

# List of cognitive biases

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**Cognitive bias** is distortion in the way humans perceive reality (see also cognitive distortion). *See also* the list of thinking-related topic lists. Some of these have been verified empirically in the field of psychology, others are considered general categories of bias.

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## Decision-making and behavioral biases

Many of these biases are studied for how they affect belief formation and business decisions and scientific research.

- Bandwagon effect — the tendency to do (or believe) things because many other people do (or believe) the same. Related to groupthink, herd behaviour, and manias.
- Bias blind spot — the tendency not to compensate for one's own cognitive biases.
- Choice-supportive bias — the tendency to remember one's choices as better than they actually were.
- Confirmation bias — the tendency to search for or interpret information in a way that confirms one's preconceptions.
- Congruence bias — the tendency to test hypotheses exclusively through direct testing, in contrast to tests of possible alternative hypotheses.
- Contrast effect — the enhancement or diminishment of a weight or other measurement when compared with recently observed contrasting object.
- Déformation professionnelle — the tendency to look at things according to the conventions of one's own profession, forgetting any broader point of view.
- Endowment effect — "the fact that people often demand much more to give up an object than they would be willing to pay to acquire it".<sup>[1]</sup>
- Focusing effect — prediction bias occurring when people place too much importance on one aspect of an event; causes error in accurately predicting the utility of a future outcome.
- Hyperbolic discounting — the tendency for people to have a stronger preference for more immediate payoffs relative to later payoffs, the closer to the present both payoffs are.
- Illusion of control — the tendency for human beings to believe they can control or at least influence outcomes that they clearly cannot.
- Impact bias — the tendency for people to overestimate the length or the intensity of the impact of future feeling states.
- Information bias — the tendency to seek information even when it cannot affect action.
- Loss aversion — "the disutility of giving up an object is greater than the utility associated with

- acquiring it".<sup>[2]</sup> (see also sunk cost effects and Endowment effect).
- Neglect of probability — the tendency to completely disregard probability when making a decision under uncertainty.
  - Mere exposure effect — the tendency for people to express undue liking for things merely because they are familiar with them.
  - Omission bias — The tendency to judge harmful actions as worse, or less moral, than equally harmful omissions (inactions).
  - Outcome bias — the tendency to judge a decision by its eventual outcome instead of based on the quality of the decision at the time it was made.
  - Planning fallacy — the tendency to underestimate task-completion times.
  - Post-purchase rationalization — the tendency to persuade oneself through rational argument that a purchase was a good value.
  - Pseudocertainty effect — the tendency to make risk-averse choices if the expected outcome is positive, but make risk-seeking choices to avoid negative outcomes.
  - Selective perception — the tendency for expectations to affect perception.
  - Status quo bias — the tendency for people to like things to stay relatively the same (see also Loss aversion and Endowment effect).<sup>[3]</sup>
  - Von Restorff effect — the tendency for an item that "stands out like a sore thumb" to be more likely to be remembered than other items.
  - Zero-risk bias — preference for reducing a small risk to zero over a greater reduction in a larger risk.

## Biases in probability and belief

Many of these biases are often studied for how they affect business and economic decisions and how they affect experimental research.

- Ambiguity effect — the avoidance of options for which missing information makes the probability seem "unknown".
- Anchoring — the tendency to rely too heavily, or "anchor," on one trait or piece of information when making decisions.
- Anthropropic bias — the tendency for one's evidence to be biased by observation selection effects.
- Attentional bias — neglect of relevant data when making judgments of a correlation or association.
- Availability heuristic — a biased prediction, due to the tendency to focus on the most salient and emotionally-charged outcome.
- Clustering illusion — the tendency to see patterns where actually none exist.
- Conjunction fallacy — the tendency to assume that specific conditions are more probable than general ones.
- Gambler's fallacy — the tendency to assume that individual random events are influenced by previous random events. For example, "I've flipped heads with this coin so many times that tails is bound to come up sooner or later."
- Hindsight bias — sometimes called the "I-knew-it-all-along" effect, the inclination to see past events as being predictable.
- Illusory correlation — beliefs that inaccurately suppose a relationship between a certain type of action and an effect.
- Ludic fallacy — the analysis of chance related problems with the narrow frame of games. Ignoring the complexity of reality, and the non-gaussian distribution of many things.
- Neglect of prior base rates effect — the tendency to fail to incorporate prior known probabilities which are pertinent to the decision at hand.
- Observer-expectancy effect — when a researcher expects a given result and therefore unconsciously manipulates an experiment or misinterprets data in order to find it (see also subject-expectancy effect).
- Optimism bias — the systematic tendency to be over-optimistic about the outcome of planned actions.
- Overconfidence effect — the tendency to overestimate one's own abilities.
- Positive outcome bias — a tendency in prediction to overestimate the probability of good things

happening to them (see also wishful thinking, optimism bias and valence effect).

