

# 23

## HISTORICAL PROCESSES AND PATTERNS OF COGNITIVE AGING

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In this chapter I comment on some of the historical influences that contribute to the marked cohort and generational differences in levels and trajectories of cognitive abilities that have been observed over the past century. I then use data from the Seattle Longitudinal Study (SLS; Schaie, 2005) to show how changes in educational attainment and occupational status have served as mediating variables for these changes.

Because I have investigated these processes primarily in a normal community-dwelling population sample, I need to begin by dealing with a number of definitional issues. First, I want to be specific in distinguishing between different forms of aging that can be found in the literature (cf. Schaie, 2006). I then try to embed normal age trends within a co-constructionist heuristic model of cognition (cf. Willis & Schaie, 2006).

Next, I describe some of the historical events that have bearing on differences in cognitive development across the cohorts for which I present relevant data. I discuss exemplars of events that seem to me to have mediating properties for

changes in cognitive trajectories across cohorts. Finally, I provide specific data for a crystallized and a fluid ability to show the impact of historical processes that appear to be most relevant. This last section also includes speculations about the future course of changes over time in level and rate of cognitive development in adulthood.

### FORMS OF COGNITIVE AGING

Scrutiny of a variety of longitudinal studies of cognitive aging (cf. Schaie & Hofer, 2001) suggests most of the observed differences in cognitive trajectories can be described by four major patterns. Most individuals can be classified as (1) those who age normally, (2) the supernormals (those who are said to age successfully), (3) those who develop mild cognitive impairment, and (4) those who eventually become clinically diagnosed as suffering from dementia. I would like to suggest that historical processes are likely to have a differential impact on these patterns.

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*Normal Aging.* Normal is what most people expect. The normal aging pattern most individuals follow is to remain relatively stable in the years prior to the late 50s or early 60s. Most abilities decline slowly and steadily. Survivors of this group are those who remain in the years prior to the late 50s or early 60s. Willis, & Siegel (1976) found that cognitive aging can distinguish between those individuals who are physically frail and those who are close to their physical peak. The group, who remain cognitively developed in old age require little support to experience a successful aging. This is apparent from the fact that they are not different from others (cf. Dickerson, 2003). This group has been identified as having advantages which are not behind because of lack of mental support.

*Successful Aging.* Successful aging is an experience which is characterized by a long life expectancy (Fillit et al., 1998). Members of this group are those who continue cognitively and typically asymptotically. This group shows some speeded tasks and their overall functioning until the late 70s. This group contains those whom the mortality curve is squared and closely approximates a normal distribution. There is reason to believe that this group has positive effects of opportunities.

*Mild Cognitive Impairment.* Mild cognitive impairment (MCI) is a condition characterized by a decline in cognitive function (1999), characterized by a decline in cognitive function.































