Understanding the evolution of primate decision-making using experimental games

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Humans routinely confront situations that require coordination between individuals, from mundane activities such as planning where to go for dinner to incredibly complicated activities, such as international pandemic responses. How did this ability arise, and what prevents success in those situations in which it breaks down? One important approach to these questions is understanding how this ability evolved, which provides insight into the pressures that selected for these behaviors and phylogenetic constraints on their expression. To this end, I use experimental games to address these questions comparatively, across a wide variety of species. Experimental economics is an ideal mechanism for this approach, as it is a well-developed methodology for distilling complex decision-making into a series of simple decision choices, allowing these decisions to be compared across species and contexts. My lab has used this approach to investigate decisions related to coordination, anti-coordination and cooperation, as well as how inequality influences decisions, in monkeys, apes and humans using near-identical methodologies. We find that there are remarkable continuities of outcome across the primates, including humans, in coordination, however there are important differences in how each species reaches these outcomes. These differences in mechanism may limit similarities in decision-making in other situations. Indeed, despite similar outcomes in coordination decisions, species' outcomes diverge sharply in the context of anti-coordination, possibly due to the differences in their decision-making mechanisms. I consider what these similarities and differences in decision-making across different contexts tell us about the evolution of decision-making across the primates, including humans.