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16 October 2022

Online at <https://mpa.ub.uni-muenchen.de/114985/>  
MPRA Paper No. 114985, posted 16 Oct 2022 05:59 UTC

# **Rationalizing Decision Choices: What Influences our Social Decision Making?<sup>1</sup>**

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## **Abstract**

The goal of this paper is to examine and analyze how certain factors influence our social decision making process. I undertake an investigative study into the dynamics of rational choice theory which is behind making decisions rationally productive. The research touches on the foundational concepts of Social Choice Rationality – the theory that is grounded on searching and making choices socially rational for the decision maker. The welfare functional component of social choice theory underlying rational decision making have been examined, and new knowledge have been derived from the analysis that could be helpful for making collective decisions which concern public policy and social welfare.

**Keywords:** *Decision choice, rational choice theory, rational intelligence, social choice theory, social choice rationality.*

**JEL Classification Codes:** I30, I38

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<sup>1</sup> This paper is the continuation of my previous work on the theoretical conception of the Idea of Social Choice Rationality.

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## 1. Introduction

This paper underpins the foundational concepts of the theory of *Social Choice Rationality* in relation to how we make rational social decisions, and what factors determine or influence our social decision making processes. It also stresses on the intricacies of how as rational individuals we should make good choices with respect to our material needs (i.e., wealth, food, etc.) and social needs (social status, respect, and distinction)<sup>3</sup>. The idea of SOCIAL CHOICE RATIONALITY (SCT) stems from the preceding researches grounded (see Chatterjee (2022a), and Chatterjee (2022b)) on the theoretical foundations of the Social Choice Theory<sup>4</sup>. The idea of SCT involves the process of choosing *rationally* that require rational use of reasoning, information, and logic, and the application of common sense as well. It also entails searching for the best courses of action that will lead to the best possible outcome. However, there exist certain problems that are inherent to decision-making; one of them being the problem of finding the *most* “optimal” option from a given number of alternatives when such are strictly decreasing order of functions. In fact, we are all hooked up to the same string of searching for the best path that might lead to best possible outcomes.

In construction of social welfare function, the role of social objectives needs to be emphasized. It is this that becomes relevant as it involves identifying all the possible actions (options) and ranking them according to their utilities by considering ordinal preferences (Vickrey, 1960). Now in order to choose, we must have some options at hand. The act of choosing isn't difficult for an agent for we all make certain decisions all the time, by choosing things what we think or expect to have a probability to maximize our utility, which contributes to our wellbeing and happiness. Whether we choose for ourselves or make collective decisions, most agents act in a way to make choices that aims for best possible outcomes<sup>5</sup>.

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<sup>3</sup> This Classification of Needs into their respective categories has been borrowed from the works of Karni and Schmeidler (1990).

<sup>4</sup> See Kenneth Arrow (1951), Sen (1977) for a detailed understanding of the social choice theory.

<sup>5</sup> It is assumed that human beings are utility maximizers, and so they do scoop to maximize utility function of a choice.

In terms of utilitarian welfare economics, human beings make collective decisions that are assumed to be rational—and which depend much on the antecedents conditional on the functional components (options) of a decision-making unit. Selection of welfare policies based on computation of outcomes of policies thus chosen, allow maximization of the collective welfare of a community. Seen from individual perspectives, it depends on how much an agent gains from the outcomes of a policy. For instance, let's take a policy of pricing for granted: what do customers gain from price wars? Customers gain a lower price for products, but this gain is an outcome of strategic policies in product pricing.

We often encounter some specific government policies that are devised and implemented from time to time to support or promote certain sectors in their activities that help them to flourish, and survive. Therefore, it must be implicitly understood that specific policies have a utility (or welfare function) component attached to their outcomes. It depends on choosing an option that provides the highest level of utility. Hence, to choose more efficiently, two things need to be taken into account:

- Compute individual utilities of each of the choices, and
- Take into account individual preferences.

