

# 52 COGNITIVE BIASES

## SKEWING YOUR INSIGHTS



Learn how to avoid the traps even experts fall into when analyzing data.



Pollfish

# Introduction

Surveys are powerful tools for gathering insights, but cognitive biases can subtly influence both the creation and interpretation of surveys, leading to skewed results. This guide aims to help Pollfish users identify and mitigate common cognitive biases, ensuring that the data collected is as accurate and unbiased as possible. By understanding these biases, you can enhance the reliability of your surveys and make more informed decisions based on the data you gather.

# 52 Cognitive Biases Skewing Your Insights

## 1. Availability Heuristic (Overvaluing easy recall) 🧠

The availability heuristic involves overvaluing information that can be easily recalled from memory, often because it is recent or vivid. This cognitive bias can lead to an overestimation of the importance or likelihood of events that are more memorable, skewing decision-making processes. For example, after hearing about a plane crash, people might overestimate the danger of flying despite statistical evidence showing it is safe.

## 2. Anchoring Bias (Over-reliance on initial info) ⚓

Anchoring bias occurs when individuals rely too heavily on the first piece of information they receive (the "anchor") when making decisions. This initial information unduly influences subsequent judgments and decisions, even if the anchor is irrelevant. For instance, in negotiations, the first offer often sets the tone and heavily influences the final agreement.

## 3. Bandwagon Effect (Following others' actions) 🚶‍♂️

The bandwagon effect is the tendency to adopt certain behaviors, styles, or attitudes simply because others are doing so. This social phenomenon can lead to conformity and collective behavior changes, often regardless of the individual's own beliefs or the evidence available. It's commonly observed in trends, fads, and public opinion shifts.

## 4. Base Rate Fallacy (Preferring specifics over general info) 📊

The base rate fallacy occurs when people ignore general statistical information (base rates) in favor of specific information. This bias can lead to incorrect judgments and decisions, as individuals focus on anecdotal evidence or detailed

stories rather than overall probabilities. For example, overestimating the risk of rare diseases based on dramatic news reports while ignoring actual prevalence rates.

## 5. Belief Bias (Judging by believability)

Belief bias is the tendency to judge the strength of an argument based on the believability of its conclusion rather than on the logical strength of the argument itself. This cognitive bias can cause individuals to accept invalid arguments if they lead to conclusions that align with their pre-existing beliefs, and to reject valid arguments with contrary conclusions.

## 6. Clustering Illusion (Patterns in randomness)

The clustering illusion is the tendency to perceive patterns in random data. This cognitive bias leads people to see clusters or streaks in situations that are statistically independent, such as gambling outcomes or random number sequences. The illusion can affect decision-making by creating a false sense of predictability in inherently random processes.

## 7. Confirmation Bias (Preferring confirming info)

Confirmation bias is the tendency to search for, interpret, and remember information in a way that confirms one's pre-existing beliefs or hypotheses. This bias leads individuals to give more weight to evidence that supports their views while dismissing or ignoring contradictory information. It can result in poor decision-making and reinforcement of false beliefs.

## 8. Conservatism Bias (Discounting new evidence)

Conservatism bias is the tendency to insufficiently revise one's beliefs when presented with new evidence. People with this bias give too much weight to their prior beliefs and not enough to new information, leading to slow or inadequate adjustment of views. This can hinder learning and adaptation to changing circumstances.

## 9. Contrast Effect (Perception altered by comparison) ⚖️

The contrast effect occurs when the perception of one item is influenced by a comparison with another item. This cognitive bias can lead to distorted judgments, as the evaluation of an option is altered by the presence of a contrasting option. For example, a mediocre performance might be perceived as better when following a poor performance, and worse when following an excellent performance.

## 10. Egocentric Bias (Self-focused perception) 🧑

Egocentric bias is the tendency to rely too heavily on one's own perspective and experience, often leading to an overestimation of one's own influence or centrality in events. This bias can affect how individuals interpret social interactions, leading them to believe they are more noticed or important than they actually are.

## 11. Forer Effect (Personal meaning in vagueness) 🌌

The Forer effect, also known as the Barnum effect, is the tendency for people to accept vague or general statements as personally meaningful. This cognitive bias explains why individuals often believe that horoscopes, psychic readings, and personality tests describe them accurately, despite the statements being applicable to a wide audience.

## 12. Framing Effect (Perception shaped by presentation) 🖼️

The framing effect is the phenomenon where people's decisions are influenced by the way information is presented, rather than by the information itself. Different presentations of the same facts can lead to different conclusions. For instance, people are more likely to choose a medical treatment described as having a "90% survival rate" rather than one described as having a "10% mortality rate."

