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# Improving pricing scope through consumers' construal level – evidence based on consumers' willingness-to-pay ranges



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**Summary:** How can the pricing scope be further leveraged in times of increased price transparency and growing price awareness on the consumer side? To answer this question, this paper uses the concept of willingness-to-pay ranges (as opposed to points). Three quantitative studies show that various marketing activities that allow consumers to assess a product on a more abstract (less concrete) level shift the upper limits of the intervals upwards and thus increase the scope for price setting. These (price) upper limits are particularly high when the central product advantages are emphasized.

**Keywords:** construal level theory, measurement category, pricing scope, psychological distance, willingness-to-pay ranges, ceiling reservation price



**Nutzung mentaler Abstraktionsniveaus von Konsumenten zur Verbesserung von Preissetzungsspielräumen – empirische Erkenntnisse auf Grundlage von Zahlungsbereitschaftsintervallen**

**Zusammenfassung:** Wie lässt sich der Preissetzungsspielraum in Zeiten gesteigerter Preistransparenz und zunehmenden Preisbewusstseins auf Verbraucherseite besser ausschöpfen? Zur Beantwortung dieser Frage nutzt der vorliegende Beitrag das Konzept von Zahlungsbereitschaftsintervallen (im Gegensatz zu -punkten). Drei quantitative Studien zeigen, dass verschiedene Marketingaktivitäten, die Verbraucher\*innen auf abstrakterem (weniger konkretem) Niveau ein Produkt beurteilen lassen, die Intervallobergrenzen nach oben verschieben und somit den Spielraum für die Preissetzung erweitern. Diese (Preis-) Obergrenzen sind bei Betonung der zentralen Produktvorteile besonders hoch.

**Stichwörter:** Preisgestaltung, Preissetzungsspielraum, Construal Level, Psychologische Distanz, Zahlungsbereitschaftsintervall, Reservierungspreis.



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## 1 Introduction

How can the pricing scope be further widened in times of increased price transparency and growing price awareness on the consumer side? This article builds on the idea that understanding consumers' willingness-to-pay (WTP) is a key to answer this question. In particular, consumers' WTP is the cornerstone of value-based pricing, which can improve a firm's performance and is thus essential for its survival (*Liozu/Hinterhuber* 2013).

To understand consumers' WTP it is essential to know its antecedents. In general, WTP antecedents represent potential levers for marketing managers to improve the firm's performance. More specifically, knowing to which extent WTP can be increased through a specific marketing activity supports pricing managers in their attempt to better exploit their pricing scope.

Many antecedents and measurements of WTP have been discussed in the literature (for an overview, see *Voelckner* 2006, *Mazumdar et al.* 2005, *Miller et al.* 2011). It is not our intention to review these factors here; instead, we note that the large majority of this literature use a *point*-based conceptualization and measurement of WTP. This conceptualization assumes that WTP can be captured by a single (precise) point for a given product (*Jedidi/Jagpal* 2009), which practically can lead to an undervalued pricing potential (*Dost/Wilken* 2012) by not considering prices beyond the single point estimates at which consumers could still buy (*Wathieu/Bertini* 2007). Moreover, a point-based concept of WTP ignores more recent insights for pricing managers in connection to our initial question.

We suggest WTP *intervals* or *ranges* (*Wang et al.* 2007) to further widen the pricing scope of companies. Such a concept typically uses floor and ceiling reservation prices as end points (FP & CP, respectively). The FP is the price below which a consumer would definitely buy, with a 100 % purchase probability. In contrast, the CP is the price above which a consumer would no longer buy, with purchase probability close to 0 %. Between these prices, a consumer is indecisive toward buying (*Wang et al.* 2007; *Schlereth et al.* 2012; *Dost et al.* 2014). This WTP-as-a-range conceptualization offers several opportunities to increase pricing potential: by increasing consumers' FP, their CP, or both simultaneously.

One new lever for pricing managers with WTP-as-a-range is that the ranges consider uncertainty in assessing consumers' preferences (*Braun et al.* 2016, *Håkansson* 2008, *Kniebes et al.* 2014). In this context, *Maier/Wilken* (2014) show that consumers' uncertainty reduces the WTP range, specifically through an increase in the FP. *Wang/Hu* (2019) likewise show that uncertainty especially affects the FP and is necessary to be considered for optimal pricing. Hence, the small WTP-as-a-range literature and related managerial activities to date are directed at decreasing uncertainty. However, while increasing FP could allow the setting of higher certain prices, it also reduces the even higher range of prices where consumers may be still willing but are indecisive to buy.

Given this literature, marketing activities that could impact consumers' CPs have not yet been investigated. This is a relevant research gap to further widen the pricing scope besides the FP: Increases in CPs would allow firms to increase profit margins through viable "overpricing" (*Wathieu/Bertini* 2007) and to reduce price sensitivity (*Dost/Wilken* 2012). Furthermore, increasing CP can help soften entrenched competitive price environments by increasing the number of indecisive consumers who may be swayed by additional marketing communication (*Dost/Geiger* 2017).

The contribution of this article is therefore to propose and empirically investigate an important antecedent of consumers' CPs – namely: consumers' construal level which, in turn, can be impacted by numerous marketing activities. Put differently: We will apply construal level theory (CLT) to understand why specific marketing activities can leverage a firm's pricing potential through increased consumers' CPs.

