Introduction*

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Research on comparative human cognition (i.e., the study of group differences in cognitive function) has a long history—the scientific study of age differences, for example, may be traced back to the last century. Only recently, however, have studies begun to reveal remarkably similar findings in what were once quite separate research areas, and along with these findings has come a growing awareness of common interests and concerns. Some of these concerns are more theoretical and others are more methodological, but in both cases they have prompted psychologists studying different populations to begin trading ideas and techniques. The result is a growing communication between research areas that were once quite isolated from each other, to the point where it seems time to specifically acknowledge these recent developments and, by doing so, to actively encourage them.

One important theme in recent research on comparative cognition has been the ubiquitous finding of general slowing in diverse populations. These populations include not only healthy older adults (e.g., Cerella, 1985) and those with dementia of the Alzheimer’s type (e.g., Nebes & Brady, 1992), but also patients with closed-head injury (Ferraro, 1996) and individuals with mental retardation (Kail, 1992). Whereas previous research may have attempted to determine whether groups differ in terms of global or specific deficits, the common finding of general slowing brings to the fore the problem of identifying specific deficits in the context of more general cognitive differences. Possible solutions to this common problem are beginning to be proposed (e.g., Madden, Pierce, & Allen, 1992; Myerson, Wagstaff, & Hale, 1994), with increasing attention paid to the potentially broad range of their application (e.g., Fisher & Glaser, 1996).

The articles in this issue illustrate common themes in comparative adult cognition. One such theme is the use of meta-analytic regression models to test for general cognitive slowing, and this approach is applied here to two new populations: adults with multiple sclerosis (Kail, this issue) and adults with clinical depression (White, Myerson, & Hale, this issue). Another recurrent theme is the occurrence of deficits in suppression of irrelevant information, applied here to the comparison of good and poor readers (Gernsbacher, this issue). Finally, three of the articles address the problem of distinguishing general from specific deficits in healthy older adults, focusing on quite different aspects of cognitive function: focusing attention (Madden & Gottlob, this issue), retrieving proper names (Maylor, this issue), and visual search (Scialfa & Joffe, this issue). Each of these articles illustrates how the use of multiple measures and analytic approaches may provide converging evidence for a hypothesis or clarify interpretation of findings that might otherwise be ambiguous. Indeed, the response time and eye movement data presented by Scialfa and Joffe suggest that generalized cognitive slowing may be just one

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1 Lest anyone think that general slowing results only from neuropathology and thus that these findings necessarily imply that normal aging is the result of disease processes, similar findings have been reported in healthy children (e.g., Hale, 1990; Kail, 1991) and in college students who were subdivided into groups of more and less efficient information processors (Hale & Jansen, 1994).

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manifestation of an even more general (!) age-related decline in the efficiency of human information processing.

The research presented here illustrates some of the common concerns that bind together comparative studies of adult cognition and points to new directions that need to be explored. Future studies comparing additional populations will be needed to delineate the group characteristics that give rise to phenomena such as generalized slowing and suppression deficits. The question of whether the occurrence of similar phenomena in different populations necessarily implies similar mechanisms will also need to be addressed. Another important, related issue is whether similar phenomena necessarily have similar consequences in different populations. For example, is cognitive slowing always associated with working memory deficits, and does the former necessarily cause the latter, as appears to be the case in both older adults (Salthouse, 1996) and school-age children (Fry & Hale, 1996)? Success in addressing these issues will depend on the utilization of analytical techniques appropriate to these new concerns and on reaching a consensus regarding what constitutes convincing evidence of both general and specific deficits.

REFERENCES


