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Up, up and away! The metaphor of verticality and the moderating role of regulatory focus in price assessments

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Abstract

Purpose – The purpose of this study is to analyze the effects of the metaphor of verticality on how individuals assess prices, having regulatory focus as a moderator of this relationship.
Design/methodology/approach – Two experiments were conducted with a 2 × 2 between-subjects design (metaphor of verticality: physically higher vs physically lower × regulatory focus: promotion vs prevention). The second study performed moderated mediation by incorporating the self-esteem variable.
Findings – The results show that the treatment group consisting of prevention-focused individuals who consider themselves physically higher assessed prices according to what was proposed for the study compared to the group consisting of promotion-focused individuals who consider themselves physically lower. Participants in Treatment Group 1 attributed the lowest prices to products, demanded more significant discounts to go to another store searching for a product and considered the prices more unfair.
Originality/value – The primary contribution of this study is to reveal that the position of one's body on the vertical axis influences their thoughts and, therefore, their decision-making in the scope of products and services prices. Moreover, regulatory focus can attenuate such effects.
Keywords Metaphor of verticality, Regulatory focus, Pricing decisions
Paper type Research paper

1. Introduction

People are often exposed to stimuli to buy products, whether in supermarkets, on the streets, at work or at home. The acquisition of goods and services is carried out by assessing and paying the best price, considering the available and accessible options for purchase (Santana, Thomas, & Morwitz, 2020). Generally, this activity requires commitment on the part of individuals so that their choice is not mistaken (Genc & Giovanni, 2021). Deciding on the price that brings the most benefits for the least cost is not a simple task. Therefore, many consumers become vulnerable during this process, mainly because they lack the motivation to get a good deal on the transaction in question.

Consumers' lack of motivation to assess prices oscillates during the day (Shirai, 2017), primarily due to temporary changes in their self-esteem. According to Meier, Schnall,

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Schwarz and Bargh (2012), people often rely on metaphors, i.e. comparisons of past physical experiences, to understand abstract concepts, aiming to determine whether something is good or bad. This task is performed based on the knowledge acquired from sensory experience in a domain where these can influence cognition, emotion and behavior in various situations (Krishna & Schwarz, 2014; Casasanto & Bruin, 2019). The use of metaphors, usually unconsciously, can affect one's motivation regarding how they will behave in subsequent activities. For example, Ostinelli, Luna, and Ringberg (2014) found evidence that mentalizing upward vertical movements can decrease motivation for cognitive tasks.

The metaphor of verticality refers to how people imagine themselves at higher or lower positions and attribute positive or negative connotations to them. This statement is based on the fact that people use the upright position as an orientation to perceive things from top to bottom. They also assess objects in higher positions more positively than lower ones. On the effects of the metaphor of verticality, Aggarwal and Zhao (2015) identified that one's physical height can affect levels of mental interpretation (global and local perception), leading them to make different product decisions that may have long- and short-term benefits. In turn, Sun, Wang, and Li (2011) showed that individuals in higher positions had elevated expectations about how they performed on cognitive tasks. However, there was no difference between participants in higher or lower positions in practice.

Furthermore, Barone, Coulter, and Li (2020) proved that prices displayed in lower places (when compared to high ones) lead individuals to perceive them as lower, too, in addition to stimulating more favorable purchase intentions and higher sales. Thus, these authors show that the metaphors "down = less" and "up = more" can influence one's perception of a target price as monetarily low or high.

The studies mentioned in the previous paragraph show some effects of the metaphor of verticality. However, since this metaphor also impacts the variations of one's degree of motivation to engage in cognitive tasks (Ostinelli *et al.*, 2014), regulatory focus is a theory that addresses the different motivational characteristics of subjects in the context of pursuing their goals. For Higgins (1997), this theory can be defined as a motivational principle based on the relationship between motivation, self-regulation and the pursuit of goals. According to Pham and Chang (2010), two types of regulatory focus can be distinguished, namely, a focus on promotion and a focus on prevention, in which the former seeks to take advantage of opportunities, and the latter aims to achieve safety. These goals motivate individuals to move toward a desired state or change away from an undesired state, respectively.

Regulatory focus can also be understood as one's pursuit of their ideals or duties (Zou & Chan, 2019). Promotion-focused subjects try to achieve their ideals, translated into dreams, aspirations and achievements, and are motivated to approach gains (Campos and Costa, 2021). In turn, prevention-focused subjects aim to fulfill their duties, which are understood as obligations and responsibilities, and feel motivated to change away from losses (Chan & Ho, 2017). The specific characteristics of each of the two regulatory foci can impact price assessments.