According to construal level theory (CLT), consumers “use concrete, low-level construals to represent near events and abstract, high-level construals to represent distant events” (Trope et al. 2007, p. 83). A concrete mental picture includes details and contextual features, whereas an abstract mental picture mainly consists of the general features of the object or situation (Trope/Liberman 2010). When consumers evaluate products, construal level determines which product features are salient. Under concrete construals, peripheral/feasibility aspects are more salient, whereas under abstract construals, consumers focus on central/desirability aspects (Dhar/Kim 2007; Trope/Liberman 2000). Applied to our research context, we therefore would expect that various marketing activities, intended to shift consumers' ‘mode of thinking’ to a more abstract level, can shift consumers' CPs upwards, implying an improved pricing scope for the firm and ultimately increasing its revenues.

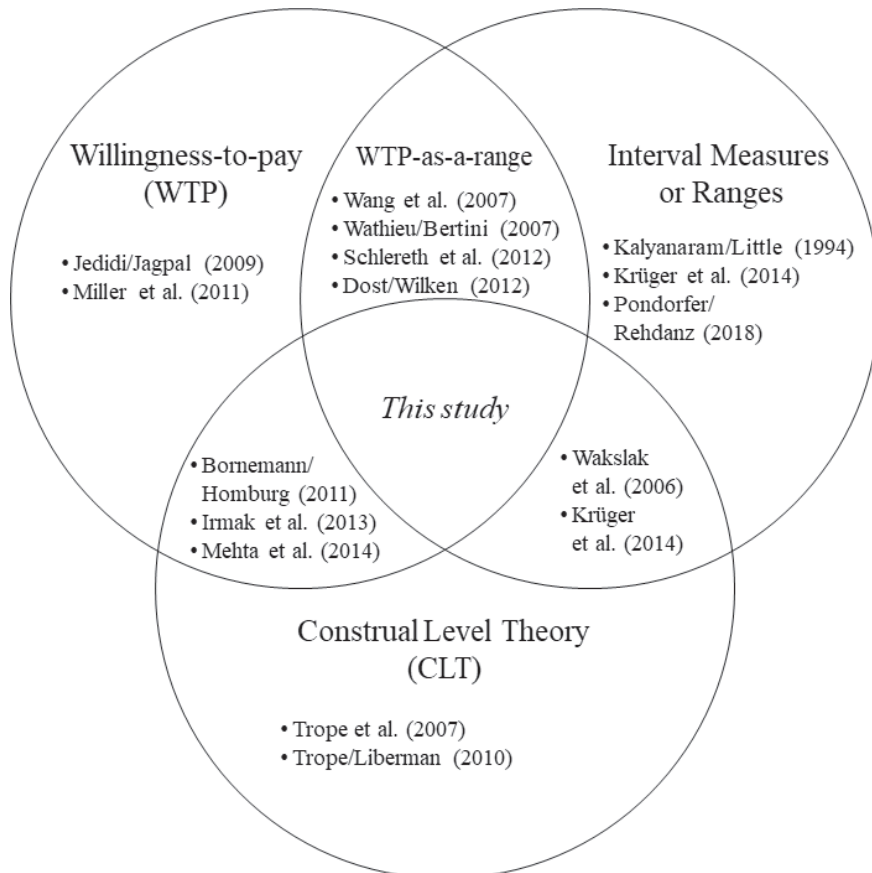


Figure 1: Intersections of Three Research Streams and Exemplary Studies

Our study therefore links three extant streams of literature (WTP, interval or range measures, CLT) and addresses a managerially important research gap at their joint intersection. It is important to stress that to the best of our knowledge, no extant research in all possible intersections of the three research streams (see Figure 1) addresses construal level (or any other construct) as antecedent for CP. Thus, our findings hold novel, specific insights for each stream in return.

The following chapter discusses in more depth CLT as the underlying theoretical foundation and proposes hypotheses on the influence of construal level on WTP. These hypotheses are going to be tested in three empirical studies. We conclude by discussing the novelty of the findings and derive managerial implications. These concluding comments thus close the circle on our initial question.

## 2 Construal Level Effects on WTP Ranges

### 2.1 Construal Level Effects on Point-Based WTP

CLT describes the relation between psychological distance and the degree of abstraction in people's thinking. The more distant an object or situation is from an individual, the more abstractly the individual perceives it to be, and the closer the object is, the more concretely it will be pictured in the individual's mind. For example, the event "moving into a new house" could be pictured in an abstract way as "starting a new life," a high-level mental representation called "high-level construal." In contrast, the same event could be pictured in a concrete way as "packing and moving boxes," a "low-level construal" that reflects details and contextual features of the situation (*Liberman/Trope* 1998, p. 8).

How does this knowledge apply to a marketing and, more specifically, a pricing context? Regarding product evaluation, consumers' construal level determines which product features are salient – central, desirability-related or peripheral, feasibility-related features of the product. For example, evaluations of a stereo system under an abstract construal should be influenced substantially by central aspects like sound quality. In contrast, a concrete construal should make evaluations to be mainly driven by peripheral aspects, such as the quality of an integrated clock (*Trope/Liberman* 2000). *Irmak et al.* (2013) show that manipulating construal levels influences consumers' point-based WTP. Specifically, high-level construal encourages consumers to place greater weight on a product's central (desirability-related) aspects than on its peripheral (feasibility-related) aspects, which in turn increases their indicated price for the desirability-favored product. In other words, people in a high-level construal condition react to this match between their construal and the presented product features by indicating higher WTP than people in a low-level construal condition. In contrast, when the feasibility aspect is superior and the desirability aspect is inferior, WTP is equally low for both construal level conditions.

