

Contents lists available at [ScienceDirect](#)

The Journal of Choice Modelling

journal homepage: www.elsevier.com/locate/jocm

Latent variables as a proxy for inherent preferences: A test of antecedent volition[☆]



Thomas J. Magor^{*}, Leonard V. Coote¹

UQ Business School, University of Queensland, Brisbane, Australia

ARTICLE INFO

Available online 20 February 2015

Keywords:

Antecedent volition
Inherent preferences
Structural choice modeling
Stated preference experiments

ABSTRACT

We present a test of antecedent volition under conditions of varying choice complexity. Using a stated preference design, decision makers make hypothetical transport choices under three decision scenarios. The choices are made under conditions of three, five, and seven alternatives per choice set. Further, we analyze the data from these three experiments simultaneously using factor-analytic structural choice models. We fit these models because they allow us to specify a latent structure representing a behavioral process of antecedent volition. Past research emphasizes differences in aggregate preferences due to context effects, but is incomplete in some important respects. Model parameters of the most theoretically appealing specification include estimates of means (i.e., aggregate preferences for the attributes studied) and regression coefficients for the effects of latent variables on the taste sensitivities common to the decision scenarios (i.e., structure of preferences in relation to the attributes). Extending past research, we find evidence of latent variables and structures that are common to the taste sensitivities of specific attributes across the decision scenarios (i.e., sources of preference heterogeneity and a structure to the heterogeneity). This pattern of results is suggestive of a behavioral process consistent with literature and theory on antecedent volition. Our model forms and results have implications for policymakers and researchers. They are especially salient to recent literature contrasting context effects with the notion of stable and inherent preferences.

© 2015 Elsevier Ltd. All rights reserved.

The literature on context effects is well established and has significantly influenced thinking about utility maximization. Classic papers by [Simonson and Tversky \(1992\)](#) and [Tversky and Simonson \(1993\)](#) introduced the theory of context dependent preferences, offered applied examples, and provided a foundation for decades of experimental work consistent with their thinking and theorizing. Their work and related work collectively forms the basis of behavioral decision theory (BDT). The basic premise of BDT is the value of a choice alternative is determined by context effects. They specifically outline the effects of the broader context (they call this the background context) and the immediate set of choice alternatives under comparison (the local context) on choice. For example, the relative value of a choice alternative relative to another one (local context) may depend in part on the presence or absence of a third alternative (background context). Central concepts in

[☆] We presented an earlier version of this paper at the 2013 International Choice Modeling Conference in Sydney, Australia. We thank conference reviewers and delegates for helpful comments on that version of the paper. We thank the editors and reviewers at the *Journal of Choice Modeling* for their helpful comments on this version of the paper. Finally, we thank Cam Rungie for providing access to the DisCoS software.

^{*} Corresponding author.

E-mail addresses: t.magor@business.uq.edu.au (T.J. Magor), l.coote@business.uq.edu.au (L.V. Coote).

¹ Tel.: +61 7 3346 8092; fax: +61 7 3346 8166.

their formulation of choice are tradeoff contrast and extremeness aversion: an alternative may appear more attractive against the background of a less attractive one and losses loom larger than gains. BDT further implies preferences are constructed and attempts to establish conditions under which the standard model of economic choice breaks down. However, a more subtle viewpoint is needed.

More recently, the ubiquitous nature of context effects has been questioned and is giving way to theorizing on antecedent volition (Simonson, 2008; Swait, 2013). Indeed, the emerging view is decision makers have stable and inherent preferences. These stable and inherent preferences may be more strongly manifest under some conditions than others (e.g., more strongly evident for search goods than experience goods and/or attributes). Moreover, the notion of decision makers holding stable and inherent preferences is consistent with literature and theory on antecedent volition. The basic premise of antecedent volition is decision makers, despite the decision scenario they confront, will behave in ways broadly consistent with their “true” underlying preferences for the choice alternatives under evaluation. That is, antecedent volition offers one conceptualization of how stable and inherent preferences are manifest. To give a few examples, the choices decision makers make may be separated by time, be recorded pre- and post-purchase, or be complicated by varying degrees of task complexity. The basic premise of antecedent volition is a general behavioral process common to the tasks should be evident in the pattern of choices of decision makers even in the presence of context effects.

