

# **Reflection on My Decision Making Processes: How Observation, Intuition and Deduction Play Important Roles**

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## **I. Introduction**

Decisions, no matter big or small, are the building blocks of one's life. But often, we focus only on the decisions themselves rather than how we make them. Motivated by the UGFN course "In Dialogue with Nature", I began to reflect on my own decision making processes, and in particular, how observation, intuition and deduction play important roles.

## **II. My Personal Decision Making Process**

Among all the decisions I make, one of the simplest could be, deciding to get some food while feeling hungry, where a body signal is enough for making the decision. But when it comes to more complicated ones, I found that, most of them are made either through the observation and deduction process or intuitively, depending on the occasion and the decision itself.

### **i. Observation-deductive Method**

Many mental activities begin with observation, which Galileo, who used to utilize observation to spot a problem, would totally agree with (Cohen 56). While the *observation* I am referring to is more widely defined. Because we observe not only natural phenomena, but also people, society and written materials, defining observation as *information-searching process* is more precise. For example, once I was asked, if I have 100 million dollars, how I would invest it. Without hesitation, I began to search for market news, and comments of financial analysts which provided me with basic information.

Then it follows with *deductive* process. Deduction is defined as “the process of reasoning from one or more statements to reach a logically certain conclusion” (Sternberg 532). In the previous case, I picked one piece of information as the premise of my logical deduction: if the Fed would increase interest rate, then more people would invest in the US market, the demand for US dollar would increase and ultimately the exchange rate would increase. Thus, I reach to the conclusion that the foreign exchange market is promising.

Obviously, observation-deductive method is a rather cautious way to make decisions, but meanwhile demands much time. So personally, when it comes to important decisions such as investing a large amount of money or choosing a university, and when time is abundant, observation-deductive method would be my first choice.

### **ii. Intuitive Method**

Intuition can be understood as “a cognitive ‘short circuiting’ where a decision is reached even though the reasons for the decision cannot be

easily described” (Hall 216). It is like an inner voice in our heart that tells us “do so!”

Honestly, when it comes to big decisions, I feel it too reckless to barely rely on my intuitions. But sometimes I have to use them. One example is facing an unfamiliar question in an exam. Considering time is tight, trusting my intuition might be the only possible way.

### **III. Analysis**

The analysis below compares the strengths and weaknesses of both methods, showing that neither is perfect and they tend to be used in different occasions.

#### **i. Strengths and Weaknesses of Observation-deductive Method**

The strength of observation-deductive method is obvious. If the premise, or rather, the information is correct, as well as the logic, then the conclusion must be correct. So observation-deductive method is the best to reduce uncertainty.

However, real life issues tend not to be so simple. First, as mentioned above, when the situation is so urgent that it requires a quick decision, the observation-deductive method fails to work. Second, when information is inadequate, further logical analysis would be based on nothing. Third, while using observation-deductive method, we tend to only respect truth and neutrality but ignore our values<sup>1</sup>, which are critical in personal decisions. For example, once I was asked to put myself in a situation—when I was

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<sup>1</sup> Here, value means what we regard important.

driving a car whose brake fails, I must choose either go straight or turn the steering wheel and run into a wall. I tried using deduction at first—if I go straight, I would kill people on the street; if I turn the wheel, I would kill myself. But this deduction didn't help me make a decision at all. I still needed to knock my heart and asked what exactly I value. Unfortunately, even if all the conditions mentioned above are satisfied, observation-deductive method is hard to work alone, just like every investor needs not only adequate information and the ability to reason, but also their values, say, how much risk he/she can bear. So it seems that to make a decision, barely relying on our observation and deduction tends not to be enough, and the edited methods will be discussed later.

## **ii. Strengths and Weaknesses of Intuitive Method**

As Euclid holds, never take something for granted (Dunham 259–274). Indeed, intuitive method bears relatively high risk, but we cannot abandon it completely considering its special value.

Poincaré, a French mathematician, found that during the process of mathematical discovery, there could be a stage where an intuition comes to us suddenly after a long-time's struggling when we seem to gain nothing (Poincaré 167–178). And as former World Chess Champion Garry Kasparov put it, “The total number of possible different moves in a single game of chess is more than the number of seconds that have elapsed since the big bang created the universe, . . . intuition is the defining quality of a great chess player” (Matzler, Bailom and Mooradian 13). The discovery and the claim convey the same message—intuition is not just a magical sixth sense, but the reflection of our past experience. Therefore, intuition is in no way inferior to logical analysis.

