

Research on the Anchoring Effect in the Judicial Field

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Abstract: The anchoring effect is essentially a cognitive bias in which people tend to overly rely on the first piece of information they receive (the anchor) when making decisions, or are influenced by the first piece of information they received, which further leads to obvious deviations in subsequent judgments. This phenomenon is evident in multiple fields, including the legal field. This article will comprehensively introduce the mechanism of anchoring effect in the judicial field by collecting, analyzing, and integrating existing research results. It will also draw conclusions on the size of initial anchor values and how they can have a negative impact on judicial decision-making. Finally, potential solutions will be provided.

Keywords: bias, the anchoring effect, judge, sentence, prosecutor

1. Introduction

Kahneman & Tversky proposed the concept of the anchoring effect [1]. They designed a digital turntable experiment that was specially made so that numbers could only stop at positions 10 and 65, then invited students to turn the turntable and asked the students what the best estimate would be for African countries as a percentage of the United Nations. The results showed that students who switched to the number 10 had an average of 25 percent of their answers, and those who switched to the number 65 had an average of 45 percent of answers [1].

This means that regardless of whether the initial information is relevant to the problem being estimated, it will affect the subject judgment. This is the phenomenon of the anchoring effect. Anchoring effect refers to the systematic influence of initially presented numerical values on subsequent judgments of uncertain quantities, even when presented numbers are obviously arbitrary and therefore unambiguously irrelevant [2].

Kahneman and Tversky proposed two mechanisms for the anchoring effect, one is the anchoring effect caused by the heuristic effect of suggestion, and the other is the anchoring effect caused by insufficient adjustment of the initial value [1]. In the turntable experiment, the numbers on the turntable are suggestive, affecting the subject judgment of the problem, which is mainly caused by system [1]. The inefficient adjustment mechanism means actively adjusting from the initial value, but the degree of this proactive adjustment is often insufficient. The anchoring effect will have an impact on the judgment and decision-making process in many fields, and Shen proves that the use of high anchor value in the retail field can effectively stimulate consumers' enthusiasm for purchasing [3]. Holst et al. verified that previous bids during the auction process can serve as anchors to influence subsequent bids [4]. Hermann & Musshoff verified that discount rates in internet shopping can serve as anchors to cause larger expenses [5].

This article will form a comprehensive understanding of the above topic by collecting, analyzing, and integrating existing research results. More importantly, based on an understanding of the topic of this article, potential appropriate solutions can be explored to better achieve fairness in the field of justice.

2. The Anchoring Effect in Judicial Field

As a phenomenon of cognitive bias, the anchoring effect itself can easily cause inconsistency in judges' judgments in the judicial field and even produce unreasonable judgment results. The anchoring effect generally means that in the process of judging an uncertain situation, people will be deeply impressed by the initial information, even irrelevant information, and unconsciously adjust the information in the final decision. Since the details of the case cannot be perfectly restored, and the judge is in a state of uncertainty from the beginning, the judgment mainly depends on documentary evidence, physical evidence, witness testimony, and other evidentiary materials, the litigation requests of the parties and lawyers involved in the case, and the sentencing recommendations issued by the prosecutor. Often, the defendant's appeals or the prosecutor's sentencing opinions will be put forward before the evidence is issued, so this information can easily be used as an anchor to interfere with the cognition of judges, further causing a certain degree of deviation.

Among them, the main influencing factors are the height of the anchor, and whether the anchor is meaningful and relevant to the case. According to the experiment of Englich & Mussweiler, the verdict of judges largely depends on the sentencing opinion issued by the prosecutor, and another set of experiments in this study showed that the anchor of meaning and the anchor of meaninglessness affect the decisions of judges [6]. And the meta-analysis of Bystranowski et al. also proved, through the study of anchoring effects, that both anchors of meaning and meaninglessness have a significant impact on decision-making [7].

2.1. The Effect of the Initial Value on the Decisions of Judges

Englich and Mussweiler designed an experiment where 19 German judges from criminal courts were randomly divided into two groups and asked to make a decision on the same case [6]. Judges in both groups received the same relevant information, except for the penalties requested by the prosecutor. One group of judges received a request for a 2-month sentence, while the other group received a request for a 34-month sentence. These judges accepted two inappropriate verdicts within a reasonable time. One was too short, and the other was too long [6]. This precisely proves that under identical conditions, just because of different initial values caused by different punishment requests made by prosecutors, it led to significantly different judgments made by two groups of judges, which are clearly against fairness principles. On the other hand, this can be seen as an excellent example of anchoring effects in the judicial field.

But the experimental results show that the decision of judges will be "anchored" by the appeal given by the prosecutor. The first group of judges considered that the time proposed by the prosecutor was seriously insufficient and adjusted the time, but not by a sufficient magnitude, with an average penalty length of 18.78 months. The second group of judges considered that the length of the penalty proposed by the prosecutor was too long, and therefore the sentence was reduced, but the adjustment was also inadequate, with an average penalty of 28.7 months.

