

A Study Toward Measuring Acceptance in Decision-Making in Practical Decision-Making

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Abstract

This paper proposes the concept of acceptance based on the observation that people sometimes make decisions by choosing alternatives obtained when they are satisfied with their decision-making process and explores the factors that lead to acceptance. The validity of the construct extracted from the author's previous research results was clarified based on previous studies.

Keywords: Acceptance, Practical Decision-Making, Bounded Rationality, Satisfaction

1 Introduction

In decision-making problems faced by practitioners, there are multiple attributes to consider, such as cost, quality, and delivery, which often exhibit a trade-off relationship. In such difficult situations, practitioners strive to make the best decision and carry out their work. How is such practical decision-making being conducted, and how should it be done?

Normative decision-making theory, one of the decision-making theories, holds that decision-making based on expected utility theory is the best decision, and humans are believed to be capable of making such decisions, and are expected to make them. Expected utility theory quantifies the preference relationship between alternatives, seeks a multi-attribute utility function that corresponds to the preference, and chooses the alternative with the maximum value, making it possible to derive the optimal solution for practical decision-making problems. However, it is difficult for practitioners to identify the multi-attribute utility function and ensure the theoretical premise in their limited time, and therefore, there are few instances where decision-making based on multi-attribute utility theory is being used. Therefore, descriptive decision-making theory, which aims to pursue the human decision-making process as it is, has been proposed.

Simon, one of the representative researchers of descriptive decision-making theory, claimed that humans make decisions based on the principle of "satisficing", which is the idea of choosing an alternative that satisfies the decision-maker's requirements to the greatest extent, based on the observation of managerial behavior in decision-making [1]. Another researcher, H. Montgomery, developed the dominance structure search model based on the fact that humans commonly make decisions using heuristics derived from experience, as one of the ways humans make decisions [2]. Their achievements reveal that humans make decisions by accepting moderately good alternatives and demonstrate a practical way of decision-making.

Based on a survey of previous research and suggestions from past practical experiences, the author discovered that they often choose an alternative by being satisfied with their decision-making process and presented the concept of "acceptable decision-making. [3]" In practical

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decision-making, where trade-offs are often present, it is essential for decision-makers to actively accept their decision-making process and choice, such as "a decision made with acceptance" or "a decision-making process that they are satisfied with," to facilitate smooth post-decision action. However, when satisfied with the decision-making process, it is crucial to identify and communicate what exactly the decision-maker is satisfied with and how they are satisfied with it. Therefore, based on the results of a descriptive analysis of acceptance in decision-making in practical decision-making conducted by the author to date, this study will identify the factors that lead decision-makers to acceptance in decision-making in practical decision-making.

2 Research on Decision-making Criteria

2.1 Research on decision-making based on bounded rationality and the "satisficing" principle

When discussing the criteria for decision-making, a major point of contention is rationality. According to the normative decision theory based on the expected utility theory, it is assumed that humans have bounded rationality, knowing all alternatives and their utility values identified by the utility function. Therefore, the optimal alternative that maximizes the value of the utility function is mathematically determined, regardless of the decision-maker's behavior, and thus, no criteria are necessary. Simon defined rationality as the process by which the person acting does the following: surveys alternative courses of action, surveys the consequences that follow from each, and selects that course of action whose consequences are judged to be most nearly what he desires in the circumstances [2], which he called bounded rationality.

However, Simon claimed that humans do not possess bounded rationality but only possess bounded rationality, as their problem-solving ability is much smaller than the problem space that must be objectively solved to determine rational behavior in the real world. Under bounded rationality, it is impossible to enumerate all the alternatives required by normative theory. Therefore, Simon argued that in such situations, humans make decisions based on the "satisficing" principle, which involves setting a certain level of aspiration and selecting an alternative that achieves that level of aspiration. He stated that decision makers who select an alternative that meets or exceeds some aspiration level, but which is not necessarily the best in any other sense or guaranteed to meet any specific criterion, are said to be satisficing.[4].