This paper will afford the reader in analyzing human rational behavior to a great depth, to derive understanding of how humans make rational decisions, and get a good grounding in the principles of rational economic thought. It will also enable us to examine the scientific basis of human rational behavior in the act of choosing the best option that aims to maximize utility. In our understanding of the economics of choice maximization, it will go a long way in explaining the dynamics of rationality<sup>6</sup> that aid us in choosing what's rational, and what's most beneficial in terms of maximizing an individual's self-interest (Simon, 1978).

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<sup>6</sup> With respect to Herbert Simon's (1978) dynamics of bounded rationality, the human cognitive limits of rational thinking are limited by two constraining factors; "time" and "information". Time is precious and a limiting factor, but there must be more efficient ways to learn more or get more information in much less time, which are what strategic policy options as rational choices could offer to its rational agents.

It is generally assumed that human beings are rational agents,<sup>7</sup> and so they will make rational decisions in terms of maximizing their self-interests. It is—according to Herbert Simon (see Simon, 1978), our rational behavior that in an economic sense of maximization always strives to maximize our utility. In such sense, Simon’s thoughts on rationality of the utility maximizer do not correspond to those who aim to maximize rationality<sup>8</sup>, but to those who aim to maximize their utilities from *choosing* rationally the most optimal option to make decisions. Rationality may, therefore, be thought of as a product and process of human thought (1978). Most agents tend to choose the most useful path or profitable course of actions—often basing their choices on costs and benefits, i.e., selecting the option with least cost and most benefit. Our decision choices—in most instances, therefore appear to be “rational” for we choose based on personal preferences, and to some extent, our choices depend on individual needs and tastes. But not because of these that our choices become rational, but for the reason that we as human beings are able to think objectively using logic and reason to make informed decisions. Reasons increase our powers of understanding.

## **2. Rational Social Decisions:**

Welfare decisions lead to social benefits. In this paper, I discuss the rational foundations of social choice process and the factors that influence how we make social decisions. It shall be reckoned that a sense of “collective responsibility” is attached to every social welfare decision, and it is this concept around which the entire idea of rational choice theory revolves. In our attempt to understand how certain factors influence our choices that we make, we must consider as well the influence of established norms of human behavior that shape our decisions. The reason for this being that, we have human behaviors and their choices that

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<sup>7</sup> By rational agents, I mean people who are able to identify, set, and pursue their own goals by making sensible decisions that leads them to achieve those goals. Being rational, however, doesn’t actually indicate that all decisions made by a rational being will be through and through rational. See more on this, for instance, Sen’s work on Social Choice Theory, (1977).

<sup>8</sup> Neither is it our intention to do so, but as far as it seems cogent it appears much like a paradox of rationality, i.e., should one choose to be more *rational* or strive to *choose* rationally? Or, should one try to rationalize their decisions after they have been made? This would appear to be most ridiculous in strictest sense of justifying the title of this research.

are heavily influenced by Pareto Optimality criteria. Welfare functions – however, need not be festooned by such criteria of optimality and can be readily improved upon by searching, designing or inventing more effective policies that bear prospects of superior outcomes.

Therefore, what behavioral norms could we tag together that influence our social decision making? There are various factors that influence our social decision making, as there are many factors that modulate individual choices and preferences, which could be profitable to the society. Society must be able to derive benefits from collective social decisions made in the greater interests of its inhabitants. This has been brilliantly expounded by Gibbard (1968) where he showed by taking recourse to Socratic dialogs that how justice is determined by Social choice function which he thinks satisfies the conditions of collective rationality. Ranking of preferences irrespective of choice functions could indicate that changes in our behavioral norms (choices) that relate to social decision functions can indeed profit others in the society. Of course, our decisions are influenced by choices (Salvador, 1977), as well as by our emotional components and feelings. Barbera Salvador (1977) examined whether there exist satisfactory social *decision* functions which are free from strategic manipulation. If it is to be the case that individuals could profit from changes in a society's choices, it could reciprocally mean that the society could also profit from changes in the individuals choices and preferences. In similar tune, and prior to Salvador's (1976) work, it was Gardenfors (1976) who examined how social *choice* functions could be manipulated to accrue profit for the manipulator. Well, rational agents can profit from misrepresenting their preferences. However, would it be so such that a society's choice won't change in response to changes in your true preferences being revealed? One can expect to reap real benefits from hidden penchants. For individuals, it could be so that by hiding their true preferences and misrepresenting them, individuals can reap their own benefits. Thus, manipulation of social choices (society's choice) in favor of self could maximize one's own utility, since one's true intentions remain hidden when their preferences are not revealed. Therefore, whether or not by influence or by manipulation, one may derive profits from

misrepresenting his or her preferences. This issue has been taken up to model *Corollary 1* within the method section.