## 13. Gambler's Fallacy (Misjudging chance events) 🎲

The gambler's fallacy is the erroneous belief that past random events can influence the probability of future random events. This bias leads individuals to expect that



outcomes will "even out" in the short term. For example, after a series of coin flips resulting in heads, a person might incorrectly believe that tails is now "due" to occur.

#### **14. Halo Effect (One trait altering overall view)** 🧐

The halo effect is a cognitive bias where the perception of one positive trait of a person or thing influences the perception of their other traits. For instance, if someone is attractive, people might also assume they are intelligent and kind. This bias can distort judgment and decision-making by allowing a single favorable impression to overshadow other relevant attributes.

#### **15. Hindsight Bias (Past events seen as predictable)** 🌟

Hindsight bias is the tendency to see past events as having been predictable and obvious after they have occurred. This cognitive bias can lead individuals to overestimate their ability to have predicted outcomes, thereby distorting their understanding of past events and potentially influencing future decision-making with an unrealistic sense of foresight.

#### **16. Hyperbolic Discounting (Preferring immediate rewards)** ⌚

Hyperbolic discounting is the tendency to prefer smaller, immediate rewards over larger, delayed rewards. This cognitive bias can lead to irrational decision-making, as individuals disproportionately value immediate gratification despite long-term benefits. It explains behaviors such as procrastination and impulsive spending, where the present value is overemphasized.

#### **17. Illusion of Control (Overrating personal influence)** 🎮

The illusion of control is the tendency for people to overestimate their ability to control events, even in situations where they have little or no influence. This cognitive bias can lead to overconfident decision-making and risky behavior, as individuals believe they can influence outcomes more than they actually can, often in gambling or investing scenarios.

## 18. Illusion of Transparency (Thinking emotions are visible) 🧐

The illusion of transparency is the tendency for people to overestimate the extent to which others can discern their internal states, such as emotions or thoughts. This bias can lead to miscommunications and misunderstandings, as individuals might assume that others can easily read their feelings or intentions, even when they are not explicitly expressed.

## 19. Illusory Correlation (Seeing nonexistent relationships) +

Illusory correlation is the perception of a relationship between two variables when no such relationship exists. This cognitive bias can lead to false associations and erroneous conclusions, as people might believe that certain behaviors or events are connected based on coincidental or rare occurrences, rather than actual causation.

## 20. Illusory Truth Effect (Repeated claims seem truer) ↺

The illusory truth effect is the tendency to believe that repeated statements are more likely to be true, regardless of their actual validity. This cognitive bias occurs because familiarity increases perceived accuracy. Repetition of information can lead individuals to accept false or misleading statements simply because they have heard them multiple times.

## 21. Impact Bias (Overestimating emotional effects) 💥

Impact bias is the tendency to overestimate the intensity and duration of emotional reactions to future events. People often believe that positive or negative events will have a more significant and lasting impact on their happiness or well-being than they actually do, leading to distorted decision-making and expectations.

## 22. In-group Bias (Favoring one's group) 👥

In-group bias is the tendency to favor members of one's own group over those of other groups. This cognitive bias can lead to preferential treatment, loyalty, and positive judgments for in-group members, while fostering prejudice and

discrimination against out-group members. It influences social dynamics and decision-making in various contexts, from workplaces to communities.

### 23. Information Bias (Unnecessary information seeking) 🔍

Information bias is the tendency to seek more information than is needed to make a decision, often leading to analysis paralysis. This cognitive bias can result in an overload of data, making it harder to discern relevant information and delaying decision-making processes. It can also lead to the belief that more information will necessarily lead to better decisions, even when it is not the case.

### 24. Insensitivity to Size (Ignoring sample size) 🔬

Insensitivity to sample size is a cognitive bias where people ignore the importance of sample size in evaluating statistical data. This can lead to overgeneralization and incorrect conclusions, as small samples may not accurately represent the larger population. Recognizing the significance of sample size is crucial for making reliable inferences and decisions based on data.

### 25. Loss Aversion (Preferring avoiding losses) 📈

Loss aversion is the tendency to prefer avoiding losses over acquiring equivalent gains. This cognitive bias means that the pain of losing is psychologically twice as powerful as the pleasure of gaining. It influences decision-making, leading individuals to make choices that minimize losses, even at the expense of potential gains, often resulting in conservative or risk-averse behavior.

### 26. Mere Exposure Effect (Favoring familiarity) 🏠

The mere exposure effect is the tendency to develop a preference for things merely because they are familiar. This cognitive bias leads people to favor familiar faces, brands, or ideas over unfamiliar ones, regardless of their actual value or quality. Repeated exposure increases comfort and likability, influencing preferences and choices in various contexts.



