

THE RATIONAL IRRATIONALITY

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Abstract: One of the fundamental theories in Economics, namely the Rational Choice Theory, is seriously questioned these days. A lot of examples of irrational behavior have been provided, and a Nobel Prize was awarded for the achievements in the field. Yet, a careful scrutiny of these instances shows that, in most of the cases, the light of rationality shines through the observed irrational behavior. A hypothesis in the partial support of the Rational Choice Theory is proposed. It takes into account the subject’s understandings, attitude and information in describing a choice as rational or irrational. Therefore, one and the same activity could be considered as perfectly rational, as well as perfectly irrational at the same time.

Keywords: Microeconomic Behavior; Underlying Principles; Micro-Based Behavioral Economics; Macro-Based Behavioral Economics.

*“When your opportunity costs are low, it pays to take risks and speak up especially if the course you pursue is as much fun as the one I have taken.
(Thaler, 2015, p. 345).”*

Introduction

We teach our students, as we once were taught, the fundamentals of the Rational Choice Theory, namely that the economic agent is always rational, or at least most of the times, when she makes her mind on buying or not buying the product, or doing or not doing the activity (I use “activity” in the broadest sense of the word including consumption, etc.). We do this even though we encounter numerous examples of irrational behavior in our everyday life, or do we?

We probably suppose that these instances of irrationality we observe are just a small fraction of the whole range of deeds of the human beings, so small – an exception – that it does not worth mentioning. Yet we, or at least I, often ponder on this exception wondering if it is an exception at all or a significant part of our lives. The more I observe, the more exceptions I see, so my opinion changed slowly and I, like many others, was convinced that irrational behavior is much more common than we thought.

The Hypothesis

So “What is Rational behavior?”. We find various definitions in numerous sources, which can roughly be summarized as following: a rational agent is a person with clear preferences, who always makes prudent and logical choices to achieve the greatest benefit, satisfaction or utility for herself, or Rational behavior is a decision-making process of the economic agent that maximizes **her Utility** (benefit or satisfaction).

The simplest example I often use with my students is when the individual enters a shop and finds two boxes of milk by different producers, but having the same quantity and quality, both of the product and package. The rational individual would prefer the cheaper to the more expensive one, thus increasing her utility getting the same product and paying less money. All the other decisions that deviate from the one stated should be termed as Irrational behavior – reducing the utility, namely buying the more expensive box of milk.

Recently, I encountered a great book named “Misbehaving: The Making of Behavioral Economics” by the recipient of the Nobel Prize, Richard Thaler. It was a really pleasant reading finding that I was on the right track and that I shared the beliefs of many prominent scholars even

before reading their papers. Everything went well until I finished the book, when I realized that **buying the more expensive milk is actually as rational as buying the cheaper one, or not buying milk at all**. This hypothesis surfaced in my mind, when I asked myself “What if...“ What is Rationality? Rationality is increasing Utility. Though, in general terms, utility might be considered a universal consistent human characteristic, in personal terms, achieving higher utility is **purely personal and entirely subjective characteristic**. Therefore, Rationally must be **purely personal and entirely subjective, too**. So:

1. If I like milk, buying the cheaper one will increase my marginal utility, and my behavior can be determined as rational.

2. If I do not like milk, not buying either will not reduce my marginal utility (or will not increase my disutility), but preserve its state, and therefore my behavior can be determined as rational, too.

3. No matter whether I like milk or not, buying the more expensive one will show the others that I can afford it. Thus, I might look richer, which will make me feel superior to them and will increase my marginal utility, so my behavior is rational again.

Furthermore, goods and services that increase my utility may not increase the utility of others, or the effect will probably not be as high as it is on me. The products I prefer may even increase their Disutility. Each person feels the increase in marginal utility as a result from different decisions, which for the rest of the world might be pure misbehaving. For example, if I like milk, buying the cheaper one will increase my marginal utility, but if another person suffers from Lactose intolerance, getting the milk for **free** will not increase her marginal utility at all, and we might even observe a sharp increase of her Disutility, if she consumes the product.

So, since utility, and therefore rationality, is **purely personal and entirely subjective**, the questions arise “What happens to the Irrational behavior?”, “Does it exist at all?”, “Can we observe it?” Well, YES, but we will come to this later.

