The Persuasiveness Power of Round Numbers: a Construal Level Theory Perspective

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Marketers often use numerical information in advertisements. Earlier research shows that precise numbers are more persuasive than round ones. The present work, however, shows that people are more persuaded by round (vs. precise) numbers when the judgmental target is psychologically distant (vs. close).

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EXTENDED ABSTRACT
Numerical persuasion is everywhere in marketing. One recurrent finding in the persuasion literature is that precise numbers are more persuasive than round ones (e.g. Xie and Kronrod 2013). The present research, however, finds that round numbers could be more persuasive than precise ones. In addition, we reconcile our prediction and previous research by specifying circumstances under which each pattern will happen. Our core proposition is that precise (vs. round) numbers are associated with shorter (vs. longer) psychological distance. Then, drawing from construal level theory (CLT; Liberman, and Waksdal 2007), we predict and find that precise (vs. round) numbers are more persuasive when the judgment is psychologically close (vs. distant). Finally, we find that this effect is driven by the enhanced processing fluency that consumers experience as a consequence of the fit between precise (vs. round) numbers and a closer (vs. distant) psychological distance.

Several reasons support the association between round (precise) numbers and distal (closer) psychological distance. Round numbers are associated with broader confidence intervals than precise numbers (Dehaene 2011). For example, whereas “ninety nine” represents only the exact quantity of 99, “one hundred” may mean anything between 91 and 109. Consistent with this idea, (Jerez-Fernandez et al. 2013) showed that people use round (vs. precise) numbers when they have low (vs. high) confidence about their estimations. Now consider psychological distance. Typically, people are less confident about psychologically distant (vs. close) events because they have less information. Thus, people should use round numbers to describe distal targets because the associated broader confidence intervals provide higher flexibility.

The numerical precision - construal level link has an important implication for persuasion purposes. Previous research has shown the importance of a congruency between an external stimulus and the consumer mind-set to obtain the maximum effect (Higgins 2000). The application of this logic lead to propose that precise (vs. round) numbers are more persuasive when the judgment is psychologically close (vs. distant).

Three studies examined our predictions. Study 1 provided initial support for our first hypothesis. We presented participants (n=141) an scenario where they were having a few days of holidays either at their city (near condition) or in another country (distant condition), and we told them that they needed to buy a digital camera for the trip. The description of the camera was made using either round or precise numbers (e.g. weight 10 Oz vs. 10.1 Oz). The dependent variables were their attitudes towards the camera and purchase intentions. As expected, we observed a two-way interaction. A match between distal (vs. close) spatial distance and round (vs. precise) numbers led to higher attitudes and purchase intentions towards the camera (F(1,137)=4.83, p<.05).

In study 2 we aimed to replicate the results of study 1, and to reconcile our findings with past literature demonstrating that precise numbers are more persuasive than round ones. Specifically, we suggest that when psychological distance is not explicitly specified (as in previous research), participants might have perceived the scenario as psychologically close. To empirically test this possibility, in this study we included a control condition where psychological distance is not specified. Participants (N=208) imagined planning a vacation (control condition) for either next weekend (close condition) or one year later (distant condition) and they were searching for a hotel, whose description included the type of number manipulation (e.g., room size: 298 or 300 square feet). As expected, we observed a two-way interaction (F(1, 202)=3.82, p<.05). In addition, we found support for our goal to reconcile previous findings within our framework. That is, participants’ attitudes were more favorable in the precise (vs. round) condition (Mprecision=4.81, SD=1.09 vs. MRound=4.30, SD=1.37; t(202)=1.76, p<.05). Moreover, the difference between precise and round conditions didn’t significantly differ between the control condition and the psychologically close condition (t<1, p>.90).

In study 3 we aimed to obtain support of processing fluency as the underlying mechanism. Participants (n=96) imagined that their university (close condition) versus another university (distant condition) was planning to introduce laptops in the classrooms. Then, we presented participants with a laptop described using round or precise numbers (e.g.2507 by 1593 vs. 2500 by 1600 pixels of resolution). We replicated the same pattern of results of study 1 and 2 and they were significant (F(1,93)=5.19, p<.05). In addition, we also found support of our proposed underlying mechanism, and processing fluency was dependent of a fit between precise (vs. round) numbers and close (vs. distant) psychological (F(1,92)=5.83, p=.01). Finally, a mediation analysis supported the processing fluency as the mediator of the proposed effect (β=.31, SE=.16), with a 95% confidence interval excluding zero [.06 to .76].

REFERENCES