Now, it shall be borne in mind that influencing is not always analogous to manipulation—but certainly some amount of influence is necessary to manipulate others’ viewpoints, choices and decisions. Both Gardenfors’s (1976) and Salvador’s (1977) works have been quite influential in examining the conditions of manipulation—that are in line with Pattanaik’s (1973) concept of manipulability. These works have also helped me to lay the groundwork for this research as well. Such studies have no doubt laid the initial foundations of the principles and canons which help us understand how certain factors could influence our social decision making that involve community and public welfare. A decision that needs to be made in the interest of public welfare involves functional components that rest on the concept of *Social Rationality*. This idea of social rationality was first proposed by Amartya Sen<sup>9</sup>, and now it is further extended to accommodate the evolving concept of *Social Choice Rationality* which is taking shape slowly but steadily answering to the needs of the times. We know that our decision to help others is a personal choice—until and unless that concerns collective or public welfare where it becomes our duty and obligation to help others. I have discussed this in my previous paper, and hence herein, I will provide the readers with a summarization of it in terms of understanding the factors that possibly influences us to choose to make decisions in the interests of others. The reasons that most likely explain what motivates us in choosing to help others (Blader, and Tyler, 2002; Deonna, 2020), altruistically, are enumerated as follows:

- i. There is a goodness in us that moves us to help others
- ii. The decision to help others is a personal choice
- iii. It depends on our innate sense of empathy, kindness, and personal belief
- iv. Some individuals find *value* in helping others
- v. Maybe we are hardwired to help others

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<sup>9</sup> See, for instance, Prof. Sen’s paper discussing the concept of “Social Rationality” in his landmark paper: Sen, A. (1993). Internal consistency of choice. *Econometrica: Journal of the Econometric Society*, 495-521.

- vi. It makes us feel good and feel more connected to others
- vii. Our willingness to help others often stems from compassionate grounds
- viii. Our sense of responsibility or duty towards others based on moral grounds
- ix. The way we were raised and brought up may also contribute as a factor of benevolence
- x. Care for others' sufferings that moves us to do good to others
- xi. Finally, some may have vested interests in extending help to the needy.

Now, beyond these common factors, there might be various other factors that most probably influence our social decision making. For example, a decision choice in the sole interests of others is an active component of social decision making where the decision that we make are aimed toward maximizing the benefit of others. Parenthetically, it is for us to decide whether we choose to help others, or maximize our own utility. Our intentional stance that we take in choosing a course of action determines whether our actions are rationally self-centric or selfless (Chatterjee, 2022b). Various factors could affect individual choices and personal preferences in deciding what needs to be done or what could be done in making more rational social decisions. Much of social decision making is also tied to welfare economics that involve search for social welfare functions that aim for collective benefits.

### **3. How do People choose and what determines their Choices?**

People choose based on what they think is best for them, their friends or for their families, or based on their needs and necessities aimed to satisfy their wants and desires. Some individuals choose based on what they believe is the right thing to do or what they think will make them happy. Their choices may be influenced by what others are choosing as well. People's choices are heavily influenced by their family, friends and that may vary under different conditions. One may prefer to choose coffee over cold drinks when its winter, or cold drinks over coffee when its



summer. This kind of choice is state dependent; i.e., seasonal, for it takes into account weather or climate as a determinant of choice.

Again, most people generally express their preferences in a way that is consistent with their own likings and tastes, but not necessarily with the preferences of others. It is assumed that nobody reveals their true preferences. But it is by voting methods that individual preferences are integrated to form collective judgments.<sup>10</sup> Through voting, you can express your choice, and you can express your own preference only, not of others. This is for the reason that you do not have complete information about others' preferences. But it is rather advisable to have enough information concerning the "candidate" in favor of whom you choose to cast your vote.

