

Money vs. meaning and motivation: Evidence from Latin America

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Abstract

Research in decision sciences, psychology, behavioral economics, and management suggest that rationality-based models are not always valid to explain human behavior (THALER, 2000; ARIELY, 2009). However business schools and management executives continue teaching and using Western-developed and rationality-based models of human behavior not considering cultural, personal differences, and intrinsic human characteristics inconsistent with rational choice models (CHEN and MILLER, 2011; THALER, 2000). Following recent work by Ariely, Kamenica and Prelec (2008) this paper tests the role of perceived meaning as a significant motivation driver in a Latin-American setting using two experimental studies. Previous research on the violations of rationality assumptions is based mainly in Western and developed countries, and this study's results provide support towards the generalizability of quasi-rational models of human behavior in Latin America, expanding existing evidence. Implications for management, business, and public policy practice and future research are discussed.

Key words

Incentives, motivation, quasi rational human behavior, perceived meaning, experiments.

Introduction

For many years the rational model of man has been the predominant paradigm in economics for explaining and modeling human choice and behavior. Rationality violations and “behavioral anomalies” are regularly described as “subjects problems” and not evidence against prevailing models attempting to represent human behavior (THALER, 2000). However, in psychology, decision sciences, and recently in the behavioral stream in economics, there is a growing criticism regarding the validity of the rational model of man to explain consumers, workers, and managers' behaviors (e. g. ARIELY et al., 2009; ARIELY and NORTON, 2009).

These criticisms and empirical evidence, has important implications for business and marketing practices, for products design, human resource management, financial decisions, public policy design, etc. (RATNER et al., 2008; AMIR et al., 2005). Unfortunately, most of previous work has the Western and developed World as setting, lacking empirical studies in developing nations and particularly in Latin America (NICHOLLS-NIXON et al., 2011;

OLAVARRIETA and VILLENA 2014). One of such anomalies is the role of perceived meaning on the willingness to act, work or behave. According to rational assumptions, minor differences in perceptions should not have an effect on behavior, and should not override economic incentives.

However, psychology, marketing, and behavioral economics suggests that perceived meaning can be an important driver of motivation and behavior, and reducing or overriding economic and pay incentives. There is a story about construction workers that explains the role of perspectives (meaning) on motivation and performance. If you ask them regarding what they do, they can answer in very different ways: they might say: “we are placing bricks”, others may say “we are building a wall”, and a third group may say “we are creating a cathedral”. Clearly, the level of motivation and commitment for these three different workers can be expected to be quite different. Is this a frequent phenomenon, or is it just a special case? May persons be affected in their motivation and willingness to collaborate or act by managers, marketers, or policy makers?

The main objective of this paper is to test this hypothesis through two experiments, focusing on perceived meaning as an intrinsic motivational, decisions and productivity driver (ARIELY, KAMENICA and PRELEC, 2008; HEYMAN and ARIELY, 2004; AMIR et al., 2005), in a Latin American context. Is this a cross cultural phenomenon? (OLAVARRIETA 2001).

Theory

Classic economic theory suggests that on average subjects will base their task execution on expected payments. Psychology, marketing and management scholars suggest, however, that other factors may be more important to explain motivation and performance. In particular, Csikszentmihalyi (1998) and Heyman and Ariely (2004), argue that the search for meaning can be as important to drive human efforts and minds.

The concept of meaning is present in several disciplines like psychology, management, marketing and economics (FRANKL, 1962; CSIKSZENTMIHALYI and ROCHBERG-HALTON, 1999; FRIEDMANN and LESSIG, 1986; LOEWENSTEIN, 1999; among others) and can be approached from several levels of depth. In this case, the interest is centered on a simpler version of meaning. People think that objects or activities are meaningful when somebody acknowledge or recognize them or when they think these activities have a sense of purpose (ARIELY, KAMENICA and PRELEC, 2008).

