Confirmation Bias

"*Confirmation Bias*"

> *"the tendency to process information by looking for, or interpreting, information that is consistent with one's existing beliefs. This biased approach to decision making is largely unintentional and often results in ignoring inconsistent information. Existing beliefs can include one's expectations in a given situation and predictions about a particular outcome. People are especially likely to process information to support their own beliefs when the issue is highly important or self-relevant."* (The Encyclopedia Britannica, britannica.com/science/confirmation-bias)

"When the only tool you have is a hammer, every problem looks starts to look like a nail."

Psychological science has found that experts tend to find what they "expect" to find. This goes by different names: "*Confirmatory Bias*", the "*Rosenthal Effect*" ("*Pygmalion Effect*"), the "*Rosenhan Experiment* (*Sane in Insane Places*)", "*Mental Set*", "*Primacy Effect*", or "*First Impressions*" dynamic. The CIB expert needs to demonstrate they are cognizant of this phenomenon that adversely affects objective decision-making and show reasonable steps have been taken to avoid the various pitfalls. For example - the tendency for information gathering to be influenced by first impressions or a bias. There is a natural (albeit it unintentional) tendency to accept the essential accuracy of the self-reports of subjects in a study.

- Confirmation biases can occur through a researcher engaging in hypothesis-confirming information seeking and interpretation, overweighting confirmatory signs and underweighting dis-confirmatory signs, especially in unstructured interviews.
- Interviewers' characteristics and biases can influence how interviewers interpret information and determine subsequent queries (Tanaka-Matsumi, 2004).
- A lack of training and experience on the part of the research interviewers can result in erroneous information and weaken the validity of their findings (Bootzin & Ruggill, 1988).
- Data gathered from interviews can be biased due to social desirability and participants' own discomfort with disclosing personal information (Guinn et al., 2010). Self-report data can be accurate, but also can be an exaggeration or a minimization (Haynes, Mumma, & Pinson, 2009; Haynes, O'Brien, & Kaholokula, 2011).
- Because the interview method requires retrospective recall, information gathered is prone to memory errors and recall biases (Graham, Catania, Brand, Duong, & Canchola, 2003)."

Psychological research frequently uses techniques for mitigating the effects of confirmation biases, called "*blind*" or "*double-blind*" experimental protocols (Gluud, 2006). This is where the interviewer and/or the interviewee do not know the underlying purpose of the study. This helps to eliminate confirmatory bias.

Bottom Line:
Investigators are prone to confirmation biases. Consider asking the investigator on the stand:

- What is confirmatory bias?
- How do you correct for confirmatory bias?
- Did you systematically rule out rival explanations? What contradictory points of data were found?

It is a type of cognitive bias and a systematic error of inductive reasoning. People display this bias when they gather or remember information selectively, or when they interpret it in a biased way. The effect is stronger for emotionally charged issues and for deeply entrenched beliefs. People also tend to interpret ambiguous evidence as supporting their existing position. Biased search, interpretation and memory have been invoked to explain attitude polarization (when a disagreement becomes more extreme even though the different parties are exposed to the same evidence), belief perseverance (when beliefs persist after the evidence for them is shown to be false), the irrational primacy effect (a greater reliance on information encountered early in a series) and illusory correlation (when people falsely perceive an association between two events or situations).

A series of experiments in the 1960s suggested that people are biased toward confirming their

existing beliefs. Later work re-interpreted these results as a tendency to test ideas in a one-sided way, focusing on one possibility and ignoring alternatives. In certain situations, this tendency can bias people's conclusions. Explanations for the observed biases include wishful thinking and the limited human capacity to process information. Another explanation is that people show confirmation bias because they are weighing up the costs of being wrong, rather than investigating in a neutral, scientific way.

Confirmation biases contribute to overconfidence in personal beliefs and can maintain or strengthen beliefs in the face of contrary evidence.

On the cognition of causal relationships.
Toda, Masanao. Japanese Journal of Behaviormetrics, Vol 14(1), Sep, 1986. pp. 60-70.
Abstract:

> Discusses the theoretical bases, process, and functions of causal attributions. An evolutional view is presented. Attribution bias, the illusion of control, confirmatory attribution, and the effects of causal implications on memory are considered.

Personal hypothesis testing: The role of consistency and self-schema.
Strohmer, Douglas C., et al.
Journal of Counseling Psychology, Vol 35(1), Jan, 1988. pp. 56-65.
Abstract:

> We report the results of two experiments that examined the way individuals test hypotheses about themselves. Both experiments were based on the work of Snyder (e.g., Snyder, 1981; Snyder & Skrypnek, 1981), which suggests that individuals have a **confirmatory bias** when testing hypotheses about others and about themselves. In Experiment 1, we examined the extent to which this **bias** toward confirmation persists when a negative (e.g., depression) or nonconsistent (not consistent with the individual's evaluation of him- or herself) personal hypothesis is tested. Results suggest that the negative or positive nature of a personal hypothesis does not directly influence the way individuals test their hypothesis. However, the way individuals tested personal hypotheses was influenced by hypothesis consistency. In Experiment 2, we examined the relation of a cognitive schematic variable (i.e., vulnerability for depression) and hypothesis testing. Results suggest that vulnerability is related to the way individuals test a personal hypothesis about depression. Vulnerable, low-depression participants were **confirmatory** when testing a depression hypothesis, whereas nonvulnerable, low-depression participants were disconfirmatory. We discuss implications for counseling and future directions for research.