Businesses are highly data-driven today on account of their drive to understand consumer preferences; i.e., what people want to buy, what products they like or admire, etc. They collect as much information as possible on 'consumer preferences', which account for much of the consumer data that gets through analytics teams so as to obtain some information concerning consumer sentiments. Data and information on consumption pattern also reveal what consumer choose or prefer to buy.

#### **4. How to Maximize Rationality?**

I discuss rational choice and rationalizing decision choices that involve sound social decision making. We are aware of the economic concept of utility maximization. Indeed, rational agents make decisions with the aim of maximizing utilities (Sen, 1997). In this section, I analyze how to maximize rationality. Some steps could help us to maximize rationality when such is lacking in our decisions that we make:

- i. Take time to think and decide,
- ii. Think *logically* and search for reasons. This will prevent you from committing errors in thinking,

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<sup>10</sup> For instance, one may ask, what information is revealed through voting? Voting reveals the preferences of people on candidates and predilections on policies and issues of the government. See, for instance, writings of Condorcet (Condorcet, M. J. A. N. C. (1976). Condorcet Selected Writings.) on Voting, and on social choice functions by Fishburn, P. C. (1977). Condorcet social choice functions. *SIAM Journal on applied Mathematics*, 33(3), 469-489.

- iii. Gather as much information possibly as you may get your hands onto, and consider different perspectives,
- iv. Think *objectively* and don't allow emotions cloud judgments,
- v. Avoid confirmation bias: don't readily decide based on *preconceptions*. Remain open to change and accept new ideas from others. Examine with reasons what others believe or have to say,
- vi. To make more informed decisions, examine facts, and think with reasons,
- vii. Practice 'mindfulness', and be aware of your own thoughts and feelings.

It is generally assumed that individuals always make choices that serve their own interests and purposes. That is to say, people are rational beings who in search of maximizing utility tend to make choices that lead to most desirable outcomes. They have a propensity to consider a course of action whose benefits outweigh costs. Does it mean that choosing rationally always make your choice rational? Making choices that conform to social norms may not make sense in economic terms, but can make sense on moral grounds. For instance, the mid-day meal program for school students (Dreze and Goyal, 2003; Khera, 2013) and the justification of old-age or elderly pension schemes that are questionable economic decisions (Shapiro, 1997; Unnikrishnan, and Imai, 2020) having social benefits do not accrue anything to government coffers. These decisions may actually cost money but societies believe they are worth the investment. Similarly, taking a vacation costs money but gives one the pleasure of leisure, without making any financial gain. Companies too provide vacation trips to their employees as incentives in belief that it would help boost their performances and increase work efficiency. Such vacation trips (breaks) cost money to the companies<sup>11</sup>. Social decisions that extend "economic support" to the needy in times of crises are highly rational even though such decisions cost money. Apparently, collective social decisions like

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<sup>11</sup> However, this is a corporate choice that works as an incentive strategy aimed to boost employee morale and performance.

these do not mean that such decisions act in a way that may be reasonably called *irrational*.

However, some people, although being rational—commit crime—thinking *irrationally* that they might get away with it. The increasing incidence of violent crimes committed by individuals point to the fact that people are not always rational, for they allow various emotional components into their motives, e.g., resentment, malice, retribution, envy, voracity and lust, among other factors that cloud their rational thinking. By taking recourse to crime, individuals think that they are making choices which they believe will maximize happiness and satisfaction, but in actuality, such human behavior do not fit well within the context of rationality.

Conversely, it is also true that the rational choice theory has been criticized for not taking into account the emotional components that often drive humans to make certain choices that have utility or are beneficial. Rational choice, too, ignores the role of social norms in decision-making, making it vulnerable to criticism from various corners who question the reasonableness and stability of internal consistency conditions, for RCT—in its most fundamental form—is built upon internal consistency conditions (see Sen, 1993; Pattanaik, 1973). Now, a theory is coherent if it doesn't lead to contradictions.

