
Intelligence Analysis (cont'd)

Where do individual intelligence analysts go wrong?

- Issue of ongoing high interest to the US intelligence community (IC)
- The following are ideas and approaches developed over decades inside the IC
- Special debt to the work CIA officer Dick Heuer, retired in 1979
 - See Heuer's *Psychology of Intelligence Analysis*, available at the CIA's Center for the Study of Intelligence at www.cia.gov/csi
 - Most experiments cited, and illustrations used, are from *Psychology of Intelligence Analysis*
- Note: What follows is *not* a psychology lecture, but merely an illustration of how these questions are viewed by working analysts and managers in the IC

Core Idea: Mental Ruts and their Corrosive Effects

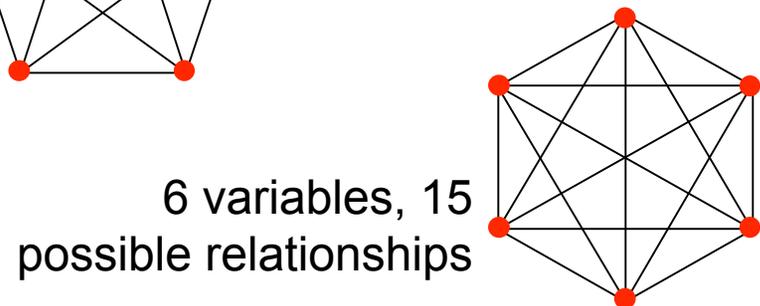
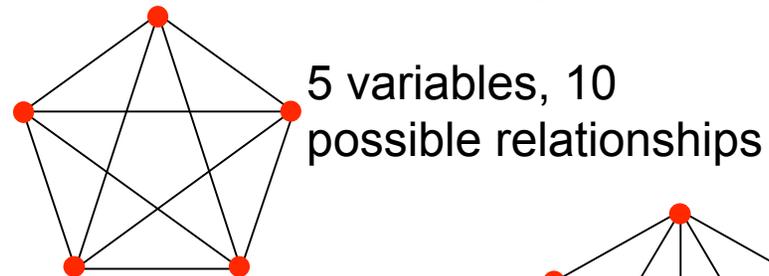
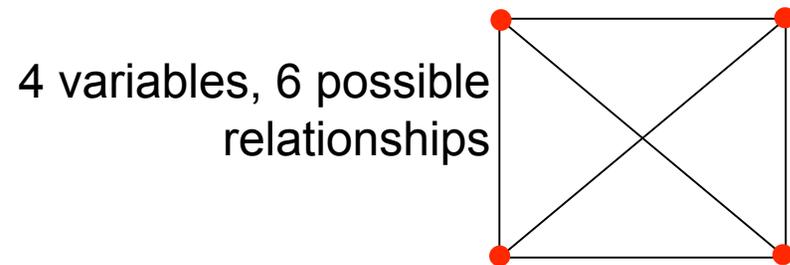
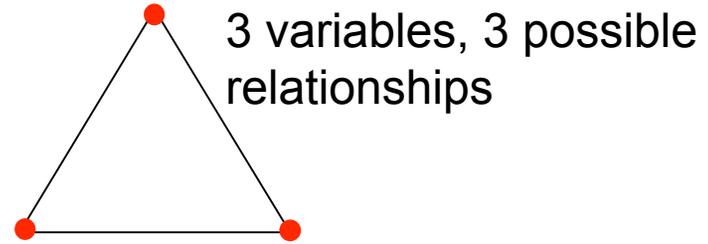
- There are a cluster of psychological phenomena that can narrow our vision and corrupt our analysis
 - Close our minds to new ideas and information
 - Blind us to changed circumstances
 - Encourage us cling to assumptions and explanations that are outmoded, poorly supported, or just plain faulty
- The problems these phenomena generate are especially acute in *intelligence* analysis
 - In intelligence, important pieces of the puzzle are often missing
 - We easily fall back on assumptions that have worked in the past, but which may no longer hold

Complexity Makes Everything Worse

- The 7-plus-or-minus-2 rule
 - People can only keep about seven things in their minds at once, plus or minus two
- Compare how difficult it is to multiply 124 by 49 in your head — impossible, for most of us — with how easy it is to do with a pencil and paper
- Even a mildly complex problem is too much to hold in your mind all at once

Complexity Grows

- The number of variables in a problem grows arithmetically, but the relationships between variables increase geometrically



Why Minds Close

Seeing is not necessarily believing

- Contrary to popular belief, we do not tend to see what we want to see
- Rather, we see what we *expect* to see

Experiments

Flipping through cards, identifying the shapes. Much harder for subjects to identify the red spades and black hearts, because they expect the colors to be reversed.



If you're told it's an old lady,
you'll see an old lady.