In this context, acknowledgement involves that another person (boss, peer, consumer, etc.) appreciates and is aware that the task was completed. It is as simple as that there is no necessity to have an economic transaction (i.e. payment). The sense of purpose occurs if subjects understand or believe that a particular activity or work is linked to an objective or goal. Interestingly, psychology, marketing and behavioral economists suggest that the presence of meaning will act as a key driver of motivation, regardless the functional or experiential benefits linked to an activity. The amateur runner is motivated by the marathon itself, not for the functional benefits (health, fitness), experiential benefits (being there, sharing the experience), or symbolic benefits (status, image), but for the sake of running a marathon. As Loewenstein (1999) reports in his interesting mountaineering study, mountain climbers basically like to climb, because hills and mountains are there, ready to be climbed, and their mission, their role, their “meaning” is to climb them. This motivation is an important driver in several difficult or complex occupations like: policemen, fire fighters, athletes, and even university professors. In fact, there is some interesting evidence that more productive researchers are probably so not because they are more sensitive to incentives or to reputational benefits, but because they derive more meaning from the research process (e. g. ARIELY et al., 2009).

A major hypothesis of this work, following previous research by Ariely, Kamenica and colleagues (ARIELY, KAMENICA, and PRELEC, 2008; NORTON, MOCHON and Ariely 2012), is that perceived meaning has a significant effect on human behavior, work and performance among employees, and choice, purchase and referral in the case of consumers (FRIEDMANN, 1986; FRIEDMANN and LESSIG, 1986). Meaning can be derived by consumers not just from the possession of goods, or from the derived image lined to product categories and brands, but also from tasks and activities they have to perform. For example NORTON, MOCHON and ARIELY (2012) report substantial evidence on the do it yourself or IKEA effect, where consumers assign more value to products they built themselves, and that they are very subjective in terms of assessing the value of products. In those cases meaning is derived from the task of building the products. These ideas are also consistent with intrinsic motivation explanations due to enjoyment. In this line of thinking, optimal challenging and self valuation of competence generate enjoyment (and motivation). ABUHAMDEH & CSIKSZENTMIHALYI (2012) suggest that these effects on enjoyment are mediated by attentional involvement, or “the degree to which one’s attention is devoted to moment-to-moment activity”. Hobbies normally fulfill these characteristics, and therefore generate intrinsic motivations associated with meaning and enjoyment.

Therefore, previous literature in psychology, decision sciences, experimental economics and even marketing, suggest that meaning can be derived from products or things (CSIKSZENTMIHALYI and ROCHBERG-HALTON, 1999), but more importantly from the activities involved, particularly if they are optimally challenging (not too easy - not too difficult) and if they allow for a self-valuation of competence (CSIKSZENTMIHALYI 1998; NORTON, MOCHON and ARIELY 2012; ABUHAMDEH & CSIKSZENTMIHALYI 2012).

We hypothesize that perceived meaning and intrinsic motivation effects are not just linked to western cultures and more developed contexts, and that are cross culturally stable (MONETA 2004), taking an “etic” perspective on (BERRY 1999; OLAVARRIETA 2001). In particular, we suggest that meaning effects is an important driver to explain behavior in a Latin American context.

Method

Researching meaning and behaviors is a complex subject, particularly if surveys are used as the main research strategy. It is critical to observe actual behavior, but at the same time isolating other potential causes. For this reason, experiments might be the best alternative to simulate real world scenarios, and observe human reactions to variations in perceived meaning. If subjects have to perform the same tasks in different treatment conditions, and the stimulus is very subtle -just a minor variation to affect slightly perceived meaning- the observed behaviors (and differences) may provide a strong support for the working hypothesis. Stronger effects can be found in real life situations, where perceived meanings can vary very strongly affected by emotions, contexts, endowments, and other factors. Such an experimental setting is risky from a design point of view since small treatment differences, may not be perceived by subjects; thus reducing variance in subjects’ behavior. However, at the same time the presence of significant effects may be considered a strong test for the theory behind the hypothesis.

Study 1

The experimental studies replicate the method and design of Ariely, Kamenica and Prelec’s article (2008) adapting it slightly to Latin American countries’ context and experimental setting (i.e., language, instructions, subjects’ recruitment procedure). In fact, experiments are a novelty in Latin American university campuses, which can be a positive context avoiding

memory, history or learning effects, but make it more difficult to recruit subjects (they are not used to receive payments to participate in a study) and to administer the experiments.

