



Marketing

# Shopping the way to my goals: an analysis of purchase impact on perceived goal progress

*Rumo aos meus objetivos via compras: uma análise do impacto de compras na percepção de progresso em objetivos*

*Hacia mis metas por medio de las compras: análisis del impacto de las compras en la percepción de progreso hacia objetivos*

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## Abstract

This article examines the impact of goal related purchases on goal progress perception, and whether this perception depends on the strength of association between product and goal. To test how consumers perceive the act of purchasing goal-related products, three experiments were conducted in an online setting. Participants exposed to purchasing situations perceived greater goal progress than participants exposed to usage situation or a control group. In addition, studies show that this effect is a result of strength of association between product and goal, since participants exposed to more instrumental products perceived greater goal progress than participants exposed to less instrumental products. Therefore, these studies demonstrate how consumers interpret goal related purchases, and the mechanism that influences this interpretation.

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**Keywords:** Purchases; Goal progress; Motivation; Consumer behavior; Self-regulation

## Resumo

Nesta pesquisa busca-se avançar no conhecimento de progresso em objetivos ao analisar como as compras são percebidas pelos consumidores em relação a seus objetivos. Ela busca verificar se a compra de um produto relacionado a um objetivo faz com que o consumidor perceba progresso no mesmo e se essa percepção de progresso depende da força de associação do produto com o objetivo. Para testar os objetivos propostos, realizaram-se três experimentos *online*. Esses experimentos mostram que os participantes expostos a situações de compra de produtos relacionados a um objetivo, percebem maior progresso no objetivo do que os participantes expostos a uma situação de uso ou ao grupo de controle. Ainda, os estudos explicam

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que isso ocorre devido à força de associação dos produtos com os objetivos, uma vez que os participantes expostos aos grupos com produtos mais instrumentais ao objetivo perceberam maior progresso do que os participantes com produtos menos instrumentais ao objetivo. Portanto, essa pesquisa mostra teórica e empiricamente como consumidores interpretam compras relacionadas a seus objetivos e o mecanismo que influencia essa interpretação.

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*Palavras-chave:* Compras; Progresso em objetivos; Motivação; Comportamento do consumidor; Autoregulação

## Resumen

En este estudio se busca avanzar en el conocimiento acerca del progreso en objetivos al analizar cómo las compras son percibidas por los consumidores en relación con sus metas. Se verifica si la compra de un producto relacionado con un objetivo hace que el consumidor tenga la percepción de progreso en este objetivo y si tal percepción depende de la fuerza de asociación del producto con el objetivo. Para poner a prueba las hipótesis propuestas, se han llevado a cabo tres experimentos *online*. Los resultados muestran que los participantes presentados a situaciones de compra de productos relacionados con un objetivo perciben un mayor progreso hacia la meta que aquellos participantes expuestos a una situación de uso o al grupo de control. Además, los estudios indican que esto ocurre debido a la fuerza de asociación del producto con el objetivo, dado que los participantes expuestos a los grupos que contaban con productos más instrumentales al objetivo han percibido mayor progreso que los participantes con productos menos instrumentales al objetivo. Por tanto, este estudio demuestra teórica y empíricamente cómo los consumidores interpretan las compras relacionadas con sus objetivos y el mecanismo que influye en esta interpretación.

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*Palabras clave:* Compras; Progreso en las metas; Motivación; Comportamiento del consumidor; Autorregulación

## Introduction

People are constantly establishing and pursuing goals. These goals can be specific and attained with one or a few actions – like baking a cake – or they can be ongoing goals that require constant investment of resources, such as time and effort, like saving for retirement.

Sometimes the pursuit of ongoing goals is not an easy task, especially because individuals tend to have multiple goals that are often contradictory at the same time, for example, a consumer may want to save money for retirement and, at the same time, may want to enjoy a vacation in the Caribbean.

The application of resources such as time and effort in the pursuit of ongoing goals depends on personality traits (Fishbach & Shah, 2006) and context (Zhang, Fishbach, & Kruglanski, 2007). Moreover, individuals' financial resources are limited to budget constraints. It is known that, when these budget constraints allow people to invest money in the pursuit of goals, they will generally do it and, furthermore, they will seem insensitive to the amount invested (Simonson & Dhar, 1999). Thus, many consumers invest their money in products that serve to attain a certain goal. However, anecdotal evidence and common sense suggest that consumers often buy products that they do not use.

Previous research on consumer choice (Fishbach & Dhar, 2005) shows that individuals have multiple and even conflicting goals. Actions taken in goal pursuit can be interpreted in terms of goal progress and/or goal commitment (Fishbach & Dhar, 2005). When consumers interpret an action as commitment, they tend to make subsequent choices that are congruent with the goal at hand. However, when consumers perceive their action as progress toward the goal, they tend to make goal-incongruent subsequent decisions. In this research, we propose that consumers interpret goal related purchases as goal progress, even

though ownership of the product itself does not guarantee goal progress. Moreover, we hypothesize that this happens even when progress is only attained by using a product.

Although Fishbach and Dhar (2005) have evaluated consumers' subsequent choices after goal-oriented actions, to the best of our knowledge, no studies evaluated how consumers make these goal progress inferences. This article aims to verify whether people are capable of perceiving purchases associated with an ongoing goal as goal progress. In addition, we seek to study whether the perception of progress depends on the strength of association between product and goal, based on goal systems theory (Fishbach & Dhar, 2005; Huang & Zhang, 2011; Kruglanski et al., 2002; Zhang & Huang, 2010).