Moving the literature on decision making forward requires some mechanism for accommodating the competing views outlined above. On one hand, context effects are anticipated. For example, decision scenarios that differ by level of complexity should yield differences in aggregate preferences for the attributes defining the choice alternatives of the varying decision scenarios. On the other hand, evidence of stable and inherent preferences should be evident per the notion of antecedent volition. Latent variables are a useful proxy for stable and inherent preferences common to the attributes of choice alternatives under different conditions of complexity. More specifically, the effects of the latent variables on the taste sensitivities for the attributes of a choice alternative should be consistent across choice contexts. These effects should be evident even if the aggregate preferences for the attributes of the choice alternatives vary across contexts. The basic premise of the current study is this: aggregate preferences may be specific to choice contexts but a common antecedent volition process defined by latent variables and structures can be established. Testing this premise requires flexible model forms that incorporate latent variables. Hence, we specify and estimate factor-analytic structural choice models (SCMs) (Rungie, Coote, and Louviere, 2011, 2012) as a test of antecedent volition.

Our study aims to make two contributions. Firstly, we attempt a contribution to the emerging literature and theory on antecedent volition. Our views of antecedent volition are strongly motivated by the now classic literature on context effects per BDT. Plus, we are strongly influenced by the critique of this literature and recent emphasis on the presumption of decision makers holding stable and inherent preferences. To be sure, the notion of antecedent volition built on stable and inherent preferences is much more consistent with utility maximization and thus should be of some conceptual comfort to choice modelers working in this paradigm. Second, we attempt a modeling contribution. We specify and fit factor-analytic SCMs consistent with a conceptualization of antecedent volition. More specifically, our model catalog specifies four models: a fixed coefficient specification of conditional logit, a random coefficient specification of mixed logit, a single-factor model, and a multi-factor model. All four models are fit to data recording the choices of decision makers under three conditions of task complexity. A comparison of the model specifications highlights the relative advantages of the multi-factor model: a better representation of antecedent volition, better model fit, and better interpretations.

1. Conceptual framework: antecedent volition and inherent preferences

1.1. Theories of decision making

Competing views of decision makers are evident in the literature. The standard view is decision makers behave according to random utility theory (Luce, 1959; Thurstone, 1927); that is, rational utility maximizers pursuing known and stable preferences. These assumptions are generally sound for demand forecasting purposes using the multinomial logit model (McFadden, 1974). However, as Simon (1956) posits, the choice environment constrains the extent to which decision makers are able to process the full set of information available at the time of decision making. Quantifying bounded rationality has proven challenging using conventional model forms. More generally, the counterview formalized under the rubric of BDT posits that rather than evaluating the full set of alternatives available, decision makers consider an edited problem using simplifying heuristics in line with some decision rule (Kahneman and Tversky, 1979; Tversky and Kahneman, 1973). While this account seems more plausible than the perfectly rational decision maker, Simonson (2008) suggests that regardless of the choice environment, decision makers will behave in ways consistent with their underlying preferences. That is to say, decision makers should behave per some common antecedent volition, i.e. their underlying true preferences/motivations are not context dependent. Only in exceptional circumstances such as when subject to coercion, manipulation, or severe cognitive burden, should the stability in the way decision makers make choices break down.

Past research focuses on providing tractable accounts of the decision processes involved in the formation of constructed preferences (e.g., Ross and Nisbett, 1991; Schwarz, 2007). This is useful in the development of marketing strategy, particularly advertising, as this concerns the process of decision making at points in time close to the point of purchase. This information, however, provides limited insights into understanding how more enduring consumer preferences are formed.

Download English Version:

<https://daneshyari.com/en/article/5091877>

Download Persian Version:

<https://daneshyari.com/article/5091877>

[Daneshyari.com](https://daneshyari.com)