In terms of a microeconomic social science theory, the theory of rational choice attempts to explain human behavior that aims to maximize utility, welfare, and wellbeing by considering several assumptions that are held to be hypothetical:

**Hypothesis:** *If an agent is rational, then her choice must satisfy consistency conditions.*

We might, hence, assume such conditional statements like 'not all utility maximizing actions are rational', or, 'not all criminals are irrational beings' with caution, for crimes are often committed by *rational* human beings who use a high degree of *reasoning* and *intelligence* in giving shape to their offences. Again, on account of this, we may wish to question the conditions of rational choice, i.e., what are the conditions for rational choice? This is important for us to revisit the basic tenets based on which

the foundation of rational choice theory is grounded. It is also important to consider whether thinking rationally and understanding with reasons makes an entity a rational being. If it be so, wouldn't one consider an intelligent robot as a rational artificial being? Therefore, the *conditions* for rationality and rational choice could be enumerated as follows:

- That the individual is completely rational
- Individuals have all the information (perfect information) needed to make a decision
- Rational individuals have complete and accurate knowledge of choices available to them,
- Individuals seek to maximize their utility,
- They are self-interested
- Individuals are able to accurately assess the cost benefits of each possible action
- Be able to predict the consequences of each action
- Have a clear understanding of their own preferences
- Be able to accurately assess the probabilities of each outcome

A choice could be counted as rational if, (all other things remaining constant), by choosing it, it yields productive and utilitarian outcomes. In other way, it may imply that if a choice is useful it could mean that it is rational as well – since it is assumed that choices that have more utility are indeed *rational* choices. It needs to be ascertained that nowhere it denotes that all human actions ought to be “productive” in order to be *rational*, or vice versa.

Now, from these deductions, we may wish to construct a formal definition of Rational Intelligence as, “*a form of intelligence that gives us the ability to think critically and use reason and logic to solve problems*”.

When considering whether your decision choice is rational, you must take into account how to define your choice with reference to something that denotes quality. For example, suppose you go to a restaurant and have a look at its menu; i.e., what the restaurant has got to offer, and at what price. Now, you have got no other way but to define your choice with reference to a “menu”. Menu denotes different options that signify

*quantity*. It gives you the options to choose what you prefer. You can derive more information about the options from this 'menu'. Now, then, what you've got to know about *quality*? Price – though it is not always the best indicator of quality. Beyond price, *trust* will be a sign of 'quality', for whether in a restaurant or a shop, companies can't make money by offering low quality goods and services at a high price. And this implies utter *irrationality* if that occurs to be so as a corollary.

However, rational choice theory has a number of drawbacks that could be explicated based upon the limitations that raise criticism on the ground that not all the conditions remain stable or are consistent in accordance to its fundamental aspects. The drawbacks of rational choice theory (RCT) are as follows:

- i. The assumption that all people are rational and self-interested is not true. People can be irrational or may act in ways that are not in their best interests
- ii. Emotions and feelings of people can influence their decisions – which it doesn't take into account
- iii. Often used to justify unethical or immoral actions taken in the best interests of individuals
- iv. It is considered as a deterministic theory, which doesn't allow the plausibility of change
- v. Rational choice theory is limited in its ability in explaining human behaviors that are often beyond what reasons could clarify. This is due to the fact that the nature of human behavior is complex.
- vi. RCT is grounded on rules of rationality, but human beings often act differently even when acting according to rules. This violates Chernoff's condition.

Now, according to Sen's tautology concerning framing of the theory of rational choice that takes into account internal consistency of choices, this would be a difficult task, but not an implausible one. In one way or other, it has been proved that agents violate Chernoff's condition, but that doesn't lead to "irrational" behavior. It is possible to consider moving beyond choice by examining the actual motives guiding agent's choices

(Bhattacharya and Pattanaik, 2011), which would help ‘rationalize’ such decisions that apparently seems *irrational* to most people. If the logic behind the decisions is analyzed, it would reveal the real motives that led agents make choices which would otherwise seem preposterous. Besides, if we assume emotional components affecting decisions, such as intuition and instinct—some decision choices that apparently seem *irrational* would not, however, in reality, be so.

