Canadian Journal of Psychology*, **36** (1982), 325–344.
- 2 Zacks, R. T., Hasher, L., Daren, B., Hamm, V. and Attig, M. S. Encoding and memory of explicit and implicit information. *Journal of Gerontology*, **42** (1987), 233–245.
- 3 Hess, T. M. and Slaughter, S. J. Specific exemplar retention and prototype abstraction in young and old adults. *Psychology and Aging*, **1**, 3 (1986), 202–207; Burke, D. M. and Peters, L. Word associations in old age: evidence for consistency in semantic encoding during adulthood. *Psychology and Aging*, **1**, 4 (1986), 283–292.
- 4 Hess, T. M., Vandermass, M. O., Donley, J. and Snyder, S. S. Memory for sex-role consistent and inconsistent actions in young and old adults. *Journal of Gerontology*, **42** (1987), 505–511.

Age and Cognitive Performance Centre,
University of Manchester

Older Women**Sheila Peace**

Maximiliane Szinovacz, 'Preferred retirement timing and retirement satisfaction in women'. *International Journal of Ageing and Human Development*, **24**, 4 (1986–87), 301–316.

The process of retirement has a differential impact on men and women and yet, to date, the experience of women has largely been ignored. Retirement has been viewed as a major life event for men, while its significance for women has been masked by the assumptions that the combination of formal and informal roles for women somehow 'lessens the blow'. The article suggests that retirement is equally a major life event for women and explores the conditions affecting women's preferred retirement timing and retirement satisfaction.

The initial discussion centres on the changing nature of employment for older American women. Obviously women's work patterns differ from men's, but evidence is given that for women in a range of jobs, not just 'career women', 'employment during the middle and later years when family responsibilities decline constitutes an important source of self-development and identity formation.' The author argues that both the objective conditions and the subjective experience of retirement differ for men and women, and discusses three sets of factors which may