The hypothesis I formulated continues as follows: we can distinguish between two types of rationality: Inner Rationality and Outer Rationality, they can also be called Subjective Rationality and Objective Rationality, or Personal Rationality and Non-personal (Observer’s or Society’s) Rationality. The Outer rationality might take the form of Rational behavior or Irrational behavior, depending on the observer’s point of view. It reminds a little bit of the Schrodinger’s cat – one and the same activity is both rational and irrational, and what final state it will take depends on the interpreter. So, let me ask you a question: “Is my decision to buy the milk rational, if I suffer from Lactose intolerance?”

Since utility is purely personal and entirely subjective, since utility governs our decisions, and since we try to increase our marginal utility, we may conclude that **all (or at least most of) the decisions and activities are rational**, or in other words: if utility is subjective, then rationality must be subjective too. Our decisions are based not only on the information we have, but also on the current moods, circumstances, hopes, expectations, influences, etc. **up to the moment of decision making**. Therefore, the individual is always rational *at this very moment*, though she might regret it the second later, or is she?

If we consider the choice we made at a certain moment, it is the one we expect to increase our marginal utility, and therefore, it is rational. But the factors influencing our decisions are in constant movement, so we adjust our decisions to the transitory conditions. An activity today might be considered to increase our marginal utility the most, and yet tomorrow, due changes in person’s attitude, influence from friends, government, etc. the same action might be viewed even as bringing disutility.

Instances of (Ir)Rational behavior

Before continuing with the cases, we need to stress on something: **my rationality will coincide with your rationality** only if you know how I feel and what I need, or to get it to the extreme **only if you walked my life in my own shoes**.

We have numerous examples of activities that are hard to be term rational in any sense at first glance, so let’s consider some of them one by one. These are some of the extreme cases of Irrationality that I and my students came up with.

Case 1: *Paying for the product, but without consuming it.* I often observe this behavior when some students pay their tuition fees and do not attend classes. An extreme case of comparison might be paying for the milk and leaving it at cash register. Or the students show up, but they are unprepared for the lecture or the seminar. Many of us would call this agent Irrational since we do not have the whole picture, but is she such? The decision not to attend might be due to the fact that she had to work and raise the money for living, or taking care of a sick relative, or meeting someone special, or just heaving a little rest from my “nonsense”, etc. Whatever the reason, at the very moment of decision making, she thought it is the best choice, though she might regret during the exam session. Yet, at that moment she increased her marginal utility.

The rational behavior from purely economic point of view would be to consume what we paid for.

Case 2: *Consumption of cigarettes and alcohol.* We often term this behavior as Irrational, since the harms to the body, and wallet, always exceed the benefits. But why do people consume these products? Out of necessities? In most of the cases, people start using these products in order to appear “cool”, not to be the “losers” or “outsiders” of the group. The personal opinion that the person is cool increases her marginal utility more that the increase of the marginal disutility from the consumption. Since the sum total of her utility is increased at that moment, **for her**, this is a rational behavior. Later of course the consumption turns into addiction, and she often regrets it, but continue the habit since it still increases the marginal utility at the specific times of “hunger” for the product.

Case 3: *Drug abuse.* One of the reasons is similar to the above mentioned with cigarettes and alcohol, especially when people are at a party or in a club. They are exalted by the music the lights, by the people, but this feeling starts to wear off and some stimulant might be needed. The first choice is often alcohol, and the second – a mild drug or extasy. Again, for the person in this situation the marginal utility is increased and the decision is rational. We know the dark path this leads to. Yet, for taking drugs there might be another reason often examined by scholars researching the poor and desperate, or the rich, too. For the poor it is a means of getting away from the harsh, crashing reality of the daily misery, even for a while. And for the rich and famous, who climbed their mountains and can afford everything, the material things and trivial goals do not bring any satisfaction – the personal marginal utility is not increased any more, or it requires tremendous efforts, so they reach for something else. And here again, for the person again the behavior is rational, though for the rest it is a pure Irrationality.