## 5. What Influences our Social Decision Making?

Is rational social choice at all possible? The rational basis for making aggregate social decisions is to solve certain social problems that have economic underpinnings; i.e., poverty and hunger, and allocation of resources for universal education and provision of adequate healthcare (Sen, 1995). Social decisions involve collective choices in decision making which affect the welfare of the many. Decisions must be rational that aim for collective welfare and wellbeing which maximizes aggregate utility. Indeed, social choice theory can address aggregate socioeconomic problems like aggregate poverty (Sen, 1995) that are in the greater interests of the general masses. Now, no single social welfare function can satisfy a set consisting of as the *axioms* of social choice theory that refers to ‘Arrow’s impossibility theorem’.

It is assumed that if an agent is rational, then her choices must satisfy rational conditions, and her decisions ought to be rational as well. The conditions of rational choice have been enumerated in section 3 above. Now, does it *always* make your choice “rational” if you choose discreetly? For it is to be reckoned that rational choice theory is also grounded on internal consistent conditions, but which, however, have been shown to violate Chernoff’s condition under certain circumstances. It has been the topic of research and debate of Sen’s (1993) paper<sup>12</sup>, and Bhattacharya and Pattanaik’s research as well. Battacharya and Pattanaik (2011) have provided several interesting examples that depict certain violations of internal consistency conditions which seem to contradict with choice behavior which is noncompliant with Chernoff’s condition. It appears that

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<sup>12</sup> Sen, in his pioneering work entitled “Sen, A. (1993). Internal consistency of choice. *Econometrica: Journal of the Econometric Society*, 495-521,” has elucidated the problem of consistency of choice using several examples.

sometimes our choice behavior may violate social norms—which, however, RCT generally ignores. Now, we have already mentioned that an agent is rational when her choices must satisfy a rational condition—which is not always the case—as could be deduced from the works of Bhattacharya and Pattanaik (2011). We, therefore, can hypothesize concerning agent's choice behavior on the assumption that they can make rational choices by choosing options that's rational (Chatterjee, 2022a). But now another problem arises: how do we as rational agents know whether a choice is rational? What makes a choice rational?

Rationality of a choice can be determined based on reasoning and logical analysis of the available information used to choose an option. A choice is rational when it meets the criteria of a good option. The criteria of a good option could be stated as a reasonable and reliable choice that meets the needs of the user. The option must be feasible, effective, affordable, and timely. About this issue, I wish to refer to my previous paper (see Chatterjee, 2022a) titled, "Choice that's Rational". In the next section, I shall be explaining this with the help of a simple model supported by meta-analysis of the subject under consideration.

## 6. The Model

*Rationalizing Decision Choices:*

Why some people might choose to rationalize their decision choices? There are several reasons that might explain why some people may do so. These are as follows:

- Feel better about a suboptimal decision that they might have taken,
- To justify their choices to others,
- To create a logically coherent and understandable anecdote that may have led them to decide on something based on the choices that they have had,
- In trying to make sense or convince others about their decision that may not have made much sense at the time it was made
- In an attempt to manipulate other's choices.

Based on these above explanations, I develop a model of choice behavior that tends to reduce decision choices to their rudimentary logic and

rationality – which is my point of view of rationalizing decision choices. It is not what *you* think will always seem rational – but it is for others to decide whether “your choices” that lead to certain actions (outcomes) are rational or not. I give this notion some credit of analyzing whether such attempt to rationalize decision choices are rational or desirable, if at all, from the normative point of view. Rather, my attempt is directed to study the factors that influence our choices while deciding on some action and contemplating on the outcomes. With regard to outcomes, however, two contingently conditional viewpoints could be considered as follows:

- Outcome of social welfare functions in decision situations
- Outcome of decisions related to social welfare functions

Further, the attempt is on line on empowering agents how to make rational choices whose outcomes are productive, not to try to make their choices *look* rational after they have been chosen. In other words, agents’ making rational choices must depend upon choosing what’s rational<sup>13</sup>. It shall be recalled that rational choice theory is a decision making model that seeks most positive outcomes from choices based on decision rules made by people who weigh costs and benefits while making decisions. Agents should rationally consider several things while making decisions. These are in the tune of:

