SOCIAL PSYCHOLOGY AND MARKETING: THE CONSUMPTION GAME. UNDERSTANDING MARKETING AND CONSUMER BEHAVIOR THROUGH GAME THEORY

Cătălina BUTNARU

Abstract: Consumer psychology provides enough evidence that consumer behavior is not just one side of our existence, but, as a matter of fact, it is a central dimension of our everyday lives, engaging us into changing and defining our identity, beliefs, attitudes and practices. In relation to this, commodification has reached us on all levels: everything that people created, produced and developed over the years, during the post-industrial era, can be commodified and sold to a specific market. Commodification and increased consumption are crossing the line between values and needs, production and creation, identity and capital accumulation, thus making people constantly expecting a payoff while engaging in social, cultural and economic transactions. In this article we argue that we can use the models of game theory to understand socio-economic phenomena such as consumption, B2C marketing and market dynamics.

Keywords: Game Theory, consumer behaviour, commodification, decision theory, marketing

JEL Codes: C7, C91, M31

1. AN INTRODUCTION TO GAME THEORY

Game theory is an untapped theoretical and methodological resource for behavioral economists and social scientists who prefer a more rational approach to the social interactions underpinning culture, society and economy at large (Aumann & Hart, 1992). Game theorists use specific methodologies to predict and model the behavior of rational, self-interested players in various interactive

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situations, thus claiming that game theory provides a solid methodological and theoretical background that could successfully explain the complexity of social dynamics, culture emergence and consumption patterns (Elster, 1982). To understand why, some concepts need more explanation, and we shall rest our attention upon them later on.

The fact is that, game theory received more attention from theoretical economists than from social scientists, more likely because according to the game theory framework people are expected to be rational and act optimally in a given set of circumstances (game matrix). In real life, these expectations remain unmet, while social scientists often find that people's decisions and strategies are based on irrational beliefs, subjective cognitions and personal interpretation of data.

Although the most common approach, since 1970s, in game theory is concerned with economic applications and modeling of market dynamics (in which self-centered, rational economic agents concerned with prices and interest rates trade with one another) game theory has ignored the consumer (Rasmusen, 2001), the marketer and the advertiser, who also play a role in the game of economic agents such as companies, production firms, manufacturers and traders. Game theory never saw a logically valid connection between the agent and the consumer, specifically because the consumer is not aware of or does not care about its influence on the agent's actions and decisions. The missing links can be found in (1) marketing, as a strategy used by the economic agent to influence the consumer - who is expected to behave in a self-interested manner, and (2) consumption, which is pervasive in all social strata, while consumers react to specific marketing messages in which the benefits of consuming are translated in both material and immaterial gains (psychological – such as satisfying a need or desire, social – such as the growing power of a brand, created via multiple, repeated purchases over time; or moral – such as the feeling of empowerment, authority and success).

2. GAME THEORY – CORE CONCEPTS

Game theory uses formal logic and mathematics to rationally predict the outcome of a game-like situation with two players, from the disputes of couples over where they should spend the evening, to more risky situations, like conflicts and business decisions. In order to understand game theory, one must understand its key concepts: players, actions, payoffs and information. This is the PAPI model and refers to static games. Extensive-form games will also include (1) the
moment in which one player makes a move, (2) the order of moves, (3) the player's payoffs as a function of the moves that were made, (4) what the player's choices are when deciding to make a move, (5) what each player knows when he makes his choices (6) the probability distribution over any exogenous event\(^3\), (6) if the players can observe each other and (7) if they know everything there is to know about each other (complete vs. incomplete information sets; perfect vs. imperfect information set games)\(^4\).

Game theory assumes that the player is a rational agent, capable to predict and accurately evaluate the outcome of choosing one strategy over another, in a situation where the number of strategies to be chosen varies from 2 to \(n\), in relation to another player, whose strategies will also vary from 2 to \(n\). It is important to note that there must be a connection between the players – they must be aware that their decisions are co-dependent, in the sense that whatever one does will have a consequences for both players (Rasmussen, 2001). Further on, what a player can do is part of his actions set and the player can foresee the results of his chosen actions. Once the player chooses to act in a specific way, he will also expect certain outcomes and accordingly, the player will design her own strategy, given his predictions and expectations are accurate.