This study is grounded on the thesis that regulatory focus can mitigate the effects of the metaphor of verticality on one's performance in the scope of price assessments. This proposition is based on the fact that the two types of regulatory focus (promotion and prevention) rely on different motivations and strategies to achieve their goals. It is believed that the motivation associated with the focus on promotion to move closer to a desired state and the motivation associated with the focus on prevention to change away from an undesired state can restore one's self. After all, the metaphorical mental representation of moving up or down is thought to impact one's self-esteem, decreasing or increasing their motivation to engage in subsequent activities (Ostinelli *et al.*, 2014).

The originality of this study lies in the employment of regulatory focus to moderate the relationship between one's mental simulation of vertical movements on price assessments. This moderation may contribute to understanding pricing decisions when the motivation to

engage in this task decreases. We must highlight that the effects of the metaphor of verticality in decreasing one's motivation to perform a given cognitive task (Ostinelli *et al.*, 2014) have already been proven.

After reviewing the studies on the effects of the verticality metaphor on one's performance (e.g. Sun, Wang, & Li, 2011; Aggarwal & Zhao, 2015) and the moderating role of regulatory focus in various consumer behavior situations (e.g. Hong & Lee, 2008; Chan & Ho, 2017), we found that the interaction between these two variables on price assessment remains uninvestigated. Therefore, this research seeks to extend the analysis of how the shift in one's motivation caused by the metaphor of verticality can be restored by regulatory focus. In turn, it examines how this impacts price assessments, more specifically on the scope of price assignment, discount demands and price fairness.

This study makes a theoretical contribution to the field by confirming that the effects of the metaphors of upward and downward movements interfere with price assessments but can be minimized depending on one's regulatory focus. Furthermore, one's self-esteem did not influence price assessments, nor did it play a mediating role in the interaction between the metaphor of verticality and regulatory focus. In turn, this study offers a practical contribution by showing that people can be warned by government educational campaigns about the effects of verticality on decision-making so that regulatory focus prevails in such situations, thus helping them to avoid mistakes in consumption choices.

2. Literature review

2.1 The metaphor of verticality and regulatory focus on price assessment

Metaphorical representations of verticality are very present in society. People routinely and inadvertently associate affect with vertical positions so that objects that are up or high are often considered good, whereas those that are down or low are considered bad (Li & Cao, 2017). According to Ostinelli *et al.* (2014), embodied cognition suggests that "high" has a positive valence (e.g. good, divine), whereas "low" is associated with negativity (e.g. evil, wicked). For example, it is common to hear in Brazilian Portuguese slang people saying that "a movie is top" as a reference to something excellent or extraordinary. These associations are grounded in a figure of speech in which one thing is experienced or understood in terms of another (Meier, Hauser, Robinson, Friesen, & Schjeldahl, 2007; Casasanto & Bruin, 2019).

Ostinelli *et al.* (2014) proved that the metaphor of imagined vertical movements impacts individual self-esteem positively and negatively. Specifically, this research revealed that participants who pictured themselves moving upward experienced increased self-esteem. However, their degree of motivation to succeed in the subsequent activity decreased. Thus, the same individuals performed worse on a given cognitive task than participants who pictured themselves moving downward. These results suggest that a decrease in motivation is expected to affect price assessment, demands for discounts and one's perception of price fairness.

Since it is based on the motivational self-regulatory principle, the regulatory focus can re-establish motivation through one's energy source, which regulates them to achieve their goals (Higgins, 1997). Therefore, a key feature of self-regulation is its approach to motivation, which engages in reducing discrepancies between the situation people are in and the one they aspire to be (Chan & Ho, 2017).

By relating the two types of regulatory focus (promotion and prevention) with the two metaphors of verticality (high and low), the results are not expected to be significantly altered when the relationship is established with modes of focus and metaphors with very similar characteristics in terms of their self-esteem effects. The metaphor of moving upward boosts self-esteem (Ostinelli *et al.*, 2014). Presumably, manipulating the regulatory focus on promotion will also establish a more intense connection with high self-esteem. It is believed

that the focus on promotion incorporates this approach because these individuals are engaged in fulfilling their dreams and taking advantage of opportunities.

The same happens with the metaphor of moving down, which lowers self-esteem (Ostinelli *et al.*, 2014) and the focus on prevention. It is believed that prevention-focused individuals may experience low self-esteem because they devote their efforts to carrying out their duties and obligations while seeking security. Thus, the cross-relationship between manipulations is expected to lead to an apparent change in the results.

When it comes to assigning a price to a given product or service, prevention-focused individuals, due to their characteristic of avoiding an undesired state and making decisions that bring them security (Pham & Chang, 2010; Costa, Angelo, & Farias, 2020), will act to control individuals' actions, so as to offer the lowest possible price for the product. Thus, individuals who experience the mental condition of being up or high will experience low motivation (Ostinelli *et al.*, 2014). However, focusing on prevention will help restore motivation to obtain the best price. Therefore, for rational reasons, it is assumed that the best price in a market transaction is the lowest price to be paid in exchange for the corresponding benefit. To test the arguments, the following hypothesis was proposed:

H1. Prevention-focused individuals who consider themselves physically higher will set lower prices for a given product than promotion-focused individuals who consider themselves physically lower.