Case 4: *Trademarks, or paying a small fortune just for the label.* Again, if we leave it this way, we can conclude that this is Irrational behavior. We as economists know, probably better than anyone, that most of the famous trademarks actually produce nothing. They pay some company in Asia to produce the goods under certain design and quality, but we also know that this company produces three times more of the same product, selling it at a significantly lower price without the brand label. We buy the label in order to impose our superiority on others, to set us apart from the rest trying to be as unique as possible, which makes us feel good and increases our marginal utility, so for some of us this is rational. Such a behavior is known as the Veblen Effect, which is much common in Bulgaria. For a person who has no such needs this is irrational behavior. I tested it several times with a famous mobile phone and the users confirmed in friendly talking that they feel better – buying a phone at the price of two second hand cars and going on foot – “vanity” one said.

Case 5: *Donation and charity.* From pure economic perspective giving money away must be completely irrational. But if this irrationality makes us feel better from the good deed helping someone, soothes our conscious that we have more than others, and helps us sleep better at night, this is rational. This is rational even if we give our last money for it as far as this behavior increases our marginal utility. A good example might be Grandpa Dobri – a beggar and one of the greatest donators

to the Bulgarian Church. Why did he do it? Probably for a greater love of God and willingness to save his soul instead of the money.

Case 6: *Stubbornness*. People and especially children are often stubborn, even though they realize that they might be wrong. This is probably because they want to show us their independence, their freedom of choice. Gaining and defending this freedom increases one's marginal utility, and though we determine such a behavior as irrational, for the doer it is rational.

Case 7: *Holiday shopping (New Year, etc.)*. A plausible explanation might be that during holidays we are already in euphoria due to the upcoming event. Our marginal utility is already relatively high, but we strive to increase it probably because this is in our nature. Thus, we need higher stimuli, or of greater quantities, so we buy more expensive and numerous presents, food and other things in quantities we normally do not buy. And yet, since this boosts up our marginal utility, for us this activity is rational at the moment of doing it.

Case 8: *Replacing working products with their newer version*. If a product works properly, replacing it with a new one might seem irrational, but if this brings us some pleasure, even in the form to show off in front of our neighbors or colleagues (Veblen Effect), from our point of view this is rational behavior increasing our marginal utility.

Case 9: *Buying food at university canteen, etc. instead of bringing it from home*. Many students would rather buy low quality high-priced food from some fast-food restaurant instead of bringing food from home, which, stated in this way, can be termed as irrational behavior. Yet, when I discussed it with my students, they admitted that they do it in order for the rest not to think that they cannot afford to buy food themselves. Thus, they show the rest that they are not inferior to them, considering this topic, and they preserve their level of utility, and might even increase their marginal utility comparing with some student, who brings her own food. Actually, both of them act rationally for themselves.

Case 10: *Team work*. Is it rational behavior helping others to succeed instead of standing out in the crowd? One explanation might be the benefits of making friends or sharing the load outweigh the costs of not proving that we are the best, thus increasing our marginal utility.

Case 11: *Taxation policy in Bulgaria*. The Bulgarian government applies Flat Tax to incomes, thus exacerbating the income and wealth inequality, and keeping a steady high level of poverty in the country. Yet, there are few who insist on progressive taxation. Most of the people prefer to be better off today than tomorrow, and thus they behave perfectly rational considering the information they have. Others probably prefer to be better off in the long run and thus prefer progressive taxation, which would increase their marginal utility and therefore they are rational too. So, for the independent observers, let's say some economists in Australia, rational will be the behavior that is closer to their preferences. **This is what I would call Outer / Objective / Non-Personal Rationality** in the hypothesis.

Case 12: *Redistributing the profit instead of investing it*. This example shows the famous contradiction between the manager and the owner of a company. The former has predominantly short-term interests and thus trying to maximize his benefits, and thus marginal utility, in the shortrun behaving rationally. Yet, for the latter such a decision is irrational. The latter, on the other hand, has predominantly long-term interests and thus trying to maximize her benefits, and marginal utility, in the long-run behaving rationally, too. Yet, for the former such a decision is irrational.

Therefore, considering Inner Rationality both the decisions are perfectly rational, and considering Outer Rationality – each one judging the choices of the other – both the decisions are perfectly irrational.

Case 13: *Short and long run choices*. Considering cases 11 and 12, we can distinguish between two choices, each of which at the expense of the other and each of which as rational as the other. If we want to increase our utility in the short-run, we behave rationally, at the expense of the longrun utility. This might be due to the fact that we need the money now, and cannot predict or do not expect higher future monetary necessities. However, if we want to increase our long-run marginal utility, we again behave rationally, but sacrificing the short-run one this time. So, which behavior is rational

depends on the person making the choice. Yet, it also depends on the person observing the choice and the information she has for the doer.