Goal systems theory (Kruglanski et al., 2002) states that goals are mental representations interconnected with their means of attainment. This cognitive motivation theory states that goals are the desired end-state that people want to achieve. These goals are connected to the means that are associated with their achievement as in a network (Kruglanski et al., 2002). The means for attaining a goal are any perceived activities, events or circumstances seen as likely to contribute to the attainment of a goal (Shah & Kruglanski, 2003). These means may vary as to how much they contribute to the attainment of the goal. For example, a person wanting to learn Mandarin could watch a Chinese movie or spend a year living in China. While the former may contribute the goal, the latter is likely to contribute even more. As a result, it is also likely to have a stronger association to the goal. The greater the strength of association between goal and means, the greater the perceived instrumentality of the means (Shah & Kruglanski, 2003; Zhang, Fishbach, & Kruglanski, 2007).

This article aims to contribute to the goal progress theory in two ways: (1) by testing how consumers interpret goal-related purchases, and (2) by examining the role of the product-goal

strength of association in goal progress perception. It is worth mentioning that the proposed effect can only occur when there is an ongoing goal, that is, when it needs continuous actions as a means to achieve the desired end-state. It does not apply to goals which can be attained with one or two actions (e.g. quench thirst – buy bottled water and drink). We build on goal systems and goal progress theories, which serve as base for the three experimental studies reported here.

### Goal systems theory

Goals have an important role in regulating people's daily behavior. They have a significant impact on emotional experiences and welfare (Higgins, 1997; Zhang, Fishbach, & Kruglanski, 2007). Everyday life is full of events that serve as reminders of desirable goals. For example, someone passing a tennis court may bring their attention to health and well-being. These thoughts play a key role in successfully attaining goals by keeping people “with the eyes on the prize”, especially in the light of other concerns that require attention and effort (Shah & Kruglanski, 2003).

Goal systems theory defines goals as mental representations cognitively interconnected with their means of attainment and alternative goals. According to Zhang, Fishbach, and Dhar (2007), people's daily choices are driven by mental representations of goals that are chronically maintained or that are activated by clues in the context of a given situation (Aarts & Dijksterhuis, 2003; Bargh, Gollwitzer, Lee-Chai, Barndollar, & Trötschel, 2001).

The means of attaining a goal are understood, in a general sense, as any perceived activities, events or circumstances likely to contribute to the attainment of a goal (Shah & Kruglanski, 2003). For example, the goal of having a fit body can be connected to means such as eating healthy foods, exercising, and avoiding sweets and fatty foods.

The pursuit of a goal through a specific means creates an association between goal and means based on a functional relation, which differs from a semantic, related with the meaning of the word, or conditioned associations. For example, the words “doctor” and “nurse” are related to “health” and therefore interrelated through a cognitive aspect and capable of activating one another. A semantic meaning is generally shared between members of the same language community (Shah & Kruglanski, 2003).

The establishment of cognitive associations through conditioning often requires the joint activation of different stimuli for its development and maintenance on repeated occasions (e.g., bell and food in Pavlov's classic studies). In contrast, for a functional relation to happen, it is enough to simply inform an individual that a certain behavior or circumstance will probably facilitate goal achievement, which may be enough for them to build functional associations between goals and means (Shah & Kruglanski, 2003). Indeed, Aarts and Dijksterhuis (2000) showed that cognitive associations between goals and means can be established merely through conscious planning, and that these associations are similar to those developed by habit (e.g. by the repeated use of means in pursuit of a goal). As a consequence of the functional association forged between goal and

means, the goal should acquire the capacity to activate its means of attainment and vice versa (Shah & Kruglanski, 2003).

The strength of association of these functional relations between goals and means is known as perceived instrumentality of the means, and is determined by several factors (Shah & Kruglanski, 2003). First, it may depend on the number and frequency with which goals and means have appeared together on the past (Zhang, Fishbach, & Dhar, 2007). Second, the associative strength between goals and means also depends on the uniqueness of their association, which is inversely proportional to the number of additional goals associated with one means of attainment or the number of additional means associated with one goal (Shah & Kruglanski, 2003; Zhang, Fishbach, & Dhar, 2007). Third, the strength of association between goals and means depends on the degree to which the goals linked to these means differ subjectively from one another. The tendency to reduce goal association with shared means is stronger if the goal is more distinct (Zhang, Fishbach, & Dhar, 2007).

### Multiple goals and perceived goal progress

The pursuit of important long-term goals often requires individuals to shift away from other lower priority goals (Fishbach & Shah, 2006). Woolley and Fishbach (2016) found evidence that people are more motivated to pursue long-term goals when they focus on the immediate gratification of their actions rather than on the actual desired goal. Etkin, Evangelidis, and Aaker (2014) demonstrate that people who perceive goal-conflict feel time restricted, more stressed and anxious.

While in the pursuit of multiple goals, consumer choices may seem contradictory if evaluated separately (Dhar & Simonson, 1999; Fishbach & Dhar, 2005). Individuals often believe simultaneously in saving money for retirement as well as taking a luxurious vacation; they also believe in having a good academic performance and actively socializing with colleagues (Fishbach & Dhar, 2005). Fishbach and Dhar (2005) explained this contradictory behavior by examining the consumer's subsequent choices following the initial action to goal pursuit. The authors proposed that when individuals have multiple goals, the pursuit, or the intention to pursue the initial goal frees the individual to pursue other, unrelated or conflicting, goals (i.e., succumbing to temptation). For example, opening a new savings account may suggest to the individual that their goal of saving money for the future is being actively pursued and, as a result, new left-over money may become susceptible to indulgence (Fishbach & Dhar, 2005).

