Consumer Values Across The Lifespan

Keywords: Values, Lifespan, Nuances, Consumer Behavior, Computational Social Science

Extended Abstract

Introduction

Values - the overarching principles and broad personal goals that guide one's existence (Sagiv & Schwartz, 2022; S. H. Schwartz, 1992) - influence consumers' attitudes and shape their behaviors towards desirable end-states (Dixon & Mikolon, 2021; Mai et al., 2021). Marketers tap into consumers' value systems to develop appealing brand and product propositions that stimulate consumers' inner drives (Kim & Kramer, 2015). However, while some individual consumers' characteristics tend to remain largely stable, thus offering a consistent basis for market segmentation and targeting, the relative importance of values is likely to change as consumers mature (Borg, 2021; Steenkamp & Maydeu-Olivares, 2015). For example, younger consumers tend to exhibit a preference for products, services, or experiences that reflect a more hedonic lifestyle, while older consumers are driven by safety and security in their purchase and consumption choices.

To develop an accurate understanding of the intertwined relationship between consumers' values and age, we surveyed over 77,000 global consumers through a research collaboration with TIME Magazine. We argue - and demonstrate robustly across 36 analytical modelling choices, and 180,000 simulation-based decisions - that value development may be more nuanced than how it is typically represented. Specifically, we propose that a systematic investigation of age-graded differences in personal values, from late teenage years to post-retirement across different aggregation levels, may reveal heretofore unappreciated dynamics. Furthermore, we examine a methodological challenge with important implications for social science research. Commonly, researchers aggregate individual questions into parsimonious higher-order concepts to ease interpretation. However, for values, the individual items representing the more granular, underlying value nuances diverge in their importance and development throughout consumers' lifespan. For the first time, we study the asynchronous change of value nuances, consequently, finding that aggregation i) leads to a loss of critical information, ii) creates conflicting results when nuances diverge and iii) significantly reduces predictive power.

Methodology

Data collection and sample

This research uses values and age data from the TIME Magazine Basic Human Values Dataset (Du et al., 2021; Stieger et al., 2022). The TIME Magazine Basic Human Values Dataset was collected between December 2017 and February 2021 as part of a research partnership with TIME Magazine. Data collection ensued through an interactive online survey, in which participants' personal values were assessed using scientifically validated, psychometrically sound measures. The survey (https://time.com/5063406/star-wars-character-quiz/) was launched and promoted via websites and social media channels (e.g., Facebook, Twitter) by TIME Magazine and its media partners (e.g., People, Entertainment Weekly) as a tribute to the global release of the movie "Star Wars: Episode VII - The Last Jedi". Participants who completed the survey received automatic customized feedback on which Star Wars characters most closely resembled them based on their values. The final sample consisted of 77,980 participants, with 57.8% of the sample identifying as female and 6.9% as other. The average age was skewed towards younger participants (mean = 27.4 years; SD = 10.26).

Data analysis strategy

We adopted a three-pronged analysis approach, in which we Part 1: Chart out values across consumers lifespan, Part 2: Predict consumers' age from values at three hierarchical levels and Part 3: Contextualize findings and benchmark predictive accuracies.

First, to provide an exploratory, visual summary, we charted age-graded differences in personal values across participants' lifespan at all three levels of the value hierarchy.

Second, we fitted three models (i.e., traditional OLS regression, Elastic Net, and M5P Decision Tree) at each level of the value hierarchy (i.e., higher-order values, basic values, and value nuances). The dataset was split into a test and training dataset with an 80/20 split (Schroeders et al., 2021). The data were split into percentiles by age, within which random sampling occurred. Therefore the 20% test data had a similar age distribution to the training data but represented a different partition of the data that were kept separate from the training process at all times. With this approach - resulting in nine training and nine testing models (each one per model type and value hierarchy layer) - we sought to prevent both overfitting (through cross-validation / out-of-sample testing; (Rocca & Yarkoni, 2021; Seeboth & Mõttus, 2018; Yarkoni & Westfall, 2017), and underfitting (through comparisons across different models with varying complexity; (Jacobucci & Grimm, 2020; Stachl et al., 2020; Yarkoni & Westfall, 2017).

In a third and final step, we dived more deeply into scrutinizing the actual predictive abilities of the different hierarchical levels of the personal value system. Again, this step was not intended to draw any causal inferences (Hang et al., 2021; Mõttus & Rozgonjuk, 2021; Schroeders et al., 2021) but to effectively contextualize (Funder & Ozer, 2019; Götz et al., 2022) the observed effects in intuitive, meaningful real-world terms (Hofman et al., 2021; Rocca & Yarkoni, 2021; Yarkoni & Westfall, 2017). Specifically, we were interested in detangling what age-sensitive information was contained at each level of the value hierarchy. To do so we utilized a simulation-based approach, in which we conducted for each of the 9 models 10,000 decisions as to which participant is most likely to be older based on the values they hold. We transformed the results into easily interpretable accuracy metrics, which highlight the boundary conditions of the predictions.

Results and discussions

In this paper, we drew from a large-scale online sample and adopted an integrative modeling approach (Hofman et al., 2021) to examine whether values change across consumers' lifespan and at which level of the value hierarchy these changes are most pronounced. Across all analytical steps and algorithmic models, we consistently find support for our hypothesis. That is - specific values driving consumers' evaluations and intentions change as consumers mature. Furthermore, we show that value nuances contain more age-sensitive information and consequently have greater predictive power than basic values, which in turn contained more age-sensitive information and hence had greater predictive power than higher-order values.

The values wheel highlights the importance of considering the nuanced value structure of consumers. Dyson for example leads the vacuum market and advertises to consumers who are curious, value creativity and new things. Curiosity and creativity are the two nuances of Schwartz's basic value of self-direction, while seeking new things is one of the nuances of stimulation. We find that all three nuances increase during consumers' lifespan. At the same time, however, they belong to the higher-order value of openness to change, which decreases across the lifespan. A manager or consumer researcher only looking at the highest-level result, openness to change, would derive a fundamentally wrong conclusion about the potential customer group of Dyson, likely favoring a too young target customer group.

References:

References provided in-text

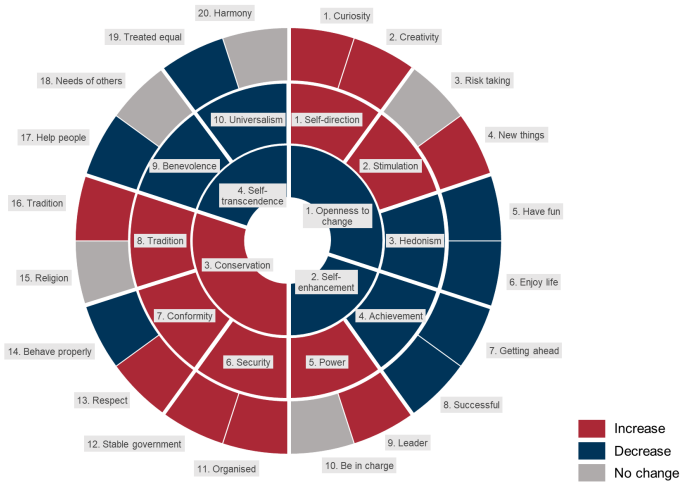

Figure 1. Summary of change of Schwartz Human Values across three hierarchical levels, i) four higher-order values (inner circle), ii) ten basic values (middle circle), iii) twenty value nuances (outer circle), with red indicating an increase, blue a decrease and grey indicating no significant change.