Case 14: *Deflation – individual and society*. How should we feel when there is deflation in the economy? It is perfectly rational for the individual to be happy and to increase her marginal utility from the lower prices, and at the same time to be unhappy as a part of the society and to increase her marginal disutility expecting companies to lay off workers. Whether her marginal utility will increase or decrease depends on the perception of the situation by the person at that very moment, whether the present or the future consequences outweigh.

Case 15: *Hope*. Many people regularly participate in lottery games and gambling **hoping** to win. Even though the chances are close to nothing, they continue spending their money on such activities. Having hope is a great feeling. It lifts up the spirit and thus increases the marginal utility. Therefore, everything that gives us hope might be accepted as rational, although no scientific proofs are found and for the rest of the people it might seem as irrational behavior. This is often the case with cancer treatment, when many people try various products with the hope that some might work for them.

A lot of companies exploit **hope** for their purposes of gaining higher profits. A good example of such companies might be the casinos and all the gambling games, the advertising of which is duly forbidden in many countries.

Case 16: *Time wasting*. Just having a long coffee break, lying in bed, playing some computer game or trying to reach the bottom of some social network might be considered as irrational behavior by an observer. Yet, if the person wants to get away from reality just for a while, to “recharge the batteries”, or to empty her head, for her these time wasters are the rational choice increasing her marginal utility.

Case 17: *Misbehaving in income distribution*, or why the rich are not willing to redistribute their income even though they lose more from higher income inequality. This is a really interesting example concerning rational behavior. There are hundreds of papers, articles and studies stating that a more equal income and wealth distribution will benefit not only the poorer part of the society, but the rich one, too. Then, why is such a distribution heavily opposed by the rich? The plausible explanations could include: the rich might judge costs and benefits in the short-run, ignoring the long-run ones; money does not have marginal utility (Pigou, 1923); people just want to have more than the rest; the rich do not trust the researchers (“he whose belly is full, does not believe the one who is fasting”), etc. In any way, if their marginal utility is increased by hoarding wealth, their decision not to redistribute the money is rational. Yet, on the other hand, if people, like Bill Gates, believe that redistribution will increase their wellbeing in the long-run and spread their money among the rest, their decision is rational, too.

Case 18: *The Ultimatum game*. This game is in the core of many research papers, dedicated to the irrational behavior. It consists of the following: an organization provides a stranger with a sum of money. The stranger decides how to distribute the money between her and you. If you accept the distribution, both you and the stranger keep the money. If you refuse the distribution neither you, nor the stranger gets any money. The offers are as follows:

If you are offered \$10 and nothing for the stranger will you accept it?	Yes	No
If you are offered \$9.50 and for the stranger \$0.50 will you accept it?	Yes	No
If you are offered \$9.00 and for the stranger \$1.00 will you accept it?	Yes	No
...		
If you are offered \$0.50 and for the stranger \$9.50 will you accept it?	Yes	No
If you are offered nothing and for the stranger \$10 will you accept it?	Yes	No

Many people would argue that accepting all the offers down to \$5 each is rational since we are either better off than the other person, and thus feeling superior and increasing our marginal utility, or at least we are equal (Figure 1).