Additionally, consumers with a high construal level focus more on product attributes associated with abstract goals, compared to consumers with a low construal level, and this difference can lead to an increased WTP a price premium (*Ramirez et al.* 2015). In a similar vein, the salience of desirability versus feasibility aspects depends on construal level (*Dhar/Kim* 2007): when a consumer considers a product on a high-level construal, its desirability-related aspects become more important for decision making (e.g., "Why would I like to have this product?"). In contrast, when a consumer represents a product on a low-level construal, its feasibility-related aspects are more prominent in decision

making (e.g., “How would I use this product?”). Similar effects emerge with psychological distance: when a product is distant, it is represented in a more abstract way, which encourages the consumer to focus on high-level construal information such as the product's desirability-related, central features. This in turn leads to a higher WTP, assuming these features are favorable (Hansen/Melzner 2014; Ledgerwood et al. 2010).

What are the implications for the pricing scope – how can the existing knowledge on the relationship between construal level and point-based WTP be transferred to the WTP range conceptualization? A higher point-based WTP as a consequence of abstract construal or high psychological distance have three possible explanations: (1) a greater increase in the CP than decrease in the FP, (2) a greater increase in the FP than decrease in the CP, or (3) an increase in both prices. Logically, a single expectation arises: if abstract construal level or high psychological distance leads to both increased WTP levels and wider ranges (see 2.2), then only a greater increase in the CP than in the FP can explain prior findings consistently. Wider ranges from a greater decrease in the FP than in the CP would imply decreasing WTP levels, in contradiction to the literature. Wider ranges from a shift of both prices in opposite directions would only support increasing WTP levels if the CP increases more strongly than the FP decreases. Hence:

H1: For products with favorable central, desirability-related features, consumers' ceiling reservation prices increase more strongly than floor prices under abstract than concrete construal level.

This hypothesis thus claims that, if supported, marketing managers should implement activities that generate a high consumers' construal level, so that these consumers evaluate desirability-related product features favorably, which in turn increase their ceiling prices.

## 2.2 Construal Level Effects on WTP Ranges

Chapter 1 emphasized that the range-based understanding of WTPs provides richer starting points for uncovering price scope than the point-based understanding. In particular, the range itself is a measure for meaningful options for price setting. Put differently: With increased ranges, the pricing scope gets leveraged as well. This section, therefore, talks about beneficial effects of abstract (vs. concrete) construal level on WTP ranges.

Empirical evidence shows that construal level influences response category widths (Lieberman et al. 2002; Smith/Trope 2006; Wakslak et al. 2006; Krüger et al. 2014). Specifically, people tend to group items into broader (narrower) categories at an abstract (concrete) construal level (Trope/Lieberman 2010; Wakslak et al. 2006). Krüger et al. (2014) illustrates this relationship effectively: following a manipulation of construal level, participants indicated the minimal and maximal number of blueberries shown in a picture. Estimates for these amounts were further apart when the abstract name “fruit” appeared compared with when the more concrete term “blueberries” appeared. Similarly, when participants judged the minimal and maximal length of a bridge whose name was either in the local or a foreign language, the supposedly far away bridge (foreign name) triggered wider length ranges than the supposedly close bridge (local name). The response category was wider under abstract than the concrete construal condition.

In this sense, WTP range may also be considered a response category width. Similarly, Lieberman et al. (2007, p. 116) predict but do not empirically test that “if a person is asked about the price range of [a product] ..., a wider price range will be indicated in a distal

perspective compared to a proximal perspective.” However, the authors do not apply WTP measures, and more importantly, they do not consider the reason behind increased range estimates as postulated in chapter 2.1.

Transferring these findings to a consumer context, a similar effect occurs for price ranges that consumers perceive as “acceptable” (Krüger *et al.* 2015). The range of acceptable prices becomes wider with high-level construal. In summary, we can state a straightforward expectation from prior literature applied to WTP ranges:

H2: For products with favorable central, desirability-related features, consumers’ WTP range is wider under abstract than concrete construal level.

This hypothesis thus again claims that, if supported, marketing managers should implement measures that generate an abstract consumers’ construal level. While H1 refers to the immediate positive effect of such measures (increased CPs), H2 focuses on the related implication for pricing managers (increased pricing scope).

### 3 Empirical Studies

#### 3.1 Overview

We carried out three empirical studies to answer our research question and test the hypotheses. The studies are structured along the following guiding questions: (1) Does the theoretical explanation of increased CPs and increased WTP ranges through consumers’ construal level hold? (2) Does a managerially applicable way of affecting construal level work equally well – in a context of real purchases? (3) Can the established effects be generalized to another marketing activity and another product category? Therefore, study 1 focuses on the theoretical explanation behind our expected effects (1), while study 2 focuses on the managerial implementation and on external validity (2). Finally, study 3 focuses on generalization and thus on broadening managerial applicability by maintaining theoretical validity.

#### 3.2 Study 1

##### 3.2.1 Design, Stimuli

Study 1 manipulates construal level and the favorability of the product’s central and peripheral features. Participants in the abstract construal condition were asked to think about the goal of “improving and maintaining health” and then to write down why to pursue the given goal, whereas participants in the concrete condition were asked to indicate how they should pursue that same goal (Freitas *et al.* 2004). This leads the chain of thought along either goal-related or means-related considerations.

A prestudy testing these materials showed that the manipulation significantly changed participants’ construal level. Participants judged the length of a bridge by indicating the minimal and maximal estimated length in meters. The high-level construal group ( $M_1 = 254.10$ ,  $SD_1 = 434.17$ ) indicated a significantly wider range as compared to the low-level construal group ( $M_2 = 111.70$ ,  $SD_2 = 136.05$ ;  $t(57.16) = 2.193$ ,  $p < .05$ ).