Simon introduced the concept of "procedural rationality" after proposing bounded rationality and the "satisficing" principle, and argued that how the decision-making process is carried out is just as important as the importance of alternative choices. Procedural rationality refers to the idea that an action is procedurally rational if it is taken on the basis of appropriate deliberation. Such "procedural rationality" depends on the process. When psychologists speak of rationality, they usually have procedural rationality in mind [5]. This means that while human rationality is limited when considering results from a single aspect of purpose or means, it can become procedurally rational when the process is carefully considered. Therefore, Simon argues that humans with bounded rationality can ensure "procedural rationality" by reflecting on their decision-making process and selecting a satisfactory alternative that meets or exceeds their own standards.

2.2 Previous research on satisfactory decision making

The author's survey of previous studies and the author's own practical experience suggest that humans often make decisions by reflecting on their own decision-making process and choosing alternatives obtained when they themselves are satisfied with the process. Furthermore, the author discovered that by being satisfied with their decision-making process, humans gain confidence and justification for their decision. Based on these suggestions, the author has come up with the concept of "Acceptable decision making." The original meaning of the word "Acceptable" is to "understand and acknowledge someone else's thoughts and actions." In other words, the concept of Acceptance is a concept that expresses judgments toward others (objects). Therefore, the author defines acceptance in decision making as "a sense of satisfaction that implies objectifying and evaluating one's decision-making process and allowing it in light of one's own values." Therefore, acceptable decision making is a decision-making process in which the alternative selected is based on the satisfaction with one's own decision-making process in this sense. The conceptual model of acceptable decision-making introduced by the author is shown Figure 1 [3].

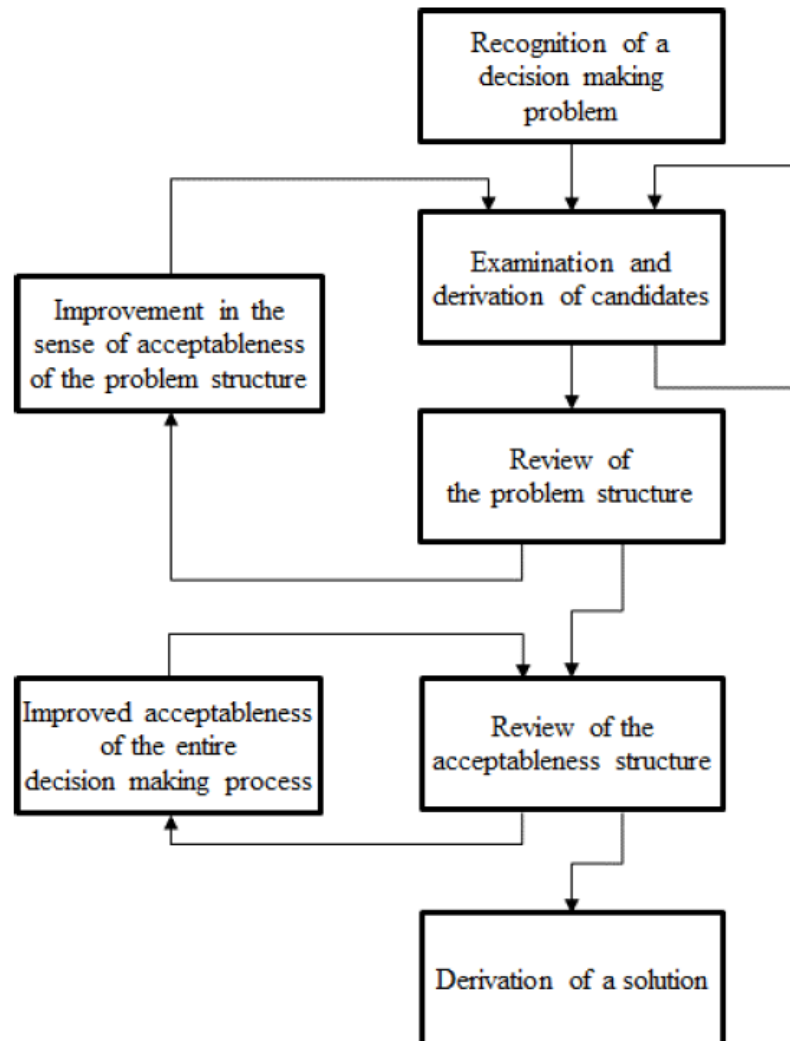


Figure 1: Flowchart of the dominance search model [3]