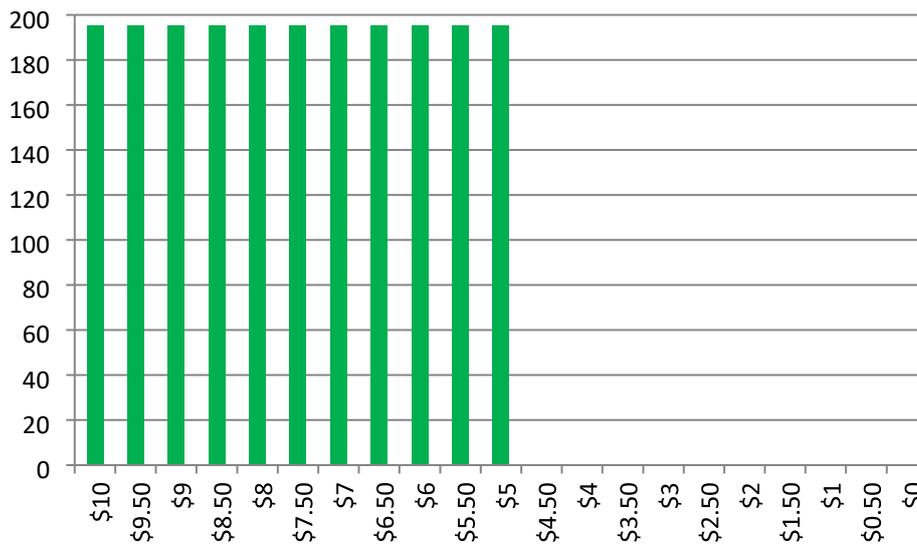


Figure 1. Hypothetical rational behavior “Accepting all offers down to \$5”
Source: Author’s chart

Others might insist, and the simplest economic logic leads us to such a conclusion, that everything but the last choice is a rational decision, since we leave the game with more money than we entered it. Having more money at the end of the game, compared to the beginning, should increase our marginal utility (Figure 2).

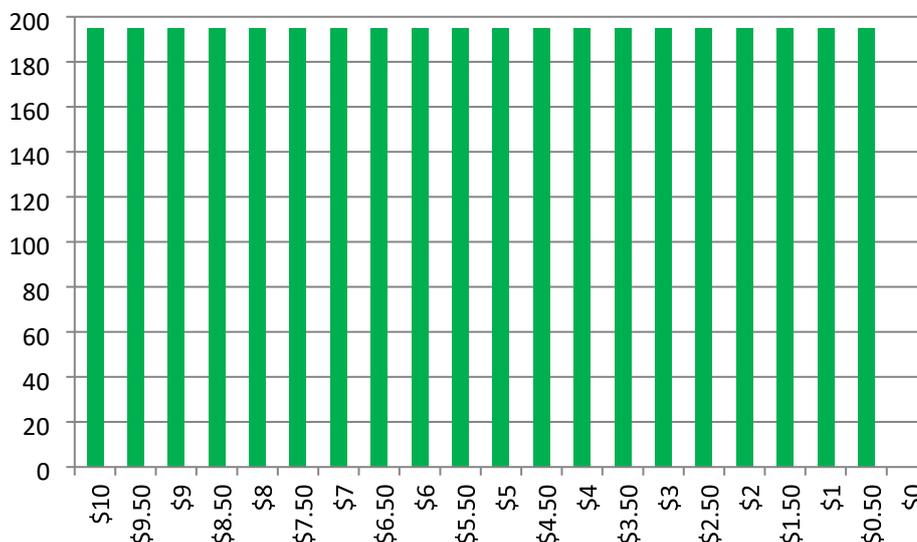


Figure 2. Hypothetical rational behavior “Accepting all offers down to \$0.50”
Source: Author’s chart

I recreated the game among about 200 randomly selected students from the second largest university in Bulgaria, trying to cover as many study subjects as possible. I could not use real money since no funds were available, but the results I believe are still plausible due to the fact that the students got really interested in the research and dedicated much time pondering on their choices (Figure 3).