On one hand, the players and their actions are part of the active forces that shape the game as it unfolds. On the other hand, the payoffs and the information set are part of the defining factors of a game. Each player's action constitutes the input, which is normally smaller than or at least equal to the expected payoff. The payoffs are most often represented by the cardinal and ordinal utilities\(^5\) (J. von Neumann, 1947) that players will eventually benefit from when the game is over. Cardinal utilities can be easily measured and the most relevant example would be that of money. Ordinal utilities constitute of immaterial benefits, which are usually ranked based on preferences.

Once the game begins, the information available to players may be complete or incomplete, thus the players involved may have to make decisions under uncertainty\(^6\). The information set will include data about the players, the payoffs, the rules of the game, the context and the details mentioned in extensive-form games. As the game unfolds, both players make use of this information to make better decisions and ultimately receive the expected payoff. The agents are also aware of one another, so their evaluation of the other players involved is also part of the information set of the game.
The problem of awareness should be understood in a larger sense, in my opinion. One cannot be constantly aware of every aspect of the game, since people have limited cognitive resources and often make use of shortcuts and apparently skip irrelevant details when making a decision. In theory, players do not have limited cognitive resources and they expect that every player involved in the game is rational and aware of all the rules of the game. Nonetheless, if our intention is to make sense of game theory in real life situations, with real human beings involved, we need to accept that people do make mistakes, that they may underestimate or overestimate another player, that they do not always behave rational and often prefer to play suboptimal strategies. We will focus on this aspect in the next section of this article.

One core assumption of game theorists is that players are self-interested and therefore will always try to maximize the payoff when choosing a strategy, even if that payoff is either a gain (the output after playing a strategy is greater than the input before starting the game) or a loss (that is, the most acceptable losing strategy, if there is no other choice but to lose something once entering a game – this is exemplified and explained by the maxim in strategy\(^7\) in zero-sum games (J. Von Neumann & Morgenstern, 1947).

The idea that people are in essence self-interested has received attention from various prominent academics, scientists and philosophers: from David Hume, Charles Darwin, Emile Durkheim and Adam Smith to Richard Dawkins, John Nash and Bill Hamilton. It is very important to note that being self-interested does not have the same meaning as being selfish. Self-interested behavior can facilitate cooperation between people, if cooperation is the best strategy for achieving desirable outcomes for every member of the group. This situation is often illustrated in the way people make use of public goods (Olson, 1965) and resources: although each party is motivated to benefit the most from the public resources available, if people behaved selfishly, the available resources would be exhausted in short time and nobody will benefit from it if this happens. In other words, using the public transportation services without a ticket is a self-interested behavior because the cheater will keep the money and get a free ride, but if this self-interested behavior would be generally adopted, the public transportation system would soon be made unavailable, due to money shortage. Although not paying the ticket is the dominant strategy, leading to maximum payoffs, cooperation (paying the ticket) would make public transportation available for a
long turn for anybody and even at even lower costs/ticket. This situation alone does not fully describe the idea underpinning this concept, as we shall see further on.

As we have shown, self-interested individuals may be motivated to cooperate if cooperation leads to benefits that are reasonably more relevant than the benefits of playing strictly dominant strategies. What else could best describe the self-interested behavior type? Theoretically, being self-interested is a sufficient condition for being motivated to outperform oneself, again, if the payoffs of outperforming are greater than the payoffs of keeping the same level of performance as before, and most of the time, outperforming is usually more beneficial.

**Using Game Theory**

Self-interested individuals always try to maximize the payoffs they reach while playing a strategy. We already know that the payoff is the *cardinal or ordinal value* ascribed to a specific output. A self-interested attitude will motivate people achieve better results in whatever they do, if high performance is correlated with higher payoffs (which is often the case in capitalistic societies) thus self-interested individuals will always raise the standards of competitive social and economic behavior. A.D. Alexander saliently concludes that ‘Ethics, morality, human conduct, and the human psyche are to be understood only if societies are seen as collections of individuals seeking their own self-interest...’ (1987, 3).