First, the "Examination and derivation of candidates" process is a process of understanding the relationship between attributes and alternatives. By understanding this, it is possible to objectively understand the trade-off relationship between the alternatives and their attributes in the decision-making problem. Next, the "Review of the problem structure" process is a process of reflecting on the problem structure that was understood in the "consideration and derivation of candidate subjects" process. By going through this reflection process, understanding of the problem structure is deepened, and the sense of satisfaction with narrowing down the alternative choices can be increased. Finally, the "Review of the acceptable structure" process is a process of objectifying the decision-making process followed by the decision maker and reflecting on whether the process can be accepted based on their own values, life views, and worldviews. The reflection for this introspection can further enhance the sense of satisfaction. Since the process of performing acceptable decision making can enhance the sense of satisfaction with one's own decision-making process by going through the four processes, each process can be said to be a constituent element for performing acceptable decision making. The author has also confirmed the validity of this model through a questionnaire survey [4].

3 Components of Acceptance in Decision-Making

3.1 Implications from previous research on the components of satisfaction in decision making

Based on previous research on decision making, this section focuses on criteria in decision making. Simon proposed the principle of satisficing, which states that humans aim for the best decision that satisfies their requirements, rather than the optimal one. However, he did not specifically discuss how to meet these requirements. The satisfaction with the decision-making process leading to the alternatives and their selection can be considered one criterion, but the criteria for judging whether these alternatives are satisfactory are not clear. On the other hand, Simon emphasized the importance of deliberation in decision-making processes and argued that procedural rationality is crucial. The degree of deliberation in the decision-making process can be seen as a criterion for satisfaction in decision-making.

The author proposes an extension of Simon's theory, introducing a new criterion for decision-making: "acceptance." In the concept of "acceptance," the degree of comprehension of the decision-making problem during the process leading to a decision is a critical component of satisfaction, in addition to the value of the alternatives themselves. By considering what alternatives can be considered and what attributes are used to evaluate them, a deeper understanding of the decision-making problem is developed, and a coherent rationale for choosing the alternatives can be found. This is necessary for convincing oneself to make a decision and is an essential process for making satisfactory decisions. Thus, Simon's and the author's approach to decision-making processes are critical for evaluating the quality of decision-making. Revealing how decision-making processes were examined, and what elements influenced them, is meaningful for evaluating the quality of decision-making. From these considerations, it becomes evident that identifying the components for evaluating the quality of decision-making processes is crucial. The following section focuses on the concept of "acceptance" as a component of satisfactory decision-making and examines its constituents.

3.2 Proposed Model

Based on the author's previous research, it is important to have an understanding of the structure of decision-making problems and ensure coherence in the decision-making process in order to make satisfactory decisions. Understanding the structure of decision-making problems involves understanding the types and quantities of options and evaluation criteria, as well as the trade-offs that occur between each option. This understanding enables decision-makers to comprehend the difficulty of the problem they are facing and approach decision-making with "good enough" as Simon suggests. In addition to understanding the structure of decision-making problems, the author positions ensuring coherence in the decision-making process as an important process. Evaluating whether alternative options have been thoroughly considered, whether the attributes that serve as evaluation criteria have been sufficiently examined, and whether the decision problem has been adequately considered, objectively as if assessing it from a third-party perspective, is a necessary element in ensuring coherence in the decision-making process. Particularly in this process, making judgments based on personal beliefs such as individual values, life views, and worldviews that are based on subjective criteria is consistent with the concept of acceptance. Furthermore, the author emphasizes that logical reasoning supporting coherence is also important and not merely based on personal biases. Based on the concept of acceptable decision-making, the author proposes a model, shown in Figure 2, by extracting its constituent elements. In constructing this model, the author sets four hypotheses.

