The Psychology of Bias: Understanding and Eliminating Bias in Investigations
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“Our experiences instantly become part of the lens through which we view our entire past, present, and future, and like any lens, they shape and distort what we see.”
—Daniel Gilbert, *Stumbling on Happiness*

As employment investigators we promise to come to an “unbiased” conclusion of what occurred in the workplace. But if we ourselves are impacted by biases of which we are unaware, how can we be sure that we are delivering on this? This article is intended to educate investigators about different types of bias and provide information on studies that have shown the impact of bias on investigators and others.

**Bias – Some Basics**

Bias may be defined as: a strong inclination of the mind; a preconceived opinion or irrational preference or prejudice; an inclination, especially one that prevents an unprejudiced consideration of a question. In other words, prejudice.

Although we may associate the term “bias” with prejudice against a disadvantaged group, the term is broader and applies to all types of preferences and prejudices. Some of these are idiosyncratic and reflect personal tastes or experiences. Others are impacted by societal images and norms. The types of biases about which an investigator should be concerned are those that may lead the investigator to faulty conclusions.

Cognitive bias may be defined as: the human tendency to make systematic errors in certain circumstances based on cognitive factors rather than evidence. Such biases can result from information-processing shortcuts called *heuristics*.

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2 Heuristic is a term for experience-based techniques that help in problem solving, learning and discovery. A heuristic method is used to come to a solution rapidly that is hoped to be close to
include errors in judgment, social attribution, and memory. Cognitive biases are a common outcome of human thought, and often drastically skew the reliability of anecdotal and legal evidence.

**Bias Against Disadvantaged Groups**

*Actors do not always have conscious, intentional control over the processes of social perception, impression formation and judgment that motivate their actions.*


Researchers have developed a test called the Implicit Association Test (IAT) that focuses on discovering unconscious bias towards or against certain groups of people. These biases have come to be known as “implicit biases” and are often based on social stereotypes that have led to an association between a group and a trait.

The IAT has been taken more than 2.8 million times. The test measures relative speeds in key stroking when responding to four categories – images of members of groups that have been traditionally disadvantaged (e.g. African Americans, overweight people, gays and lesbians, older people), images of members of groups that have been traditionally advantaged (European Americans, thin people, straight people, young people), images or words with positive associations (happiness, goodness) and images or words with negative associations (depression, war). A longer delay in key stroking when asked to associate positive words with a disadvantaged group, as compared with an advantaged group, shows a bias against that group. Individuals can take the test on a computer and the tests are available online.

Prior to taking the test, individuals are asked to rate themselves on bias, and that rating is compared with their scores on implicit bias tests. There is a significant difference between the ratings. The test has been taken by thousands of individuals. Scoring shows that across 12 topics, 42% of respondents rated themselves as at or near neutral, yet only 18% of respondents demonstrated sufficiently small implicit bias to be judged as implicitly neutral. About 70% showed an implicit bias in favor of the advantaged group (European Americans) whereas 12% showed a bias in favor of the disadvantaged group (African Americans). Further, IAT results consistently revealed greater bias in favor of the advantaged group than did the explicit measures.

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3 More information about the IAT, along with the tests themselves, is at [https://implicit.harvard.edu](https://implicit.harvard.edu)

Bias Studies

Numerous studies have demonstrated that certain traditionally disadvantaged groups are treated differently, to their detriment. Some of these studies utilized IAT data whereas others were done before the IAT was developed. The studies show the very real impact of bias in people’s actions and inactions. No doubt many (if not most) of the people treating others differently are unaware of doing so. This is unconscious bias playing itself out in everyday life.

In a study involving tipping cab drivers, the following findings were made:

- White cab drivers were tipped 61% more than black drivers and 64% more than other non-white drivers in the sample.
- Black passengers tipped white drivers 48% more than black drivers.
- White passengers tipped white drivers 49% more than black drivers.
- Latino passengers tipped white drivers 146% more than black drivers.
- Black drivers were 88% more likely to be stiffed than white drivers and white passengers were nearly twice as likely to stiff black drivers than white drivers.
- Passengers of all races tended to round up for white drivers and round down for black drivers.\(^5\)

A study of restaurant tipping showed that customers of both races discriminated against black service providers by tipping them less than white service providers.\(^6\)

In another study identical resumes were submitted in response to help wanted ads. The only differences were the names on the resumes. Some were submitted with traditionally African American names (e.g. Tamika Jones) while others were sent with traditionally white names (e.g. Emily Ryan). The white names received 50 percent more responses across the board.\(^7\)