- i. The likelihood of each outcome, the risks associated with them, and the reward – wherever applicable,
- ii. The amount of resources and information available to them,
- iii. The timeframe and the likelihood of each outcome, and
- iv. The preference of others involved in the decision

Agents can make a decision that is best for them by considering the aforementioned factors enumerated as simple, rational guidelines to objective decision-making based upon the fundamental tenets of rational choice theory. They may choose suboptimal options resulting in a bad decision, or make choice that violates social norms. The point is in making people more observant of what’s best for them to choose so that they

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<sup>13</sup> This has been the topic of my previous research with the title, “Choice that’s Rational”, forthcoming in JoRIT (Vol. 1, Issue 1, 2022),



would be able to choose rationally while making informed decisions using intellect, logic and reason. Most rational agents are expected to choose rationally using reasons and the available information related to each of the options. Nevertheless, agents can violate internal consistency conditions for choice while making decisions. To judge internal consistency of choice<sup>14</sup>, consequently, it is necessary that one should analyze an agent's motives and objectives as well (Sen, 1993; Pattanaik and Suzumura, 1994; Bhattacharya and Pattanaik, 2011). Knowing the reasons behind agent's choices would furnish us with more information concerning the aspects of decision-making.

Now, let us turn to the model designed below that describes how we make social decisions and what factors have influences on our decision-making process: it will provide insights into the dynamics of social welfare policy design based on the utility model. A model of social decision making is a system designed as a welfare functional component which is an operator that produces an output as a choice when data and information are fed to the system. A search for social welfare function, therefore, is a process for finding out the most efficient policy strategies that could provide the best benefit which a policy has to offer, and which is essentially nothing but a method as described by William Vickrey (see Vickrey, 1960). Taking inspiration from such proceeds, I proceed as follows:

*Assumption: Let's assume that we drop the conditions of internal consistency of choice.*

And this could mean that though people always have choices, they always do not act in their self-interest.

Now, let's consider that there are two agents,  $I_1$  and  $J_1$  with each of them having a single set of options Set A and Set B to choose from. The two agents can choose according to their own preferences, which are  $P_1$  and  $P_2$  respectively. Agent  $I_1$  may either wish to choose from Set A or B, and so can agent  $J_1$  do as well. The two sets of options are defined cardinally as:

Set |A| :  $\{q_1, q_2, q_3 \dots q_n\}$

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<sup>14</sup> This issue has been discussed by Sen, (1993), and others in great details.

Set  $|B|$ :  $\{r_1, r_2, r_3 \dots r_n\}$

Now, the elements of the sets are defined according to the axioms of choice as set forward by Ernst Zermelo. Again, from two sets of options, another finite Choice Set  $\{S\}$  in the form of  $\{S_1\}$  or  $\{S_2\}$  could be constructed by both the agents—as and according to their individual preferences. Agents are free to choose from any or both of the sets as per the axiom of choice. Herein, the consistency of a choice function is defined by agents' preferences, only if the agents always choose the same elements from the given sets.

**Lemma:** *We are to explain what if choice consistency conditions are not met.*

Now, if choice consistency conditions are not met, decision making with regard to social welfare may be constrained. This leads to a corollary.

**Corollary:** *In social decision functions, you can choose a cause that's either better for you or for the society. Or, you can cause a society's choice to be a better one for you by misrepresenting your hidden preferences (from Gardenfors, 1976). You can change your preferences with respect to choice behaviors if you contemplate the outcomes to be in your favor.*

As it appears in this context, the model helps to explain how agents should be continuously motivated to opt for better (rational) choices by making their choices more rational in relation to making decisions on the social welfare frontier. On the other hand, stability in choice function is also a desired activity that could be expected from rational agents when they aim to choose options which are more welfare-centric, and beneficial for the people in society in the long run. An epigrammatic, humorous allegory could be cited herein concerning rational decision making: "A potentate and a sovereign may have a very few choices to make rational decisions, but they have as many options to make their decisions look rational."