## 27. Misinformation Effect (Memory swayed by false info) 🧠

The misinformation effect occurs when a person's memory of an event is altered by misleading information presented after the event. This cognitive bias can lead to the creation of false memories or the distortion of actual memories, affecting the accuracy and reliability of eyewitness testimony and personal recollections.

## 28. Negativity Bias (Focusing on negative aspects) ☁️

Negativity bias is the tendency to give more weight to negative experiences or information than to positive ones. This cognitive bias leads people to focus on and remember negative events more strongly than positive ones, influencing their perceptions, decisions, and emotions. It can affect relationships, news consumption, and overall outlook on life.

## 29. Normalcy Bias (Underestimating disaster odds) 🌀

Normalcy bias is the tendency to underestimate the likelihood and potential impact of a disaster, assuming that things will always function as they normally have. This cognitive bias can lead to inadequate preparation and response to emergencies, as individuals fail to recognize and act on warning signs of significant disruptions or threats.

## 30. Observer-expectancy Effect (Researcher bias in studies) 🧑🔬

The observer-expectancy effect occurs when a researcher's expectations influence the outcome of a study. This cognitive bias can lead to unintentional alterations in the behavior of participants or the interpretation of data, skewing results and compromising the study's validity. Double-blind experimental designs can help mitigate this effect.

## 31. Omission Bias (Preferring inaction harm) 🚫

Omission bias is the tendency to view harmful actions as worse, or less moral, than equally harmful inactions. This cognitive bias leads individuals to prefer inaction over action, even when taking action would lead to a better outcome. It affects

decision-making in ethical dilemmas, medical decisions, and policy-making, where the consequences of action and inaction must be weighed.

### 32. Optimism Bias (Overestimating positive outcomes) 🌞

Optimism bias is the tendency to overestimate the likelihood of positive events and underestimate the likelihood of negative events. This cognitive bias leads individuals to believe that they are less likely to experience negative outcomes compared to others. It can result in overly positive expectations and risk-taking behaviors, affecting personal and professional decisions.

### 33. Ostrich Effect (Ignoring negative info) 🐦

The ostrich effect is the tendency to ignore or avoid negative information, often by metaphorically "burying one's head in the sand." This cognitive bias can lead individuals to overlook important warnings or problems, delaying necessary actions and exacerbating issues. It affects financial decisions, health management, and crisis response, where acknowledging and addressing negative information is crucial.

### 34. Projection Bias (Assuming shared beliefs) ↻

Projection bias is the tendency to assume that others share one's current beliefs, attitudes, and preferences. This cognitive bias leads individuals to project their own perspective onto others, often misjudging others' thoughts and behaviors. It can affect interpersonal relationships, negotiations, and decision-making, where understanding diverse viewpoints is essential.

### 35. Pro-innovation Bias (Favoring new over old) 💡

Pro-innovation bias is the tendency to favor new ideas or technologies over existing ones, assuming that innovation is inherently beneficial. This cognitive bias can lead to the adoption of new solutions without adequate evaluation of their potential drawbacks or comparison to existing alternatives. It affects consumer behavior, technology adoption, and policy-making.

### 36. Pseudocertainty Effect (False sense of certainty) 🔒

The pseudocertainty effect occurs when people feel a false sense of certainty about uncertain outcomes, often due to how choices are framed. This cognitive bias can lead to overconfidence in decisions, especially when risks are not fully understood or presented ambiguously. It affects risk perception and decision-making in contexts like finance, health, and safety.

### 37. Recency Effect (Focusing on latest info) 🕒

The recency effect is the tendency to remember and give more weight to the most recent information encountered. This cognitive bias can influence judgments and decisions by prioritizing recent events or data over earlier ones, regardless of their overall significance. It affects memory recall, performance evaluations, and decision-making processes.

### 38. Risk Compensation (Riskier when feeling safe) ⚠️

Risk compensation is the phenomenon where individuals adjust their behavior in response to perceived safety measures, often becoming riskier when they feel more secure. This cognitive bias can lead to unintended consequences, such as increased recklessness when using safety equipment like seat belts or helmets. It highlights the complex interplay between safety measures and human behavior.

### 39. Salience Bias (Noticing noticeable traits) 🔍

Salience bias is the tendency to focus on the most noticeable or prominent information, often at the expense of less obvious but equally important details. This cognitive bias can distort perception and decision-making, as salient features disproportionately influence judgments. It affects areas like advertising, decision-making, and perception of risks.