Regarding the demand for discounts on a given price, it is suggested that individuals must be enjoying motivational fullness to make an effort to obtain a lower price. Therefore, individuals manipulating the prevention focus will have higher motivation to bargain for discounts or strive to find a product with the most affordable price compared to the promotion focus. According to Zhou and Sengupta (2006), this information is based on the strategy of focusing on prevention to achieve non-losses (i.e. the absence of negative results).

In turn, individuals who visualize themselves moving downward and who, as such, have lower self-esteem act to restore their self in the scope of their tasks (Ostinelli *et al.*, 2014). Therefore, the focus on promotion, characterized by pursuing dreams and aspirations, will add little value to these subjects. In turn, the motivation to undertake efforts to obtain discounts will decrease among individuals who picture themselves moving upward. Therefore, it is expected that the focus on prevention will influence this group more significantly.

H2. Prevention-focused individuals who consider themselves physically higher will demand higher discounts on a given product than promotion-focused individuals who consider themselves physically lower.

The subjective aspects of assessing fairness are based on individual reactions to objective reality, which varies according to social norms of fair distribution. Price fairness assessment is carried out through comparison, adopting a given reference point (Thaler, 1985). Thus, amounts paid by other consumers or practiced by other stores and sellers are considered in the scope of this analysis. In addition, consumers' concern with price unfairness is a psychological factor that can decrease their willingness to pay the amount charged by sellers (Wang & Krishna, 2012).

Individuals manipulated to picture themselves moving upward (and experiencing low self-esteem) will perceive price unfairness more instinctively due to the natural effort to restore their self. However, low motivation among prevention-focused individuals who consider themselves high or up will also require effort to be restored. This happens because of their sensitivity to adverse outcomes, which incites them to stay alert and move away from undesired states (Higgins, 1997; Aaker & Lee, 2001) and can be represented by price unfairness.

H3. Prevention-focused individuals who consider themselves physically higher will assess price fairness more negatively than promotion-focused individuals who consider themselves physically lower.

Figure 1 shows the relationships of the primary constructs of this research. It is possible to identify the moderating role of the motivational regulatory focus on the direct relationship between the metaphor of verticality and price assessments. The dashed line shows the relationship not yet investigated by this area of knowledge, which is the study's primary contribution.

3. Empirical research

3.1 Study 1

This study aimed to analyze how the regulatory focus and the metaphor of verticality influence pricing and the demand for a discount on the price of a given product and test H1 and H2.

3.1.1 Method. 3.1.1.1 Participants. A total of 160 students from São Paulo participated in the study. However, five questionnaires were removed from the sample due to filling problems, and three failed the attention check, thus resulting in a final sample of 152 participants. The demographic profile of the respondents is: 55.3% are female and 44.7% are male; the average age of the participants is 24 years (SD = 3.904); the average monthly income is BRL4,880.67 (SD = 4,026.64); the average per capita family income is BRL10,390.22 (SD = 12,034.44); and 71.7% of the participants are single.

3.1.1.2 Design and procedures. A 2 × 2 between-subjects design (physically higher vs lower × promotion vs prevention).

The metaphor of verticality was manipulated according to the guidelines of Ostinelli *et al.* (2014). Manipulation and attention checks followed the guidelines from the referred study. The framing technique to manipulate regulatory focus experimentally was based on Freitas and Higgins (2002).

Then, the Mood scale was presented to participants (which is one of the control scales of the study), and they were asked to indicate the degree of intensity they were feeling at the moment. The construct was measured based on the Brief Mood Introspection Scale (BMIS) by Mayer and Gashcke (1988).

Later, the participants were asked to read the cover story before assigning a price to the product; in yet another text, they had to inform how much discount they would demand before going out and buying the product. Two dependent variables were added because it was deemed pertinent to evaluate the two contexts requiring different behavioral mechanisms within the dimension of pricing decisions.

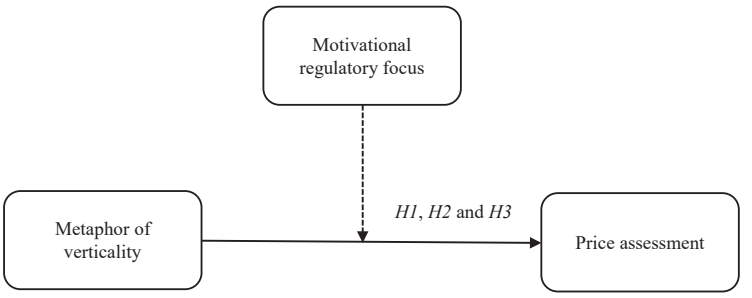

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Figure 1.
Theoretical model

To measure the pricing variable, we adopted the scenario developed by Thaler (1985), in which the author evaluated the framing effect (the way the decision problem is presented) in relation to price.