In game theory self-interested players will always try to find those strategies that are best responses in a given information set. They will do so by: (1) predicting the other player's choices, based on the assumption that the other player is also trying to maximize her own payoff and therefore play a dominant strategy; (2) estimate what the other player's best strategy would be at specific times during the game; (3) find the best strategy for herself at any given moment during the game and (4) try to make the other agent play in such a way that both players reach a perfect *equilibrium solution* (Nash, 1951). The strategy profile is a Nash equilibrium if no player has any incentive to deviate from his strategy given that the other players do not deviate. The perfect *equilibrium* can be achieved in several ways, included *iterated dominance*. It does not mean that the players will receive the highest possible payoffs they can get, it means that the game has reached an outcome point where all players simultaneously benefit from having played a certain strategy. The Nash Equilibrium is exemplified in the following game matrix:
C1 and C2 represent the two possible actions of player C and R1, R2 represent the two possible choices of player R. If R chooses R1 and C chooses C1, both receive 10 points. If R chooses R1 and C chooses C2, then R loses 5 points and C loses 20 points, and so on, according to the table represented above. The best choice for both players would be that they choose R1 and C1 respectively, therefore this strategy profile is a Nash Equilibrium. Nonetheless, if R is strictly *self-interested* and wants only to maximize her own payoff, then R will have to choose R2, in which case R wins 20 points only if C chooses C1. But since C is also rational and *self-interested*, she will prefer to play C1 only if R plays R1, which means that C should be able to observe R's moves. Since a static simple form game assumes that both players choose simultaneously without observing each other, we will not go into further details. In this case it is almost obvious that, if people could cooperate (or at least trust the other players are cooperative) they could be self-interested and win at the same time, by reaching the Nash Equilibrium.

Game theory fails to predict social behavior in several situations because in real life people do not want to play strictly dominant strategies. One example is the *Ultimatum game* (Von Neumann & Morgenstern, 1947) in which one player – A – who has, for example, 10 dollars will decide how much he wants to give the other player – B – who can choose to accept or reject the offer. If player B refuses the offer, both players receive nothing. A self-interested player A will give the smallest amount possible – 1 dollar – and a self-interested player B will accept the offer since 1 dollar is better than 0. Evidence proves that players A are far more generous, over 40% of the subjects involved in various similar studies offering more from 30 to 50% to the other player. On the other hand, player B behaves contrary to game theory’s predictions, that is, a significant number of players B will refuse an offer that is lower than 30%, thus punishing the player A for having made an „unfair” offer in the first place (Camerer and Thaler 1995; Guth and Tietz 1990; Roth et al. 1991).

This is just an example of suboptimal behavior preferences, illustrated by the results of several studies carried out in various conditions. It was shown that the strategy profile preferred by the subjects is influenced by the cultural background of the subjects. Being more generous and more cooperative is culturally

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<th></th>
<th>C1</th>
<th>C2</th>
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<tr>
<td>R1</td>
<td>10,1</td>
<td>-5,20</td>
</tr>
<tr>
<td>R2</td>
<td>+20,-5</td>
<td>0;0</td>
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conditioned and often people who value cooperation will use various forms of punishment to discourage non-cooperative behavior. This was shown by Toshio Yamagishi (1986) who studied how people behave in *The public goods game*. In this type of game, subjects are given an initial credit, for example 20 points, which are convertible in real money and they can choose how much to contribute to a public account, which will later be split among all the participating subjects. In theory, self-interested subjects should choose to contribute with 0 points. This way, they will not lose money and if other players will contribute, then they will finally have more in their personal account than any other player. This type of behavior is seen as *unfair* and, if given the possibility, most of the participating subjects would punish it. In real life situations people will create special entities that will have the power to *fine* or *punish* non-cooperative or cheating behaviors.

3. **Using Game Theory to Understand Social Interaction and the Emergence of Culture**

In theory, everything works well as long as it obeys the *Occam's razor* rule: the simpler the set of premises, the more accurate (testable and verifiable) an hypothesis becomes. In real life, being 1) *self-interested* and 2) rational are not sufficient descriptors of the players. People are complex and they love making things complicated, even if their behavior can be partly reduced to simple explanations. In real life it would be awkward to stick to only one criteria of selection – the strategy that is most attractive to a *self-interested*, rational individual, trying to maximize their pay-offs. Not only do we have to add in this equation the socio-cultural influences, biological and psychological factors, which account for most of the individual's choices, but we also have to understand that the concept of payoff is extremely relative and that the payoffs may change many times during the same game or may not bear the same meaning for all the players involved.