Study 1 includes 101 subjects recruited from 1st to 3rd year classes at a Chilean University, by signs posted in the school bulletin boards, facebook announcements, mailings, and announcements in class. All these announcements said “Get paid for participating in a 30 minute study”. Students had to sign up on a web page with fixed spots for an equal number of women and men, and they were contacted to schedule the experiment time. The experiment was conducted in the study rooms of the School’s library. The experiment’s task involved finding 10 3-letter sequences in a sheet of paper with 20x20 letter squares. For the first completed page they will receive \$250 (0,50 \$USD approx.). After turning the first completed page they were asked if they wanted to complete a second sheet for \$220 (5 cents less), and so on until the tenth sheet of paper where they will receive \$50 (5 cents). Students participate alone with no other subject in the room, apart from the experimenter. Subjects were separated by gender, and then they were randomly assigned to three different experiment conditions manipulating perceived meaning: acknowledged, ignored, and shredded. In the acknowledged condition subjects have to write their names in each sheet of paper, experimenters will check the page in order to establish if it was correct, and then they were filed in a folder. After this procedure they will receive the pre-established amount of cash, and were asked if they wanted to continue playing. In the ignored condition, students were not asked to write their names, and experimenters just left the sheet of paper on a table when subjects turn them over. In the shredded condition, subjects will hear in the instructions that pages will be immediately destroyed after passing them to the experimenter, and experimenters will shred the paper in front of the subjects’ eyes. Effort or labor supply is measured counting the number of total pages completed by each subject. Subjects could cheat in all conditions since monitoring was only symbolic in the case of the acknowledged scenario. Using a traditional economic viewpoint, the acknowledged condition will have higher perceived costs to cheating, since subjects needed to write their names, and they had to wait while the experimenters review the page. In the other two conditions, the cost of cheating was lower and in the case of the shredded condition it was almost non-existent, since subjects knew the pages will be destroyed without ever revising them.

Psychology, management, decisions theory, behavioral economics and marketing theories will predict otherwise. All of these disciplines will suggest different explanations for which an “acknowledged” scenario will increase perceived meaning, motivation and given this, total labor supply (effort or production) will be higher. In economic terms, reservation wages will be lower!

Results

Study 1 results are against classical economic theory predictions, and provide support for the “meaning-motivation” hypothesis. Subjects in the acknowledged condition complete on average 9,81 puzzles (receiving USD 3,5), higher than the extreme shredded condition with 7,53 complete puzzles. The ignored condition generates an intermediate output, since subjects in this category complete 8,48 puzzles. Differences are statistically significant at the global sample level ($p=0,010$). In fact, in the acknowledged condition over 60% of the participants completed puzzle 10 (no payment), and 32% continue playing after puzzle 10 without payment. In the Shredded condition only 18% of the subjects completed more than 10 puzzles.

Overall, these results provide consistent evidence with Ariely, Kamenica and Prelec (2008) and the meaning-motivation hypothesis, compared to the classical economic rational choice hypothesis. Even in the case of very non-significant tasks individuals appear to be affected by small differences in perceived meaning of the task (i.e. acknowledgement).

Additionally, an interesting insight from this study (compared to the original American one) is the possibility to have gender as a moderator, which might be related with the task characteristics or relevance. In this case, differences were stronger and highly significant for the female subsample (Acknowledged: 10,5 vs. Ignored: 9,2 vs. Shredded: 7,0). A potential explanation is that this kind of puzzles, involving just a cognitive task will have more appeal to women than to men.