Given these apparent inconsistencies in goal management, it is important to understand whether and under what conditions consumers perceive purchases as goal progress. If consumers tend to perceive purchases as goal progress, then the likelihood of subsequent contradictory choices increases (Fishbach & Dhar, 2005).

It is well known that consumers often use products as means in their goal pursuit (Etkin & Ratner, 2012). For example, when a consumer has the goal of satisfying hunger, he/she can buy and eat a sandwich. In contrast, when the consumer has an ongoing goal, in which several actions are necessary to achieve the goal

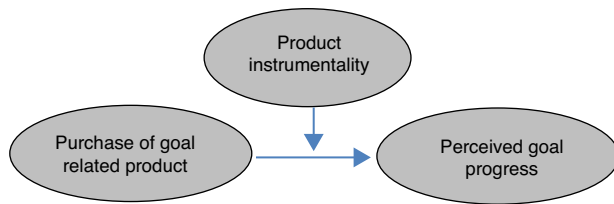


Fig. 1. Graphic representation of the proposed effect.

Source: The author(s).

(Zhang, Fishbach, & Dhar, 2007), the purchase and consumption of goal-associated products may occur at different times.

In fact, the purchase of a product associated with an ongoing goal alone does not imply progress. The consumer often will only make progress toward the goal if he/she uses the product in a deliberate way. For example, consider a consumer that has the goal to be fit. Buying running shoes may help achieve this goal, but only if the consumer uses the shoes to exercise. The purchase itself is not necessarily moving the consumer closer to the goal.

Considering that consumers have budget constraints and are less sensitive to spending their financial resources when these expenditures are made in goal pursuit (Dhar & Simonson, 1999), we propose that once consumers purchase a product, they may be less motivated to use it because they interpret the act of purchase goal related products as progress toward the goal. Therefore, we hypothesize that:

**H1.** Consumers perceive the purchasing action of goal-related products as goal progress.

Why would the consumer interpret the purchase of a product associated with an ongoing goal as goal progress in it? Brendl, Markman, and Messner (2003) showed that products that are instrumental in an active goal may have their value increased, which is called the valuation effect, increasing the importance of a making the purchase grow more important for goal pursuit.

Means instrumentality is the strength of the association between goals and means, it is the functional associations between them (Zhang, Fishbach, & Dhar, 2007). It depends on the frequency in which means and goals have appeared together (Shah & Kruglanski, 2003) and how distinct is the goals-means association (Shah & Kruglanski, 2003; Zhang, Fishbach, & Dhar, 2007). We propose that, because goal-related products have a functional association with a goal, consumers interpret the purchasing act of those products as progress toward the goal. Therefore, we hypothesize that:

**H2.** The perceived progress toward the goal due to product purchase will be greater (lesser) the more (less) instrumental the product is perceived to be for goal achievement.

Fig. 1 summarizes the proposed hypotheses.

## Study 1

In study 1 we intend to test the first hypothesis that states that consumers perceive progress toward the goal by purchasing a goal related product.

## Participants

In this study, 115 (50.4% male and 49.6% female) participants were randomly assigned to one of two between-subjects treatments. The average age of participants was 34.10 years ( $SD = 11.27$  years). As for nationality, 92.2% of the sample was North American, though English was the mother tongue selected by 96.5%. Among the experimental groups, no gender ( $\chi^2(1) = 1.955; p = 0.162$ ) and age ( $F(1, 113) = 1.106; p = 0.953$ ) differences were found as well as no demographic differences between groups. Therefore, we will not discuss these variables further.

## Design and procedures

The study was a one-factor between-subjects experiment – treatment versus a control group (purchase  $\times$  no-purchase). It was carried out using an online panel. Similar to many experiments in marketing and consumer behavior, the study used hypothetical scenarios. The method consists in elaborating written scenarios, with stories that contemplate the different combinations of the manipulated variable. On one hand, the method limits the richness of interactions, but on the other, it provides control and allows the clear treatment of conditions.

Participants were recruited through Amazon's website Mechanical Turk (MTurk) and answered the questionnaire by using Qualtrics software. For this research, an incentive of 0.75 US dollars was offered to each participant.

First, participants read an introduction paragraph explaining that it was an academic research with no right or wrong answers. After that, the experiment started by telling the story of a person who wanted to attain a certain goal. Two goals were used: to learn how to speak Spanish and how to play the guitar. After presenting the scenario with one of the goals, the participant was exposed to the actions taken by the character to pursue their goal in three subsequent days. During the action taken on the second day, the manipulation of the independent variable was inserted.

For the purchasing group, the scenario stated that the character had bought a product (a Spanish dictionary or a guitar), whereas in the control group the character performed another activity (writing an academic paper). An example of the applied manipulation follows below.

*“The activities John performs the following three days after setting his new goal were:*

*First day: He watched a movie in Spanish.*

*Second day: He purchased a Spanish grammar book and a CD with Spanish songs. (Purchase group)  $\times$  He wrote a paper to his strategic management course. (Control group)*

*Third day: He went out with his friends.”*

The actions were presented as taking place in separate days to disguise from the participant the purchase activity among the other actions. However, only the activity of the second day varied between the purchase and the control groups, all other activities

Table 1  
Descriptive statistics of rank.