Two product scenarios served to manipulate the favorability of product features. The first described a camera as being superior on its central features and inferior on peripheral features: “Imagine that you want to buy an advanced camera for taking artistic pictures.

You have been offered a camera which has all of the sophisticated features that an art photographer needs. However, the camera is a little bulky and heavy, so it is not easy to carry around with you" (Irmak *et al.* 2013, p. 288). The second scenario described the camera in the opposite way, as having superior peripheral features and inferior central features: "Imagine that you want to buy an advanced camera for taking artistic pictures. You have been offered a camera which has only some of the sophisticated features that an art photographer needs. However, the camera is compact and light, so it is easy to carry around with you" (Irmak *et al.* 2013, p. 288).

### 3.2.2 Participants, Procedure, and Measures

Participants were recruited using a German online panel (Norstat). The sample consisted of 111 participants (54 % female) between 20 and 40 years ( $M = 31$  years,  $SD = 6.6$ ). In addition, 60 % of the sample had a monthly income lower than €1,800, 30 % indicated a higher monthly income than €1,800, and 10 % declined to provide this information.

After reading general instructions on mindsets, participants needed to complete the construal level manipulation. Then, participants were thanked for having filled out the survey about health-relevant behavior. To discourage them from assuming that the study combined health-related questions and product evaluation items, participants were told that a second, unrelated product survey would follow on the next pages. Then, they were told to imagine that they would like to buy a camera. Each participant was exposed to one of the two favorability conditions and then asked for their WTP range for the described ("Please indicate the price until which you would definitely buy the product (100 % likely to buy)"; "Please indicate the price beyond which you would definitely no longer buy the product (0 % likely to buy)").

Participants finally answered questions regarding uncertainty about their preferences and product performance (Wang *et al.* 2007), perceived quality of the described camera, interest in the product category in general, and whether they owned a camera similar to that described. The survey ended with demographic questions.

### 3.2.3 Results

The perceived quality of the camera differed significantly between the two feature conditions (primary superior, secondary inferior vs. secondary superior, primary inferior;  $t(109) = 2.603$ ,  $p = .01$ ). As expected, a product that is superior on its primary features is also perceived as being of high quality, as compared to a product that is inferior on primary features. Accordingly, quality is included as a covariate.

A MANCOVA showed that construal level affects FP and CP differently ( $F(1, 107) = 3.974$ ,  $p < .05$ ,  $\eta^2 = .036$ ). Furthermore, while the favorable central versus favorable peripheral feature did not significantly affect the two WTP measures ( $F(1, 107) = 2.491$ ,  $p = .12$ ,  $\eta^2 = .023$ ), it did so in interaction with construal level ( $F(1, 107) = 4.123$ ,  $p < .05$ ,  $\eta^2 = .037$ ). These results support H1.

An ANCOVA showed a significant main effect of construal level ( $F(1,107) = 3.974$ ,  $p < .05$ ,  $\eta^2 = .04$ ). The main effect of product features was not significant ( $F(1,107) = 2.491$ ,  $p = .12$ ). In support of H2, the interaction of construal level and product features was significant ( $F(1,107) = 4.123$ ,  $p < .05$ ,  $\eta^2 = .04$ , *figure 2*): construal level influenced WTP ranges for products favorable on central features ( $M_{\text{high}} = 233.03$  vs.  $M_{\text{low}} =$

108.37), whereas WTP ranges remained unaffected by construal level when the product under evaluation has favorable peripheral features ( $M_{\text{high}} = 121.24$  vs.  $M_{\text{low}} = 122.38$ ).

These results support the claim that abstract (vs. concrete) construal levels increase consumers' CPs and WTP ranges. However, two important shortcomings need to be considered: First, for managerial action, we need to test measures that can 'easily' be implemented to influence consumers' construal level. Second, the results so far have been obtained in a laboratory setting, with no purchases having taken place. Consequently, the next study is based on a managerially actionable measure, using an incentive-compatible design with real purchases taking place, revealing consumers' (real) WTPs.

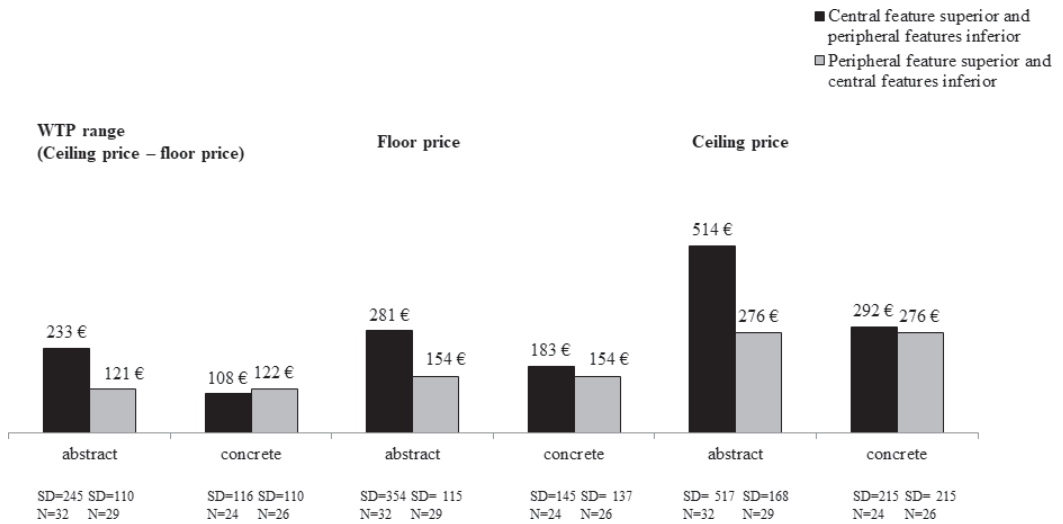


Figure 2: Influence of CLT on WTP range, FP, and CP

### 3.3 Study 2

#### 3.3.1 Prestudy

53 participants recruited via social network postings completed an online survey. Because it was particularly important that participants were able to watch the video without interruptions, eight participants were excluded for reported technical problems during the study. In addition, one participant indicated unrealistically high estimates in the following manipulation check and was subsequently excluded, leaving a final sample of 44 participants (73 % female and aged 30 years on average).

