ScholarOne - Zone In not Out! The Key to Winning for High-Level Tetris

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Abstract

Automating a perceptual-motor task won’t win you a perceptual-motor contest. Despite claims that mindless automaticity is the essence of expertise, our view is that it is worthwhile only because it enables the expert to plan and strategize. Indeed, the purpose of learning to manually shift gears is to eventually ignore that part and focus on actually driving. To perform well the expert must transition their attention from a task’s low-level components to its high-level nuances. This is best understood in real-world scenarios, e.g., driving, where performance is dynamic and sometimes competitive. Our argument is based on a years-long, longitudinal case study of learning to play the puzzle game Tetris. Tetris is intensively perceptual-motor with complicated manual routines needed to manage expert game speeds. For our case study, the player started out as an advanced novice but successfully transitioned to competing at the championship level and entered the Classic Tetris World Championship in 2020. Initially, the challenge was gaining enough skill to make and execute perceptual-motor decisions in a fraction of a second. However, once that became automatic the player could spend those mental resources someplace else. Performance was better for all games when the player was mentally engaged and used their focused attention to plan ahead rather than just automatically responding to the game pieces. We argue that the end goal for automating perceptual-motor skills in competitive, dynamic environments is to make space for the user to excel strategically.

Zone In not Out! The Key to Winning Extreme Tetris Games

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