There is another heuristic mechanism for the anchoring effect—inefficient adjustment. According to Kahneman & Tversky, inefficient adjustment started with an anchoring number, assessing whether it is too high or too low, and then gradually adjusting the estimate by mentally "moving" the anchor

bias [1]. This adjustment typically ends prematurely, as people stop when they are no longer certain that they should move further.

This experiment shows that regardless of whether a judge is experienced or not, they are affected by the anchoring effect. If the only difference between the lengths of punishment submitted by the prosecutor is that they exceed a reasonable range, then the two groups of judges will differ by about 10 months in their judgment. In criminal law, issues such as sentencing and fines have a significant impact on the personal lives of those involved.

Similarly, Campbell & Bernard found that the plaintiffs' claims had a strong anchoring effect [8]. They convened 766 subjects for a mock court experiment in which plaintiffs' lawyers asked the jury to award \$250,000 or \$5 million in damages to compensate the plaintiffs for suffering from back injuries. In this experiment, simulated jurors watched 6 different experimental conditions produced by different combinations of arguments from the plaintiff and defendant. The experimental results showed that the anchoring effect has an extremely powerful effect [8]. When the plaintiff claims more damages, it will get more damages even if the amount of compensation claimed is unreasonable.

Chapman also has shown that in some cases involving monetary damages, judges will show a tendency to support the plaintiff when they cannot determine whether the claim of plaintiff is reasonable, and the more the plaintiff demands, the more damages will be awarded [9]. Malouff & Schutte also demonstrate that judges are accustomed to following initial recommendations [10]. It follows from this that the judge's decision will be influenced by the initial value provided by anyone. It is conceivable that the judge of second instance would be affected by the decision of the first instance, and the judge of the lower court would also be influenced by the informal opinion issued by the higher court [10].

2.2. The Influence of the Meaning of Anchors on the Decision of Judges

Englich & Mussweiler invited 16 judges from a German Regional High Court as participants and first-year computer science students to play the role of prosecutors to issue sentencing opinions. The experimental results show that judges who were very certain about their sentencing decisions were also influenced by sentencing recommendations, even when those recommendations were made by first-year computer science majors with no legal background. Yao et al. invited 200 undergraduate and graduate law students to participate in the evaluation of compensation for mental damages in a traffic accident liability dispute case [11]. Prior to making judgments, the experiment included unrelated anchors (such as courtroom decoration costs) and related anchors (such as median disposable income among residents) [11]. At the same time, high anchor values and low anchor values are set for meaningful and non-meaningful anchors, respectively. The experimental results indicate that the compensation amount under high anchor value conditions is significantly higher than that under low anchor value conditions [11]. This demonstrates the presence of the anchoring effect, regardless of whether the anchor is meaningful. However, meaningful anchors tend to reinforce the effect, causing the decision amount to be closer to the anchor value compared to meaningless anchor conditions. Similarly, Bystranowski et al. also proved through meta-analysis that both meaningful and meaningless anchors will have a significant impact on the decisions of judges [7]. This shows that the initial value will have a strong impact on the decision-making of judges, but the results also show that some legally important factors, such as legal expertise, the relevance of anchors, and the value of anchors, may have a moderating effect on the impact of anchoring effects.

However, in addition to the initial opinion of the plaintiff, lawyer, or prosecutor and its significance, the judge's decision-making, the judges own emotions will also affect the strength of the anchoring effect. Bodenhausen found that different emotions can also become important factors affecting the strength of the anchoring effect [12]. Arana & Leon also found that the strength of anchoring effects correlates with emotional intensity [13]. While legal practitioners are officially discouraged from

making emotional decisions, both judges and jurors are influenced by emotions. Therefore, there is a need for effective methods to reduce the impact of anchoring effects from external and internal information.

3. The Potential Solutions

It can be seen that the anchoring effect will indeed have a negative impact on judges decision-making to a certain extent, but in the process of judicial practice, if there is a serious impact, the fairness of the judiciary will be challenged. However, the impact of the anchoring effect is objective, and legal practitioners cannot avoid it and can only respond with a positive and positive attitude, so effective methods are needed to reduce the impact of the anchoring effect.

3.1. Improve the Education and Training System for Judicial Personnel

According to the experiment of English, learning more about decision-making can reduce the impact of anchoring effects [14]. Then further improving the professional knowledge training and ethics training system of legal workers is an effective way. If legal practitioners lack professional training related to legal practice and the ability to adjudicate independently, they will not be able to correctly determine the facts. In addition to professional knowledge and ethics training, legal practitioners should also conduct humanistic training and aesthetic training, etc., to enrich the knowledge accumulation of legal practitioners from multiple disciplines and perspectives. Such knowledge accumulation is called “knowledge base” by Twining, which is a collection of objective information, thinking patterns, memory, prejudice, thinking and many other contents, and legal practitioners determination of facts will be greatly affected by their own knowledge collection, therefore, legal practitioners should make their knowledge collection as rich and objective as possible.