Alternatively, a methodological issue can also be explaining at least part of this moderating effect. Experimenters notice a confounding factor that may have reduced the magnitude of the difference between acknowledged and shredded conditions. For logistical reasons we decided to run several experiments at the same time in different study rooms (we did not want to have a “word of mouth” or “contagion” effect, therefore we wanted to collect more data in less amount of time). Then, for the shredded condition we decided to shred the sheets manually instead of passing it through a shredding machine. This small change made some students angry, but also it made few others (mostly men) smile, showing some sort of liking of the “destruction process”, and motivating them to continue completing the sheets just to see it again. Probably, a more impersonal shredding process will reduce these cases, and more extreme differences would be found at the total sample and the male subsample levels.

INSERT TABLE 1

Obviously, the characteristics of this study are somewhat far from real life situations, and some may argue that these results may change with other types of tasks. Therefore, a second experiment was designed in order to test our hypothesis in a different context. This time the task involves both cognitive and manual skills.

Study 2

The second experiment uses a task with a higher physical or manual component. After all, most jobs involve both cognitive activities and more physical ones. Salespersons do have to analyze markets and convince people, but they have to move around, call, act, a lot. Professors need to think and prepare classes, but they also need to communicate, move, and interact with students (not just writing papers!). In order to check the meaning-motivation hypothesis a second study involved assembling one Lego model, following the second experiment by Ariely, Kamenica and Prelec (2008).

Subjects were invited by email, facebook, web and bulletin board announcements. Again, they were invited to participate in an activity where they will win money by playing. Subjects have to register in a website in order to pick their time slots. Subjects were separated by gender and then they were randomly assigned to two different experimental conditions: meaningful and meaningless. All participants receive general instructions regarding the activity. They had to assemble 55 pcs. Lego figure (a person riding a 4-wheel motorcycle), and they will receive immediate cash for doing it according to a scale that started with \$650 (Chilean pesos, approximately USD 1,35), and will reduce by \$50 (0,10 USD) until the 7th assembled LEGO figure where they will receive \$0. Each time a participant finished assembling a figure, they will pass the figure to the experimenter and they will receive the cash. Then they will be asked if they wanted to continue assembling LEGOs. In the meaningful condition, LEGO figures would be placed on the table on a visible spot. In the meaningless condition, the experimenter will start disassembling the figure immediately after the subject started to assemble the new figure, and will tell the subject, he needed to do so, because he/she only had two figures. This process ended when the subject wanted to do so, but we limit time to 30 minutes. In trials previous to the experiment we timed different

subjects, and we estimate an average assembly time of 4 minutes. Therefore, in 30 minutes they would be able to complete 7 figures if they wanted.

Results

Results confirm the working meaning-effort hypothesis in a new more complex setting, suggesting that meaningful conditions generate more motivation, effort and performance. In the meaningful condition subjects assemble on average more Legos (6,8) than the meaningless condition (6,8 vs. 5,6). The difference is statistically significant ($p=0,007$). The experimental time constraint (30 minutes) is important to be noticed, since it reduces the variance in results on subjects who would have continued assembling figures, particularly under the meaningful condition.

An additional interesting result is the difference between the male and female subsamples, as expected from Study 1. In Study 1, the female subsample showed stronger effects. However, in Study 2, the results show stronger differences in the male subsample (average of assembled figures: 7,3 vs. 5,8; $p=0,004$) compared to the female subsample (6,3 vs. 5,4; $p=0,210$). In both subsamples the results go in the hypothesized direction, and the non-significant results for the female subsample can be explained by sample size and the time constraint. The role of gender (or type of activity) as moderating factor is an interesting finding, confirmed in this second study that needs to be further researched in experimental settings and other contexts and activities.

INSERT TABLE 2

The results of this second study, that consider a more complex task (combining cognitive and physical activities), are consistent with study 1 results providing stronger support to the meaning-motivation hypothesis, and quasi rational models of human behavior, over traditional rational models of human behavior used in economics.

Discussion and Implications

Overall results support theories and findings in psychology, decision sciences, management, marketing and more recently behavioral economics, which favor bounded rationality assumptions over full rationality ones to model human behavior. Most of the previous evidence has been generated in Western and developed countries, therefore these studies provide interesting evidence towards the generalizability of these theories. These results are particularly important for different business and applied policy disciplines, both for researchers and practitioners.

