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# The rise and fall of the inhibitory mechanism: Toward a unified theory of cognitive development and aging

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## Abstract

In this article I introduce a framework that represents a first step toward a unified explanation of diverse expressions of cognitive development and aging. Its basic tenet is that resistance to interference (i.e., the capacity for inhibition) is a major, albeit underrated, factor in the development of intellectual competence and declining mental ability later in life. To support this claim, I review evidence suggesting that young children, older adults, and individuals with frontal lobe lesions demonstrate a similar pattern of performance deficits in a wide range of interference-sensitive tasks, including the Wisconsin Card Sorting Test, measures of field dependence, illusions of judgment, the Stroop Test, selective attention tasks, the Brown-Peterson task, and text processing. The linchpins of the framework are the frontal lobes of the brain, a system that is heavily involved in the ability to effectively inhibit or suppress stimuli or

associations that are not relevant to the task at hand. It is also the last region of the brain to develop and appears to be the first to undergo involution later in life.



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