	Group	n	Rank means	Rank sum
DV1 progress Spanish	Purchase	58	66.28	3844.00
	Control	57	49.58	2826.00
	Total	115		
DV2 progress Spanish	Purchase	58	66.49	3856.50
	Control	57	49.36	2813.50
	Total	115		
DV1 progress guitar	Purchase	58	67.90	3938.00
	Control	57	47.93	2732.00
	Total	115		
DV2 progress guitar	Purchase	58	68.03	3945.50
	Control	57	47.80	2724.50
	Total	115		

Source: Research data.

were kept constant in both groups. After the manipulation, the dependent variables were measured.

### Measures

Two questions measured the dependent variable – perceived progress toward the goal (“*How much progress toward his goal of speaking Spanish has John made after three days?*”; “*What is John’s situation after three days?*”) Subjects rated responses on an 11-point Likert scale (from 0-No progress at all to 10-A lot of progress; from 0-Same situation to 10-Goal accomplished). The dependent variables were adapted from previous studies on goals theory (Fishbach & Dhar, 2005; Zhang & Huang, 2010).

### Control variables

Bargh, Gollwitzer, and Oettingen (2010) state that goals have to be desirable and feasible, therefore, participants were asked how desirable and how feasible each of the presented goals was. In addition, a series of covariates measured participants’ characteristics including how hardworking they were, how diligent they were, if they could play the guitar, and if they could speak Spanish. The reasoning behind these questions is that hardworking people tend to attain their goals more often than negligent people (Bargh et al., 2010). For non-categorical variables, a 7-point agreement Likert scale was used. As the control variables did not present significant results, they will no longer be discussed. Finally, we also measured demographic variables.

### Results

Given that the data violated the normality assumption distribution ( $p < 0.01$ ) according to the Shapiro–Wilk and Kolmogorov–Smirnov tests, the Mann–Whitney test was used, which, although it also compares if the samples had the same distribution as ANOVA, it is used for non-parametric data. It should be noted that the results found with the Mann–Whitney test were the same as those found with MANOVA.

Table 2  
Mann–Whitney test for the goal of learning Spanish.

	DV1_ progress Spanish	DV2_ progress Spanish
Mann–Whitney <i>U</i>	1173.000	1160.500
Wilcoxon <i>W</i>	2826.000	2813.500
<i>Z</i>	–2.753	–2.844
Asymp. Sig. (2-tailed)	0.006	0.004

Source: Research data.

Table 3  
Mann–Whitney test for the goal of playing guitar.

	DV1 progress guitar	DV2 progress guitar
Mann–Whitney <i>U</i>	1079.000	1071.500
Wilcoxon <i>W</i>	2732.000	2724.500
<i>Z</i>	–3.300	–3.341
Asymp. Sig. (2-tailed)	0.001	0.001

Source: Research data.

As shown in Table 1, the group that received the purchase manipulation has significantly higher rank average in all dependent variables. That is, all participants who received the manipulation in which the character made a purchase among other activities in the pursuit of their goal perceived a greater progress than the participants who were in the control group.

In the first measure of progress in the goal of playing the guitar, participants in the purchase condition presented a rank average of 66.28, while for the control showed 49.58 ( $u = 1173$ ;  $p < 0.01$ ). In the second measure of progress in the goal of playing the guitar, participants in the purchase condition presented a rank mean of 66.49 versus the control that presented a rank average of 49.36 ( $u = 1160.5$ ,  $p < 0.01$ ).

The first progress measure toward guitar playing had a rank average of 67.9 for the purchase group and 47.93 for the control ( $u = 1079$ ,  $p < 0.01$ ). Meanwhile, in the second measure for the same goal the means were 68.03 for the purchasing group and 47.8 for the control group ( $u = 1071.5$ ,  $p < 0.01$ ). These findings provide a first indication that proposition 1, which says that consumers perceive purchases as progress in pursuit of their ongoing goal, is true (Tables 2 and 3).

None of the control variables had statistically significant effects ( $p > 0.05$ ).

### Discussion

This first study was designed to provide an initial test of the first hypothesis, which proposes that a goal related product purchase is perceived as goal progress. Participants in the purchasing group showed a greater level of perceived progress than the participants in the control group. Therefore, consumers perceive they are indeed advancing in their goal pursuit through purchases.

The number of the actions taken by the consumer in the hypothetical scenarios was a major limitation of this study because they were imbalanced between groups. While in one group it was one effective action toward the goal in the other group it was two actions (action of purchase + effective action) toward the goal.

Due to this limitation, it can be argued that the results are not dependent on the perceived goal progress generated by the purchase, but on the number of actions associated to the goal. The next experiment is designed to address this possible explanation.

Furthermore, we did not control the participants' perception of the products' future usage in this study. The usage information was open to participants' interpretation, since, at the time of purchase, consumers did not know a priori whether or not they would use the product.

### Study 2

This study aims to test both the first and second hypotheses and to address the possible alternative explanations of the first study.

#### Participants

In this study, 78 participants responded to the survey. Among these respondents, 66.7% were males and 33.3% were female. The average age of participants was 32.99 years ( $SD = 12.28$  years).