Pricing scenario: "You are lying on the beach on a hot day. All you have to drink is ice water. For the last hour, you have been thinking about how much you would enjoy a nice cold bottle of your favorite brand of beer. A companion gets up to go make a phone call and offers to bring back a beer from the only nearby place where beer is sold, a fancy resort hotel. He says that the beer might be expensive and so asks how much you are willing to pay for the beer. He says that he will buy the beer if it costs as much or less than the price you state. But if it costs more than the price you state, he will not buy it. You trust your friend, and there is no possibility of bargaining with the bartender. What price do you tell him?" The discount demand variable was measured according to the scenario developed by Kahneman and Tversky (1984), considering the adaptation from Serpa and Ávila (2004).

Discount demand scenario: "Imagine that you are at a store buying a TV for BRL 500. The salesperson tells you that the same TV set is on sale at another store branch, located ten blocks away (assume you will have to walk there). What is the minimum discount on the TV price that the store would have to offer you to make it worth your while to go there?"

The other control variable was presented soon after. Then, the researcher debriefed the participants, and the process was concluded.

3.1.2 Results. 3.1.2.1 Manipulation check. Results show a convergence between the two modes of regulatory focus (prevention and promotion) and the scale response options for this question ($M_{\text{prevention}} = 64.59$, $N = 75$; $M_{\text{promotion}} = 88.10$, $N = 77$; $U = 1{,}994.40$, $p < 0.01$), and that the manipulation of the metaphor of verticality was successful: $M_{\text{physically\_higher}} = 112.48$; $M_{\text{physically\_lower}} = 39.56$; $U = 117.00$, $p < 0.01$.

3.1.2.2 Hypothesis testing. A two-way ANOVA procedure was conducted to test H1. These are the means for each treatment group for the two independent variables (metaphor of verticality and regulatory focus).

The results show the main effect of the regulatory focus variable on price attribution ($F(1, 148) = 11.554$, $p < 0.01$, $\eta p^2 = 0.072$), but no main effect of the metaphor of verticality on the dependent variable ($F(1, 148) = 0.682$, $p > 0.05$, $\eta p^2 = 0.005$). In turn, the interaction between the two independent variables showed a significant effect on pricing ($F(1, 148) = 5.311$, $p < 0.05$, $\eta p^2 = 0.035$). Indeed, Figure 2 demonstrates such an interaction.

The results support H1 because the group of prevention-focused individuals who consider themselves physically higher set lower prices for the product in question than promotion-focused individuals who consider themselves physically lower. To test H2, the two-way ANOVA procedure was used once again.

The results show no main effect of regulatory focus on the demand for discounts on the price of the product ($F(1, 148) = 3.238$, $p > 0.05$, $\eta p^2 = 0.021$). It is important to note that other studies adopted marginally significant p-values, i.e. $p < 0.10$. Although the significance of the previous relationship was $p = 0.074$, the standard p-value of $p < 0.05$ was adopted in this study. The metaphor of verticality had a prominent effect on the demand for discounts on the price of the product ($F(1, 148) = 5.640$, $p < 0.05$, $\eta p^2 = 0.037$). Figure 3 illustrates the interaction of the independent variables.

The interaction between the metaphor of verticality and regulatory focus variables impacted the dependent variable significantly ($F(1, 148) = 4.144$, $p < 0.05$, $\eta p^2 = 0.027$).

3.1.2.3 Additional testing. To test the inclusion of the control variables, ANCOVA was used. Regarding H1, the inclusion of the control variable Mood ($\alpha = 0.799$) had no effect on the dependent variable ($F(1, 147) = 2.745$, $p > 0.05$, $\eta p^2 = 0.018$), as well as did not impact the results found previously. The Individual price sensitivity control variable showed no main effect on product pricing ($F(1, 147) = 1.570$, $p > 0.05$, $\eta p^2 = 0.011$) nor changes in the relationships identified previously.

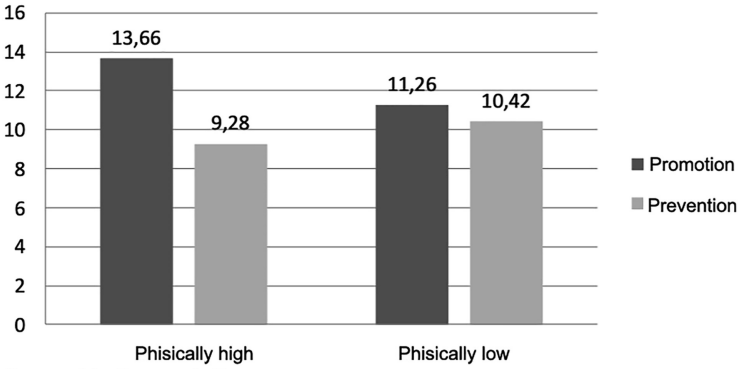

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Figure 2.
Interaction between Study 1 variables (H1)

