

Chapter 10 - Biases in Evaluation of Evidence

(Psychology of Intelligence Analysis)

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Chapter 10 - Biases in Evaluation of Evidence

Evaluation of evidence is a crucial step in analysis, but what evidence people rely on and how they interpret it are influenced by a variety of extraneous factors.

- Vividness criterion
- Absence of evidence
- Oversensitivity to consistency
- Coping with Evidence of Uncertain Accuracy
- Persistence of Impressions Based on Discredited Evidence

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Vividness criterion

Information that is vivid, concrete, and personal has a greater impact on our thinking

than

pallid and abstract information that may actually have substantially greater value as evidence.

Labeled by Nisbett and Ross as the “*man-who*” syndrome:

“But I know a *man who* smoked three packs of cigarettes a day and lived to be ninety-nine.”

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Vividness criterion

Certain kinds of very valuable evidence will have little influence simply because they are abstract.

- Information that people perceive directly have more impact than information received secondhand;
- Case histories and anecdotes have more impact than more informative but abstract data.

Experiences > read stories
Concrete words > abstract words
Words of all types > numbers

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Absence of evidence

Intelligence analysts are unable to determine what relevant evidence is lacking and factor this into their account.

They are also unable to estimate the potential impact of the missing data and to adjust confidence in their judgement accordingly.

Being criticized by some authors: the bias may be introduced by the examiner.

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Absence of evidence

1. Argument count in function activation
2. Coertion warnings
3. No such file or directory
4. Semicolon missing
5. Unterminated string
6. Undeclared method
- 7. Parse error**
- 8. Undeclared variables**
- 9. Unused variables**

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Oversensitivity to Consistency

Data coherence influences intelligence analysts to put too much reliance on small samples (the law of small numbers).

For $n > 2$, what is the following sequence?
3, 5, 7 → **primes, odds ?**

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Oversensitivity to Consistency

What is the result of the following function?
 $\text{gcd}(n^{17}+9, (n+1)^{17}+9)$

n	1	2	3	4	5	6	7	8	9
gcd	1	1	1	1	1	1	1	1	1

Probably the result is always 1...

Except for $n >$
8424432925592889329288197322308900672459420460792433

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Coping with Evidence of Uncertain Accuracy

The analyst employs heuristics (rules of thumb) to reach a solution based on data with different degrees of accuracy.

“Best-guess” strategy is used to “round” results above(below) a certain threshold.

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Coping with Evidence of Uncertain Accuracy

- Hitler before Russian campaign in WW2: “When Operation Barbarossa is launched, the world will hold its breath!”
- Invasion of Bay of Pigs by John F. Kennedy (Cuba)
- The Americans estimated that the small three-square-mile island of *Iwo Jima* would be overrun and captured within four days. It took four weeks.

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Persistence of Impressions Based on Discredited Evidence

Impressions tend to persist even after the evidence that created those impressions has been fully discredited.

Comparable to Adjustment and Anchoring (employment of irrelevant information as a start point) and Rationalization (justification for “unexplained” acts).

People tended to believe their performances even after learning that the feedback concerning the results was invalid.

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Questions?



That's all folks!