#### Design and procedures

As in study 1, study 2 was carried out with an online panel with the manipulation of a factor in five levels, with two distinct scenarios. The manipulation was performed through written scenarios and represented action toward a goal, such as: purchase a goal related product; execution of an effort activity related to the goal and a non-related activity (control). The adopted procedure was within-subjects, which was chosen to avoid non-systematic variations, as well as to verify whether a single person is able to perceive purchases in pursuit of a goal, use and control differently, and no longer rely on the randomization among groups to reduce this variation. The data was randomly presented.

The participants were recruited through Amazon's Mechanical Turk website (MTurk). The questionnaire was run using

Qualtrics software. An incentive of 0.75 US dollars was offered to each participant.

The manipulation was performed directly in the instruction of the questions that measured the dependent variables. After being introduced to the research, each participant was directly exposed to one of the questions that represented the different treatments of the experiment. Subsequently, participants responded on a progress scale adapted from Fishbach and Dhar (2005). As soon as the control and demographic variables were measured, the participant received the final acknowledgment and the code for receiving the participation incentive was generated.

#### Manipulations

Manipulations were presented directly to the questions instructions that measured the dependent variables. After an introduction to the research, the participant was exposed to four or five questions that were randomly ordered and which represented different treatments of the experiment. The questions used in the manipulation are shown in Chart 1.

#### Dependent and control variables

Subsequently, participants answered to 6 items on a 7-point Likert scale (1-Completely disagree to 7-Completely agree) based on the Fishbach and Dhar (2005) goal progress scale. In addition, 3 distracting items were included and presented in randomly order. The items that measured progress were: That she is closer to her learning objective; That she is making progress toward her goal; That she is moving toward her objective. The distracting items were: That she loves French; That she loves to read; That she really cares about learning French. Control variables were the same as those used in study 1.

#### Results

Repeated ANOVA measurements were used for the analysis of these studies. This test assumes the existence of sphericity, that is, the variances of the differences between the conditions are equal. In relation to the objective of learning French, Mauchly's sphericity test was performed and it was significant ( $p < 0.05$ ). Therefore, there were significant divergence among variances of differences and consequently the sphericity condition was violated.

Due to the violation of sphericity assumption, the Greenhouse–Geisser correction was used for being a more conservative test, and it showed that the test between subjects was significant for progress variable  $F(3.21, 128.46) = 150.31$ ,  $p < 0.01$ . The average perceived progress of the effective action to speak French (spend two hours writing an essay in French) was the highest ( $M = 6.10$ ), followed by the purchase of a French method book ( $M = 5.79$ ), and the French dictionary ( $M = 5.76$ ). However, the difference between these actions was not significant ( $p > 0.05$ ). This means that effective action in the pursuit of a goal and purchases of products strongly associated with the goal were perceived to virtually contribute with the same progress toward the goal.

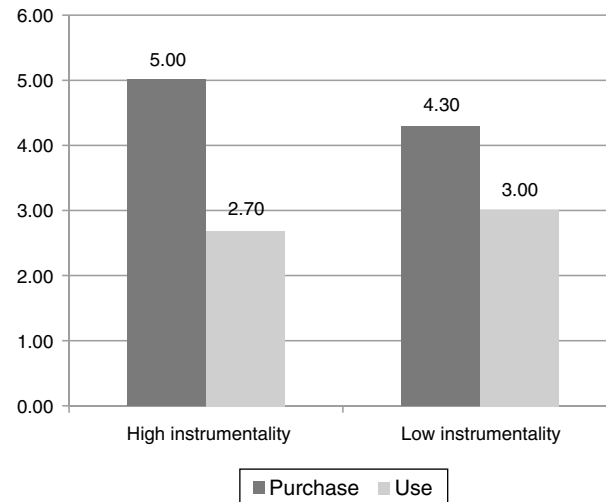


Chart 1. Interaction between instrumentality and action in perceived progress.

Product purchase	Barbara decided to learn French. The same night, she bought a French method book. In your opinion, buying the book shows:
Product purchase	Daniel decided to learn French. The same night, he bought some French songs. In your opinion, buying the songs shows:
Effective action	Patricia decided to learn French. The same night, she spent two hours writing an essay in French. In your opinion, writing the essay shows:
Control action	Joe decided to learn French. The same night, he went out to drink with a friend. In your opinion, going out shows:
Product purchase	Linda decided to learn French. The same night, she bought a French dictionary. In your opinion, buying the dictionary shows:
Product purchase	Jane decided to learn to play guitar. The same night, she bought a guitar. In your opinion, buying the guitar shows:
Effective action	Barbara decided to learn to play guitar. The same night, she spent two hours in a guitar web lesson. In your opinion, watching the lesson shows:
Product purchase	Joe decided to learn to play guitar. The same night, he bought some music magazines. In your opinion, buying the magazines shows:
Control action	Daniel decided to learn to play guitar. The same night, he went out to drink with a friend. In your opinion, going out shows:
Product purchase	Linda decided to learn to play guitar. The same night, she bought a guitar hanger. In your opinion, buying the hanger shows:

Source: Research data.

When the purchases of products highly associated with a goal were compared in pairs (method book and dictionary) with the purchase of a less associated product – French songs ( $M = 4.59$ ) – a significant difference of means appears, for instance, between the dictionary and the songs ( $p < 0.01$ ), highlighting that the perceived instrumentality of the product or, the strength of association of the product with the goal can influence the level of perceived progress. Although songs ( $M = 4.59$ ) contributed less to the perception of progress, it was still higher ( $p < 0.01$ ) than that observed in the control situation ( $M = 1.65$ ). This result confirms that purchasing goal related products diminishes consumers perceived gap between the desired state and the actual state.

