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Why bigger may in fact be better... in the context of table tennis TADD TRUSCOTT, ZHAO PAN, Brigham Young University, JESSE BELDEN, Naval Undersea Warfare Center — We submit that table tennis is too fast. Because of the high ball velocities relative to the small table size, players are required to act extremely quickly, often exceeding the limits of human reaction time. Additionally, the Magnus effect resulting from large rotation rates introduces dramatically curved paths and causes rapid direction changes after striking the table or paddle, which effectively reduces reaction time further. Moreover, watching a professional game is often uninteresting and even tiring because the ball is moving too quickly to follow with the naked eye and the action of the players is too subtle to resolve from a distance. These facts isolate table tennis from our quantitatively defined "fun game club," and make it less widely appealing than sports like baseball and soccer. Over the past 100 years, the rules of table tennis have changed several times in an effort to make the game more attractive to players and spectators alike, but the game continues to lose popularity. Here, we experimentally quantify the historic landmark equipment changes of table tennis from a fluid dynamics perspective. Based on theory and observation, we suggest a larger diameter ball for table tennis to make the game more appealing to both spectators and amateur players.

> Tadd Truscott Brigham Young University

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