The application of game theory to real-life situations requires that we use the concepts, the rules and strategies presented by game theorists in more flexible ways, adapted to the complex world we live in. Game theory should not be an isolated subject; instead, it should encourage the researcher to have a multi-disciplinary approach, crossing into decision theory, social dynamics, group psychology, psychology and economics. For example, people will often behave in such a way that they will receive the highest payoffs if that behavior is socially
acceptable and if their strategy does not require too much effort, as we shall see in
the next section. Strictly dominant behavior nonetheless can be considered
*cheating and it is not tolerated.*

Following Rasmussen's call to using a theoretical model in a more results-orientated way, the aim of this article is to pinpoint the possible new understanding
of human behavior, as exemplified by the consumer-marketer relationship.

In this section we will argue that *self-interested individuals* will not choose
strictly dominant strategies if the effort required to act them out is greater than the
effort required if they were to choose alternative strategies. To see how this
happens, we go back to analyze how game theorists describe a game by using 4
descriptors: the *players, the payoffs, the information set and the actions.* As we
have said before, the players are supposed to function optimally in every game, so
that during every game they will fully use the information available to find the best
possible strategy.

As a matter of fact, people will often fail to perform to the expected optimal
level because not every situation motivates them to find the best strategy. People
are players and the cultural, economic and social context in which they dwell will
represent the larger information set in which various types of games are played.
The expected payoffs, the alternative actions available to each player and the
information that she can access will be taken into consideration before choosing a
certain strategy. When choosing a strategy every player will also consider the
cognitive resources required by her choice and this is the main reason why we will
observe players choosing suboptimal or even dominated strategies. This is
especially frequent in the case of cultural behavioral patterns, which are learned
from peers and require lower cognitive resources than any other alternative strategy
(J. Bednar and Page, 2007).

Bednar and Page (2007) come to the conclusion that, “when purposeful,
incentive-sensitive agents confront multiple strategic situations rather than just
one, and when cognitive effort is costly, we find that culturally distinct behavior is
likely and in many cases unavoidable”. Rational, self- interested agents will choose
to behave culturally for many reasons, such as *cognitive resources and energy
preservation, behavioral consistency, social pressure, behavioral subroutines and
passive involvement* in specific decision-making situations. In their article, the
authors focus on cultural behaviors that are constructed and learned in time by
individuals. They also note that cultural behaviors are not necessarily optimized
and may not bring the highest payoff to the agent, on the contrary, cultural behavioral patterns evolve from *constrained self-interest and therefore prove to be suboptimal*.

They also clearly identify five dimensions of culturally evolved behavioral patterns, which are easily adopted by individuals and therefore will always lead to suboptimal strategies:

- **Intra-individual consistency** – individuals will respond or act in a similar way, in time, as they move from task to task
- **Inter-agent consistency** – individuals from the same community may tend to act like one another
- **Contextual effects** – depending on contextual circumstances, individuals from different cultural communities may behave differently in similar situations.
- **Behavioral stickiness** – individuals may not change their behavior despite changes to their incentives.
- **Suboptimal behavior** – The strategy employed by individuals within a community may be suboptimal, where individuals could benefit by acting in a different way. Formally, the behaviors are not equilibrium strategies in the repeated games or if they are equilibrium strategies, the resulting equilibrium does not belong to the set of *Pareto efficient equilibria*.

### 4. Marketing and Consumers: The Consumption Game

*Consumption* has become a core component of our social life, in the sense that inter-individual transactions can be seen as part of games that we play, provided that the payoffs are of significant cardinal (symbolic) or ordinal value (material).

After the World War II, on the background of a significant economic growth and general income increase (Goldsmith et al., 1954), people started to buy more, thus consuming more according to their „wants”, rather than according to their „needs”. Social symbols of wealth and prestige started to be used more often in the promotion of goods and services and this transfer of values from intellectual, moral and social spheres to the market had a profound effect on a population whose desire to indulge in socially determined consumption had never been greater. The effects of commodification have been spotted in time by theoretical economists,
and they soon came up with a new model of goods and services, in which social and psychological factors received more attention and interest.