In the results regarding the goal of learning to play the guitar, also elaborated through repeated ANOVA measures, the assumption of sphericity obtained in the Mauchly test was also significant ( $p < 0.05$ ). Therefore, we continued to use the Greenhouse–Geisser correction, which showed differences among the conditions  $F(3.22, 115.77) = 95.51, p < 0.01$ . The pattern of results in the post hoc tests was similar to those found for the goal of learning French, the purchase of a more instrumental product (*guitar*) presented greater progress than the purchase of a less instrumental product ( $p < 0.01$ ), which, in turn, presented a greater progress than the control group ( $p < 0.01$ ). Nevertheless, this goal showed a significant difference between the effective action in pursuit of the goal and the purchase of a highly

instrumental product ( $p < 0.01$ ), a result that was expected in these studies.

### Discussion

The results of this study provided new evidence that purchases can be perceived as goal progress. The design of this study allowed a control of non-systematic variations. An initial test was also presented on how the impact of product strength of association with an ongoing goal influences the perceived progress. Indeed, products with a stronger goal-association presented greater rates of perceived progress, while purchases with a lower strength of association presented a lower level of perceived progress, albeit higher than the control group. However, the level of product-goal association was not controlled, which is a limitation that has to be addressed in the design of following studies.

Surprisingly, actions taken toward goal achievement did not always show greater progress than purchases. This is a result one might expect since actions are effective toward the desired end state. The effectiveness of purchasing a highly instrumental product is dependent upon the goal under analysis. There seems to be an influence of how desirable the goal is perceived by the participant. Given this result, the goals selected for future studies should be desired by the participants.

### Study 3

The third study tests whether the goal progress perception effect is dependent on the perceived product instrumentality.

#### Participants

A total of 297 participants were randomly assigned among the four treatments. Of these participants, 41 stated that they did not have the goal of keeping in shape and, therefore, they were excluded from further analysis. As to the gender variable, 58.6% of respondents were male and 41.4% female. The average age of the participants was 31.13 years ( $SD = 10.13$  years), 95.3% of the sample was of US nationality and 99.6% said English was the language spoken at home.

#### Design

As in the previous studies, an online experiment was conducted by manipulating two factors and two levels of treatment within each factor in a between-subjects design. The manipulations performed were the goal-pursuit action (purchase  $\times$  use) and the instrumentality of the product (product more and less instrumental to the goal).

The story presented for the scenarios was similar to the previous studies in this research, with some adaptations. Thus, as in studies 1 and 2, we opted to use a projective technique in the stories. In addition, we preferred that the scenario with use treatment had explicit action directed toward the goal.

Participants read a brief introduction, about how many Americans intended to stay fit and among them was a target person named Lucy. After that, they read about what Lucy had done the week before (the treatment was then presented: the various possible actions in pursuit of her goal). For the treatment of the purchase of a highly instrumental product, the scenario stated that Lucy had bought a treadmill. For the treatment of the use, it stated that Lucy had been going for walks twice a week since last week. The low instrumentality purchase scenario stated that Lucy had bought 3 cereal bars. Finally, in the low instrumentality use condition, the scenario stated that Lucy ate the 3 cereal bars. The choice of these products as being of high or low instrumentality was based on an online pre-test with 102 participants (the same selection criteria was used – advanced qualifications in MTurk, an attention task, and a question whether they had the goal of keeping fit), who received an incentive of 0.30 US dollars to participate in the study. The participants assessed, on a 9-point Likert scale, to what extent the means (treadmill, walking, cereal bars) were related to the goal of keeping in shape (to what extent would you say that the cereal bars are related to the goal of being physically fit? 1-not at all to 9-extremely), and to what extent they felt each means was effective for this purpose based on Shah and Kruglanski (2003) (How effective are the cereal bars to attain the goal of being physically fit? 1-not at all to 9-extremely). The treadmill was perceived as a more effective means ( $M = 7.17$ ,  $SD = 1.93$ ) than the cereal bars ( $M = 3.55$ ,

$SD = 2.21$ )  $t(1, 101) = 13.88$ ;  $p < 0.001$ , and also more related  $t(1, 101) = 13.08$ ;  $p < 0.001$ , to the goal of staying fit.

#### Procedures

Participants of the experiment were recruited through Amazon's Mechanical Turk website (MTurk). The incentive was reduced to 0.40 US dollars to each participant. The questionnaire was run using the Qualtrics software.

The manipulation was in the story of a third person, therefore, we opted to ask at the end of the experiment if the participants had the goal of keeping fit. After the introduction, participants read the scenarios with one of four possible treatments. Afterwards, the dependent variables on perceived goal progress were measured. Subsequently, they were questioned how much the treadmill, walking and cereal bars were related to the goal of keeping fit and, also, how effective each of these means was perceived to pursuit the goal of maintaining ideal weight. Then, the attention task was presented and the demographic variables were measured. The participant saw a thank you note for their participation and Mturk generated their receipt/payment finalization number.

#### Measures

Participants answered the perceived goal progress on one question (How much progress has Lucy made toward her goal of being physically fit? 1-not a lot of progress to 9-a lot of progress) (Etkin & Ratner, 2012; Fishbach, Dhar, & Zhang, 2006). However, unlike the previous studies, a 9-point Likert scale was preferred so as to be more sensitive.