Mindsets

- Mindsets are systems of prejudices, assumptions, knowledge, and beliefs that simplify our world
- Allow us to make judgments without analyzing every new possibility
- If not for mindsets, human action would be impossible

Problems with Mindsets

- We adopt mindsets quickly, even automatically
- Changing them is slow and difficult
 - The amount and quality of evidence required to change a mindset is far greater than the amount and quality needed to form one

Experiment



- Series of cards with drawings that morph from man's face into woman's body
- Where you see the cross-over depends on:
 - Which end of the card series you start with
 - Whether you believe it will change
 - What you believe it will change into

Problems with Mindsets (cont'd)

- We tend not to let new information contradict or challenge our mindsets
 - Instead, we *assimilate* new information, making it fit with previously held beliefs
 - And it gets worse — most law enforcement and intel organizations value (and exert pressure for) “consistency” in intelligence analysis

Ambiguous Information

- If our first encounter with a problem is fuzzy or ambiguous, the mindset we form will frustrate future critical thought
- This phenomenon continues even *after* we obtain clarification

Ambiguous Information (cont'd)

■ Experiment

- ❑ Blurred photographs, brought into focus through successive steps
- ❑ The greater the initial blur, and the longer the subjects were exposed, the sharper the photo had to become before the subjects recognized it

Ambiguous Information (cont'd)

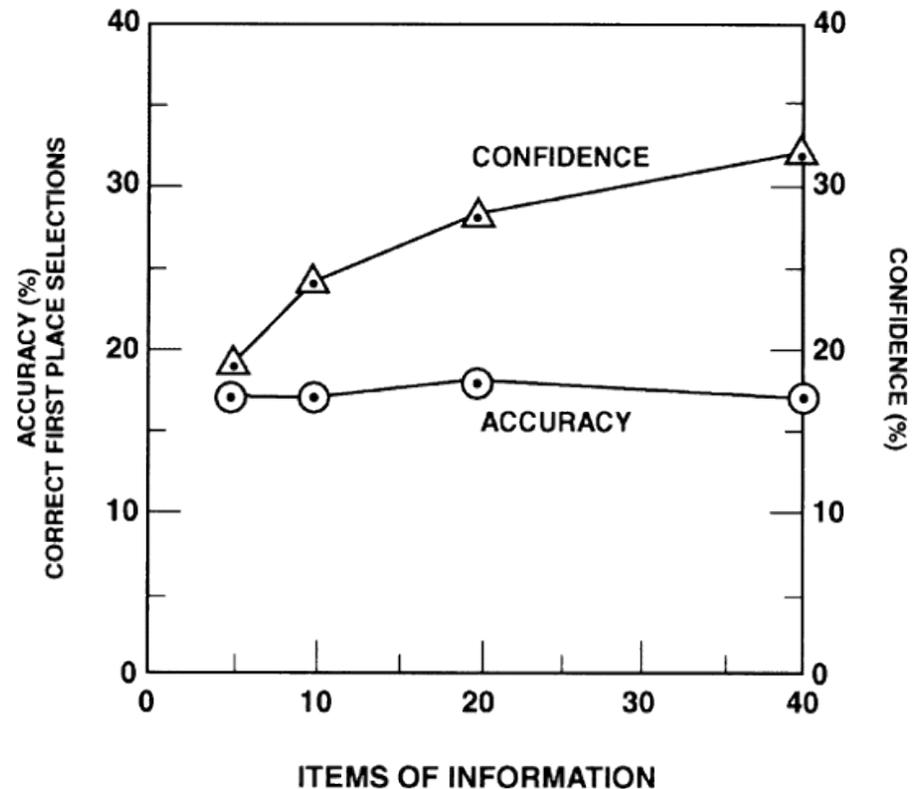
- Good analytical strategy is to postpone judgment on ambiguous information as long as possible
 - Unfortunately, the expectation from policy makers is usually for intel analysts to form opinions rapidly

More is not always better

- When a good analyst has the basic info needed for a judgment, additional information does not necessarily improve the accuracy of the judgment
- However, more information does make the analyst more *confident*
- Many experiments over a wide range of professions