In a study examining gender bias, identical scripts were rated, some with the name of a female playwright and others with the name of a male playwright. The twist in these results was that it was the female reviewers that revealed a bias. The female reviewers rated the script with the female name significantly

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lower than the script with the male name whereas male raters rated them the same.\textsuperscript{8}

Two studies conducted in the 1970s examined how nonverbal behavior impacts interracial interactions. In the first study, interviewers who did not know the purpose of the study were videotaped while interviewing both black and white job applicants. The applicants were aware of the study and had been trained to interact a set way, so that there would be consistency in the manner in which the applicants presented themselves. The results showed that interviewers demonstrated greater indications of nonverbal discomfort when interviewing the black applicants. For example, there was less “nonverbal immediacy,”\textsuperscript{9} less time spent in the interview, and higher rates of speech errors.

In the second, follow up study, white interviewers were trained to conduct interviews of whites applicants in the manner that the previous white interviewers had with the black applicants. That is, they were trained to interact with less nonverbal immediacy, spend less time, and make more speech errors. In this study the white interviewees did not know the purpose of the study. The result was that the white interviewees performed worse in the interview and were more nervous and distant in their interaction style. The interviewees also judged the interviewer to be less friendly.\textsuperscript{10}

In a more recent study, white undergraduates were videotaped while being interviewed separately by white and black experimenters. The subjects also completed a race attitude IAT. Those subjects whose race IAT scores indicated strong implicit preference for whites relative to blacks hesitated less and made fewer speech errors when speaking to the white experimenter than to the black experimenter. They also spoke to and smiled more at the white experimenter than the black experimenter. These subtle and spontaneous behaviors suggested a higher level of comfort interacting with the white experimenter.\textsuperscript{11}


\textsuperscript{9} Nonverbal Immediacy is a term used among communication researchers to describe nonverbal behaviors that communicate liking, a positive evaluation of others, or positive affect to others. These behaviors typically include looking toward someone, leaning toward someone, touching someone in a non-threatening manner, sitting near someone, smiling, and speaking in an animated way. Research demonstrates that the more a communicator employs this type of behavior, the more others will like, evaluate highly, and prefer that communicator. Nonverbal immediacy is also positively correlated with perceptions of communicator competence, goodwill, and trustworthiness (all components of credibility).


These studies have significant implications for investigators. If an investigator is less comfortable with an individual of a different race or background, and therefore less able to establish rapport, the ability of the investigator to obtain information and assess credibility may be compromised.

The studies above focus on bias regarding characteristics that are protected under the law. However many biases go beyond these categories. In Blink\textsuperscript{12}, Malcolm Gladwell discusses his own research on the impact of height. In an interview about this, Gladwell states:

\begin{quote}
I have a chapter where I talk a lot about what it means for a man to be tall. I called up several hundred of the Fortune 500 companies in the U.S. and asked them how tall their CEOs were. And the answer is that they are almost all tall. Now that’s weird. There is no correlation between height and intelligence, or height and judgment, or height and the ability to motivate and lead people. But for some reason corporations overwhelmingly choose tall people for leadership roles. I think that’s an example of bad rapid cognition: there is something going on in the first few seconds of meeting a tall person which makes us predisposed toward thinking of that person as an effective leader.
\end{quote}

**Bias in the Legal System**

Studies have also shown the impact on bias in civil rights cases and in criminal sentencing. One study found that African American judges, as a group, and white judges, as a group, perceive racial harassment differently (regardless of political affiliation). The statistics showed:

- Racial harassment plaintiffs are successful, on average, 22% of the time.
- With an African American judge presiding, they were successful 45.8% of the time.
- With a judge appointed by a Democratic 29.3%; Republican 17%.
- Female judges found for the plaintiff 25.6%; male 21.3%\textsuperscript{13}.

Another study that involved violent felons in Detroit found that both black and white judges imposed harsher sentences on black defendants than white ones\textsuperscript{14}.

Other studies have revealed that judges set bail 25% higher for black defendants than similarly situated white defendants and gave sentences that were 12%

longer for blacks than comparable whites. Killers of white victims are more likely to be sentenced to death than killers of black victims.\textsuperscript{15}

In a study that looked at whether the gender of the judge made any difference in outcome in Title VII sex discrimination and harassment cases, the researchers found that female judges were significantly more likely than male judges to find for plaintiffs (when their cases were appealed to the appellate level). Further, panels with a female judge were significantly more likely to find for the plaintiff than panels with no female judge, implying that the female judge’s perspective had an influence on her male colleagues.\textsuperscript{16}