#### Results

The results show, as predicted, a main effect of product instrumentality on the perceived goal progress  $F(1, 255) = 53.40$ ,  $p < 0.01$ . The purchase of the treadmill ( $M = 5.00$ ;  $DP = 2.16$ ) showed a higher perceived progress than the purchase of cereal bars ( $M = 2.75$ ,  $SD = 1.96$ ). The action had no major effect, that is, the purchase and the effectiveness of the action in pursuit of the goal returned the same perceived progress in an ongoing goal. Table 4 presents descriptive statistics, and Table 5 shows the ANOVA test.

There was an interaction of the action and the product instrumentality on the perceived progress  $F(1, 255) = 4.00$ ,  $p < 0.05$ . Participants of the highly instrumental product purchase condition ( $M = 5.00$ ,  $SD = 2.16$ ) perceived greater progress than the participants of the high instrumentality effective action condition ( $M = 4.29$ ,  $SD = 1.77$ ). Chart 1 illustrates this result. No difference was reported between different treatment actions of low instrumentality, as can be verified in Table 5.

#### Discussion

The results obtained in this experiment allow us to confirm the first hypothesis, which proposes that the purchase of a product associated with an ongoing goal offers a sense of progress to the



Table 4  
Descriptive statistics for the perceived progress variable.

Dependent variable: perceived progress				
Action	Instrumentality	Means	Standard deviation	<i>n</i>
Purchase	High	5.0000	2.15794	68
	Low	2.7460	1.95900	63
	Total	3.9160	2.34697	131
Use	High	4.2857	1.77281	63
	Low	3.0000	1.81071	62
	Total	3.6480	1.89760	125
Total	High	4.6565	2.00680	131
	Low	2.8720	1.88361	125
	Total	3.7852	2.13944	256

Source: Research data.

consumer. To put it differently, the purchase is perceived as a step forward toward the desired end-state. These results also allow us to confirm the second hypothesis, which deals with the size of that step. In other words, consumers perceive the purchase as goal-pursuit progress, which, in turn, depends on the association of the product with the goal: the higher (low) the association, the greater (smaller) the perceived progress.

These results were replicated in an experiment with between-subjects design, improving the outcomes of study 2, which was carried out with a within-subjects design. Differently from the second study of this research, the goal used in the scenarios was created based on previously demonstrated goals that most people possess (Etkin & Ratner, 2012). In addition, the products used in the manipulations of the scenarios were pre-tested in a survey sampled with the same population.

Furthermore, we advanced the theory by showing that the purchase of a product associated with an ongoing goal can be perceived as a greater progress than an effective action in the pursuit of the goal. One could argue that by purchasing the treadmill the consumer could use it as many times as they wanted, however, performing the effective action of walking is also something that can be done as much as one has the interest and the will. For this reason, this logic is not sufficient to explain the outcomes we found.

Table 5  
Between-subjects effects test for the perceived progress variable.

Dependent variable: perceived progress					
Source	Sum of squares type III	df	Means square	<i>F</i>	Sig.
Corrected model	222.390 <sup>a</sup>	3	74.130	19.772	0.000
Intercept	3610.578	1	3610.578	963.031	0.000
Action	3.386	1	3.386	0.903	0.343
Instrumentality	200.210	1	200.210	53.401	0.000
Action × instrumentality	14.981	1	14.981	3.996	0.047
Error	944.794	252	3.749		
Total	4835.000	256			
Corrected total	1167.184	255			

Source: Research data.

<sup>a</sup>  $R=0.191$  (Adjusted  $R=0.181$ ).

## General discussion

Fishbach and Dhar (2005) show that when one has multiple goals, and actions are taken in pursuit of these goals, they can be interpreted in terms of both progress and commitment. When consumers interpret actions as commitment, they tend to make subsequent choices that are congruent with the goal at hand. When, however, consumers perceive the action as progress, they tend to make inconsequential, even contradictory, subsequent choices toward their goals.

Although Fishbach and Dhar (2005) assessed the consumers' subsequent choices after action toward the goals, the authors did not study what actions are interpreted in terms of progress and the reason why consumers make these inferences of progress. The research described in this article tested and showed that consumers perceived the purchase alone as progress toward the goal and also that the size of the perceived progress in the pursuit of ongoing goals depends on the strength of association of products purchased for this purpose. We think this effect happens because when a person face constrained resources it could seem easier to apply money in goal pursuit than effort.

This effect was tested in three different contexts: in the goal of learning a second language, in learning to play a musical instrument, and in staying physically fit. In the first two cases, even if the participant did not have the goal, they perceived the purchase as being able to reduce the distance between the actual state and the desired state. Subsequently, in study 3, only the participants who actually had the specific test goal were screened and the outcomes were maintained, thus increasing the external validity of the data.

The first study aimed at demonstrating the perceived progress of the action of buying compared to a control group. The results of this study provided initial indications that the phenomenon does indeed exist. In the second study, we tested whether the same consumer perceived an action related to the pursuit of a goal and the purchase of a product itself related to an ongoing goal differently in terms of goal progress (Fishbach & Dhar, 2005). As there was no difference in perception between these actions, the confirmation that the act of purchasing has a psychological effect on the perceived goal progress was reinforced.