Neo-Marxist models of consumption describe goods and services not only as commodities, but as social symbols too, used by people as marks of power, prestige and wealth. We enjoy consuming goods and services primarily because of the social and symbolic significance of the purchase (Douglas and Isherwood, 1980). Although this view is highly consistent with the reality of market dynamics and consumption, it was taken into consideration by both theorists and marketing practitioners only after 1960. In 1966 Lancaster’s remarkable contribution changed the way products were defined, arguing that each product comprised a unique set of properties and characteristics from which utility was derived by the consumer.

This view changed traditional approaches of consumer behavior and ultimately led to a major paradigmatic shift from the initial description of the consumer as passive, receptive and interested in price, quality and the physical utility of goods; to a more comprehensive approach, in which the consumer takes an active role in deciding what to buy and for what purposes – practical, material or symbolic. Francis Bourne (1956) also supported this view and he suggested that while consumers could buy goods independently from any significant social influence, there are often times when consumers would be very sensitive to external factors and justify their choices purely on the account of brand, social impact and desirability.

Bourne described the characteristic of goods to be socially desirable as “conspicuousness” and used brand desirability and utility to create a new model of consumption. He would use the two characteristics to identify four categories of goods and examine the way consumption patterns and decisions were different in each case.

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<tr>
<th></th>
<th>Utility Minus</th>
<th>Utility Plus</th>
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<tbody>
<tr>
<td><strong>Brand Minus</strong></td>
<td>Neither brand nor utility are important to consumers.</td>
<td>The utility of the product is very important and brand conspicuousness has little or no relevance</td>
</tr>
<tr>
<td><strong>Brand Plus</strong></td>
<td>Products which are not very useful to consumers, but which are constantly purchased because of the symbolic value of the brand associated to them is far more important for the consumer.</td>
<td>Both utility and brand conspicuousness are important factors for consumers.</td>
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In fact, Bourne was a visionary, suggesting that products should be marketed to social groups and individuals, not to the masses, in order to be successful.
Bourne's contribution marked the transition to modern marketing theory, in which products are classified according to the number of *rewarding responses* they evoked - based not only on the physical attributes of goods but also on the social and psychological benefits associated with consumption\(^{11}\). (Mason, 2005)

These changes in product taxonomy reflect the realities of the 20\(^{th}\) century in which consumption is part of a more complex, diverse and controversial social discourse. In a postindustrial world, the modern entered the century of symbolic consumption, in which people seem to buy things in order to achieve happiness and derive immaterial satisfaction from goods and services. Half way through it, we acknowledge the illusory benefits of commodification and accept it as part of our lives. Before 1900, art, culture and status were the only coordinates we had to identify the moral values we were trying to reach. In time, as things became available in all markets, we started to search for that grain of happiness on the shelves of the biggest supermarkets and malls in town. In conclusion, in the past century out modern society was facing a new type of challenge: finding happiness in the code bar, as higher-standards living was the main purpose for which people worked.

### 5. A CONSUMER SOCIETY: COMMODIFICATION AS A SHAPING FORCE OF SOCIAL INTERACTIONS

As consumption takes away most of our spare time, culture industry shapes the way we perceive the world around us. The best and most popular products are the ones that increase profit on one hand, and make consumers happy with their purchase – on the other hand. Products and services are there not only to satisfy basic needs, but also to help us find a meaning in our day-to-day existence. The world population increases dramatically and the market becomes a shaping forces of the mass culture. In a time of political and economic turmoil, we find similar products all over the world, as a proof that commodification breaks down the barriers of politics, ethnicity and social discrepancies. Poor or rich, literate or illiterate, people want to buy soda, watch soap opera, chew gum and eat potato chips. Behind the name of the product, there is the concept of a consumption-based lifestyle, in which what we buy becomes the statement of what we want to be or have become (Slater, 1997).

Moreover, for the past two decades, the *new media* and the Internet became a connecting bridge between corporations and consumers. The relationship between
marketing and the consumer is closer to a one-to-one game than ever before. Described as the big new thing in relationship marketing, social media is now the official context in which consumption becomes part of our personal histories: consumers share their views on new products, build up social representations of the new age lifestyle and ascribe modern values to goods and services that can be purchased over the Internet (Zwick, Detlev and Dholakia, Nikhilesh, 2008).

