What's It All about: Variation and Aging

Mary A. Luszcz

School of Psychology, Flinders University, Adelaide, Australia

Key Words

Cognitive aging · Intraindividual variability · Methodology

Those of us who arrived at the study of cognitive aging following a traditional experimental approach have long searched for ways to understand the 'noise' in our data. This noise was a 'nuisance' that often arose from cross-sectional studies. Through them we crudely sought to understand ageing as a process, while relying on data derived from studies where age and cohort were inherently confounded and single observations were made at one point in time. To the extent that human development is all about intraindividual change, this approach was flawed, but reflected at least two beguiling assumptions.

One was that the confounding of age and cohort might not be so crucial in the study of such basic processes as cognition. Although Schaie and others [1] have shown repeatedly that this is not the case, still the experimentalist forged on. We also held to a belief that observation of age by condition interactions would show the way to what ageing was all about. What we didn't realize at the outset was that these interactions are exceptionally elusive. The 'hum' in the system partially contributed to this, but the way forward was not obvious. One thing that is clear in the series of papers that follows is that there is both a need, and many ways, to harness interindividual differences, intraindividual change and interindividual

differences in intraindividual change to enable us to better understand ageing. The return of a more psychometric approach to understanding ageing has been in no small part a contributor to this methodological shift.

The content area of these papers derives mainly from cognitive and sensory ageing, but the lessons to be learned here are readily transferable to other domains. Is this emphasis because these constitute two of the areas most relevant to day-to-day functioning and quality of life? Perhaps it derives from our having developed exquisitely sensitive barometers to index cognition and the impact of sensory processes. Regardless, the challenge will be to (a) establish efficient as well as efficacious ways to undertake research that will not overtax our participants or our research resources and (b) extend these approaches to social and affective domains.

As a whole this series of papers raises important questions about how we conceptualize the ageing process. While the emphasis is on the statistical end of a theory-method continuum, the inseparability of these elements of analysis becomes obvious in each paper. The contributors develop theoretically-driven hypotheses about what could happen, given specific patterns of overall statistical relationships.

The core group of authors of these papers are part of a new generation of researchers of cognitive ageing who want to push the boundaries of evolving statistical techniques to re-visit old questions, e.g., of neural noise, fluid and crystallized intelligence and how gains at one point in time benefit later performance. They also emulate the

KARGER

Fax +41 61 306 12 34
E-Mail karger@karger.ch
www.karger.com

© 2004 S. Karger AG, Basel
0304-324X/04/0501-0005\$21.00/0

Accessible online at:
www.karger.com/ger

Mary A. Luszcz
School of Psychology, Flinders University
GPO Box 2100
Adelaide 5001 (Australia)
Tel. +61 8 8201 2481, Fax +61 8 8201 3877, E-Mail mary.luszcz@flinders.edu.au

influence of the contextualism paradigm of the lifespan approach to human development [2].

Yet there is a paradox here, which is elegantly captured in the commentary by Nesselroade. He has a historical perspective that is sometimes overlooked by more junior colleagues with their sights set on the most recently downloaded manuscript. In my view, his strong message, and it is captured in these papers, is that it isn't the issues that are new, but rather the means that we have at our disposal to pursue them. In short, modern computers and computational algorithms that they can implement parsimoniously are part of that shift. Equally, if not more, important is the capacity of the researchers themselves to be

part of a global village, easily able to communicate across great distances or at close range with relative frequency. In the pages that follow you will see some of the benefits of 'interactive minds' at work on questions that have vexed developmental psychologists since its beginnings.

References

- 1 Schaie KW: Adult intellectual development: The Seattle Longitudinal Study. New York, Cambridge University Press, 1996.
- 2 Baltes P, Smith J: New frontiers in the future of aging: From successful aging of the young old to the dilemmas of the fourth age. *Gerontology* 2003;49:123–135.