### 40. Semmelweis Reflex (Rejecting conflicting new info) ❌

The Semmelweis reflex is the tendency to reject new evidence or knowledge that contradicts established beliefs or norms. This cognitive bias can hinder progress and

innovation, as individuals and institutions resist changing their views despite compelling evidence. It is named after Ignaz Semmelweis, whose findings on hand hygiene were initially rejected by the medical community.

#### **41. Serial Position Effect (Remembering first, last items)** 📖

The serial position effect is the tendency to remember the first and last items in a series better than the middle items. This cognitive bias, encompassing both the primacy effect (better recall of initial items) and the recency effect (better recall of recent items), influences memory recall in contexts like studying, presentations, and advertising.

#### **42. Sunk Cost Fallacy (Continuing due to past investment)** 💰

The sunk cost fallacy is the tendency to continue investing in a decision or project based on the cumulative prior investment (time, money, resources), rather than current and future benefits. This cognitive bias leads individuals to persist with failing endeavors because of the perceived value of already incurred costs, often resulting in greater losses.

#### **43. Survivorship Bias (Focusing on successes only)** 🏁

Survivorship bias is the tendency to focus on the successful outcomes or entities while ignoring those that did not succeed. This cognitive bias can lead to overly optimistic conclusions and misinterpretation of data, as failures are not accounted for. It affects analyses in fields like business, finance, and history, where understanding the full spectrum of outcomes is crucial.

#### **44. Swimmer's Body Illusion (Confusing cause and effect)** 🏊

The swimmer's body illusion is the confusion of selection criteria with results, leading to incorrect causal conclusions. For example, people might think that swimming gives athletes their lean physiques, when in fact, those with certain body types are more likely to become swimmers. This cognitive bias affects judgments about effectiveness and causality in various contexts.

## 45. Unit Bias (Standard amount perception) 📏

Unit bias is the tendency to perceive a single unit of something as the appropriate and optimal amount, regardless of its actual size or necessity. This cognitive bias influences consumption behaviors, such as eating more when served larger portions, and can impact decisions in areas like marketing and health, where the perception of appropriate amounts affects choices.

## 46. Von Restorff Effect (Remembering unique items) ✨

The Von Restorff effect, also known as the isolation effect, is the tendency to remember unique or distinctive items better than common ones. This cognitive bias highlights the importance of distinctiveness in memory recall, influencing areas like advertising, education, and product design, where making something stand out can enhance its memorability.

## 47. WYSIATI (Overvaluing present info) 🌐

WYSIATI, or "What You See Is All There Is," is the cognitive bias where individuals overvalue the information that is immediately available to them and ignore the information that is not. This bias can lead to incomplete and potentially flawed decision-making, as individuals fail to consider factors beyond what is immediately visible or known.

## 48. Zero-risk Bias (Preferring total risk elimination) 🛡️

Zero-risk bias is the preference for reducing a small risk to zero over a greater reduction in a larger risk. This cognitive bias leads individuals to favor options that eliminate risks entirely, even when other options might result in a greater overall reduction of risk. It affects decisions in areas like health, safety, and environmental policy.

## 49. Zero-sum Bias (Seeing gains as others' losses) ⚖️

Zero-sum bias is the tendency to view situations as zero-sum, where one person's gain is perceived as another's loss. This cognitive bias can lead to competitive and

adversarial attitudes, as individuals believe that benefits must come at the expense of others. It affects economic decisions, negotiations, and social interactions.

## 50. Ambiguity Effect (Avoiding uncertain choices) ?

The ambiguity effect is the tendency to avoid options for which the probability of outcomes is unknown. This cognitive bias leads individuals to prefer known risks over unknown ones, even when the latter might offer better potential outcomes. It affects decision-making in contexts like investment, career choices, and policy-making, where uncertainty is a factor.

## 51. Barnum Effect (Personal meaning in vagueness) 🌟

The Barnum effect, similar to the Forer effect, is the tendency to find personal meaning in vague and general statements. This cognitive bias explains why individuals believe that broad descriptions, such as horoscopes or personality assessments, accurately describe them, despite these statements being applicable to a wide audience.

## 52. Focusing Illusion (Overemphasis on one aspect) 🔍

The focusing illusion is the tendency to place too much importance on one aspect of an event or situation, leading to distorted perceptions and judgments. This cognitive bias can cause individuals to overestimate the impact of a single factor on their overall happiness or decision-making, ignoring other relevant factors that contribute to the outcome.



## Conclusion

Awareness of cognitive biases and their potential impact on survey data is crucial for any Pollfish user. By applying the insights from this guide, you can minimize the influence of these biases and improve the accuracy and reliability of your survey results. Continuous learning and vigilance in survey design and analysis will help you maintain the integrity of your data and ensure that your findings are truly representative of your audience's perspectives.