Interestingly, the word „consumer“ still bears negative connotations derived from the idea of passive consumption and it is usually replaced with „customer“, which is more likely associated with the image of a responsible individual who chooses to develop constructive relationships within the marketplace (Lang, 2006). Nonetheless, this type of relationship is hard to get for most of the people: some families may seriously consider educating their children so that they are able to refrain themselves from hedonistic consumption; other families may have no other choice but to carefully spend their monthly income so that they would still lead a decent life. For the latter category, consumption becomes the modern ideology through which they pursue higher-standards of living, but it can also be part of a social movement towards less-regulated markets and increased production.

In any case, consumption is omnipresent, as part of global and local markets, mediating people's access to resources and enabling them to achieve their goals. Its core value is the freedom to choose, thus making people feel powerful. In fact, whether choice makes us the true authors of our lives or not, remains an unanswered question. Chosing from things that are marketed to the masses is not exactly the expression of freedom, but it is the most popular expression of the self in modern societies.

6. THE PAYOFF – THE GREATEST INCENTIVE

The first connection between consumption and game theory can be made through the philosophical interpretation of consumption as large scale manifestation of people, groups and societies trying to receive higher payoffs/benefits from their interaction with the offering agents – companies, industries and corporate entities. These manifestations stem from people striving to achieve specific goals in life and, accordingly, reach certain satisfaction levels.

One of the most comprehensive definition of consumption as a goal-oriented activity can be found in The Why of Consumption: contemporary perspectives on consumer motives, goals and desires edited by S. Ratneshwar, D.G. Mick and C.
Huffman. In this book being goals refer to what a person wants to be, in terms of her identity, status, social relations and appearance. In this case, that person may develop preferences for specific brands of clothing, personal use items and cosmetic products. Also, in her pursuit of happiness, being somebody (for example a renowned doctor) means that she may have to attend certain classes, buy materials that are suited for her education, make friends and connections in a specific area. Everything that a person does in order to be somebody implies that she will become a specific type of consumer. Being goals are most closely associated with life themes and values. This goal level refers to conceptions of cherished or desired self-states, that is, who a person is trying to be (Mick and Buhl, 1992)

Marketing specialists will have to understand how being goals are achieved, whether objectively or illusorily, through cultural behavior, consumption patterns and preferences and personal perception of available goods and services.

Doing goals are related to specific consumption behaviors that have a functional role in our modern times. These are represented by current concerns that are easily taken for granted (eating, writing, traveling, relaxing, organizing and maintenance, etc). Notwithstanding, doing something to achieve a certain level of satisfaction means that one should have specific items: from decent clothing to PC, mobiles, cars, a place to live, so on and so forth.

There is a strong relation between the aforementioned types of goals. For example, buying clothing is specific for both having and being goals: one may not be satisfied with having one pair of jeans, on the contrary, one may start to feel powerless and depressed for not being able to wear a certain brand of jeans.

Having goals: having is all about what one has or what one can buy. We start to compare with one another as soon as we begin to earn an income. Then the comparison criteria becomes harsher and harsher, that is, we have to earn more and more to be happy about ourselves.

“Consumer culture involves a quest for meaning in life primarily through consumption. With our logo-laden clothing and shopping bags, we roam the shopping mall in search of an identity and in search of meaning in life” (Belk, 2006).

In a consumerist society people seek for a higher meaning in life in eclectic sources, from the exchange of goods and services, to televised entertainment, hi-tech gadgetry to new-age spiritualism and mystical interpretations of life events.
Facing this desire to find mystical and miraculous answers to our own existence, the world of commerce is happy to come up with mystical, magical and surreal images, via brand images and messages conveyed to the broad public. In this case, the game matrix takes various forms, but there is still a universal pattern that may look like the one below.

![Game Matrix Diagram](image)

Figure 11 The game matrix

7. THE GAME

The game begins when the marketer decides to introduce an *incentive* in order to stimulate demand. In a market where a demand-based equilibrium is decisive, *production* should decrease when *demand* decreases. Ideally, if one product is the best choice for a specific need, there shouldn't be too many variations of it on the market and therefore, marketing should only be limited to creating and promoting a product to a market that has not been successfully covered. Nonetheless, the market is not dominated by the equilibrium naturally created by *offer and demand*. Every company seeks to make profit and receive a higher market share based not only on what they have to offer to the market, but
also on what they would make consumers think they can receive when making a purchase.

