Simplify the Concept of Cognitive Aging

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Commentary

The psychology of cognitive aging is that part of psychology that seeks to understand how our intellectual capacities evolve as we age. Research is trying to characterize so-called “normal” aging, but also pathological aging (e.g. Alzheimer’s disease).

Researchers working on cognitive aging conduct scientific experiments to understand which intellectual mechanisms deteriorate with age and which remain stable or even improve. The intellectual functions studied include such general functions as memory, attention, reasoning, decision-making, problem solving, language and specific functions such as spatial orientation, mental calculation, chess and typing.

Two major types of results can be identified from research in cognitive aging. First, most of our intellectual abilities decline with age. Some decrease more than others (e.g., attention and memory decline more than reasoning or decision-making). Some abilities decline very early (e.g., attention flexibility decreases from age 16); others do not decrease until age 50 or 60 (such as deductive reasoning); and others begin to decrease after age 90 or 90 (e.g., language) or even never decrease. Then, when aging leads to a decrease in performance in a cognitive domain, this decrease is all the more important when the task is complex. Thus, older people have more difficulty memorizing a list of abstract words than a list of concrete words, even if both lists have the same number of words.

Cognitions correspond to a kind of inner monologue of the individual, hence the name sometimes given to them as self-verbalizations [1-3]. They are fast to develop, like answers to stressful situations somebody may experimented. Often they emerged from an initial traumatic event, from a moment when these thoughts have been proposed or imposed by a hostile environment [4-7].

Cognitive failures are imposed on consciousness as possible and not as the current theoretical or empirical concepts they are [8-10]. In the same order, they may appear less logical than they are really are. Cognitive aging, they are more or less conscious, sometimes indistinct to the mind of an individual, like a background noise in his mind [11-15]. Cognitive decline begins at age 20 for some functions, but it is not really felt until about age 45. It manifests itself significantly in a slow but gradual decline in short-term memory and working memory, executive functions. Long-term memories can be stored until an extremely advanced age. So, can we really talk about cognitive decline due to age or decreased cognitive performance? The debate is far from over, and pits researchers against each other on the subject. In this article, the term “cognitive decline” should be used for “decrease in cognitive performance”, because neither knowledge, nor competence, nor knowledge can be observed; only performance is observable. The distinction may seem subtle or insignificant, but it is essential [16-18].

Naturally, this decline in cognitive performance due to age is compensated by a benefit, also due to age: experience. This experience (or expertise) constitutes a stock of invaluable information, knowledge and skills placed in long-term memories. As a result, the experienced accountant will have little difficulty calculating and the writer will have little difficulty writing. However, the difficulties are outside the scope of our respective knowledge and skills, so the experienced writer is likely to have difficulty counting and the accountant to write laboriously, provided of course that both have not carried out these activities on a regular basis. As for society, it is increasingly demanding. We must be efficient, versatile, creative and learn throughout life to adapt to ever more rapid economic and social changes in an environment where information flows at the speed of the nanosecond, where the planet is reduced to a small village [4,11,19-22].

Many factors accelerate cognitive decline: chronic stress, social isolation, poor diet (both industrial food and its additives, antibiotics and other pesticides, but also lack of variety), certain chemicals in our environment (home, work), alcohol, genetic dispositions, certain pathologies and
accidents, narcotics, tobacco, certain medications, depression, lack of physical activity, lack of cognitive stimulation. I think I have identified the main factors. It should be noted that for some people, quantity, frequency etc. are very important. So, it’s not because we take an aperitif from time to time that we’re going to decline, nor because we’re going through a period of depression, any more than if we were to indulge in junk food from time to time.

In terms of cognitive decline, genetic factors and environmental and epigenetic factors must therefore be considered. We are not all declining at the same speed or in the same way [1, 12, 16].

References