A recent study examined whether explicit and implicit biases in favor of whites and against Asian Americans would alter mock jurors’ evaluations of a litigator's deposition. The authors found evidence of both explicit bias (as measured by self-reports), and implicit bias (as measured by two Implicit Association Tests). In particular, if the mock juror expressed an explicit stereotype that the ideal litigator was white, this predicted a worse evaluation of the Asian American litigator. By contrast, implicit stereotypes predicted preferential evaluation of the white litigator. The study concluded that individuals were not “colorblind” towards even a "model minority," and that these biases produced racial discrimination.\textsuperscript{17}

**Bias in Educational Settings**

Many studies have shown that when teachers are randomly given the expectation that some children will excel whereas others will not, it impacts how well those children perform. In one study, school teachers were asked to score exams of children tested for academic readiness. The test booklets included “background” information on the child, including IQ score. The scorers gave different grades to identical performances – the differences correlated with the IQ scores. Thus the IQ scores gave the scorers expectations that influenced the results.\textsuperscript{18}

Another study showed that if teachers were randomly told that some students were superstars and others were not going to make it, the influence of those characterizations on the teacher’s attitude toward the students impacted how the students performed. In fact, the students performed up (or down) to


expectations. Yet another study showed that racial differences in the outcome of a standardized test disappeared if the participants were told they were doing a puzzle, rather than a test.\textsuperscript{19}

One of the implications for this is that individuals who are members of a disadvantaged group perform worse in situations (like school) that invoke a stereotypical expectation of poor performance. This phenomenon is known as “stereotype threat.” \textsuperscript{20}

**Confirmation Bias, Observer Effects and Other Forms of Cognitive Bias**

*It is difficult to avoid the subconscious tendency to reject for good reason data which weaken a hypothesis while uncritically accepting those data which strengthen it.*

—Seymour Kety

As discussed above, many of our biases are not based on race, sex or some other “protected” category, but are due to the manner in which we process information and other factors. It may be that a complainant reminds us of someone we know who tends to exaggerate. This may lead us to assume, without even realizing it, that this individual is exaggerating and then to look for evidence to support this theory while rejecting the evidence that does not. A number of these other types of biases are discussed here.

**Confirmation Bias**

Confirmation Bias is the tendency to bolster a hypothesis by seeking consistent evidence while minimizing inconsistent evidence. It involves unconscious information processing rather than deliberate case building.\textsuperscript{21} Once a hypothesis is formed, people tend to search for information that supports it. For investigators, this means that by focusing primarily on a favored hypotheses, investigators may fail to generate alternatives and thus do not see the relevance of information supporting another explanation.

Confirmation bias is an unwitting selection and interpretation of evidence to support a previously held belief. To attain coherence between evidence and the hypothesis, data that are incompatible may need to be reconciled. An investigator may reconcile ambiguous or hypothesis-inconsistent evidence with his or her theory of the case and the hypothesis may also influence the search for

\textsuperscript{20} Additional information about stereotype threat is available at the website [www.reducingstereotypethreat.org](http://www.reducingstereotypethreat.org).
new evidence. As investigators piece together information, what they perceive as missing depends on the picture already in mind.\textsuperscript{22} People are often reluctant to revise initial expectations that arise from early perceptions of a situation.\textsuperscript{23}

Let’s say, for example, that a complainant reminds us of someone we know who tends to exaggerate. This may lead us to assume, without even realizing it, that this individual was exaggerating, and then to look for evidence to support this theory while rejecting the evidence that does not. Anything that causes one to accept the truth of a hypothesis, even temporarily, makes the hypothesis become a conditional reference frame. As decision makers, we evaluate and organize relevant information within this frame, which affects how we perceive the problem, interpret relevant data, and search for new information.\textsuperscript{24} We then may be reluctant to revise initial expectations that arose from our early perceptions of the situation.

Studies have shown that people assigned to interrogate suspects in a mock theft pushed harder for confessions and interpreted suspects’ behavior as more consistent with guilt when they approached the task with higher levels of suspicion.\textsuperscript{25} Fingerprint experts were less likely to find a match when facts provided about the case made a match seem less probable.\textsuperscript{26} Experienced investigators rated witnesses who exonerated a favored suspect as less credible than those who confirmed guilt.\textsuperscript{27}

In a study conducted by Barbara O’Brien, college students were given facts of a criminal investigation. Some were asked to develop an initial hypothesis of who was guilty after reviewing only half the file, whereas others were not asked to do so. Those asked to develop an initial hypothesis focused more on the initial suspect than those who were not. They interpreted ambiguous or inconsistent evidence as more consistent with guilt. Thus, the simple act of naming a suspect and generating reasons for suspicion worsened bias on several measures.