Participants viewed a video advertisement of the BMW i8. One group saw a video that mainly used close-up shots of the interior and exterior of the car (low distance / construal); the other group saw the same car from a more distant perspective and panoramic shots (high distance / construal). For external validity reasons, these advertisements were actual TV advertisements and YouTube launch videos (figure 3). Both videos were approximately the same length (about 75 seconds) and had identical original audio tracks.



Figure 3: Screenshots from BMW videos

To check the efficacy of the manipulation participants saw a picture of a bridge and gave an estimate of its minimal and maximal length (in meters) (Krüger *et al.* 2014). Participants who saw the car advertisement in a high-distance perspective indicated a wider range for the length of a bridge than those who saw the same car from a low-distance perspective ( $M_{\text{high}} = 341.67$ ,  $SD_1 = 382.80$ ;  $M_{\text{low}} = 158.74$ ,  $SD_2 = 168.65$ ;  $t(42) = 2.083$ ,  $p < .05$ ).

### 3.3.2 Main Study: Design, Stimuli

The main study used a scenario in which participants could purchase a beverage after watching one of the car ads tested in the prestudy. After watching either the high- or low-distance version of the ad, participants had the chance to purchase a glass of sparkling wine. The description of the sparkling wine manipulated the favorability of product features, described as “sparkling wine of the year” regarding taste but having a “too light color”, or vice versa described as “average” regarding taste but having a “perfect golden color”.

The goal was to test if distance manipulation in one product carries over to an unrelated product that is offered afterwards – a typical situation (e.g., carry-over effect) in online and offline shopping in retail stores (Lieberman/Förster 2009) and therefore a setting with practical relevance.

### 3.3.3 Participants, Procedure, and Measures

Students from a European business school served as participants. They learned the survey would last about 30 minutes, in exchange for €10 for participation. 53 participants could be recruited (64 % male, average age = 23.4 years,  $SD = 2.18$ ).

After taking a seat equipped with a table number card, a pen, and a questionnaire, participants were told the cover story: they would see several product advertisements and evaluate them, including WTP ranges, explained in written instructions. Participants could ask questions regarding the definitions. Then they watched either the high- or low distance version of the ad (see prestudy). To keep up the cover story, participants then learned they would take part in a training exercise to internalize the WTP concept. This (pretended) training exercise completed the actual experiment: participants saw a glass of sparkling wine with one of two descriptions (manipulation of product features) and then stated their FP and CP on the blank back of their table number sheets. The goal of using the table

number sheets was to make participants believe that their WTP for a glass of sparkling wine was not part of the questionnaire and therefore not related to the official part of the study.

The research team drew a lottery to decide on the actual price for the glass of the sparkling wine (*Dost/Wilken* 2012): If the drawn lottery price was below a participant's FP, he or she had to buy a glass of sparkling wine. If the lottery price was higher than the CP, the participant was not allowed to purchase it. If the lottery price fell within the range, the participant could choose if he or she wanted to buy at the lottery price; if so, a coin flip determined whether the participant was allowed to purchase the sparkling wine at the lottery price. Participants were aware that they were bound to the lottery outcome and to their indicated prices.

The study then asked for evaluations and WTPs for the car shown in the initial advertisement. It then continued with a distractor video and a second car advertisement (Honda), followed by some evaluation questions. With the exception of the control questions regarding the sparkling wine and the demographic information, all information collected was only for the purpose of keeping up the cover story. The questionnaire concluded with questions on attitude toward consuming and buying sparkling wine on a five-point Likert scale. In addition, participants evaluated how focused they were while watching the videos and how accurately they had filled out the questionnaire (five-point Likert scales). The final questions concerned gender, nationality, participants' English language skills, and their beliefs about the purpose of the study. Participants left the laboratory setting, paying for their purchased glass of sparkling wine at the respective lottery price. There were no incidents of people refusing to pay.

### 3.3.4 Main Study: Results

A MANOVA showed that CLT affected FP and CP differently ( $F(1, 49) = 5.153, p < .05, \eta^2 = .096$ ). Furthermore, while the central versus peripheral feature manipulation did not significantly influence the two reservation prices ( $F(1, 49) = 2.612, p = .11, \eta^2 = .051$ ), it did so in interaction with construal ( $F(1, 49) = 4.994, p < .05, \eta^2 = .092$ ), in support of H1. *Figure 4* depicts FP and CP for all four conditions. Results show the anticipated pattern of a stronger increase in CP (€3.57 to €7.02) than in FP (€1.93 to €3.77).

Moreover, an ANOVA showed a significant main effect of distance ( $F(1, 49) = 5.153, p < .05, \eta^2 = .10$ ), while the main effect for feature was not significant ( $F(1, 49) = 2.612, p = .11, \eta^2 = .05$ ). In support of H2, the interaction of both factors was significant ( $F(1, 49) = 4.994, p < .05, \eta^2 = .09$ ). The widest average WTP ranges ( $M_{\text{high}} = 3.24$ ) emerged in the high-distance, superior-central-feature condition, consistently with Study 1.

