

# Analysis on the Factors for People's Irrational Choice

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## ABSTRACT

People often encounter many choices in their life, but they are often guided by some traps to make some irrational behaviors. This paper divides these traps into three categories according to their different characteristics: bias of human nature, thinking bias, and language bias. Based on the research of some traps, this paper finds that these three types of traps all have their own features. For example, the language traps such as decoy bias will use different languages to influence people's feelings of the same concept. By opening many investigations and studying predecessors' theories such as "loss aversion", the author verifies his ideas and comes to this conclusion.

**Keywords:** *Irrational, Traps, Human nature, Thinking, Loss aversion*

## 1. INTRODUCTION

A person will face a huge number of choices in his life, and each choice will have a certain impact on the life trajectory of a person. A wise choice can bring spiritual or material benefits to a person, but an irrational choice will guide the life path of a person to a negative way to a certain extent. Therefore, many people try their best to make a rational choice. However, many life examples show a fact to people, which is that "people have intellect and are rational beings, yet they very often behave in irrational ways." [9] For example, there are three choices to buy popcorn in the cinema, which are the small bucket of popcorn for 2 dollars, the medium bucket of popcorn for 4.5 dollars, and the big bucket of popcorn for 5 dollars. In the small bucket, there is only a small amount of popcorn and it even cannot satisfy a child. In the medium bucket, there is twice the amount of popcorn in the small bucket. Then, the amount of popcorn in a large bucket is the sum of a medium bucket and a small bucket. At this time, most people will choose the big bucket and they believe that they make a rational choice because the big bucket is one more small bucket of popcorn than the middle bucket and it is only 0.5 dollars more. Nevertheless, the choice from most people is irrational, because if people buy two small buckets of popcorn, they only need to pay 4 dollars and they can get more popcorn than the medium bucket. Such examples are very common in the lives of people and the purpose of this article is to explore the reasons why people will make this kind of irrational behavior and the ways to avoid them. This study verified the author's conjecture

about each trap by issuing a survey, and drew a conclusion through the research results. In the end, this study can help people identify different traps in their daily life and help them to keep a clear mind when making choices.

Classification of traps:

In normal life, many pitfalls lead people to make irrational judgments consciously or unconsciously. According to the characteristics of each trap, they can be divided into three categories: the trap of human nature, the thinking trap, and the language trap.

## 2. THE TRAP OF HUMAN NATURE

First of all, the trap of human nature mainly influences people's behavior by catering to human characteristics and it is the most common trap in normal life. According to Aristotle, people are naturally sociable [10]. This means it is human nature to want to be more sociable and people are afraid to become special because there are many examples confirm a fact, which is human will isolate and reject people who are different from them. Take the most obvious example: racial discrimination. In the past, white people reject African Americans because their skin color is different from most Americans, and "human even connect black skin with passive character trait." [8] Many traps use this human weakness to influence their behavior and two of the most representative pitfalls are herding bias and nudge bias. Take an example of Nudge bias. When people pass through the lawn, they often see some slogans calling on people to protect the environment, and these slogans often