In human resources and general management, it might be even more relevant to consider the role of meaning and the process of providing it when studying the effects of organizational design, incentive systems, and leadership (among other organization variables). How workers derive meaning, and how leaders can be providers of meaning (beyond communication, for example) can be interesting areas of further research. How organizational artifacts, systems, policies and rules affect meaning may be as important as the “rationality” or economic justice associated to those policies and regulations (e. g. SZABO, 2006). Individual differences and the importance of providing “customized meanings” to different team members or collectives may be also important to be acknowledged.

Top managers decisions and behavior may also be influenced by meaning effects. Top management incentives schemes need to consider these findings and theories in order to overcome the limitations of simpler performance based incentive schemes. Apparently agency theory (mainly based on rationality and individual incentives and motives) needs to be complemented with other complex assumptions regarding human perception and meaning.

This is particularly important for board member incentives, self-control and corporate governance mechanisms, and for studying the strategy making process, where all these factors may play a key role. Cross cultural issues can be very important to be considered, particularly if management models need to be developed for emerging nations. Chen and Miller (2011), recently examine the role of Eastern relational philosophy (which values integration, balance, and harmony over distinction and competition), on interpersonal considerations and temporal dimensions. They suggest that this lack of consideration of relational issues may explain some of the Western organizational shortcomings in leadership, strategic decision-making and organizational performance. This might be very critical for studying meaning construction among top executives.

From a marketing perspective, consumers' decisions need to be examined considering the different value generating (diluting) issues involved in a particular purchase decision. A key element to be identified by marketers is: what is the meaning of products, services, experiences, activities by consumers and how they derive it from existing or potential offers (BELK, 1988; CSIKSZENTMIHALYI, 1998; CSIKSZENTMIHALYI and ROCHBERG-HALTON, 1999; FRIEDMANN and LESSIG, 1986). Marketers and market research specialists have larger challenges to understand this phenomenon, than just to identify the perceived levels of a particular product or brand attribute. Challenges are twofold: methodologically and also theoretically, in terms of having logical, sound and grounded explanations of how this process may work. Helping this endeavor, a key finding in this study is the potential differences between male and female consumers regarding meaning perception and construction. Task or object differences can be an explanation, but they might be contrasted against biological explanations (brain, genes), sociological explanations (gender issues and social structures) and or psychological explanations (personalities, personal goals and motives).

Experimental studies have some limitations that need to be considered. First experimental conditions attempt to represent a real life situation but they are not necessarily equivalent to real life consumption or working situations. Compared to experiments in the psychology tradition these experiments add some "reality" by having real effects for different levels of outputs (i.e. actual cash payments), thus reducing some of this lack of external validity. However, sample issues (size, student subjects) could be addressed in further studies or replications. At the same time, a key challenge is to find more creative or ingenious ways to recreate real life situations, at lower production and execution costs. Combining experiments with some qualitative methods and theoretical perspectives (behavioral economics, psychology and business disciplines) can be an important research strategy to address some of the meaning-motivation hypothesis and to expand knowledge regarding meaning construction in economic and business agents.

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Table 1: Study 1

Puzzles

Average answered puzzles in each condition

| Gender | A Acknowledged | I Ignored | S Shredded | p-value |
|---------------|-----------------------|------------------|-------------------|----------------|
| Men | 9,2 (18) | 7,9 (19) | 8,1 (16) | 0,455 |
| Women | 10,5 (15) | 9,2 (18) | 7,0 (16) | 0,010* |
| TOTAL | 9,81 (15) | 8,48 (18) | 7,53 (16) | 0,010* |

(*) p-value < 0,01

Table 2: Study 2
Legos
Average assembled Legos in each condition

| | Destroyed (Meaningless) (n=41) | Preserved and showed (meaningful) (n=38) | p-value |
|-------------------------|---|---|----------------|
| Men (n=41) | 5,8 (22) | 7,3 (19) | 0,004* |
| Women (n=38) | 5,4 (22) | 6,3 (19) | 0.210 |
| TOTAL | 5,6 | 6,8 | 0.007* |

(*) p-value < 0,01