## IV. The Edited Method

Upon the analysis, and inspired by modern scientific attitudes<sup>2</sup>, I feel it necessary to find modified ways for decision-makings, by integrating observation, intuition and deduction, as well as doing self-reflection. Meanwhile, unlike modern science, laying importance on our values is critical in personal decision-makings.

### i. Integration

Blending observation, deduction with intuition is not new to scientists. For example, Poincaré utilized the third stage of mathematical discovery—deduction to verify the inspiration occurred at the previous stage (Poincaré 167–178). Inspired by it, we can certainly apply the integrated method to our decision making processes. Below is a real-life case.

A senior nurse in Honiton Hospital once shared his experience of using the integrated method in a clinical decision (Parsonage 19). When encountering a patient with a red swollen face, he immediately thought of two possibilities—anaphylaxis or severe allergic reaction. But his past experience gave him an intuition that it should not be anaphylaxis which is life-threatening. Thus he decided to conduct further examination. Upon getting information from the patient's examination and history, he compared it with the criteria of anaphylaxis and found they did not match. Then he made a diagnosis of severe allergic reaction. In this case, the nurse first had an intuition which gave him a direction for further steps. Then he used observation and deduction to make a decision. The whole process is both efficient and cautious.

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2 According to the UGFN course, modern scientific attitudes can be concluded by: the choice of empirical truth, and the attitude of testing.

However, this modified approach can only be used when time permits. If, in that occasion, the intuition told the nurse that it was a life-threatening disease and further deduction was impossible, then following the intuition might be the best possible way.

## ii. Self-reflection

Along the history, through reflection, scientific methods keep evolving and being revolutionized<sup>3</sup>. Likewise, reflection also helps modify our decision making processes.

Imagine that, if an intuition comes to us at the very beginning, more or less we cannot avoid being biased in the following steps. For example, during the observation process, we might selectively absorb information which support our intuition. And during the deduction process, we might make logical mistakes as well. While doing self-reflection, we can correct our prejudice and attribute to more deliberate decisions.

## iii. The Importance of Our Values

As mentioned above, our values serve as critical criteria in making decisions. Since we never know what we would value in the future, they guide us to make the best choices we could make *at present* when both observation-deductive method and intuitive method are not enough. So it's normal to feel regret sometimes when we look back on our past decisions, which might be due to the changes in our values. To reduce the negative feeling, we should

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3 For example, before Newton and Galileo, when there is a conflict between hypothesis and experimental outcome, people tend to think the phenomenon observed is just a special case or the inaccuracy of their observation leads to the conflict. By reflecting on the past methodology, Newton and Galileo modified it—respecting the truth and questioning the hypothesis. Thus making science a more objective, value-free subject.

always bear in mind what we valued in the past, and believe that in those occasions, values guide us to the best answer.

## V. Conclusion

As the observation-deductive method and the intuitive method both play important roles in my decision making processes, they also have limited usages. Therefore, modifications of my decision making processes are inspired. And hopefully, by integrating observation, intuition and deduction, doing self-reflection, and valuing our values, I could be a wiser decision-maker in the future.

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## Teacher's comment:

Decisions, intended as deliberate choices among two or more options, are a defining human activity. Observation, intuition, and deduction are human abilities that stem from the nature of our mind. What is the role of



such abilities in our decision making process? Is there any other factor that defines human choices?

Yuan Jiayi not only identifies the role that each of those abilities plays in her decision making process, but she also shows their relative relevance changes for different types of decisions, for example, quick urgent decisions or important life defining decisions. Most importantly, however, Yuan Jiayi points out that values are the factor that ultimately determine our choices. Those three fundamental abilities of the human mind are, consciously or unconsciously, put at the service of our values even when a decision seems the outcome of a logical deduction: the decision is taken based on whether the conclusion satisfies or not our values.

Jiayi reflection constitutes a valid example of the interactions between aspects of nature and human values. (Klaus Colanero)