use this trap to influence people's behavior. For example, a slogan says: all the family are protecting the environment. This slogan implies that most people are protecting the environment, and if a person does not protect the environment, he or she will become heterogeneous. Then, human beings' fear of loneliness will force them to protect the environment. Moreover, according to Beth Hendrick, "Instead of considering the average or sum of a total experience, Peak-End Rule said that people" [5] This means that people will only focus on the extreme or result of an event instead of the average feeling and it is also a common human weakness that is often exploited. For instance, there are a lot of boring games in the market, but the evaluation is not low. This is because the nature of human's peak-end will cause their senses of a thing to be strongly influenced by the extreme. These games often set up several exciting highlights to enhance people's overall senses and guide them to make a good evaluation of this game. Also, the resume is a way to use this human weakness to trap interviewers for students who apply. On the resume, most people will write their best achievements and ignore those minor achievements and some weaknesses. This is to make a deep impression on the interviewer with the help of these extremes, which is another trap of using this human weakness: the diffusion bias. Thirdly, according to Arkes and Blumer, the sunk cost, which is a theory that if people have invested a lot in something, people will continue to invest even if the future is not good, "is predicated on the desire not to appear wasteful is presented." [4] This means that people are reluctant to deny their effort. This human weakness is used by many traps to influence human behavior, and the two most representative traps are sunk cost bias and gambler's fallacy. As the literal meaning is general, gambler's fallacy is often used in some gambling games such as lottery, and the people who set traps often let "gamblers" get some benefits first to ensure that they enter the trap. Then, as the "gambler" pays more and more in the gambling game, he will sink deeper and deeper in it. In the end, "gamblers" will lose a lot because of this human weakness. The method to avoid the trap of human nature is simple to do but difficult to achieve it perfectly. The essence of this trap is to use the loopholes in human nature to let people willingly enter the trap. Therefore, as long as citizens understand the three basic human characteristics mentioned above and treat the problems objectively, they will be difficult to fall into such traps. Take gambler's fallacy as an example. In order to avoid it, people need to notice that this trap is using one of human nature, which is that people are reluctant to deny their effort. Then, people should list all advantages and disadvantages of their choice and thorough comparison between them to make a rational choice.

### 3. THE THINKING TRAPS

Secondly, the thinking bias is a kind of trap set up by using the loopholes of human thinking. This kind of bias has three remarkable characteristics. The first feature is that consumers are willing to fall into the trap because this trap will make consumers feel that they get extra benefits. The decoy bias is representative of this feature. It's as literal as it is, the decoy effect is a behavior "hypothesizes that the introduction of a carefully constructed "decoy" into a choice set will result in a segment of consumers shifting their choice to a higher-priced targeted item." [7] This means that the sellers will put a seemingly uneconomic option in front of the option they want the buyer to choose to increase the attractiveness of the latter option. For instance, when a person wants to buy snacks in the cinema, the cinema gives him three different choices. The first option is a small barrel of popcorn for \$10, the second is a medium barrel of popcorn for \$25, and the third is a set meal for \$30, which includes a medium barrel of popcorn with two bottles of coke and two 3D glasses.

**Table 1** Popcorn Price list

\$10	● One small barrel of popcorn
\$25	● One medium barrel of popcorn
\$30	● One medium barrel of popcorn ● Two bottles of Coke ● Two 3D glasses

Under this situation, most people will prefer to choose the third option because this option is only five dollars more than the second option, but consumers can get a lot more things and makes people feel very cost-effective. However, barrel of popcorn and two bottles of coke may cost less than \$2. Also, the 3D glasses, which look expensive, cost only \$6 on Amazon. This means sellers can make a profit of more than \$20 on this deal, which shows that the consumers' choice is very irrational. In this example, the second option is the trap option, and it adds to the appeal of the third option and makes consumers feel like they have received a lot of extra rewards. The second feature is that the traps will affect the behavior of consumers by using the memory mechanism of the human brain. According to McDermott and Roediger, there are three main categories of human memory: working memory, episodic memory, and semantic memory. [6] Working memory is also called short-term memory, and the duration of short-term memory is about "18 seconds".[2] This reflects that with the increase of things that need to be remembered, a normal person's memory of the previous things will become weaker and weaker. This memory feature makes sellers have a lot of operating space. For instance, if the sellers want to sell his product, he can give consumers more than three choices and put