The same study then tested two ways to reduce bias. Some participants were asked to explain why an initial hypothesis might be wrong and others were

\begin{footnotesize}
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\item \textsuperscript{22} Holyoak, K. S. & Simon, D., \textit{Bidirectional Reasoning in Decision Making by Constraint Satisfaction}, 128 Journal of Experimental Psychology: General 3 (1999)
\item \textsuperscript{23} Darley J. M. & Gross, P. H., \textit{A Hypothesis Confirming Bias in Labeling Effects}, 44 J. of Personality and Social Psychology 20 (1983)
\item \textsuperscript{24} Klayman & Ha, \textit{Confirmation, Disconfirmation, and Information in Hypotheses Testing}, 94 Psychol. Review 211 (1987)
\item \textsuperscript{25} Kassin, S. M., Goldstein, C. C., & Savitsky, K. \textit{Behavioral Confirmation in the Interrogation Room: On the Dangers of Presuming Guilt}, Law and Human Behavior (2003).
\end{itemize}
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asked to generate additional suspects. Those asked to name additional suspects showed about as much bias as those asked to name their primary suspect without considering the possibility of innocence. That is, naming additional suspects did not reduce their bias relating to the initial suspect. However, those who named a suspect and considered why he might be innocent did reduce their bias towards the initial suspect. Their level of bias was the same as those not asked to name a suspect.28

Confirmation bias is often thought to be associated with overconfidence. However, confirmation bias can occur even in the absence of overconfidence. That is, investigators need not be especially sure that they have the right person to sway their investigation toward an early suspect. However, as demonstrated in the study above, making people consider alternatives reduces such judgmental biases. Investigators cannot always delay focusing on a suspect, but taking the extra step of actively considering evidence that points away from that suspect shows promise as a simple way to counteract bias.

Observer Effects, Experimenter Effects, Priming

These terms refers to how a “neutral” observer is impacted by extraneous information and the attitudes of others. While confirmation bias is something formed internally, these biases are impacted by an outside influence. For example, studies show that biases are impacted by giving an investigator pre-interview reasons to believe or doubt the person interviewed. These expectations affect the interview structure, questions, and other aspects of the behavior of the investigator.29 Researchers’ expectancies change their behavior toward different research participants and the participants in turn pick up the cues and respond to them with their own changed behavior. Many investigators believe they are too sophisticated to be unwittingly swayed by the attitudes and opinions of others, but these influences are, by their very nature, unconscious. Research has shown that people are influenced and primed much more than they realize.

One study had observers record the head turns and body contractions of flatworms. Half the group was told by the researcher that they would probably see a high incidence of turning and contracting and the other half was told there would be a low incidence. The observers led to expect a high rate recorded

almost five times as many head turns and twenty times as many body contractions.\textsuperscript{30}

Malcolm Gladwell, in \textit{Blink}\textsuperscript{31}, cites a classic priming study in which two groups of students were asked to read a long list of unrelated words. Laced through one list were words associated with politeness; laced through the others were words associated with rudeness. The students were then asked to return to an academic office down the hall to report they had completed the task. For both groups, a confederate was blocking the door to the office with instructions to continue a conversation with the secretary until asked to move. The rude-word students were more likely to interrupt (and even barge in on) the conversation; the polite-word students were more likely to wait patiently.

In another priming study, students were told negative things about one of the teaching assistants involved in the study. In rating the teaching assistants, those not told the negative things rated the assistant as a mean score of 9.33 on a “niceness” scale. Those who heard the negative information gave her a mean score of 6.58. Those who were told the information and then told to disregard it, because it was actually someone else they were thinking about, gave the assistant a mean score of 8.09.\textsuperscript{32} Thus the students could not completely “un-ring the bell.” Once told the negative information they were influenced by it, even though they had been told it was false.

\textbf{Anchoring}

Anchoring refers to the fact that judgments are influenced by positions asserted by outside influences. In one study, test subjects were given a random percentage number and then asked whether the percentage of African nations in the U.N. was higher or lower than that number. Then they were asked to give their best estimate of the actual percentage of African nations in the U.N. Those given a higher random number gave substantially higher estimates than those given the lower number.\textsuperscript{33}

In \textit{Blinking on the Bench: How Judges Decide Cases}\textsuperscript{34} the authors postulate (and then showing evidence that) judges use a combination of intuition and deliberation when deciding a case. In another article, these same authors discuss a series of studies they conducted with judges that demonstrate how judges are influenced

\textsuperscript{34} Wistrich, Guthrie & Rachlinski, 93 Cornell L. Rev 101 (2007)
by cognitive biases.\textsuperscript{35} One study focused on how anchoring can impact a judges assessment of damages.

