CONQUERING COGNITIVE BIASES IN AUDITS AND EXAMINATIONS
Define bias.  
A careful review of the facts...  
...which results in any viewpoint other than my own!
INTRODUCTION TO COGNITIVE BIASES
WHAT ARE COGNITIVE BIASES?
Cognitive bias is the tendency to make decisions and take actions based on limited acquisition and/or processing of information or on self-interest, overconfidence, or attachment to past experience.
PREFERENCES VERSUS MINDSET
IMPACTS OF COGNITIVE BIAS

- Biased Oversight
- Honest Errors
  - Lack of training and mentoring
  - Pressure to complete work
  - Administrative errors or complacency in one’s work
- Ethics Violations
  - Fabricated Evidence
  - Estimating results without thorough testing
  - Intentional erroneous results
  - Covering up mistakes
THE PURPOSE OF MINDSET
It is inevitable that, in doing their job, a professional will more or less deliberately build up the set. And it is indispensable because the set is a most valuable tool in performing timely, coherent, articulate and, on a probability basis, accurate intelligence. Without it, the current stream of information would be unmanageable and often paralyzingly ambiguous.

- Dr. Klaus Knorr, Director of Center of International Studies at Princeton University
Mindset is:

1. Inevitable
2. Indispensable

The intuitive knowledge we use to enable efficient and effective decision making.
Cognitive bias is the tendency to make decisions and take actions based on limited acquisition and/or processing of information or on self-interest, overconfidence, or attachment to past experience.
IDENTIFYING COGNITIVE BIASES
VIVIDNESS BIAS
VIVIDNESS BIAS
ANECDOTAL BIAS
ANECDOTAL BIAS

FREQUENCY OF TESTS SUGGESTED

- Confirmations
- Documentation
- Analytical Procedures
- Client Inquiries
- Rerformance
- Observation
- Fraud Detection

Example 1:
- 6%
- 15%
- 16%
- 16%
- 15%
- 16%
- 16%

Example 2:

AVAILABILITY HEURISTIC

Probability of Revenue Loss

- Handling Cash: 82%
- Undercharging for Products: 86%
- Accepting Counterfeit Cash: 35%
BEST GUESS

BEST GUESS?

FALSE. A GUESS IS NEVER THE BEST.
BEST GUESS

ACCEPT

REJECT
Binary decisions ignore...

- Uncertainty in the relevance and reliability of information
- Interdependence of individual pieces of information
- Plausibility of evidence regardless of the source
ILLUSION OF VALIDITY

LAW OF LARGE NUMBERS
A large sample will be highly representative of the population from which it is drawn.

LAW OF SMALL NUMBERS
It is difficult to know when a sample is sufficiently large enough to be representative of the population from which it is drawn.
ILLUSION OF VALIDITY
<table>
<thead>
<tr>
<th>Unique</th>
<th>Occurrence 1 = Anomaly or Happenstance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unique</td>
<td>Occurrence 2 = Coincidence</td>
</tr>
<tr>
<td>Unique</td>
<td>Occurrence 3 = Pattern</td>
</tr>
</tbody>
</table>
CONFIRMATION AND EXPECTATION BIAS

- Confirmation Bias
  Search out information that supports our hypothesis or interpret ambiguous information in a way that supports our hypothesis.

- Expectation Bias
  We give more credence to information that supports our hypothesis and less credence to information that refutes it.
INFORMATION BIAS
IRRATIONAL ESCALATION

Commitment of...

- Time
- Money
- Reputation
- Emotion
- Etc.

There are other, better lines of examination or simply no evidence to support fraud.
OTHER TYPES OF BIAS

- Observer or Expectancy Effect
- Conformity Effect
- Need Determined Perception
- Primacy Effect
- Overconfidence
1. Collaboration
2. Inquiry – ask the right questions
Clarify and understand the purpose of the engagement
  ▪ Who are the interested parties?
  ▪ What is the issue at hand?
  ▪ When is the engagement due?
  ▪ Where can information be found?
  ▪ Why is the engagement being conducted?
  ▪ How do I get additional help or resources, if needed?
TEN TOOLS FOR MITIGATING COGNITIVE BIAS

1. Collaboration
2. Inquiry – ask the right questions
3. Take it all in
EMBRACE MINDSET
TEN TOOLS FOR MITIGATING COGNITIVE BIAS

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4. Use brainstorming, but in a structured manner
BRAINSTORMING
1. Collaboration
2. Inquiry – ask the right questions
3. Take it all in
4. Use brainstorming, but in a structured manner
5. Embrace and explore dissenting opinions
A devil’s advocate provides a contrarian opinion that creates an opportunity to test prevailing wisdom.

**DEVIL’S ADVOCACY**

Identify prevailing hypothesis and assumptions

Advocate selects assumptions to question

Advocate tests for reasonableness, probability, possibility, deception, and logical gaps

Advocate issues challenge and presents evidence

Advocate identifies evidence to support contradictory assumption

Team reviews advocate’s findings
1. Collaboration
2. Inquiry – ask the right questions
3. Take it all in
4. Use brainstorming, but in a structured manner
5. Embrace and explore dissenting opinions
6. Limit pressures
7. Limit outside influences
8. Utilize the scientific method
What happened?
Why did it happen?
Define hypotheses
Gather evidence
Analyze the evidence
Determine your findings
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9. Seek to disprove
A routine audit of a distribution center uncovers missing inventory. A review of CCTV footage shows that a shift manager – Bob – loaded boxes from the DC into his personal vehicle. Several days later, products similar to the missing inventory were posted on eBay under an account linked to Bob’s son.

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Inculpatory</th>
<th>Exculpatory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Missing Inventory</td>
<td>Inventory was ordered</td>
<td>Inventory was not received in system</td>
</tr>
<tr>
<td></td>
<td>Inventory was observed in the DC</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Inventory was not returned to vendor</td>
<td></td>
</tr>
<tr>
<td>Inventory Access</td>
<td>Bob has access to inventory</td>
<td>No records that Bob touched inventory</td>
</tr>
<tr>
<td></td>
<td>Bob has access to system</td>
<td></td>
</tr>
<tr>
<td>Inventory Removal</td>
<td>Bob observed removing inventory</td>
<td>Cannot positively ID the inventory</td>
</tr>
<tr>
<td>Theft Concealed</td>
<td>No audit trail of inventory in system</td>
<td>Bob made no effort to hide removal of inventory</td>
</tr>
<tr>
<td>Inventory Disposition</td>
<td>Similar items observed on eBay</td>
<td>No document link between eBay items and company inventory</td>
</tr>
<tr>
<td></td>
<td>eBay account linked to Bob</td>
<td></td>
</tr>
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9. Seek to disprove
10. Check your ego (confidence) at the door
MANAGEMENT SUPPORT AND OVERSIGHT
Understand cognitive biases and how they impact an examiner’s work.

Routinely review work products to check for biases.

Foster an environment of professional development that includes training on making judgments and critical reasoning.
- Structured training.
- Independent reviews.
- Mentoring relationships.
Be supportive of examiners’ tools and techniques.
- Build it into the time budget of the audit plan.
- Engage third parties on complex engagements.

Provide oversight and challenge staff in a constructive way.
- Advocate for examiners to quantify and qualify their findings more clearly.
Support your staff as a strong leader; mistakes will happen:

*Bad managers save face at the expense of their staff.*

*Good managers take responsibility for their staff, and use failures as improvement opportunities.*
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