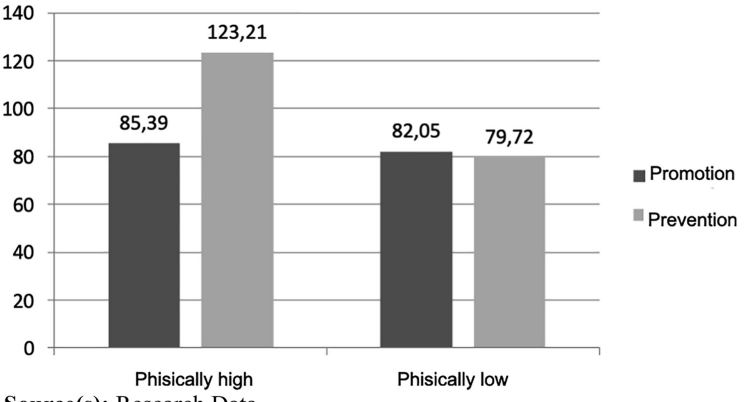

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Figure 3.
Interaction between Study 1 variables (H2)

The Mood ($F(1, 147) = 0.122, p > 0.05, \eta p^2 = 0.001$) and Price sensitivity ($F(1, 147) = 0.810, p > 0.05, \eta p^2 = 0.005$) variables did not impact the demand for discounts on the price of the product directly. Also, both control variables showed no change in the effects found initially for H2.

3.1.3 General discussion. The research objective of Study 1 was to analyze the moderating role of regulatory focus on the relationship between the metaphor of verticality and price assessment. Two specific situations regarding pricing were tested, namely, price assignment and demand for discounts on the product's price.

As predicted, the results revealed that prevention-focused individuals who consider themselves physically higher will set lower prices for a given product than promotion-focused individuals who consider themselves physically lower. This is probably because prevention-focused individuals are known to be alert to adverse outcomes (Pham & Chang, 2010). In addition, assigning a high price may have a negative valence for this group because spending more money may lead to a decapitalization scenario so that funds will be lacking for other situations. Apparently, this focus is associated with individuals who have more diligence in conducting their actions.

Further analysis of the results revealed that the treatment group that attributed the highest value to the product was formed by promotion-focused individuals who consider

themselves physically higher. The result can be explained by the profile of people with high self-esteem, as they would not be overly concerned with controlling their spending (Argo & White, 2012). In addition, the reinforcement of promotion-focused characteristics among members of this group through their quest to seize opportunities (Chan & Ho, 2017) may have contributed to concerns about financial aspects and emphasized the hedonic aspects of the product more strongly.

As for the individuals who demanded the highest discount on the product's price, prevention-focused individuals who consider themselves physically higher were the ones who required the highest discounts on the price of the product so that they could visit another seller in search of the same product for a lower price. Importantly, this group not only had a higher degree of demand compared to the group proposed in the hypothesis (promotion-focused individuals who consider themselves physically lower) but also among all treatment groups.

This result can be explained by the effort of the prevention-focused group to succeed in restoring their motivation (Zou & Chan, 2019) in the scope of the task of deciding on the best product price since their motivation was low due to their high self-esteem. The strategy of focusing on prevention to approach non-losses (Zhou & Sengupta, 2006) may have contributed to this group's performance.

There was an unexpected result regarding prevention-focused individuals who consider themselves physically lower (and have lower self-esteem). This treatment group was expected to show a high demand for discounts. However, this was the group that demanded the lowest discount to go to another store to purchase the same product. Perhaps the decision to visit another location in search of a better price has some level of representation that does not contribute to restoring one's self (Mittal & Biswas, 2016), just as having to go searching for a discount can acquire a negative connotation and hurt one's self-esteem.

Study 1 did not change with the inclusion of the variables that measured Mood and price sensitivity. Finally, self-esteem seems to be influenced by the independent variables (regulatory focus and the metaphor of verticality). Therefore, this construct may interfere with the relationships found somehow. Study 1 did not measure or analyze self-esteem.

3.2 Study 2

The second study aimed to analyze how regulatory focus and the metaphor of verticality relate to price unfairness assessment and test H3 and H4, proposed below.

Ostinelli *et al.* (2014) argue that when people picture themselves moving upward, this can result in positive self-esteem through Lakoff and Johnson's (1980) "up is more" metaphor. This metaphor is based on the mapping of vertical movements onto quantity judgments. Ostinelli *et al.* (2014) also draw on another metaphor by Lakoff and Johnson (1980) ("more is better"), which establishes that quantity is often associated with a positive valence. Therefore, when people picture themselves moving up or down, it is their "self" that moves up/down. Indeed, the "self" should be judged as having more or less value (esteem), respectively (Ostinelli *et al.*, 2014).