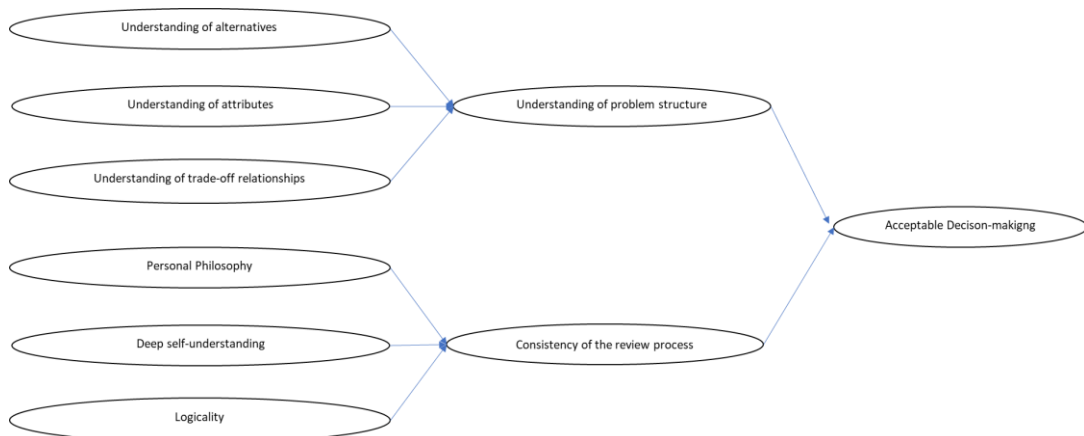


Figure 2: Model of Acceptance

H1: Understanding the structure of decision-making problems and ensuring coherence in the decision-making process positively affects acceptable decision-making.

H2: Understanding alternative options, evaluation criteria, and trade-offs between alternative options positively affects the acceptance of the structure of decision-making problems.

H3: Deep self-understanding, personal beliefs, and logical reasoning positively affect coherence in the decision-making process.

4 Consideration

Based on the concept analysis of "acceptance" in the medical field conducted by Imai et al., which was proposed in the previous section, we explore the theoretical background of the model. Imai et al. analyzed the concept of "acceptance" by examining literature in nursing, medicine,

psychology, law, economics, literature, philosophy, and sociology in Japan that included the term "acceptance" [6]. Their analysis was conducted on 5,019 pieces of literature as of March 11, 2013. First, the attribute of "deepening understanding" proposed by Imai et al. is considered to apply to the "understanding the structure of decision-making problems" proposed by the authors. "Deepening understanding" represents the degree to which one feels that they have understood something, and it is said to involve examining and interpreting one's current understanding to deepen it. This is consistent with the author's view that understanding the structure of decision-making problems deepens by examining and interpreting it. The authors cite the understanding of options and alternatives, and the understanding of trade-offs as lower-level components that make up the understanding of decision-making problems, which can also be considered as part of deepening understanding and therefore can be deemed reasonably valid. "Consistency of the decision-making process" can be explained by the attributes of "evidence" and "self-involvement" proposed by Imai et al. "Evidence" refers to certainty based on evidence, and is something that decision-makers within themselves have no doubts about, as it is obvious and certain. The lower-level component of "logicality" of the "consistency of the decision-making process" is exactly what Imai et al. refer to as "causality" and "logicality" under "self-involvement," and its meaning is almost identical. Therefore, it can be considered as a reasonable component that indicates agreement. Similarly, "deep self-understanding" and "personal beliefs" correspond to the attribute of "values" advocated by Imai et al. Imai et al.'s "values" refer to the individual's values that they judge to be meaningful, while being influenced by their personal background, such as their upbringing and social culture. The authors' proposed "deep self-understanding" and "personal beliefs" can be considered to imply this meaning. In Imai et al.'s paper, "emotional acceptance" and "trust relationship" are also listed as attributes. "Emotional acceptance" is the acceptance that comes with a sense of satisfaction or accomplishment and is something that one feels comfortable with deep down in their heart. This emotional aspect can be considered an indispensable element of human decision-making. Lerner et al. have focused on emotions in decision-making and proposed an emotion-imbued choice (EIC) model that combines traditional rational judgment theory with the latest emotion research [7]. Although this is a very interesting study, at present, the relationship between satisfaction and emotion is not clear, and it should be considered as a topic for future investigation. "Trust relationships" are relationships that are built through mutual influence with others through cooperative relationships, communication, and trustworthy information provision. The authors believe that trust relationships are important in decision-making.

5 Conclusion and Future Works

Based on the observation that people sometimes make decisions by choosing alternatives obtained when they are satisfied with their own decision-making process, this paper proposes the concept of acceptable decision-making and explores the factors that lead to acceptance. The validity of the construct, which was extracted from the author's previous research results, was clarified based on previous research by Imai et al. At this point, however, the experimental validation is insufficient. Further interviews and questionnaires will be conducted in the future to clarify the validity of the model.

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