- Primacy effect — the tendency to weigh initial events more than subsequent events.
- Recency effect — the tendency to weigh recent events more than earlier events (see also peak-end rule).
- Reminiscence bump — the effect that people tend to recall more personal events from adolescence and early adulthood than from other lifetime periods.
- Rosy retrospection — the tendency to rate past events more positively than they had actually rated them when the event occurred.
- Subadditivity effect — the tendency to judge probability of the whole to be less than the probabilities of the parts.
- Telescoping effect — the effect that recent events appear to have occurred more remotely and remote events appear to have occurred more recently.
- Texas sharpshooter fallacy — the fallacy of selecting or adjusting a hypothesis after the data are collected, making it impossible to test the hypothesis fairly.

## Social biases

Most of these biases are labeled as attributional biases.

- Actor-observer bias — the tendency for explanations for other individual's behaviors to overemphasize the influence of their personality and underemphasize the influence of their situation. This is coupled with the opposite tendency for the self in that one's explanations for their own behaviors overemphasize their situation and underemphasize the influence of their personality. (*see also fundamental attribution error*).
- Egocentric bias — occurs when people claim more responsibility for themselves for the results of a joint action than an outside observer would.
- Forer effect (aka Barnum Effect) — the tendency to give high accuracy ratings to descriptions of their personality that supposedly are tailored specifically for them, but are in fact vague and general enough to apply to a wide range of people. For example, horoscopes.
- False consensus effect — the tendency for people to overestimate the degree to which others agree with them.
- Fundamental attribution error — the tendency for people to over-emphasize personality-based explanations for behaviors observed in others while under-emphasizing the role and power of situational influences on the same behavior (*see also actor-observer bias, group attribution error, positivity effect, and negativity effect*).
- Halo effect — the tendency for a person's positive or negative traits to "spill over" from one area of their personality to another in others' perceptions of them (*see also physical attractiveness stereotype*).
- Illusion of asymmetric insight — people perceive their knowledge of their peers to surpass their peers' knowledge of them.
- Illusion of transparency — people overestimate others' ability to know them, and they also overestimate their ability to know others.
- Ingroup bias — the tendency for people to give preferential treatment to others they perceive to be members of their own groups.
- Just-world phenomenon — the tendency for people to believe that the world is "just" and therefore people "get what they deserve."
- Lake Wobegon effect — the human tendency to report flattering beliefs about oneself and believe that one is above average (*see also worse-than-average effect, and overconfidence effect*).
- Notational bias — a form of cultural bias in which a notation induces the appearance of a nonexistent natural law.
- Outgroup homogeneity bias — individuals see members of their own group as being relatively more varied than members of other groups.
- Projection bias — the tendency to unconsciously assume that others share the same or similar thoughts, beliefs, values, or positions.
- Self-serving bias — the tendency to claim more responsibility for successes than failures. It may also manifest itself as a tendency for people to evaluate ambiguous information in a way beneficial to their interests (*see also group-serving bias*).
- Self-fulfilling prophecy — the tendency to engage in behaviors that elicit results which will

(consciously or subconsciously) confirm our beliefs.

- System justification — the tendency to defend and bolster the status quo, i.e. existing social, economic, and political arrangements tend to be preferred, and alternatives disparaged sometimes even at the expense of individual and collective self-interest.
- Trait ascription bias — the tendency for people to view themselves as relatively variable in terms of personality, behavior and mood while viewing others as much more predictable.

## Memory errors

*Further information: Memory bias*

- False memory
- Hindsight bias, also known as the 'I-knew-it-all-along effect'.
- Selective Memory

## Common theoretical causes of some cognitive biases

- Attribution theory, especially:
  - Salience
- Cognitive dissonance, and related:
  - Impression management
  - Self-perception theory
- Heuristics, including:
  - Availability heuristic
  - Representativeness heuristic
- Adaptive Bias

## Notes

1. <sup>^</sup> (Kahneman, Knetsch, and Thaler 1991: 193) Richard Thaler coined the term "endowment effect."
2. <sup>^</sup> (Kahneman, Knetsch, and Thaler 1991: 193) Daniel Kahneman, together with Amos Tversky, coined the term "loss aversion."
3. <sup>^</sup> (Kahneman, Knetsch, and Thaler 1991: 193)

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## See also

- Attribution theory
- Systematic bias
- Groupthink
- Logical fallacy
- Media bias
- Self-deception
- System justification

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