People experience different experiences during childhood, such as being rejected, abandoned or criticized, which ultimately will shape their future behavior to avoid negative responses. Consequently, individuals are encouraged to prove to themselves and others that they have value (Tang & Baker, 2016). They feel motivated to restore their self when a momentary change in their self-esteem occurs.

According to Baumeister, Campbell, Krueger, and Vohs (2003), self-esteem can be defined as how much people value themselves. It is the evaluative component of self-knowledge. High self-esteem refers to a highly favorable overall self-perception, whereas low self-esteem, by definition, refers to a negative self-perception (Tang & Baker, 2016). Therefore, self-esteem is more a perception rather than a reality. It refers to whether one believes that one is intelligent or attractive, e.g. which does not mean that they are indeed (Sivanathan & Pettit, 2010).

According to Ostinelli *et al.* (2014), an adverse change in self-esteem can lead to compensatory motives designed to restore one's self-perception. This, in turn, leads individuals to engage in behaviors that require effort and can restore their self-esteem (Sivanathan & Pettit, 2010). One way to accomplish this is by succeeding at a task regarded as relevant to oneself (Ostinelli *et al.*, 2014). Thus, the mental image of descending to lower floors should lead individuals to expend greater effort on activities relevant to them, i.e. activities where success or failure may have repercussions for their sense of self-value (esteem).

As for imagined upward movements, Ostinelli *et al.* (2014) theorized that such mentalization could boost fragile self-esteem. This happens because there is no concrete evidence as to the real reason for the increase in esteem, which, in turn, may lead individuals to adopt a self-protective attitude. Thus, according to these authors, high self-esteem should result in reduced efforts devoted to activities that are relevant to oneself, which, in turn, will impair their performance in such tasks. Given that the effects of the metaphor of verticality on self-esteem have been studied previously, Study 2 sought to expand this assessment by examining the purported mediating role of self-esteem in the article's theoretical model. Therefore, the following hypothesis is proposed:

H4. Individuals who consider themselves physically higher will have higher self-esteem than those who consider themselves physically lower; however, the manipulation of the focus on prevention will decrease self-esteem, which, in turn, will attenuate perceived price fairness.

3.2.1 Method. 3.2.1.1 Participants. A total of 160 students from São Paulo participated in this study. In total, 14 were excluded due to incompleteness or attention check, summing up to 146 valid responses. 49.3% are female and 50.7% male. The average age is 24 years old (SD = 3.881); the average individual monthly income is BRL5,344.20 (SD = 4,016.53); the average per capita family income is BRL11,148.89 (SD = 12,763.00). Finally, regarding marital status, 63.2% of the participants are single, whereas 36.8% are married.

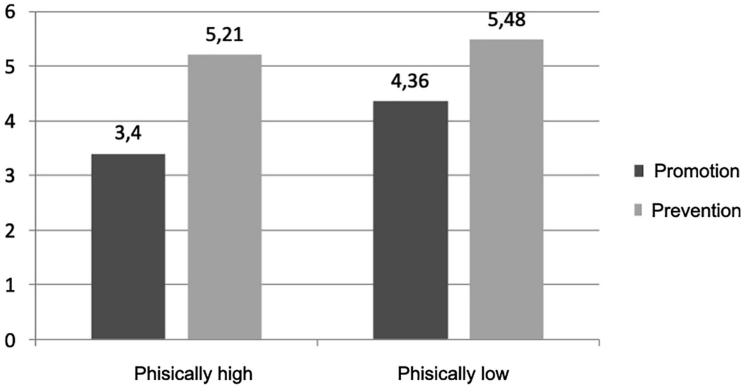
3.2.1.2 Design and procedures. A 2 × 2 between-subjects design (physically higher vs lower × promotion vs prevention). Manipulation and attention check replicated the ones used in Study 1. In Study 2, we included the self-esteem variable, which was measured using a question about four specific domains (Ostinelli *et al.*, 2014). Next, the participants had to evaluate the cover story about price unfairness. The wording of the text was as follows:

Price fairness assessment scenario: "Imagine that you are walking through a shopping mall looking at the store windows. Suddenly you feel like eating something. You approach the food court and come across a pastry shop offering some choices of pies. You quickly choose one of them and order a piece of chocolate pie. When you are finished, you pay BRL 7.00 and walk away. On the way out, you meet a group of friends, and they tell you that they also bought the same piece of pie the day before at a lower price, for BRL 5.25 (25% cheaper)."

After reading the text, the participants were asked to answer the question *Do you consider it a fair price?*, according to a seven-point agreement scale (where 1 means "Strongly disagree" and 7 means "Strongly agree"). The process was concluded with open-ended questions to check whether the participants could infer the purpose of the survey.

3.2.2 Results. 3.2.2.1 Hypothesis testing. A two-way ANOVA procedure was conducted to test H3. To facilitate understanding the analysis of this hypothesis, a change was made to the dependent scale. The scale that measured price fairness was inverted, so the scale reversal was performed (formula: 7 + 1 − "Scale option chosen by respondent").