The presumption of guilt in suspect interrogations: Apprehension as a trigger of confirmation bias and debiasing techniques.
Lidén, Moa, et al.
Law and Human Behavior, Vol 42(4), Aug, 2018. pp. 336-354.
Abstract (English):

> This research tests whether a police officer’s decision to apprehend a suspect triggers confirmation bias during an interrogation. The study also tests two strategies to reduce confirmation bias: (1) decoupling decision to apprehend from interrogation and (2) reducing cognitive load for the interrogating police officer. In Experiment 1, Swedish police officers (N = 60) were faced with 12 scenarios in which they either had to decide for themselves whether to apprehend a suspect or were informed about the corresponding decision by another police officer or a prosecutor. Participants then prepared questions for a suspect interrogation and evaluated the trustworthiness of the suspect’s denial or

confession. The same method was used in Experiment 2 but with law and psychology students (N = 60) as participants. In Experiment 3, psychology students (N = 60) prepared interrogation questions either by freely producing their own or by choosing questions from a preset list. Overall, apprehended suspects were interrogated in a more guilt presumptive way and rated as less trustworthy than non apprehended suspects. However, the tested debiasing techniques, primarily reducing cognitive load for the interrogating police officer, hold some potential in mitigating this bias.

Testing the waters: An investigation of the impact of hot tubbing on experts from referral through testimony.

Perillo, Jennifer T., et al.

Law and Human Behavior, Vol 45(3), Jun, 2021. pp. 229-242.

Abstract (English):

Objective: The present research examined whether concurrent expert testimony ('hot tubbing') and court-appointed testimony reduced adversarial allegiance in clinical experts' judgments compared with traditional adversarial expert testimony. Hypotheses: We predicted Hypothesis 1: Defense experts would render more not responsible judgments and lower ratings of criminal responsibility than would prosecution experts; Hypothesis 2: Adversarial allegiance effects on experts' judgments would be heightened for adversarial experts and attenuated for concurrent experts over time; Hypothesis 3: Adversarial and concurrent experts would report higher dissonance than would court-appointed experts and adversarial experts' ratings would increase over time, concurrent experts' ratings would decrease, and court-appointed experts' ratings would remain unchanged. Method: Clinicians and advanced clinical doctoral students conducted simulated criminal responsibility evaluations for the prosecution, defense, or court. We categorized participants as favoring the prosecution or defense based on their preexisting attitudes and randomly assigned them to the adversarial, concurrent, or court-appointed expert testimony conditions. Participants completed a dichotomous responsibility judgment, strength of responsibility ratings, and cognitive dissonance measure after initial evidence review (n = 93), report completion (n = 52), and testimony (n = 48). Concurrent experts generated a joint report outlining areas of agreement and disagreement before providing testimony. Results: Concurrent testimony did not eliminate adversarial allegiance. Adversarial and concurrent experts' perceptions of responsibility did not significantly differ (d = .04, 95% CI [−.64, .71]) or change over time (ηp2 = .03); however, prosecution experts—across testimony types—rated the defendant as significantly more responsible than did defense experts (d = 1.87, 95% CI [1.06, 2.67]). Concurrent and adversarial experts did not differ in their reports and minimally differed in testimony content. Conclusions: Experts who initially favored the prosecution or defense showed adversarial allegiance regardless of expert testimony method, and we observed no attenuation of this bias over the course of their case involvement.

Evidence-based suspicion and the prior probability of guilt in police interrogations.

Moody, Sarah A., et al.

Law and Human Behavior, Vol 47(2), Apr, 2023. pp. 307-319.

Abstract (English):

Objective: False confessions are prevalent in wrongful convictions, and much research has examined investigation factors and interrogation methods that can contribute to false confessions. However, not all these factors are under the control of the legal system, and improving the effectiveness of interrogation methods has a limited effect on evaluating the veracity of confessions. We suggest incorporating an important but often-neglected factor

in interrogations: suspects' prior probability of guilt ('the prior,' a Bayesian term meaning suspects' likelihood of being guilty before police conduct an interrogation). Method: By connecting interrogation practices to probability concepts, we discuss a gap in the literature between questions traditionally answered by lab research and a distinct question faced by the legal system. Results: On the basis of our analysis, we argue that police should increase priors by collecting additional evidence to satisfy an evidence-based suspicion of guilt before interrogating suspects. Conclusions: Implementing the evidence-based suspicion practice can help police reduce false confessions, reallocate investigation time and resources, and assist prosecutors in building strong cases for trial. Likewise, researchers should expand the empirical and legal questions they ask and incorporate priors into their interrogation experiments to improve the generalizability of findings to the criminal justice system.