Experiment: Handicapping the Horses

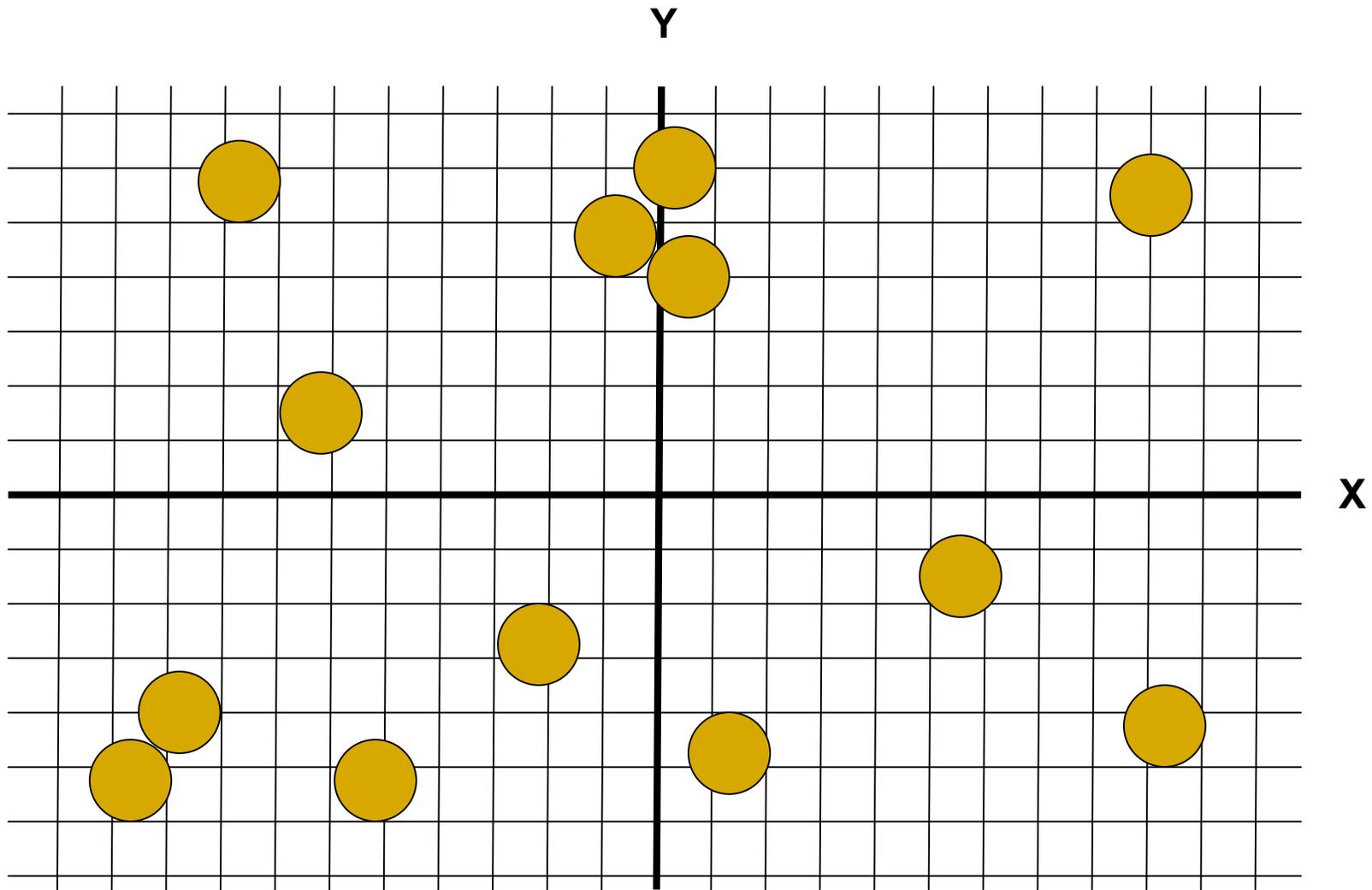
- Eight experienced horserace handicappers
- Given more information in increments of 5, 10, 20, and 40 variables



Coherence and Order

- An intelligence analyst wants to tell a coherent story, so there is a natural bias to look for logical patterns and relationships
- We don't want to believe we are dealing with random events
- If order or coherence does not exist, we often impose it

Throw the Marbles



Coherence and Order (cont'd)

- See 'evidence' of planning, control, and purpose, even when none exists
 - Leads us to overestimate the predictability of future events, as well as our ability to influence the behavior of others
- See inconstancy as evidence of cunning ploys, when it may be due to random factors, e.g., weak leadership, compromise, bargaining between power groups, miscalculation

External vs Internal Explanations for Human Behavior

■ Internal

- ❑ Beliefs
- ❑ Attitudes
- ❑ Goals
- ❑ Desires
- ❑ Other stable dispositions

■ External

- ❑ Social constraints
- ❑ Rules and laws
- ❑ Economics
- ❑ Job requirements
- ❑ Orders from superiors
- ❑ Other environmental factors

External vs Internal Explanations for Human Behavior (cont'd)

- Analysts (and everyone else) emphasize ***internal dispositions*** when explaining the behavior of others, and ***external factors*** when explaining their own
 - Saddam's invasion of Kuwait in 1990
- Tend to assume behavior of others is caused by the their natures, not by the situations they face

External vs Internal Explanations for Human Behavior (cont'd)