This study replicated the effects found in study 1, using an 'easily' managerial actionable measure of influencing consumers' construal level through high (low) psychological distance, and observing real WTPs. At the same time, we checked whether the construal level manipulation carries over to an unrelated product that is offered afterwards (e.g., comparable to a situation in a cinema). To broaden managerial application and to generalize the findings, the following study will use a different manipulation (e.g., advertisement), directly related to the product category (e.g., camera) as in study 1. This time, the aim is to discover whether an 'easily' applicable manipulation of a product advertisement as in study 2 is sufficient to replicate the current findings of studies 1 and 2.

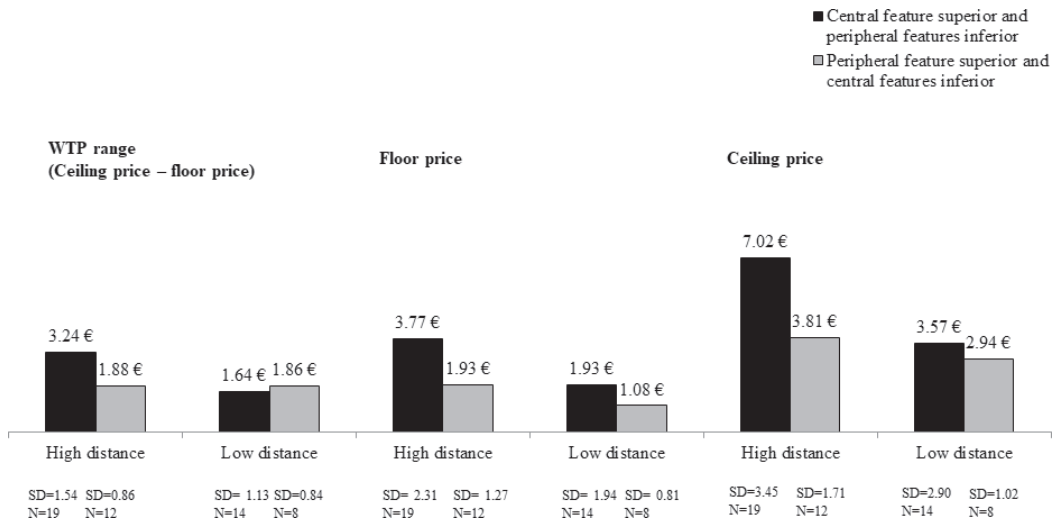


Figure 4: Influence of Distance on WTP Range, FP, and CP

### 3.4 Study 3

#### 3.4.1 Design, Stimuli

To showcase how the proposed effect of CLT, realized through spatial psychological distance (proximity) and a resulting focus on central (peripheral) product features works through real advertisements (print and online), Study 3 used official product pictures of a Canon SLR camera that had appeared in the German market. The high-distance stimulus showed a panorama in the background and the product from a distant perspective, and the low-distance stimulus showed a close-up view of the camera (*figure 5*).

The high-distance stimulus highlighted the camera's favorable desirability aspects: the high-quality picture showing a city panorama was to be associated with own desires and goals. The product slogan “your very own perspective” and “you can” served to strengthen this association. The low-distance stimulus showed the camera's favorable new functionalities in several product pictures and the verbal description (“the high-resolution, rotatable ClearView LCD-monitor offers not only new options for viewing pictures and LiveView resolution quality, but also enables creative picture composition”).



Figure 5: Camera Stimuli: High Distance (Left-Hand Panel) and Low Distance (Right-Hand Panel)

### 3.4.2 Participants, Procedure, and Measures

50 participants (66 % female) between 16 and 61 years of age ( $M = 29$  years) were recruited via online networks (e.g., Facebook). Most participants held an academic degree (72 %), and the rest either had finished a vocational training or were still studying. Participation was rewarded with a chance to win a €50 Amazon voucher.

After viewing one of the two advertisements, participants indicated their WTP ranges by stating their FP and CP (same measures as before). Next, participants indicated how appealing, helpful, abstract, and detailed they found the product presentation, judged the quality of the product, and answered some demographic questions.

### 3.4.3 Results

A manipulation check confirmed that the advertisements indeed affected concrete and abstract construal ( $t(47) = 2.586, p < .05$ ). In line with H1, a MANOVA showed that construal affected FP and CP differently ( $F(1, 48) = 4.962, p = .03, \eta^2 = .094$ ). More specifically, the CP was significantly higher in the high-distance group than in the low-distance group ( $M_{\text{high}} = 707.4, SD_1 = 379.9; M_{\text{low}} = 536.9, SD_2 = 207.2; t(48) = 2.010, p = .05, d = .56$ ), whereas the FP remained unaffected ( $t(48) = 1.305, p = .20, d = .36$ ) (figure 6). In support of H2, the data indicated wider WTP ranges in the high-distance group than in the low-distance group ( $M_{\text{high}} = 314.3, SD_1 = 162.5; M_{\text{low}} = 226.0, SD_2 = 117.3; t(48) = 2.228, p < .05, d = .62$ ).

