

Another look at constructed references: Coherent extrapolation from reminders



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Abstract

Bias and error are considered fundamental characteristics of preferences. However, daily behavior frequently demonstrates preference coherence. We link between the leading notions of constructed preferences and well-defined values (Payne, Bettman & Schkade, 1999) and the demonstration of coherent arbitrariness (Ariely, Loewenstein & Prelec, 2003), and posit that both lines of research refer to a similar construction process where people extrapolate preferences from a starting point. We characterize the unique features of this extrapolation process, by comparing extrapolated preferences and preferences built from scratch. Our findings show that the process of extrapolation follows linearity rather than diminished sensitivity, leads to fewer errors, thus resulting in more consistent preference sets, reduces cognitive effort as the quality of the starting point increases, and helps to maintain transitivity by prioritizing ordered preferences over direct but noisy experience.

Introduction

Much of the psychological research demonstrates inconsistencies and biases. There are however, abundant examples in daily life, where people make choices easily, and exhibit consistent preferences that lead to seemingly sensible market behavior.

People recognize dominant options quite easily (Ayal & Hochman, 2009; Payne, Bettman, & Johnson, 1993) and respond in a reasonable way to promotions and price changes (e.g., Plott, 1996). For example, a recent survey indicated that seven out of 10 Americans drive less because of the increase in gas prices (Kahn, 2011; Kraus, 2008; Morris, 2011; Reid, 2011; Small & Van Dender, 2007).

One explanation for preference coherence relies on well-defined values (Payne et al., 1999; Schkade & Payne, 1994). According to the constructive view, people rely on well-defined value as a reference from which they infer preferences for related objects. Another explanation refers to inference from arbitrary-anchors (Ariely, Loewenstein & Prelec, 2003). According to 'coherent arbitrariness' people apply coherent generalization rules and extrapolate preferences from any starting point – including an arbitrary anchor (Tversky & Kahneman, 1974; Epley & Gilovich, 2001; Mussweiler & Strack, 1999; Strack & Mussweiler, 1997).

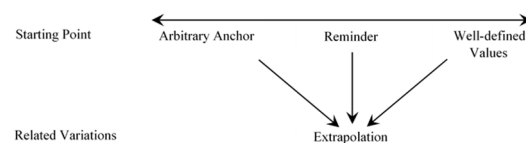
Theoretical Framework

Extrapolated preferences from well-defined values, anchors, and daily reminders.

A conceptual continuum of starting points runs from arbitrary-anchors on one end to well-defined values on the other. In between there are everyday reminders.

People rely on reminders as starting points. *For example, when at the gas pump, people do not have to dig deep to unravel a well-defined value that summarizes extensive repeated experience. They are also unlikely to recall arbitrary values such as their social security number. Instead, they are likely to rely on the price they are used to paying.*

Extrapolation from a starting point will lead to coherence.



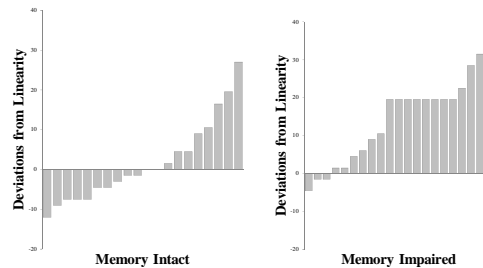
Linearity vs. Diminished Sensitivity

Extrapolation is characterized by linearity.

Task – WTP for Brownies
WTP_{Small}, WTP_{Med}, and WTP_{Large}

Manipulation –
Memory impairment between WTPs
No memory impairment between WTPs

Finding –
Linearity when memory was intact, but Diminished sensitivity when memory was impaired



Reduced Cognitive Effort

Extrapolation reduces cognitive effort.

Manipulation –
High Relevance – WTP (Item A) >>> WTP(3 x Item A)
Low Relevance – WTP (Item A') >>> WTP (3 x Item A)

Finding –
As the quality of the reminder is higher (i.e. more relevant) extrapolation requires less effort = Faster reaction time

High-relevance Reminder		Low-relevance Reminder	
Relevance	RT (sec.)	Relevance	RT (sec.)
9.08 ^a	38.28 ^a	6.18	48.07
(2.38)	(11.73)	(2.88)	(17.46)

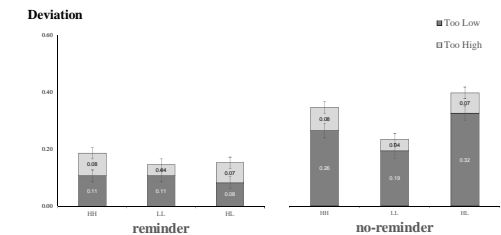
Coherence & Consistency

Extrapolation is characterized by coherence & consistency

Task – WTP (Item A) , WTP (Item B) vs. WTP (Item A & Item B)

Manipulation –
Reminder - WTP of single items is available
No Reminder - WTP of single items is absent

Finding –
High consistency with reminder
WTP (A & B) is not lower than WTP(A) , and not higher than WTP(A) + WTP(B)



Transitivity

Extrapolation helps to maintain transitivity

Task – Taste Test - Comparing pairs of chocolates

Manipulation –
Brand – Chocolates with brand pic.
Label – Chocolates with label
Blind – Chocolates without description

Finding –
Taste is noisy. Reminders sway taste in favor of transitivity.

	Violations of Transitivity	# of violations	# of participants
Brand & Label	1.7%	6	2 of 41 participant 3 of 45 participant
Blind	22.4%	76	41 of 85 participant