## **7. Results and Discussion**

This paper analyzes what influences our social decision functions, and whether we should be rationalizing our decision choices when they have been made. In requirement of social choice rationality—a concept originating from an earlier concept of "social rationality" of Sen (1993), we

propose a novel concept to support its foundations. It might appear somewhat contradictory in its strictest sense as our hypothesis diverts away from the established notion of the condition of internal consistency of choice. We examine the issue of choice consistency conditions that are not always “consistent” with individual preferences. We also question the setting of internal consistency conditions in requirement of social rationality. The basic tenets of choice consistency conditions stand on the agent’s choice behavior; i.e., choosing the same option every time. The choices that we make are grounded on a set of specific criteria. When agents are influenced by externalities, their choices become inconsistent. These may also happen under the influencing factors that are internal to the agent; i.e., agents making a choice under stress, or their choice being influenced by emotions and feelings.

Rationality in choice function—or rational choice demands that for a choice that needs to be rational, one of the conditions is that—there must be internal consistency conditions to meet the requirements of *social rationality*. What makes such a condition plausibly satisfactory? And, what makes agents choose a same option every time? What if they change their preferences and have been consistent so far?

Our model attempts to answer these questions. It states that most agents are adapted to choose a same option every time—time and again. Why? Because it is for the reason that they are contented with their choice, they are aware of what they expect, and they believe that it is the best option for them. Also, it might be the case that the agents are either fearful of making a mistake, or are reluctant to take risks by being afraid of trying something new. All of these factors contribute to conditions of consistency of choice functions.

Now, it has great implications for businesses, as internal consistency condition is one of the central concepts of the demand theory (see Sen, 1993). Why? Because a product will be in constant demand over a finite period of time given by  $X(d)_t / (|a|)$  if the consumers do not frequently change or alter their preferences, where set  $|a|$  is defined as a constant set of preferences. Now, it begs a big question: should consumer choice be consistent? Well, it depends on individual’s personal preferences.

Preference heterogeneity in choice models of consumer shopping behavior indicates spatial consistency of preferences, and tests stability of choice across several regions based on random utility theory (Severin, Louviere, and Finn, 2001). As indicated by Severin, Louviere, and Finn, (2001), stability in preferences and choices has remained an interesting avenue to study and understand the psychology of consumers. In some other context, it is taken for granted that consistent choices lead to *stability* in people's lives and careers. On the other hand, it has also been argued that agents should not always be consistent with their choices that they make, for they should enjoy exploring and experimenting with new things. Consumers are always encouraged to try out new commodities that may offer *greater* utility and benefit at a similar price—or at a price more or less than what they usually pay<sup>15</sup>. On that occasion where consumers change their preferences towards new goods and commodities from where they are able to accrue greater benefits from their decisions, they are not, in essence, making any *irrational* choice. This brings forth the essence of consistency condition of choice function at the forefront of social and economic decision making (see Sen, 1993).

Is it not a “rational” decision to search for better alternatives at similar or lower price offered by other competitors? Here, of course, *quality* becomes an issue, but as I have already mentioned that price is not always the best indicator of quality, and so we are left with our confidence on “trust” to try out new things. New products may come with new features, utilities, and appearances that may capture consumer attention. No sooner do we try out new things, our *preferences* change.

## 8. Conclusion

It is apparent from the preceding analysis that individual preferences do not satisfy choice conditions of others because it varies among different individuals. But it does—to a great extent—influence social decision-making of individuals who have complete information of their preferences. This paper—using formal analysis and a simple model, have been able to explain the factors and determinants which influence our

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<sup>15</sup> This notion corresponds to the theory of consumer utility maximization: “Greater benefit at a better price”.

social decision making process. It is not aimed to use justifications based upon theoretical considerations to rationalize decisions that have been made – for, that part looks better when left alone for regressive analysis of policy failure and inefficient choices that lead to poor outcomes from social decision making processes.

□

**Acknowledgements:**

*Acknowledgements are sincerely extended to Mousumi Samanta, and to another anonymous researcher whose valuable suggestions on an earlier draft version of this paper enhanced the value of this research.*

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