his product on the last line. Then, the consumers will probably buy his product because when they compare products, it is easy to forget the choices they have seen before. The last feature is that the traps will affect consumers' behavior by using the memory loopholes of the human brain, such as default bias. There is always a blind area in people's thinking, and it is what people often do that must be the best choice. So that "humans tend to accept what we are given and stick with what we have". [3] In economics, there are two reasons for this idea: being lazy and not wanting to take on risky responsibilities. So, the sellers will influence or even control people's behavior by using this idea. Take a real case as an example. A company encourages its employees to donate \$10 and stipulates that anyone who does not want to donate needs to go to the human resources office to fill out an application form. In this case, almost 100% of the employees donate because they don't think it's worth doing so much for the \$10. Interestingly, however, as the price of donations becomes higher and higher, the number of people who donate does not decrease significantly, because these employees feel that not giving is a problem and they think that not giving will reduce their reputation. However, when an employee couldn't bear to apply for no donation, he found that what he expected did not happen, and he completed the form easily. All of these reflect that humans are deceived and behave irrationally by their brains without knowing. The way to escape this dilemma is similar to that of human nature. As an old saying goes: "the spectators see the chess game better than the players." In order to avoid this kind of trap, people need to separate themselves from events and see things as bystanders. For instance, when people need to compare more than two things and make a choice, they often compare two things separately and then compare them with other things. Nevertheless, people often forget the advantages of the former, and it is difficult for them to realize it. However, when one looks at a thing from a spectator's point of view, that person can look at it from a broader perspective and compare all the options at the same time, which will avoid the thinking trap subconsciously.

#### **4. THE LANGUAGE TRAPS**

Besides, language trap is also a very common category that leads people to do irrational choices and this kind of trap mainly uses a human way of thinking, which is people prefer gain than loss. ("loss aversion") According to Jack S. Levy, "people tend to overweight losses with respect to comparable gains, to be risk-averse with respect to gains and risk-acceptant with respect to

losses." [1] This means when people get benefits, they will be afraid of losing their benefits and become afraid of taking risks. However, when people lose something, they will want to take risks to make up for the losses. Different expressions of a sentence will change how consumers feel about it and lead them into the trap. For example, a company will lay off 40% of its employees at the end of the year because of poor earnings, and the employee does not want to do so. At this time, the employee has two options. If the employer chooses the first option, the employer can keep 80% of the company's employees. If the second option is selected., the employer has a 50% chance to keep all the employees of the company, but the employer has a 50% chance to lose 40% of the employees. At this time, most people will choose the first option. Then, After the researcher change "keep 80% of the company's employee" into "loss 20% of the company's employee", more people choose the second choice because they are afraid of losing something. All of this reflected that language can easily influence people's thinking and lead them to fall into the trap. In contrast, language traps are the easiest to avoid, because it gives people different feelings by changing the language expression. Therefore, simplification is the best method to escape this dilemma. Take the example of company layoffs that we mentioned above as an instance. If people take away some modifying language from the description of this example, people can get two options. The first one is that the company will cut 20% of its employees (equivalent to save 80% of its employees); the other is that the employer has a 50% chance to save all employees and a 50% chance to lose 40% of its employees (equivalent to save 60% of its employees). At this time, when people put the changes of language together, they can rationally analyze the advantages and disadvantages with a spectator attitude, and no longer be affected by loss aversion.

#### **5. EXPERIMENT METHOD**

In the first experiment, the researcher read a word to 20 participants orally every three seconds (10 words in total) and then asked the participants to write down the words they remember on the paper. After 30 sections, the researcher read the 10 words in the same order and asked the participants to raise their hands if they had words on the paper. Finally, the researcher recorded the number of hands raised for each word and the result showed that participants' memory of the last three words was generally higher than the memory of the previous words, which is showed in figure 2. This confirmed that the short-term memory of human beings will lose rapidly with time.

