

Research Report

# Lasting performance: Round numbers activate associations of stability and increase perceived length of product benefits

Jorge Pena-Marín <sup>a,\*</sup>, Rajesh Bhargave <sup>b,2</sup>

<sup>a</sup> University of Texas at San Antonio, 1 UTSA Circle, San Antonio, TX 78249-1644, USA

<sup>b</sup> Imperial College Business School, Imperial College London, London SW7 2AZ, UK

Accepted by Amna Kirmani, Editor; Associate Editor, Manoj Thomas

Received 26 June 2015; received in revised form 29 October 2015; accepted 12 November 2015

Available online 2 December 2015

## Abstract

Consumers prefer products that deliver benefits for a longer time. For instance, caffeinated drinks are consumed for energy, but the key characteristic that performs this benefit—caffeine—tends to wear off in its effects. How can marketers communicate the lasting performance of product characteristics? This work proposes that numbers used in conveying product characteristics—round (200 mg) or precise (203 mg)—influence consumers' perception of lasting performance and product attitudes. More specifically, product characteristics described in round (vs. precise) numbers are perceived as performing for a longer time, and this effect is driven by a symbolic association between round numbers and stability. This finding is important because numbers are commonly used in conveying product benefits and past work has mainly documented the advantages of using precise numbers (e.g., higher competence), whereas less is known about when and why using round numbers boosts product attitudes. Three studies, including one with actual consumption, offer triangulating evidence for this prediction and its underlying psychological mechanism. Overall, this work contributes to research on product perception, numerical cognition, and persuasion.

© 2015 Society for Consumer Psychology. Published by Elsevier Inc. All rights reserved.

*Keywords:* Numerical information; Product performance; Persuasion; Preferences

A critical dimension of many products' performance is the length of benefits provided after consumption: caffeinated drinks increase energy, aspirin relieves headaches, and snacks satisfy hunger for some time. These and many other products have a key characteristic that offers a benefit after product usage or consumption (e.g., snacks' calories produce ensuing satiety), and the numerical amount of this characteristic appears in marketing messages. For instance, a drink's caffeine may be

described as 100 or 102 mg (round vs. precise number; Dehaene & Mehler, 1992). Although these numbers' magnitudes are similar, systematic differences in how round and precise numbers are perceived and processed suggest that these numbers might differentially affect perceptions of product performance (King & Janiszewski, 2011; Wadhwa & Zhang, 2014; Xie & Kronrod, 2012).

In this paper, we propose and find that round (vs. precise) numbers are more persuasive in conveying products' lasting performance. For instance, a 100 (vs. 102) mg caffeine drink is perceived as providing longer lasting energy. Further, our proposed mechanism is that when round (vs. precise) numbers are used in product descriptions, this brings to mind an associated concept of stability. In turn, greater thoughts of stability enhance perception of long-lasting performance, which increases product preference.

Our work offers two important contributions to research on numerical cognition and product perceptions. First, past work on

\* Corresponding author.

E-mail addresses: [jorge.penamarin@utsa.edu](mailto:jorge.penamarin@utsa.edu) (J. Pena-Marín), [r.bhargave@imperial.ac.uk](mailto:r.bhargave@imperial.ac.uk) (R. Bhargave).

<sup>1</sup> Jorge Pena-Marín is a doctoral candidate at the University of Texas at San Antonio.

<sup>2</sup> Rajesh Bhargave is an assistant professor of marketing at Imperial College London.

numerical cognition has documented that consumers have different feelings (King & Janiszewski, 2011; Wadhwa & Zhang, 2014) and inferences (Welsh, Navarro, & Begg, 2011; Xie & Kronrod, 2012) when using round versus precise numbers. Building on this, we propose that through the accumulation of life experiences in using numbers, consumers have learned different associations for round versus precise numbers. Correspondingly, we show that round (more than precise) numbers activate the concept of stability.

Second, and more importantly, we show the downstream consequences of this association on consumers' perception of products' lasting benefits. Although this dimension of product performance is highly predictive of purchases (Faro, 2010; Ilyuk, Block, & Faro, 2014), it has received relatively little research attention. Moreover, marketing messages often contain round numbers, but research on numerical cognition has focused primarily on documenting positive effects of precise numbers, including increases in perceived credibility (Schindler & Yalch, 2006), accuracy (Zhang & Schwarz, 2012), and competence (Xie & Kronrod, 2012). We help to fill this research gap by showing how round numbers enhance perceptions of products' lasting benefits.