When basic needs are covered, corporations are left with higher level desires and wants, motivations to buy and goals - so the next step would be to explore this side of the human psyche to attract more consumers for a longer period of time. That is one strategy and often the most successful one, in terms of long term profit and market share – often channeled through brand development, advertising and media. The other type of strategies appeal to impulse, emotions and spontaneous motivations to buy: such as promotions, direct marketing, point-of-sale marketing, online marketing. In essence, economic agents – A type players – will use marketing methods and incentives to reveal the multiple benefits of a purchase.

At this point it is necessary to draw a line between material benefits, which respond to basic needs, and immaterial benefits, which can bear significant social importance to the individual, and add up to his/her overall satisfaction and well-being in such a way that she/he may perceive these benefits as being more relevant to them than the material ones.

"Material well-being is itself understood in terms of certain basic needs that must be satisfied for any individual to be physically fit and economically productive. This conception of material well-being had the advantage of being observable and measurable,"¹³... while immaterial well-being is all about the experience of consumers.

Material well-being is a convenient approach to utility because it allows theorists and practitioners use various scales of measurement to encode and study how utility influences consumers behavior. Material well-being is only tangentially connected to the desirability, conspicuousness of a product. Pareto was one of the few theorists to have made a clear distinction between utility (a property of things which are “conducive to the development and prosperity of an individual, a people, or the human race”) and ophelimity (which he understood in terms of a thing’s capacity to satisfy an individual’s desires).

Nonetheless, it is necessary to note that, although the concept of utilitarianism was recently revived by rationalists and economists, its origins can be traced back in history, starting with the Greek philosophers. Aristotle’s view on this issue is connected to his conception of happiness and the feeling of fulfillment in life or welfare. He clearly makes a distinction between pleasure, as derived from hedonistic activities in everyday life, and happiness, which could be achieved by...
doing something meaningful, reaching a certain level of excellence and carrying out worthwhile activities (i.e. in accordance with human excellences of mind and character)\textsuperscript{14}. This distinction is closer to theoretical philosophy and morality, rather than to a pragmatic definition of utility, but it is one of the finest expression of what humanity is trying to find through various types of activities, including consumption.

In psychology, the first to pinpoint the roots of utilitarianism in human nature, was A. Maslow, who suggested that people will always try to satisfy their basic and simple needs first (pleasure, material well being, security and comfort) and then try to reach higher and higher levels of satisfaction, achieved through more complex and energy-consuming activities, which should ultimately bring happiness. The motivational pyramid, seen as an endogenous map towards happiness, was deliberately used by social psychologists to understand consumption patterns immediately after the first symptoms of „consumption as a means to achieve happiness” were identified in the post-industrial era.

The connection between utilitarianism and consumer behavior is marked normatively by using rankings of products and services based on personal preferences (Broome, 1999)\textsuperscript{15}. Therefore, pragmatically, for a company to be successful, in a type of market described by perfect competition, it should provide services and products that are preferred to any other alternative that consumers might find in the market. Consumer satisfaction is not enough: consumers are free to choose the way they want to satisfy basic needs, to the extent that they can afford paying for the desired means of satisfaction. Also, consumers may switch from one type of product to another, since they can be sensitive to various types of incentives (promotions, brand image, media and social influence). Therefore, the best way to measure the succes of a business plan or marketing strategy, is to rate consumer’s preferences of a specific product over another and connect with the number of sales/item. It is reasonable to assume that strong preference should be converted in sales.

In essence, the market is the specific economic context in which game-like interactions are created: not only between players from the same category – economic agents, companies, corporations – but also between players from different categories – between a company and the targeted consumers, as shown in Figure 11. The latter type of game is laid out and created by marketing specialists,
who try to *act on* various levels of the motivational pyramid, in order to make consumers *give in* to the temptation of satisfying their *wants*.

Interestingly enough, *marketing has the power to create stories, meanings and illusory benefits* and attach them to a specific product or service. The term *illusory* is used in the sense that people may use a specific product *mostly because* they think that the characteristics of that product makes them more happy or may have a special influence in their lives. For example, using a certain type of perfume may not only appeal to a person's preference for a certain scent, but also to her desire to use something that is promoted by her favorite artist, thus giving her the illusion that she is closer to the ideal self-image than she actually is. The perfume chosen does not have a significant effect on the buyer's personality, but the buyer may think that she is more likely to develop desired personality traits if she bought that perfume.