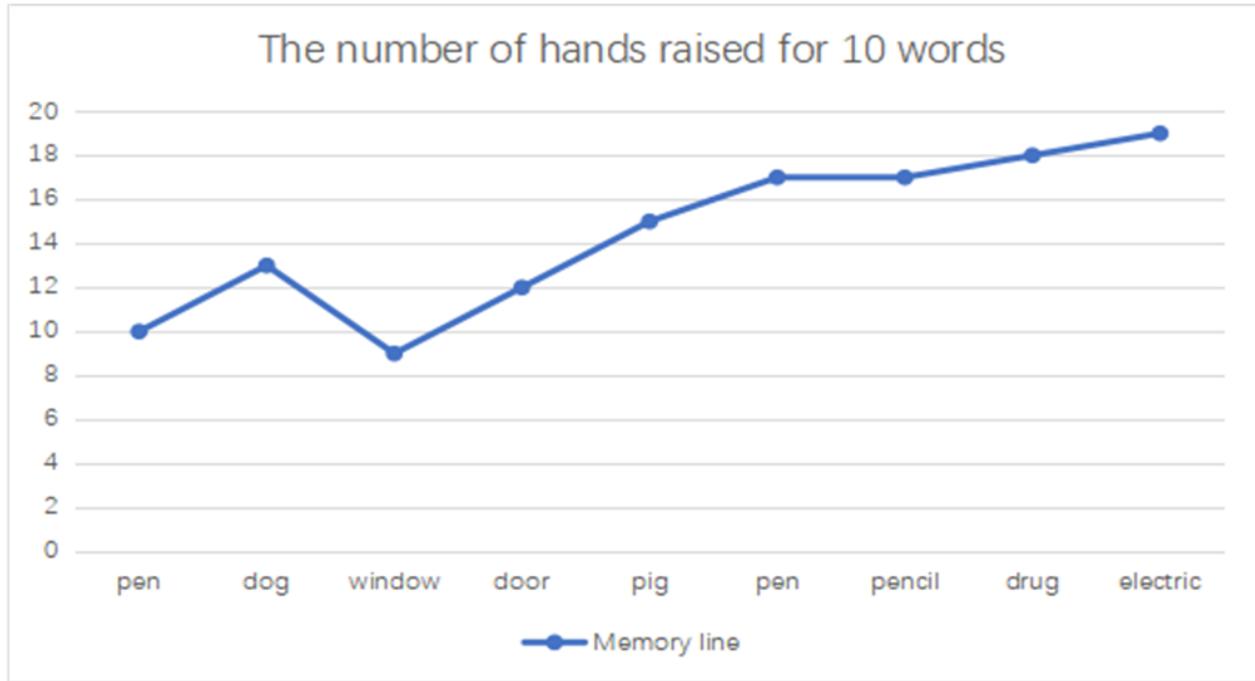


Figure 1 The number of hands raised for 10 words

Under the thinking traps, the author made another experiment to show the influence of language on human beings. The author made a questionnaire to 312 students of Ningbo University. This questionnaire allows these college students to believe that they are the boss of a company, and let them make a choice about the layoff problem of the company. One option is that the company

can keep 80% of the employees. The other option is that the boss has a 50% chance to keep all the employees, but a 50% chance to lose 40% of the employees. As figure 2 stated, the final result showed that 210 participants choose the first option and 102 participants choose the second option.