In the third and final study, we showed that the proposed effect of perceived progress generated by the purchase of a

product related to an ongoing goal depended on the perceived instrumentality of the product, as in the strength of association. This mechanism shows how much a product can be strongly associated with goals and to what extent investment in these goods becomes important to the consumer, regardless of their consequent usage.

It is important to note that the proposed effect is limited to ongoing or procedural goals – the ones that require multiple actions and effort through time to be fulfilled. And, it does not necessarily apply to situations in which the purchase is a natural means of goal achievement as in the case of been thirsty and one purchasing and drinking a bottle of water.

The use of written scenarios as method of experimental treatments is a limitation of this research as it reduces the ecological validity and the external validity of the data. Consumers might perceive progress differently if they are actually pursuing the goal in the moment of goal progress assessment.

Therefore, we suggest that future studies address this limitation. Also, this research did not explore how the association between products and goals occur and we believe that a study in that direction could arise interesting results.

The proposed motivational model has implications for the welfare of consumers. By being aware of the motivations of their actions when purchasing products associated with ongoing goals, consumers can adjust their behavior and allocate their resources more efficiently, seeking to reduce expenses incurred on products that may not be consumed in the future and apply these resources, for example, in services that increase their overall well-being.

The results of this research, besides contributing to goal theory, allow marketing managers to use cues to feature their products and how they can serve specific goals, thus increasing consumers' purchasing motivation.

Furthermore, the proposed effect also has implications in product line strategies. If the means (products) are bought by the perceived progress they offer to an ongoing goal, then the companies can, whenever possible and whenever relevant (given the goal), provide a line of products associated and complementary to a specific goal. Therefore, consumers can continue to purchase products from the same company with the same motivations.

### Conflicts of interest

The authors declare no conflicts of interest.

### References

Aarts, H., & Dijksterhuis, A. (2000). Habits as knowledge structures: Automaticity in goal-directed behavior. *Journal of Personality and Social Psychology*, 78, 53–63.

- Aarts, H., & Dijksterhuis, A. (2003). The silence of the library: environment, situational norm, and social behavior. *Journal of Personality and Social Psychology*, 84(1), 18.
- Bargh, J. A., Gollwitzer, P. M., Lee-Chai, A., Barndollar, K., & Trötschel, R. (2001). The automated will: nonconscious activation and pursuit of behavioral goals. *Journal of Personality and Social Psychology*, 81(6), 1014.
- Bargh, J. A., Gollwitzer, P. M., & Oettingen, G. (2010). Motivation. In S. Fiske, D. Gilbert, & G. Lindzey (Eds.), *Handbook of social psychology*. New York: Wiley.
- Brendl, C. M., Markman, A. B., & Messner, C. (2003). The devaluation effect: Activating a need devalues unrelated objects. *Journal of Consumer Research*, 29(4), 463–473.
- Dhar, R., & Simonson, I. (1999). Making complementary choices in consumption episodes: Highlighting versus balancing. *Journal of Marketing Research*, 36.
- Etkin, J., & Ratner, R. (2012). The dynamic impact of variety among means on motivation. *Journal of Consumer Research*, 38.
- Etkin, J., Evangelidis, I., & Aaker, J. (2014). Pressed for time? Goal conflict shapes how time is perceived, spent, and valued. *Journal of Marketing Research*, 52(3), 394–406.
- Fishbach, A., & Dhar, R. (2005). Goals as excuses or guides: The liberating effect of perceived goal progress on choice. *Journal of Consumer Research*, 32.
- Fishbach, A., Dhar, R., & Zhang, Y. (2006). Subgoals as substitutes or complements: The role of goal accessibility. *Journal of Personality and Social Psychology*, 91.
- Fishbach, A., & Shah, J. Y. (2006). Self-control in action: Implicit dispositions toward goals and away from temptations. *Journal of Personality and Social Psychology*, 90(5).
- Higgins, E. T. (1997). Beyond pleasure and pain. *American Psychologist*, 52, 1280–1300.
- Huang, S. C., & Zhang, Y. (2011). Motivational consequences of perceived velocity in consumer goal pursuit. *Journal of Marketing Research*, 48(6), 1045–1056.
- Kruglanski, A. W., Shah, J. Y., Fishbach, A., Friedman, R., Chun, W. Y., & Sleeth-Keppler, D. (2002). M. P. Zanna (Ed.), *A theory of goal systems. Advances in experimental social psychology* (vol. 34) (5th ed., vol. 34, pp. 331–378). New York: Academic Press.
- Shah, J. Y., & Kruglanski, A. W. (2003). When opportunity knocks: Bottom-up priming of goals by means and its effects on self-regulation. *Journal of Personality and Social Psychology*, 84.
- Woolley, K., & Fishbach, A. (2016). For the fun of it: Harnessing immediate rewards to increase persistence in long-term goals. *Journal of Consumer Research*, 42(6), 952–966.
- Zhang, Y., Fishbach, A., & Kruglanski, A. W. (2007). The dilution model: How additional goals undermine the perceived instrumentality of a shared path. *Journal of Personality and Social Psychology*, 92(3).
- Zhang, Y., Fishbach, A., & Dhar, R. (2007). When thinking beats doing: The role of optimistic expectations in goal-based choice. *Journal of Consumer Research*, 34.
- Zhang, Y., & Huang, S.-C. (2010). How endowed versus earned progress affects consumer goal commitment and motivation. *Journal of Consumer Research*, 37, 201.