Marketing specialists are aware of people's propensity to receive instant and illusory gratification and the consumption game is carefully crafted in such a way that the payoffs are immediate and illusory. On the other hand, the payoffs that companies are trying to get are mostly concerned with increased profit and market share. The use of incentives by corporate agents to motivate employees, executives, the public and consumers themselves is an issue that should be addressed with responsibility and should be added on the top-priority list of corporations. The use of incentives and the ensuing marketing strategy should be also a subject in the Corporate Responsibility Policy of every major economic agent in the market.

8. **CONCLUSION**

Economic agents appeal to people's desire to *feel* happy, since this is one of the most powerful drives that guides human beings. They design small-scale game matrices through marketing, in a way that, whatever payoff the consumer receives, companies still make profit. In this case, not only the payoffs, but also the actions set available to consumers should be influenced. As shown in this article, the prevalent actions set in our modern society can be understood in terms of *patterns of consumption*.

As long as the *ordinal and cardinal utility* derived by people from available goods and services still fulfills their *goals*, consumers will play a *dominated strategy* in which they spend available resources (money, time, energy) in order to receive the promised *benefits* of marketed products. As *consumption* increases,
people respond more to commercial incentives and illusory benefits advertised in the media, justifying their choices in terms of immediate payoffs – which is exactly what economic agents expect that to do.

*Self-interested behavior,* a key concept in biology, psychology, sociology and economics, is natural to the human beings, as well as their quest for excellence and desire to create, define and develop their identity. This article has shown that *commodification* is part of a large-scale game played by self-interested economic agents and self-interested consumers who try to reach specific types of payoffs. Apart from this, economic and social problems may arise, if this payoff-incentive oriented dynamic is not regulated. The over-use of financial and non-financial incentives to encourage consumption may confuse and alienate young generations, in their quest for a meaningful and value-oriented life. On the other hand, increased competitiveness may soon lead to depletion of resources and over-saturation of markets with goods and services of doubtless or mediocre use and value.

If game theory can help us see the world through the eyes of both types of players, perhaps it would be wise to find that equilibrium strategy where none of them will have any incentive to “push the limits”. As a closing line, a strategic and responsible approach is needed to create a sustainable social, economic and natural environment for future generations.

**REFERENCES:**


1 A game matrix is a complete logical description of a game-like situation, in which the following are specified: (1) the players involved (at least 2, designated by a character, such as P1, P2, P3, Pn); (2) all the possible reactions of the players that lead to a specific outcome, which, in static games, is usually a (3) payoff (the cardinal or ordinal value that the players ascribe to an outcome)
2 “They are not in a game with the readers who buy the newspapers, because each reader ignores his effect on the publisher. Game theory is not useful when decisionmakers ignore the reactions of others or treat them as impersonal market forces.”
3 Drew Fudenberg and Jean Tirole, Game Theory, MIT, 2000
6 D. Kahneman, P. Slovic and A. Tversky, Judgement under Uncertainty, Cambridge University Press, 1982
7 The maximin rule or strategy is a set of actions that minimizes the player's maximum loss in zero-sum games (Von Neuman, 1928). This strategy is best applied in games where one player's gain is another player's loss and, presumably, the losing player knows this situation, therefore the most reasonable strategy that she should choose should ensure minimum losses to one of the player and
at the same time, maximum gains to the other – thus leading to another type of Nash equilibrium in zero-sum games.

8 Jenna Bednar and Scott Page, *Can game theory explain culture? The emergence of cultural behavior within Multiple Games*, Rationality and Society, 2007, 19; p. 69

9 Mike Featherstone, *Consumer Culture and Postmodernism*, Secon Ed. 2007, p. 17


12 Kelly Tiann and Russel W. Belk, *Consumption and the Meaning of Life; Research in Consumer Behavior*, vol. 10, Elsevier, 2006

13 Jose Luis Bermudez, *Decision Theory and Rationality*, Oxford University Press, 2009


15 From a rationalist and positivist point of view, Broome points out that the official meaning of *utility* should be „that which represents preference”