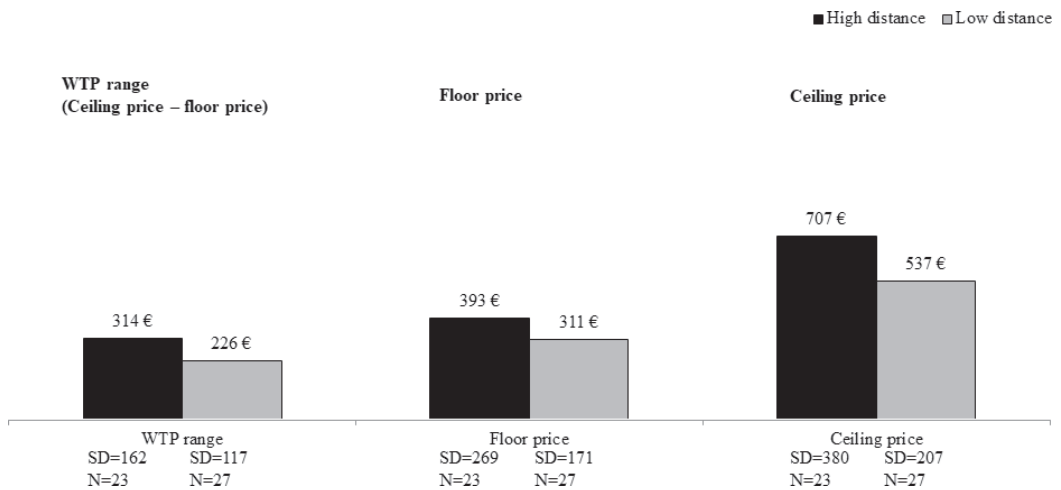


Figure 6: Influence of Distance on WTP Range, FP, and CP

#### 4 Synthesis of Results and Implications

The empirical studies show that abstract (vs. concrete) construal levels, realized through high (vs. low) spatial psychological distance lead to an increased CP (H1) and therefore a wider WTP range (H2), particularly for products superior on their central features. Because the studies used various stimuli, samples, and settings to measure WTP (hypothetical and incentive-aligned), the resulting effects can be generalized. Moreover, the effect of CLT on WTP ranges holds true for purchases after a manipulation unrelated to the sold product, highlighting the importance of the findings even as a broader context effect<sup>1</sup> (see table 1).

For whom are these findings relevant, and how? We will now discuss theoretical and managerial implications.

Theoretically, construal level complements the set of drivers of WTP ranges: whereas FP increase with certainty (Maier *et al.* 2015), abstract construal level triggers an increase in CP. This finding illustrates that a more differentiated conceptualization of WTP (through various reservation prices) also offers a more differentiated picture of WTP antecedents. Consequently, literature on WTP – still commonly conceptualized as a point – and its antecedents may require further attention, because the point-based measure cannot reflect these differentiated effects. For example, extant research on the influence of CLT on point-based WTP (Bornemann/Homburg 2011; Irmak *et al.* 2013; Mehta *et al.* 2014) likely unknowingly manipulates the CP. Conversely, research focusing on perceived risk

1 To further assess the findings, Cohen's (1992) *d* effect sizes obtained through the tests of H1 (two-way ANOVAs, ANCOVA in Studies 1 and 2, and a t-test in Study 3) and of H2 (a mixed-factorial ANOVA in all three studies) were calculated. Although the effect sizes of the direct construal level manipulation in Study 1 ( $d_{\text{Study1.H1}} = .41$ ;  $d_{\text{Study1.H2}} = .39$ ) are small, they compare favorably with mean effect size observed in social psychology research ( $d = .430$ ; Richard *et al.* 2003) and median effect size observed in marketing research ( $d = .41$ , calculated from  $r = .200$  in Eisend (2015)). In contrast, the effects of CLT on ranges and bold reservation prices ( $d_{\text{Study2.H1}} = .63$ ;  $d_{\text{Study2.H2}} = .65$ ;  $d_{\text{Study3.H1}} = .62$ ;  $d_{\text{Study3.H2}} = .64$ ) represent medium effects (Cohen 1992) and compare well with meta-analytic effect sizes for downstream consequences of psychological distance (Hedges'  $g = .526$ ; Soderberg *et al.* 2015).

Study	Guiding question	Manipulation	Extension compared to previous study	Core findings
1	Does the proposed effect of construal level on CP hold?	Construal level; goal vs. means mindset task		Abstract (vs. concrete) construal levels do increase CPs and WTP ranges.
2	Does the effect hold with realistic manipulation and real purchases?	Spatial psychological distance; video ads	Managerially implementable manipulation; externally valid effect measures (real purchases)	Substantial improvements of pricing scope do emerge in real purchases; effect translates to non-focal product (context manipulation).
3	Can managers use the effect to improve pricing scope with an advertised product?	Spatial psychological distance; actual print ads	Externally valid and managerially implementable manipulation for a target product	Effects generalize to other products and other real-life managerial means (here: ad types).

**Table 1: Overview of Empirical Results.**

reduction and uncertainty (Isik 2006; Okada 2010) presumably demonstrates effects on the FP. For current research investigating the WTP effect of more complex antecedents such as product design (Homburg et al. 2015), it is unclear which reservation price is affected. Hence, knowledge on differentiated effects is essential, because ignoring the difference between FP and CP may lead to over- or underpricing.

Considering extant research on construal level and generic interval measures, or response category widths, our findings demonstrate an important specification. Prior empirical evidence shows effects only to the range but does not specify differential effects on either endpoint of the studied ranges (e.g., lengths estimates of a depicted bridge; Krüger et al. 2014). Our studies show that, at least in the context of preference measures, the upper boundary of a range measure is affected by more abstract construal levels.

