The Stability Heuristic: How Round Numbers Increase the Perception of How Long Product Characteristics Last

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This work demonstrates a novel association between numbers and stability (the “stability heuristic”). Attribute descriptions conveyed in round (vs. precise) numbers (e.g., 100 vs. 103mg caffeine) are seen as more stable and enduring. Therefore, when consumers value product attribute performance that lasts, round-numbered attribute descriptions enhance product preference.

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EXTENDED ABSTRACT

Product characteristics that are the basis for consumers’ preferences commonly have numerical values. For instance, an energy drink’s caffeine may be described as 100 milligrams (mgs) (round number) or 102 mgs (precise number; Dehaene and Mehler (1992)). Which caffeine value is preferred? Although the two values have similar magnitude, recent research suggests that consumers perceive round and precise numbers very differently, with implications on preferences (Xie & Kronrod, 2012; King & Janiszewski, 2011).

In the present work, we propose that using a round number to describe a product characteristic enhances consumers’ preference when consumers want the characteristic to endure. For example, since consumers buy an energy drink to gain energy over a long time, they prefer an energy drink with 100 (vs. 102) mgs of caffeine, despite the greater magnitude of 102. In this work, we explain this preference based on a stability heuristic; we find that consumers perceive round (vs. precise) numbers as having greater stability and balance, and in turn, this enhances the perceived endurance of a product characteristic.

Examining this aspect is important for many reasons. First, we establish an unexplored domain of product perception in which using round numbers is beneficial to persuade consumers (Cialdini, 1993). This domain, the endurance of a product characteristic, has received relatively scant attention in the literature, but it is an important consideration in consumers’ preferences (Faro 2010). In addition, we establish a novel link between round numbers and stability.

We contend that people perceive product characteristics described using round numbers as more enduring. Therefore, when stability of a product characteristic is preferred, round numbers will increase preference. Additionally, we find evidence of a symbolic association between round numbers and stability and balance, and this symbolic association drives the effect on preferences. There are several reasons why this is the case. For instance, round numbers often represent the boundary between categories, and people perceive the distance between a round and precise number (e.g., 200 vs. 199) as bigger than between two precise numbers (e.g., 199 and 198; Isaac & Schindler, 2014). As such, we suggest that because consumers will feel that it is easier to move between precise numbers than from a round number to a precise one, round numbers will be associated with stability whereas precise numbers with movement.

Study 1 involved two scenarios. Participants were asked to imagine buying a phone (scenario 1), and an energy drink (scenario 2). In scenario 1 the dependent variable was perceived length of time (in months) that a promised battery life of 1.9 (vs. 2.0) days will maintain its promised performance. We found that the battery life of 2.0 days was expected to last for a longer time (M=3.20; SD=1.56) than the battery life of 1.9 days (M=2.31; SD=1.39); t(56) = 2.30 (p<.05). We replicated the results for scenario 2; t(56) = 2.09, p<.05.

Study 2 used the energy drink scenario – participants imagined buying an energy drink with 100mgs versus 103mgs of caffeine. This study rules out a magnitude account (i.e., differences in the actual size of the numbers) and provides evidence of the underlying mechanism. To that aim, we measured the link between round versus precise numbers and stability, and participants’ attitudes. As expected, participants expressed better attitudes towards the energy drink that had 100 (vs. 103) mgs of caffeine (Mround=2.98, SD=1.69 vs. Mprecise=2.36, SD=1.29; t(86) = 1.99, p < .05), and the 100 (vs. 103) mgs of caffeine gave a stronger sense of stability (Mround=3.27, SD=1.60 vs. Mprecise=2.68, SD=1.28; t(86)=1.90, p=.06). A mediation analysis found evidence of the underlying mechanism (95% confidence interval excluding zero).

Study 3 tested whether the stability heuristic also affects perceptions of a product that is actually consumed, its influence on product enjoyment, and future consumption. To that end, participants consumed a tablet called ‘mberry’, which has an enjoyable flavor altering effect, and we measured how long participants thought this effect lasted. The results showed that participants felt like the tablet had a longer lasting effect in the round (M=4.71, SD=1.22) versus precise (M=4.08, SD=1.33) condition (t(65)=2.01, p<.05). The round number condition also had higher enjoyment of the foods (Mround=5.59, SD=1.8 vs. Mprecise=4.74, SD=1.61; t(65)=2.43, p<.05) and a higher likelihood of consuming the tablet in the future (Mround=5.28, SD=1.93 vs. Mprecise=3.5, SD=2.11; t(65)=3.49, p<.01).

In sum, this research shows that consumers perceive a product characteristic described using a round number compared to a precise one as lasting for a longer time, which in turn influences their preferences. In addition, this effect is driven by the link between round numbers and stability.

REFERENCES