The anchoring study using judges involved a personal-injury suit where the issue that needed to be decided was the monetary damages award. The groups were given the same facts about the damages. However, the control group was told that the plaintiff’s lawyer “was intent on collecting a significant monetary payment” whereas the anchor group of judges was told that the plaintiff’s lawyer demanded $10 million. The control group awarded a mean of 808 thousand dollars whereas the anchor group awarded a mean 2.2 million dollars. A second study used same information and also told the anchor group that the defendant moved for dismissal, arguing that the case didn’t meet the jurisdictional limit of 75 thousand dollars. Judges who were told about the motion to dismiss awarded an average of 350 thousand dollars less than the judges not told about it. Thus judges were strongly influenced by anchoring.

**Fatigue and Hunger**

Other new studies have looked at the impact of fatigue and hunger on decision-making. Although fatigue and hunger are different from bias, as with unconscious bias, studies show that both fatigue and hunger can have a significant impact on decision-making without the decision-maker realizing it. In one study of Israeli judges who were making parole decisions it was found that the percentage of favorable rulings was highest (65%) first thing in the morning and after a lunch break and that the favorable rulings dropped precipitously – to zero - as the day (and amount of time without food) progressed.\textsuperscript{36} The authors theorize that without food it is more difficult to make a decision and thus the judges agreed to “stay the course” (leave the individual seeking parole in jail).

**Conformity Effects, Halo Effect and Role Effects**

A number of other forms of unconscious bias might impact an investigator’s work. For example, conformity effects refer to the manner in which individuals are influenced by people with greater stature than those with a lower social ranking. Research studies of perceptions of people from differing social status or authority show that people’s perceptions were influenced by the perceptions of others based on their relative social ranks (those of a lower rank were more influenced by those of perceived higher rank). Therefore, an investigator might


\textsuperscript{36} Danziger, Shai, Levay, Jonathan and Avnaim-Pesso, Liora, Extraneous factors in judicial decisions, Proceedings of the National Academy of Sciences of the United States of America, April 11, 2011.
credit a witness with a higher rank over a witness with a lower rank without realizing that their relative ranks had an influence.

The halo effect refers to the tendency to assume that like goes with like and thus “beautiful people” are nice, smart and capable, while “ugly” and “short” people are mean, dumb and incapable. Thus, without intending to, an investigator might credit someone who “presents well” (is attractive, slim, well groomed) over someone who does not “present well” (is short, overweight, and less attractive clothing).

Role effects refer to the fact that the perspective adopted by the viewer can affect the information sought as well as how the person perceives that information. In one study some participants assumed the role of a homebuyer and others of a burglar. They then read a description of a house and grounds. Later recollections of the details of the house differed, based on the assigned role. Attorney investigators are certainly familiar with how representing the plaintiff or the defense impacts how the facts are viewed. Thus investigators should look at what impact their role has on how they view the information gathered in the course of the investigation.

Suggestions to Counteract Bias

Some of the authors of the studies and articles cited above make suggestions about how investigators and judges can counteract their own biases. These include actively considering alternative hypothesis or why a favored hypothesis is wrong, expanding the time judges have to make decisions, issuing written opinions—because the process of writing might challenge the judge or investigator to assess a decision more carefully—and peer-review.

In a new study of the impact of interviewing skills on reducing confirmation bias, the authors conclude that interviewers who ask open-ended non-leading questions (who were dubbed “good interviewers”) showed less confirmation bias than those who asked fewer open questions (“poor” interviewers). The article states, “Our results suggest that even if confirmation bias occurs automatically when interviewers received knowledge about a case, they are able to overcome this bias if they had been previously trained to adhere to best practice guidelines and ask open questions. Thus, strong investigation skills and use of appropriate questioning methods is key in obtaining unbiased results.

There is also some evidence that biases are malleable. Students who, prior to taking the IAT, viewed prominent African American leaders and artists showed a reduction in bias on a race IAT. Implicit gender stereotypes of feminine weakness were reduced by imagining examples of counter-stereotypic (i.e. “strong”) women and implicit anti-black bias was reduced by having an African American administer the research procedure. Further, as an individual’s life experiences changes and expands, there is evidence for the fact that implicit biases change as well.

Conclusion

Unconscious biases play a significant role on how we organize and interpret the world. Thus, they impact the work of investigators by influencing what information we seek and how we view that information. Good investigative skills and practices can help to counteract these biases. Furthermore, the more we understand our own biases, and the vulnerability we all have to be influenced by cognitive biases, the more we can do to prevent these biases from impacting our decision making.

Further Reading


