
Among the excellent books about impulsivity, the book entitled “Impulsivity: the behavioral and neurological science of discounting” explore in a deep and exclusive manner one of the facets related to the ample concept of impulsivity: the human and also nonhuman tendency to devalue rewards or punishments that are not immediately available. The book is an accessible and extensive overview in 15 chapters of the cutting-edge knowledge on behavioral and neuroscience research of the relation between impulsive choice and delay discounting. More than 30 specialists address in detail topics that run through different levels and focus of analysis.

In the first part of the book (chapter 1, 2, and 3) were addressed conceptual and methodological aspects, as well as the main findings of research. Evidences indicate that impulsivity related to the trade-offs between costs and benefits at different point in time is a relatively stable trait. However, it is susceptible to some alterations throughout experimental manipulation. For example, age, IQ, race-culture, socioeconomic features, and drug addiction seems to be factors of influence. Limbic circuitry activation is associated with delay discounting, as well as some genetic polymorphisms.

The neural and molecular bases involved in delay discounting and risk taking are presented in the second part of the book (chapters 4, 5, and 6). Lesions in areas of the limbic corticostriatal loop are associated with the levels of performance in delay discounting tasks. Associations are also found in a more microscopic level of analysis, evidences about the effects of serotonergic and dopaminergic systems on impulsivity and other forms of impulsivity are presented. Neural models of delay discounting are presented, and lastly, an analysis of risk sensitivity in a neuroeconomic perspective, a domain of important impact in our personal life.

Together, the chapters 7, 8, 9, and 10 constitute the part III of the book. These chapters discussed the association between delayed discounting and addictive disorders. The frequency of substance abuse is positively correlated with high levels of discount to future events. Thus, the rate of discounting seems to predict the success of the treatment or the period of abstinence. The similarities and the discrepancies between the results of studies with human and nonhuman models are presented. An in-depth overview of the acute and chronic effects of the licit and illicit substance abuse on behavior is conducted. For instance, it is discussed the link between acute abstinence and the increased level of impulsivity in humans. Some variables seem to interact with impulsivity, increasing the vulnerability to the drug abuse. The pathological gambling and the patterns of choices on the Iowa Gambling Task (IGT) are discussed in the last chapter of this part of the book.

The part IV of the book is formed by the chapters 11 and 12, which is dedicated to the discussion of the role of delay discounting in nonaddictive human conditions. A complex framework is presented about the patterns of choice and their influences on a specific population. The association between impulsivity and the unhealthy behavior impacts on the subject, the society and the healthcare system. The chapter 12 presents evidences that delay discounting and Attention Deficit and Hyperactivity Disorder (ADHD) are relatively simple concepts to embrace the covariance found in the population. ADHD presents a continuum of behavioral responses that is influenced by multiples genetic (trait) and environmental (state) factors. These factors affect not only the impulsive behavior, but also the cluster of behavioral traits that are associated with ADHD.

The Last part of the book (chapter 13, 14, and 15) addresses empirical and theoretical extensions. Evolutionary aspects are presented via analysis of nonhuman animal models in the chapter 13. The hyperbolic function that describes the discounting in different domains of human behavior is presented in the chapter 14. The last chapter addresses a new perspective about impulsivity choice and delay discounting: the social discounting. The role of self-control and social cooperation are discussed.

It is impossible to delineate in few words the scope of the themes addressed in the book. This high quality book is an excellent option to researches and students from different areas, the unique requisite is the same interest about the aspects related to the impulsive choice, in the context of delay discounting.

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