### Theoretical background

Consistent with the literature, we define a number as more round the more ending zeros it has (Dehaene & Mehler, 1992; Thomas, Simon, & Kadiyali, 2010). Research on marketing communications has shown that consumers infer greater credibility, confidence, and accuracy for messages containing round (vs. precise) numbers (Jerez-Fernandez, Angulo, & Oppenheimer, 2013; Schindler & Yalch, 2006; Zhang & Schwarz, 2012). For instance, product claims with precise (vs. round) numbers (19.41% vs. 20%) are seen as more credible (Xie & Kronrod, 2012). Other work on numerical cognition has shown greater felt fluency for round (vs. precise) numbers (e.g., \$365,000 vs. \$364,578; King & Janiszewski, 2011; Wadhwa & Zhang, 2014), and precise (vs. round) numbers reduce adjustment from the anchor in anchoring effects (Janiszewski & Uy, 2008).

In our research, we build upon the above and other related work to suggest that consumers hold different associations for round (vs. precise) numbers. More specifically, round numbers activate stability-related concepts, which influence judgments of lasting product performance. Therefore, our proposed mechanism is akin to semantic priming or symbolic association, wherein words, phonemes, and sensory stimuli activate particular concepts (Labroo, Dhar, & Schwarz, 2008; Meyers-Levy & Zhu, 2007; Yorkston & Menon, 2004). We claim that round and precise numbers have different learned associations due to consumers' divergent accumulated experiences in processing and using these numbers. Below we draw on three theoretical perspectives that suggest reasons why consumers might learn to associate round numbers with stability.

First, research has found that finer numerical values are perceived at a more concrete, lower construal level than coarse numerical values (Monga & Bagchi, 2012). Additionally, people generally perceive concrete and lower construal elements as more prone to change over time (Trope & Liberman, 2010). Therefore, we argue that attributes described with round (vs. precise)

numbers will facilitate greater thoughts of stability and fewer thoughts of change.

Second, individuals see round (more than precise) numbers as salient reference points (Rosch, 1975). As a consequence, people commonly configure categories to contain a round number of elements (Isaac & Schindler, 2014). For instance, people create lists of hierarchy with multiples of 10 (e.g., top 10, bottom 10, etc.), and round numbers are often featured in the names and labels for categories and organizations (e.g., S&P 500, G20, etc.). In these examples, although which elements enter into the category might change (e.g., the specific companies in the S&P 500), the *number* of elements is generally stable, because it is a salient reference point. In the same vein, people also express goals and benchmarks in terms of round numbers (Pope & Simonsohn, 2011). For instance, baseball players strive for a .300 batting average, and students aim to meet or exceed certain round-numbered scores on board exams. In these examples, while people's performance might change, the goal or benchmark itself tends to be stable, either within an individual or across individuals competing in the same domain. Overall, then, we suggest that the greater salience and maintenance of round (vs. precise) numbers will lead consumers to learn an association between round numbers and stability.

Finally, because round (vs. precise) numbers are easier to process (King & Janiszewski, 2011) and have more useable representations of magnitude (Dehaene, 2011), people naturally change precise numbers into round numbers while processing numerical information (Schindler & Kirby, 1997). These changes include truncation, rounding, and estimation. For instance, a car's horsepower of 197 HP could be truncated by dropping the last digit to process "190 HP," or the 197 could be rounded to its nearest round value, "200 HP." Additionally, to calculate  $23 \times 31$ , people tend to estimate  $20 \times 30$  instead (Siegler & Booth, 2005). We suggest that these common tendencies to actively change precise numbers also encourages a greater learned association between round (vs. precise) numbers and stability.

In sum, these findings suggest that round (more than precise) numbers are linked to stability. We contend that this difference will influence consumers' perceptions of products that incorporate numerical descriptions. Often, judgments and decisions are colored by accessible associations related to target stimuli under consideration (Bettman, Luce, & Payne, 1998; Higgins & King, 1981). For instance, when consumers lift a heavy product, this physical experience semantically activates the concept of importance, which then spills over into related judgments of power and influence (Jostmann & Lakens, 2009; Zhang & Li, 2012). Similarly, phonemes in product names arouse certain associations (e.g., smallness), which sway judgments of related product features (e.g., healthfulness; Yorkston & Menon, 2004). Likewise, we believe that the activated concept of stability under a round number will especially affect consumers' perceptions of products' lasting performance (i.e., how long its benefits last), because stability is relevant when assessing a product benefit that tends to wear off over time. Next, we formally re-state our predictions.

**H1.** Consumers' perceptions of a product characteristic's lasting performance are greater when the characteristic is described with a round (vs. precise) number.

Download English Version:

<https://daneshyari.com/en/article/881973>

Download Persian Version:

<https://daneshyari.com/article/881973>

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