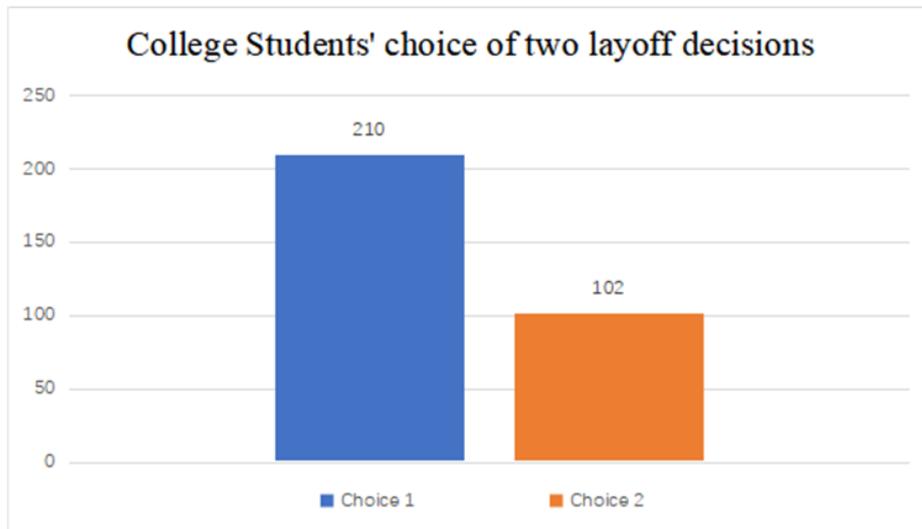
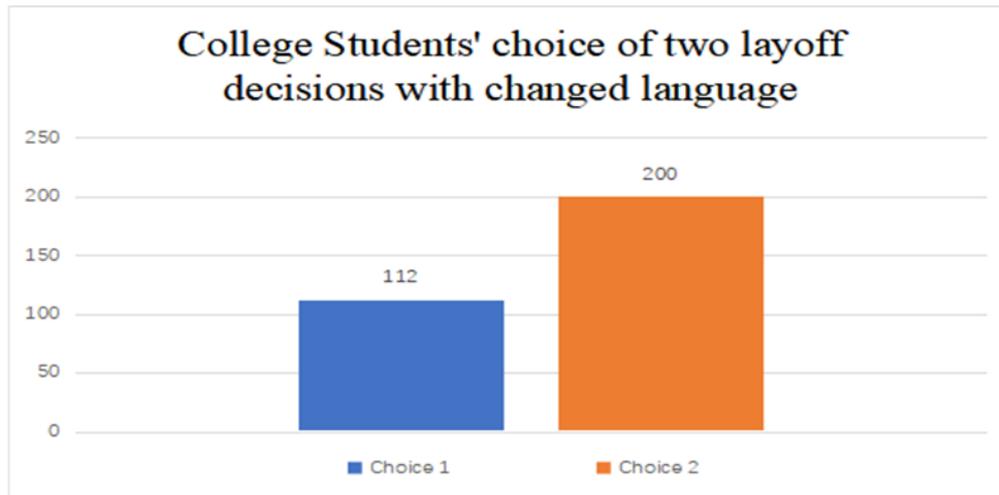


Figure 2 College Students' choice of two layoff decisions

Then, the author sent out another similar questionnaire to these 312 students of Ningbo University. In this survey, the author changed the expression of the sentence a little. This survey showed that if the employer chose the first option, the company would lose 20% of its employees. But if the employer chose the second option, the company had a 50 percent chance to keep all its

employees and a 50 percent chance to lose 60 percent of its employees. The result of this questionnaire is quite different from the previous one. As figure 3 indicates, 200 participants choose the second choice and 112 participants choose the first choice after the same 312 participants participated in the survey.



**Figure 3** College Students' choice of two layoff decisions with changed language

## 6. CONCLUSION

People will be affected by many traps to do irrational behavior. These traps can be roughly divided into three categories: human trap, thinking trap, and language trap. The characteristic of a human trap is that this kind of trap is almost set according to the three characteristics of human beings. The first human nature is that people are afraid to become special. The second nature is that people only focus on the climax of an event. The third nature is that people are not willing to deny their failure easily. Moreover, the thinking bias also has three obvious features, which are temptation, guidance, and deception. However, the language traps only introduce one concept, which is the famous “Loss Aversion Theory.” This kind of trap will use the charm of language to make people feel different from the same concept. In summary, all the three traps can be avoided in one way. Firstly, people need to identify the types of traps according to their characteristics. Then, people need to look at these traps rationally from a spectator's point of view and make a correct choice. However, although this article has been deeply studied, there are still many places that need to be supplemented in the future. For example, there may be three types of traps that cannot be summarized, but the researchers did not involve them. In the future, researchers will do more research to supplement these loopholes.

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