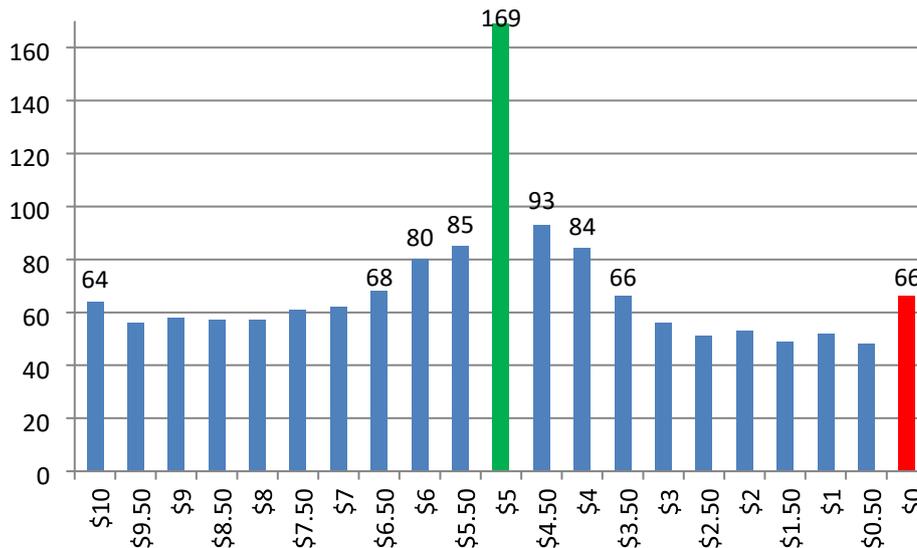


Figure 3. Ultimatum game study
 Source: Author’s chart

The results in Figure 3 raise many questions. We cannot conclude that most of these 195 future-to-be teachers, mathematicians, psychologists, engineers, managers, IT specialists, etc. are irrational human beings, just because we do not see or understand **their** rationality determining **their** choices and increasing **their** marginal utility.

We see that 87% of the people in the research would accept equal distribution. The driving force behind it might be showing the stranger that they are not inferior to them to accept unequal offer, thus increasing their marginal utility.

It is interesting to note that the number of people agreeing to get nothing is as high as the “perfectly” rational individuals accepting the whole amount of money. Yet, another thing should also be pointed out – only 1/3 of the choices is equal or exceeds the “irrational” ones. All this support the hypothesis developed so far, and namely considering this case, that the last choice is as rational as all the others.

We know that utility is a characteristic that cannot be measured, but can be felt personally. Utility governs decision making in everyday situations. Utility is increased or decreased by many factors and money is **just one** of them, and often not the most significant one. Material world can change utility, but so does immaterial world. So how about the last offer? What the rationality behind it might be is a subject matter of further studies. I suppose that part of the motives could be showing the other person that we do not need this money, thus feeling superior, or leaving the room with dignity and our head up, thus expressing that we are much above such trivial things of bargaining with a greedy stranger – we are not so much into money, but to more important things in life. If the offer was not money but something else, let’s say helping a poor person in the stranger’s country or in our country, the results I expect to be much closer to the ones in Figure 1, but yet I might be wrong.

Case 19: There is an interesting study conducted by Jonatan Freedman and Scott Fraser and published in 1966 under the title “Compliance Without Pressure: The Foot-In-The-Door Technique”. To sum up it briefly the researchers study the reaction of the people to a much larger request following a previous smaller and somewhat insignificant request, if the two are compared.

One of the explanations provided by the authors is as follows: “Once he has agreed to a request, his attitude may change. He may become, in his own eyes, the kind of person who does this sort of thing... who takes action on things he believes in, who cooperates with good causes (Freedman and Fraser, 1966, p. 201).” Changing one’s attitude changes her utility increasing stimuli making the person willing to boost marginal utility by a different way.

Considering the above example and taking into account the various cases presented in Robert Cialdini's "Influence. The Psychology of Persuasion" we might come to the conclusion that if we want someone to do something for us we have to influence the person's attitude so that the act appears as a one increasing her marginal utility, either by keeping a promise, repaying a debt, feeling as part of a cause, maintaining a consistent attitude, etc.

Case 20: *Sunk costs*. A good example might be a pair of new, relatively expensive shoes. When the person buys the shoes, she increases her marginal utility. Later on, she finds out that they are pretty uncomfortable, but she continues to wear or keep them. This might be due to the fact that the disutility from wearing or just keeping the shoes is smaller than the utility of the feeling (or wishful thinking) that the money is not spent in vain. Only when the disutility increases or the utility wears off, the person would sell at a lower price, donate, or discard the shoes.

Case 21: *Self-sacrifice*. This is probably the greatest instance of irrational behavior an observer could witness. Yet, if we know the motives behind this act, we might as well define it as a completely rational or even act the same way in a similar situation. A mother sacrificing her life to save her child – is it irrational? If her marginal utility is increased, though for the last few seconds of her life, by the thought that what she loves most will survive and endure, then the decision is rational for her, compared to living a life without the child, and for her husband, who loves her most of anything in the world – a completely irrational behavior (Outer Rationality). How about donating blood or a kidney?

These are not the only reasons for the described behavior, but the most plausible in my opinion. I do not say that all the above-mentioned cases are a good behavior, or I view them as rational. Yet, my attitude towards them does not cancel out the rationality for the participants in the activities.

