A Neuro-Autopilot Theory of Habit: Evidence from Canned Tuna

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Abstract:

In economics and marketing, habits are typically modeled as a preference complementarity, whereby a consumer’s utility for a good increases after consuming it. While this approach captures persistence in consumption over time, it ignores the primary benefit of a habit as conceptualized in psychology and neuroscience --- that seemingly complex behaviours can be automated at little cognitive cost. Here, we integrate a neuroeconomic concept of habit into a structural consumer choice model. We propose that habit represents one of two distinct decision-making modes: a habit mode which automatically repeats past choices and a ``model-based" mode of decision-making in which consumer maximize a random utility. The transition between these decision modes is governed by the reliability of a reinforcement learning algorithm, such that habits arise when the consumption environment is stable and predictable. We estimate and test this model on product choice in the canned tuna product category between 2006 and 2009, a period which underwent considerable price and product variation. While we still observe a degree of state-dependent utility in preferences, our results suggest that a considerable proportion of choice persistence is due to a habitual automaticity in consumption.