

Confirmation Bias

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Confirmation bias is the tendency for humans to look for evidence that confirms their pre-existing beliefs and disregard beliefs that do not align with them. It is a concept that has been developed for over 60 years in the field of psychology, evolving in definition as more research analyzes its impact on human behavior. Confirmation bias is an overarching term that encapsulates similar concepts such as congruence bias, biased interpretation, and biased memory. These ideas are present in multiple areas in our society; confirmation bias is present in social media, politics, and the criminal justice system all of which can be harmful to the community and world as a whole. The broad term can explain how faulty information processing in humans often is.

Origin

The concept of confirmation bias was first developed in 1960 by psychologist Peter Wason who conducted a study which investigated the extent to which young adults sought out confirming evidence in order to draw conclusions in a task called the 2-4-6 Task (Wason, 1960). Participants in this study were asked to figure out the rule for a set of three numbers such as 2, 4, 6 or 3, 10, 13. The observation was that participants came up with incredibly specific and irrational rules and only attempted to test to confirm their rules rather than disprove it. The researcher's only rule for all sets of numbers was "any ascending sequence". The task was designed to showcase the faults of human reasoning.

The characteristics of confirmation bias have changed over the 60 years since it was first introduced into the field of psychology. As more research investigates its nature, it became an umbrella term for more specific types of biases.

Types of Confirmation Bias

Confirmation Bias has three different terms within its parameters that must be explained to understand its uses within different forms of research. The three types of confirmation bias established by Iqra Noor are known as Biased Search for Information or Congruence Bias, Biased Interpretation, and Biased Memory (Noor, 2020).

Biased Search for Information or Congruence bias, explains an individual's pursuit for evidence (in research) through a one-sided outlook that only supports that individual's set beliefs (Noor, 2020). An example of this bias can be found in the wording of a question. When using Google to search answers for a question, the order in which a question is asked can be seen as congruence bias, like "Are Dogs better than Cats" vs "Are Cats better than Dogs". This results in the first animal being the favored belief and the latter being disregarded because before typing the question, the congruence bias has already been established (Noor, 2020).

The second type of confirmation bias is Biased Interpretation which shows that individuals interpret or gain evidence (in research) in favor of existing beliefs by assessing evidence that confirms set beliefs differently or favorably than evidence that might challenge set beliefs (Noor 2020). Research has shown that individuals lean towards not changing their beliefs, even after receiving evidence or "proof" due to their form of interpretation (Taber & Lodge, 2006, as cited Noor, 2020). An example of this is a study done at Stanford University where of two groups of participants have previous beliefs in support or against capital punishment. Participants were provided with two studies: for and against capital punishment. The results showed all participants siding with their original beliefs and supported their stance by using only

evidence in favor of their belief and disregarded evidence against that belief (Lord, Ross, & Lepper, 1979, as cited Noor, 2020).

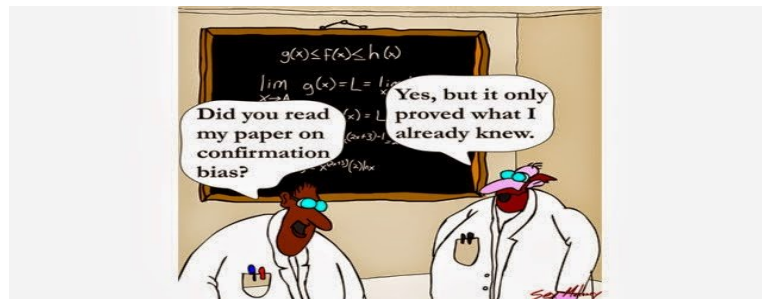
The third is Biased Memory, is the condition where individuals confirm their current beliefs by selecting what they remember or what information they recall (Noor, 2020). A theory, known as Schema Theory believes information or knowledge that supports prior beliefs is kept in memory, but information that is not is discarded, which plays a role in biased memory. Memory confirmation bias also has a place in stereotype maintenance and trait maintenance (Noor, 2020). An example of this behavior is in an experiment where participants choose a women's career based on files of introverted and extroverted traits. The results depicted participants choosing the career between librarian or real-estate salesman based on which trait they remembered more of. (Snyder & Cantor, 1979, as cited Noor, 2020).

The three types of Confirmation Bias impact components of society in everyday life from stereotype maintenance of minorities to decisions and opinions on political beliefs. The beliefs and thoughts of oneself and others will likely always be processed in a favorable state of mind but it is important to be subjective and open minded to other ideas and beliefs to avoid these biases as much as possible.

Examples in Social Setting

In this current era, people can have access to any desired news platform via social media - including any superficial media outlet of one's choosing. Easy to digest yet simplified media is, while convenient, leads to issues regarding bias. While this absorbing information enables us to get a fast overview, it can also establish confirmation bias (Garett 2017; and Ling, 2020).

