Information Processing during Intertemporal Choice: An Investigation using Eye Movement Data

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Abstract: Intertemporal choices consist of trade-offs between reward magnitude and the delay until those rewards are received. Distaste for delay (i.e., impatience) is related to various undesirable variables including drug use, credit card debt, and low grade point average. These findings have underscored the critical need to better understand intertemporal preferences. Previous work has shown that forcing participants to wait 9 seconds before making an intertemporal choice yields greater patience than when they are forced to wait 3 seconds. Unfortunately, the mechanisms that produced this effect are currently unknown. The current study uses a similar choice paradigm but collects eye movement data in order to non-invasively investigate decision makers' information processing strategies under short and long deliberation times. Eye movements over the various pieces of choice-relevant information (i.e., delays and magnitudes of rewards) were related to the deliberation time manipulation, individual choices, and individual differences in patience. Theoretical implications are discussed.