

Nature and Nurture in Brain Development and Function

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The age-old debate on the roles played by nature vs. nurture in determining individual's abilities has gained new momentum with advances in genetic research in the final decades of the 20th century. The spread of interest for genetic research encouraged by financial and political support has spurred a hunt for uncovering direct relationships between genes and numerous human attributes. Research of genetic determinants of human personality, cognitive abilities, emotions and behavior has been attracting most public interest. Targeting the essence of our humanity such research has been generating new discussions of issues like neurodeterministic basis of our abilities, existence of free will and responsibility for one's own drives and actions. Due to their meaning the findings related to brain development, personality, cognitive abilities and individual characteristics quickly find their way into the wider social arena. They can affect medical doctrine. They can influence the content, accessibility and process of education. They guide legal determinants of individual's responsibilities for one's own actions. It is therefore of paramount importance that we strive for meaningful interpretations and are aware of methodological constraints that limit the validity and relevance of scientific findings pertaining to brain development and function when interpreting and applying them in practice.