The ANOVA test revealed the main effect of regulatory focus on price fairness ($F(1, 142) = 23.058$, $p < 0.01$, $\eta p^2 = 0.140$), and prevention-focused participants considered the price to be more unfair than promotion-focused ones. The metaphor of verticality had no main effect on price fairness ($F(1, 142) = 1.472$, $p > 0.05$, $\eta p^2 = 0.010$). The interaction between the independent variables showed statistical significance ($F(1, 142) = 8.147$, $p < 0.01$, $\eta p^2 = 0.054$), as per Figure 4.



Source(s): Research Data

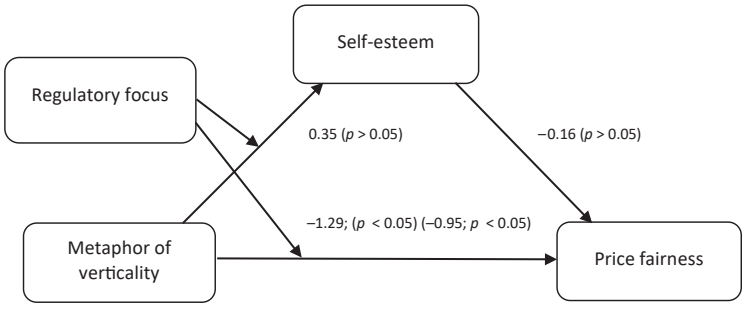
Figure 4. Interaction between Study 2 variables (H3)

These results support H3 because prevention-focused individuals who consider themselves physically higher assessed price fairness more negatively than promotion-focused individuals who consider themselves physically lower.

Further tests were developed to check whether the relationships found would be influenced by the inclusion of the control variables Mood and price sensitivity. In addition, a moderate mediation test was performed with the self-esteem variable (H4) to find out if this variable could change the results found previously.

3.2.2.2 Additional testing. The ANCOVA test for the Mood variable ($\alpha = 0{,}784$) showed no main effect on price fairness ($F(1, 141) = 0.005$, $p > 0.05$, $\eta p^2 = 0.000$). The same held true for the inclusion of the control variable price sensitivity ($F(1, 141) = 0.375$, $p > 0.05$, $\eta p^2 = 0.006$). None of the control variables changed the results found previously.

The moderated mediation test was performed following the inclusion of the self-esteem variable ($\alpha = 0.746$) through the macro PROCESS for SPSS (Model 8; Hayes, 2013). The independent variable (X) of the metaphor of verticality was coded as follows: 0 = Physically lower; 1 = Physically higher. The dependent variable (Y) was price fairness assessment. Self-esteem functioned as the moderator (M), and the regulatory focus variable was coded as 0 = Prevention; 1 = Promotion, to be used in the model as the mediating variable. Figure 5 shows the moderated mediation model for Study 2.



Source(s): Prepared by the authors

Figure 5. Moderated mediation of Study 2

The interaction between the metaphor of verticality and regulatory focus did not show statistical significance for predicting individual self-esteem ($\beta = 0.35$, $t(142) = 1.19$, $p > 0.05$, 95% CI [−0.23, 0.93]). The direct effect of self-esteem also had no statistical significance in predicting price fairness ($\beta = -0.16$, $t(141) = -1.13$, $p > 0.05$, 95% CI [−0.44, 0.12]). As such, the path that pervades self-esteem was not supported by statistical significance to prove the influence of this variable on price fairness.

In turn, the total effect of the interaction between the metaphor of verticality and the regulatory focus predicted price fairness with statistical significance ($\beta = -1.29$, $t(141) = -2.68$, $p < 0.05$, 95% CI [−2.23, −0.34]), and this effect did not change following the inclusion of the mediator variable ($\beta = -1.29$, $t(140) = -2.68$, $p < 0.05$, 95% CI [−2.23, −0.34]). Thus, considering that no change was identified in the interaction effect between the metaphor of verticality and regulatory focus on the price fairness assessment, as well as there was no statistical significance in the indirect path of this relationship that passes through self-esteem, the results do not provide support for H4, which hypothesized the mediating role of self-esteem.

3.2.3 General discussion. Study 2 examined the interaction between the metaphor of verticality and regulatory focus on price fairness. The relationship predicted by the study was confirmed, i.e. prevention-focused individuals who consider themselves physically higher assessed the fairness of the price offered by the seller more negatively compared to the group of promotion-focused individuals who consider themselves physically lower. It is worth pointing out that the findings of Study 2 did not change with the inclusion of the Mood and price sensitivity as variables.

This finding may be explained by the sensitivity associated with the prevention focus to avoiding adverse outcomes, which, in turn, encourages individuals to be more attentive to such situations (Lee, Choi, & Li, 2014). Indeed, the motivation associated with prevention focus may have driven individuals who consider themselves physically higher (and with high self-esteem) and who experience low motivation for tasks, such as making price comparisons more thoughtfully. Price fairness is assessed by comparing the prices charged by different sellers, thus establishing a reference point.