Considering these striking examples of (Ir)Rationality it is not hard to guess the driving forces behind all other forms of irrational for the observer behavior.

While working on this paper I witnessed an interesting behavior of decision changing. A man came out of a shop and walked by a beggar in a wheelchair. The man passed the person in need a few meters, then walked back, took out a box of salty crackers and gave it to the beggar. In the light of all said so far, which behavior is rational for the man: walking by and keeping the box, thus increasing his marginal utility by enjoying it later with friends, or feeding the poor, thus increasing his marginal utility by the good feeling of helping someone in need? The most consistent human characteristic is our inconsistency.

Instances of Irrational behavior

Now, what about the true Irrational behavior, since we can find motives and reasons for almost all the human decisions?

Irrational is an activity that reduces the marginal utility. A good example of irrational behavior is when we let our dear ones to override our better judgment. This is when we have a really strong feeling that we must or must not do something and yet we act in the opposite direction. The feeling is based on our information, experience, mood, circumstances, etc. and on their bases, we try to increase our marginal utility. Yet, we do not follow our best judgement. Although the final result of the act might indeed increase our utility and we are convinced of the positive effects, this behavior is actually Irrational at the moment of doing the act.

An interesting situation may arise when the same person from the last example faces a second dilemma. Considering the positive outcome of the first advice, but yet thinking that the second advice is not in accord with her feelings, her behavior should be considered rational regardless of her decision whether to follow the advice or not. If she followed her own intuition, she is rational, because she makes her judgement on her information, experience, etc.; if she followed the advice, the behavior is again rational, since she is convinced that the adviser has more knowledge due to the outcome in the previous situation.

A good example of irrationality might be the upcoming Brexit. In the light of the Rational Choice Theory, either the UK or the EU, or both should gain from Brexit. Yet, the economic theory, practice and statements of prominent scholars suggest that both would lose. Nevertheless, both sides are heading the same direction, neither willing to make concessions to the other. One might think that there must be a third party, no matter how small (or big), yet powerful enough to push the two sides into that direction for the gains it will realize, and for that party the UK’s decision to leave the EU is perfectly rational.

Another irrational behavior can be a decision that deliberately reduces the marginal utility of the agent. This is often observed in states of despair and helplessness, when the person undertakes actions, even though she realizes that they are harmful and will reduce her marginal utility.

There might be other instances of irrational behavior in the light of the proposed hypothesis that are about to be ascertained.

Rationality and economics

So far so good, but the question arises: “Should rational and irrational behavior be considered as such only in terms of economics, and profit?” The answer is “YES”, if utility is influenced **only** by economic decisions. Otherwise, the answer is should be “NO”.

Utility is cumulative notion. It is influenced and determined by economic and non-economic factors. If I am hungry, I can increase my marginal utility from the economic transaction of buying some food, but if I am a goodhearted person, I can increase my utility from giving the money to a poor, sick, hungry child, and thus increasing my marginal utility probably times beyond the one from the mere consumption of food. And how about sharing the food with the child?

If we talk about economic rationality, we are talking about something like “accountant’s rationality”, namely having a sum of money, or resources, and trying to get more products for it. This is not the whole rationality, but just a tiny bit of it, so small that could easily be neglected in many situations.

Therefore, we do not have the right to bound utility, and rational behavior, only to the limits of economics. If we take only the economic factors into account, we would create a model, which would work and be plausible only under its predetermined conditions, namely profit and for the person to be better-off. Such a model does not reflect the reality of decision making and the rationality of behavior.

Conclusion

Behavioral economics, and Economics as a whole, faces a really difficult task predicting economic agents’ decisions and behavior, as well as the resulting economic state. A thought often attributed to Einstein, or some other famous scholar, roughly states that we can predict the future if know the direction and the speed of all the particles, but, I think, we need to add **and the decisions governed by the utility of all the living creatures**. Since utility is a **purely personal and entirely subjective characteristic**, the behavior that increases marginal utility, or the so-called Rational behavior, must also be **purely personal and entirely subjective**. The economic reasons are just part of the rational behavior and, as the presented cases and the everyday observations show us, quite often not the dominant ones.

The fact that the observer does not see or cannot understand the motives behind the subject’s choices, does not make them lacking a rational explanation. Therefore, we can conclude that, in most of the cases, **Irrationality is in the eye of the beholder**.

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