Currently, the world is in the midst of a pandemic where confirmation bias has a role with each anti-vaxxers. With each anti-vaxxer material read; an anti-vaxxer likely becomes more entrenched in their views (Ling, 2020). One may wonder, for example, if this stance on immunization would alter in light of the current COVID-19 epidemic. Additionally, Ling (2020) raises the question of whether the anti-vaxxer's stance would be changed in the long term if they were given counter-confirmatory evidence that vaccinations work, or will it cement their position? Will biases spiral higher if the events in a news cycle push a person in the direction of their preferences, or will they fade with time? Is it necessary for a big event (e.g., the COVID-19 epidemic) to upset these attitudes and beliefs?. One's attitudes and views can be supported, encouraged, and nurtured by the social system in which we are ingrained.



Moreover, Ling (2020) stated that social relationships could assist in binding people to their worldview. Social networks can act as a buffer. People in one's social network may encourage, coax, and even scare them back into alignment if they start to falter in their orientation. As individuals shift away from traditional news channels and toward interpersonal news exchange, the issue of confirmation bias is becoming more prominent (Duffy & Ling, 2020).

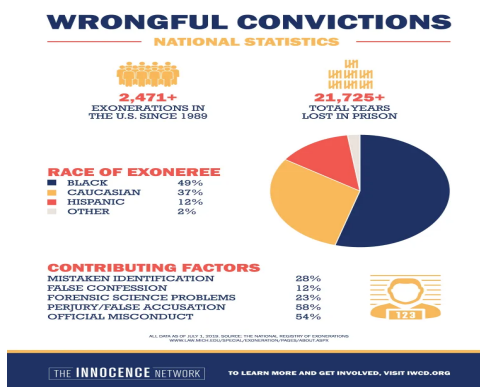
Bias in the Criminal Justice System

Confirmation Bias can influence opinions and mindsets. This bias is similar to cognitive dissonance (holding false beliefs or perceptions) and in-group bias (showing preference to those in the same group) and is ever present in today's world. Congruence Bias, Biased Interpretation, and Biased Memory are all problems that shape history itself. Especially within the criminal justice system.

For the last 40 years, there have been countless sentences many of which are considered excessive and often drug-related. Since 1980, drug-related incarcerations have gone from 40,000 to over 400,000 as of 2019 ("*Criminal Justice Facts*", 2021). The majority of these sentences have harsh punishments and are largely unjust. Unjust in this case being bogus, excessive, or otherwise questionable convictions. The bias here could simply be that the convicting judge didn't like the convicted. An overwhelming number of recipients of these harsh punishments are African-American. Although there has been a steady rise in exonerations per year, unjust punishment is still a rampant problem. Each exonerate has in common an excessive sentence originating from low-level drug offenses likely because drug offenses are easy to misrepresent or even fake. All as a result of direct or indirect confirmation bias.

The vast majority of these drug-related convictions are also false convictions. False convictions are closely related to bias of all kinds. Many of these can be traced to witness and/or jury malpractice in the form of mistakes, lies, errors, and of course, bias. On the end of the police, there can be official misconduct, forensic errors, and bias. Lawyers and judges have the main role in swaying juries and determining the outcome of a given trial, but these lawyers and judges have little to keep them in check. The result of this is allowing their own biases to surface

and manifest. These are the tools by which false convictions happen and a grim result of confirmation bias.



Since 1989, there have been under 3000 exonerations yet there should be countless more (“*Today is Wrongful Conviction Day*”, 2019). This is a larger societal issue which can only be changed through awareness of the issue and attempts to reduce one’s own bias. An ultimate solution would be to remove all bias which is impossible and perhaps tyrannical. More exonerations are happening due to raised awareness of the issues of bias and excessive sentencing but the problem will always be here to stay. The war on drugs, exonerations, and the means by which they happen are the perfect illustration of confirmation bias in motion.

It is clear that everyone at some point in their lives have encountered such biases and confirmation bias is one of them. Confirmation bias is present in all facets of life with awareness of it being the only legitimate way of combating biases. In everyday life all are guilty of seeking facts and truths that they want to believe and ignoring those that may challenge deeply held opinions. All of the above studies support the idea of seeking out more meaningful and less biased media and constantly considering one’s own biases as the most effective way of keeping confirmation bias in check. The further biases of all kinds are understood the more modern and

historical events become believable. In understanding confirmation bias, the faults in human reasoning become more apparent.

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Our selection strategy followed an order we deemed logical, starting with definition, it's history, and how it applies to the world. Doing this allows a thorough understanding of the topic and why it is relevant (and why we chose it to begin with). With such an important topic it only felt natural to include an abundance of real world application of the term.