It is important to point out that although the proposed hypothesis was confirmed in the comparison between groups, the group that considered the price most unfair was that formed by prevention-focused individuals who consider themselves physically lower (with low self-esteem). The combination of the characteristics of the two treatment groups applied to this group led individuals to a higher degree of conviction about the unfairness of the seller's price. The manipulation of the metaphor of verticality for low or down decreases self-esteem (Ostinelli *et al.*, 2014), which, in turn, leads individuals to want to restore their self and perceive price fairness more easily. Moreover, the focus on prevention is already embedded with the premise of moving away from an undesired state (Aaker & Lee, 2001), which in this context is represented by the feeling of being harmed by price unfairness.

Self-esteem did not impact the relationships found in this study. This shows that this construct was not influenced by the metaphor of verticality and regulatory focus and does not have characteristics that change how these two constructs assess price fairness.

4. Conclusion

Metaphors are linguistic representations that relate different elements based on their shared characteristics (Casasanto & Bruin, 2019). According to Zhang and Li (2012), concrete concepts help us understand and comprehend abstract concepts, and judgments relevant to abstract concepts can be shaped by physical experiences as well. For example, according to Schubert (2005), our perception of physical position ("reaching the top") can influence our perception of power ("moving up the social ladder"). Thus, the metaphor of verticality was

employed in this study to measure its impact on price assessment, and consumer regulatory focus was expected to moderate this relationship.

The findings are relevant and in line with the proposed hypotheses, although there were also unexpected results. It was possible to confirm the central proposition of the research, i.e. regulatory focus moderates the relationship between the metaphor of verticality and price assessments. The primary contribution of this study is to reveal that the regulatory focus moderates the effects of verticality, considering that individuals are exposed to changes in self-esteem daily as a result of mental simulations of verticality. The position of one's body on the vertical axis influences their thoughts and, therefore, their decision-making in the scope of products and services prices. Moreover, regulatory focus can attenuate such effects.

The treatment group, formed by prevention-focused individuals who consider themselves physically higher, assessed prices according to what was proposed compared to the promotion-focused group who consider themselves physically lower. Participants in Treatment Group 1 attributed the lowest prices to products, demanded larger discounts to go to another store in search of a product and considered the prices set by the seller more unfair. All these results were expected, proposed as hypotheses and then confirmed.

The previous findings can be explained by the moderation of the focus on prevention for the actions of individuals who consider themselves physically higher since members of this group typically have high self-esteem. Consequently, their motivation to succeed in activities that require some kind of deliberation decreases.

The results not expected by this study are related to the group consisting of prevention-focused individuals who consider themselves physically lower. This group demanded smaller discounts on the product price, probably because they considered the act of asking for a discount an irrelevant activity to restore their self. They also considered the price charged by the seller to be the most unfair in the price fairness assessment scenario.

In turn, promotion-focused individuals who consider themselves physically higher assigned the highest price to the product. Indeed, this group typically has high self-esteem, and the focus on promotion seems to drive them to fulfill their dreams and desires significantly. Thus, the profile of the members of this group must have channeled individuals to assign the price motivated more by the hedonic aspect than the financial one.

Unlike Ostinelli *et al.* (2014), who found that the metaphor of verticality directly influenced individuals' self-esteem, this study shows that the metaphor of verticality had no direct influence on self-esteem, possibly because of the moderation of regulatory focus. Thus, the premise that the metaphor of verticality affects self-esteem should be considered with caution. There may be other motivational mechanisms driving individuals to make decisions when faced with verticality situations.

4.1 Limitations and recommendations for future studies

A limitation from this study that must be highlighted relates to the manipulation of the metaphor of verticality, as other means could have been used to perform this task in Study 2. For example, an audio manipulation with a voice describing the scenario could have been used so that subjects would close their eyes and picture upward and downward movements. Study 2 could have relied on pictures illustrating these movements as well.

Another limitation is that the sample consisted only of college students. Study 2 could have formed a sample with a more diverse profile to increase the validity of the findings. The Mood variable could also have been measured before the manipulations. Finally, in the price attribution scenario, participants were not asked whether they consumed beer, and this may have influenced the responses of individuals who participated in the study but are not beer drinkers themselves.

Future research can evaluate the mediating role of self-esteem in the interaction of regulatory focus and the metaphor of verticality on price assessment by changing how

regulatory focus is manipulated. One possibility would be to perform the manipulation technique through an advertisement, according to Mantovani and Tazima (2016).

Another suggestion would be to conduct a study connecting all the dependent variables evaluated in this article. For example, Model 84 by Hayes could be used by adopting price attribution as the dependent variable. In this way, the interaction between the verticality metaphor and the regulatory focus on price fairness would be analyzed, which, in turn, affects the requirement for discounts, and that would eventually impact the final price assignment.

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