In terms of managerial implications, and in response to our initial question, pricing managers should consider the visualization of their products (Ingenbleek/Van der Lans 2013) as these studies show that a simple spatial distance clue is sufficient to influence consumers’ construal and consequently the WTP.

Additionally, companies could consider other marketing activities to influence consumers’ construal level, especially through manipulating the psychological distance, to leverage their pricing scope. **Spatial psychological distance** does not solely need to be manipulated through the product advertisement itself (as in the studies); it might also be influenced through the use of a foreign language within the product name or description (Krüger et al. 2014). Moreover, psychological distance could be further differentiated into **hypothetical distance** (e.g., focusing on product availability), which might be manipulated through: “On stock – availability guaranteed” vs. “Limited number on stock,” or claiming that the product’s availability is just a few days ahead (Howard/Kerin 2006). Furthermore, similar effects for **temporal distance** might occur, as research has shown that WTP is higher when the product evaluation happens in the distant future (Bornemann/Homburg, 2011). More concretely, preannouncements (such as in the case of Apple’s or Samsung’s announcements of new mobile phones), including price information, should positively influence consumers’ WTP (through increased CPs) when the product becomes available to them. Lastly, **social psychological distance** might be useful as well, which refers to

purchases for another person (instead for oneself). This could be leveraged by companies through offerings such as gift cards, presents, or special offers for holidays (e.g., Valentine's day); these measures should likewise positively influence WTP (Jung *et al.* 2014) through increased CPs.

To illustrate the impact of psychological distance on the manager's pricing potential, consider the incentive-aligned data from Study 2 plotted to obtain WTP ranges by distance condition in demand curves. For that purpose, assume purchase probability to decrease linearly between the individual FP and CP to calculate individual purchase probability (Wang *et al.* 2007) for the sparkling wine as a function of price. Two markedly different demand curves can then be derived as an aggregation of all individual purchase probabilities over price (figure 7). The biggest difference between the two curves lies between €2 and €5 for a glass of sparkling wine, which, interestingly, also represents a realistic price range.

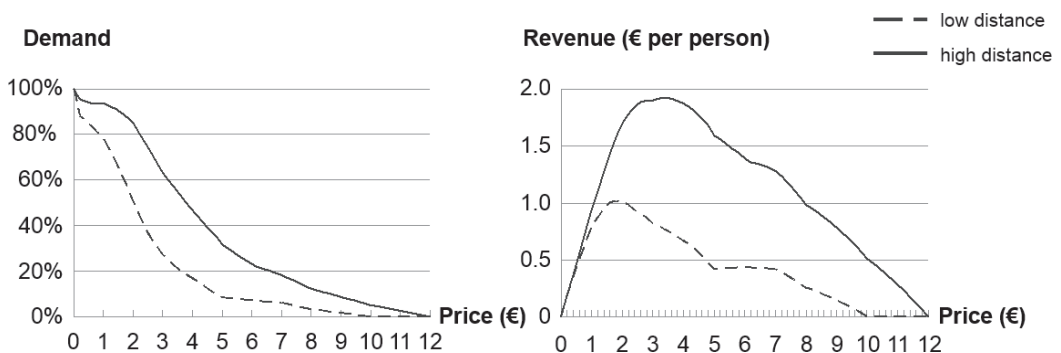


Figure 7: Demand and Revenue Prediction Based on WTP Ranges

Considering the predicted revenues, in which each price is multiplied with the respective demand at that price, illustrates self-evidently that (1) revenues are maximized under high distance and (2) the optimum revenue for the high-distance condition (~ €3.40) is almost twice as high as that for the low-distance condition (~ €1.80).

Ignoring psychological distance and its effect on demand can lead to inferior pricing decisions: if the sparkling wine price is €1.80 but consumers are actually in a state of high psychological distance, the expected revenue per consumer jumps from €1.01 to €1.57 (an increase of 55 %) but falls short of the optimal expected revenue per consumer of €1.92 (a possible 90 % increase, using the high-distance optimal price of €3.40). Therefore, a manager who ignores this effect would forgo the opportunity of an additional 35 % increase in expected revenues by not adjusting the price from €1.80 to €3.40. Even worse, if the price is optimal for the high-distance construal at €3.40 but consumers are primed to be psychologically proximal, the expected revenue per consumer drops from €1.92 to €0.76, a decrease of more than 60 %.

## 5 Limitations and Future Research

Although the three studies used different designs, some elements were fixed (*advertising* context; *spatial* distance; *hedonic* products), which needs to be addressed in future research. Such research would create a more comprehensive understanding of CLT in the context of WTP ranges, and further offer more detailed practical implications.

More specifically, future research could therefore be extended to other advertisement contexts such as in-store settings (*Van Kerckhove et al. 2015*) or e-commerce and investigate which manipulations of psychological distance is the most adequate for specific distribution channels. For example: manipulating hypothetical distance in terms of limited offers is a very commonly used method by daily deals (*Eisenbeiss et al. 2015*). In this notion, other distance dimensions besides spatial and temporal need to be considered (*Bornemann/Homburg 2011*).

Moreover, it could be interesting to investigate whether the effect of construal level on the pricing scope differs by product category (e.g., hedonic or utilitarian products; *Mehta et al. 2014*). As consumers react differently to promotions, based on product category (*Geuens et al. 2011*), marketers and pricing managers would require differentiated estimations of their pricing scope.

Lastly, additional generalizations regarding international markets warrant attention. As consumers in different country markets react differently to marketing activities (*Kustin 2004*) in general, and have different levels of price sensitivity in particular, our estimated effects require to be specified under these varying conditions.

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