3.2. Set a Cap Within Reason

According to the theory of Kahneman, it can set a cap to decrease the influence of anchors [15]. In the experiment of judges, if a reasonable range of punishment time can be set, the impact of the anchoring effect caused by the unreasonable appeal can be reduced. By making a reasonable sentence, the judge avoids imposing a lighter sentence for a lesser offence or a heavier sentence for a heavier offence. This is good for prosecutors, judges and the accused. Because the set cap is an anchor value within a reasonable range, the judicial officer will make a reasonable decision based on this value.

The most important thing is that the caps settings must be within a reasonable range. Robbennolt & Studebaker tested the level of caps on judges decisions by setting a \$100,000 cap, a \$5,000,000 cap, a \$5,000,000 cap, and a control group that did not impose a cap [16]. The experimental results show that as the level of cap increases, the degree and instability of the judgment will increase. In particular, when the level of caps is low or medium, it is able to successfully control the size and stability of the judgment. But when the level of caps was higher, the size and instability of the verdict was stronger than in the control group that did not apply caps. This shows that the negative impact of unreasonable caps will be more serious than not setting caps. Therefore, to set reasonable caps, judges and relevant legal practitioners need to combine more relevant information and opinions to obtain reasonable and effective caps to maintain the stability of judgments.

In addition to decisions of judges, inefficient adjustment mechanism can have an impact on other aspects of life. For example, if a person drives a car from a highway into a city street, although the driver will slow down, his speed will often be higher than the average speed of the city street. And when parents ask children who are playing loud music to adjust the volume of the music to the “appropriate” level, it is difficult for the child to adjust the music to the volume that the parents are satisfied with. This is because it is difficult for both drivers and children to make adequate adjustments

from a high anchor. However, as long as caps can be set in these aspects, the impact of the inefficient adjustment mechanism can be avoided as much as possible.

3.3. Refer to Relevant Legal Precedents

Although there are no identical cases in judicial practice, past precedents on similar cases can be sought. Precedents in similar cases can form an analogy anchor, thereby reducing the impact of anchoring the initial value. However, relevant precedents need to be combined with relevant legal knowledge, because legal provisions may change after the formation of relevant precedents, so combining relevant precedents based on the latest legal provisions can effectively reduce the impact of anchoring effects.

3.4. Provide the Judge with Information That Differs from the Initial Opinion of the Proceedings

Through the research of Epley & Gilovich, adopting the strategy of reverse thinking can effectively reduce the impact of the anchoring effect, and providing judges with information different from the initial information can effectively reduce the impact of the anchoring effect on judges in the judgment process, so it is important for judges to get more heterogeneous and adversarial information [17].

In the current judicial activities, the collegial system, the jury system, and other relevant supporting systems in which multiple people jointly participate in or decide the determination of the facts of the case. The application of law can effectively inhibit some extreme or inappropriate information or decisions presented in the process of judicial adjudication, and can also effectively suppress the anchoring effect brought by such information.

In addition, information issued by authoritative experts such as disability appraisal reports and medical fault appraisals will also have a great impact on judges' judgments. So reducing the negative impact of the anchoring effect can establish a competitive supply mechanism for expert opinions, while increasing the cross-examination of positive and negative experts. It also requires judges to elaborate on the justification for accepting or rejecting an opinion or appraisal information in their judgments.

4. Conclusion

According to the anchoring effect, people's judgments are largely influenced by the initial anchor value, regardless of whether that anchor value is related to the judgment content. To summarize the above content, in the field of justice, anchoring effects still strongly exist. This can be seen specifically from how judges' decisions are greatly influenced by prosecutors' sentencing recommendations and plaintiffs or lawyers' claims, regardless of whether these claims reflect reasonableness. Moreover, information submitted by non-related or non-professional individuals can also have a significant impact on judges' decisions. On one hand, the examples listed in this article are limited and cannot comprehensively explore the influence of anchoring effects in the field of justice through more data. But on the other hand, it must be acknowledged that anchoring effects do indeed bring unfavorable impacts to justice fields which lead to unfair production. Fortunately, this is not inevitable as similar anchors can effectively reduce adverse impacts brought about by anchoring effects. Therefore we should actively research some measures for reducing adverse impacts brought about by anchoring effects in judicial fields including but not limited to: improving practitioners' professional level; setting CAP within reasonable limits or referring relevant precedents which could effectively limit unreasonable anchoring effect; proposing competitive and relevant opinions through corresponding mechanisms such as peer review and jury system etc.

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