- Corollary: We give complex reasons for our own behavior, simple reasons for the behavior of others

Priority of Vivid Experience

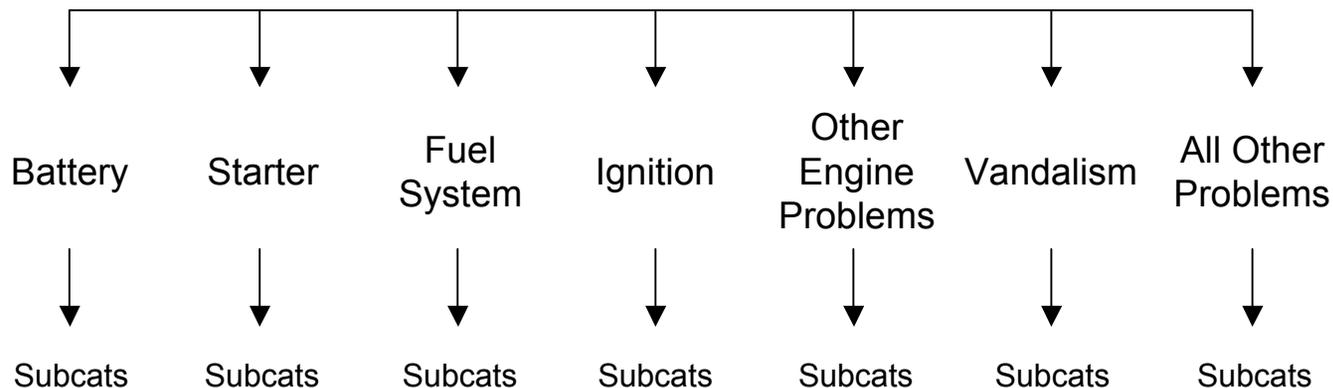
- We assign top priority to first-hand experiences, or to events we remember as sharp, visual, graphic, or intense
- Less credence to drier information, even when it is more reliable
 - Good statistics
 - Well-researched, but abstract, papers and reports

Out of Sight, Out of Mind

- Difficult to see when relevant information is absent
 - Easy to see what is there
 - Hard to see what isn't

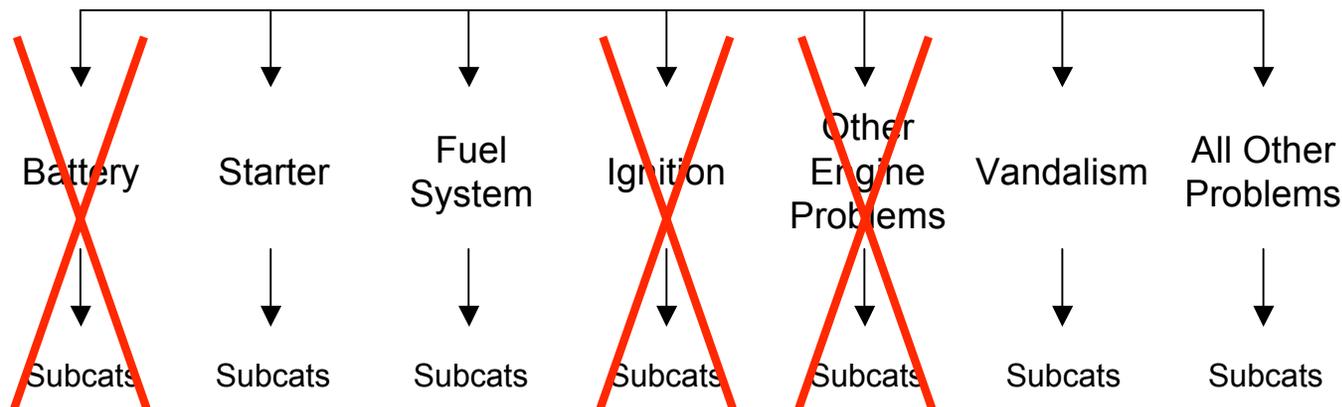
Experiment

- Two fault trees were shown to two separate groups of experienced mechanics
- The first group was shown a tree with seven main branches and multiple subcategories
 - Mechanics were asked to fit 100 automotive problems into those categories/subcategories



Experiment (cont'd)

- The second group of mechanics was shown a similar fault tree, but with three of the branches removed
- If the mechanics were fully sensitive to the missing information, “All Other Problems” should have grown accordingly
- In fact, “All Other Problems” only grew half as much as it should have
 - When the experiment was run on non-mechanics, “All Other Problems” grew even less



Deceptively Consistent

- Consistency can create the illusion of truth
- All true information is consistent, but not all consistent information is true
 - Problem of **false confirmation**, i.e., multiple reports may be consistent only because they all originate from the same faulty source
 - Small samples may be internally consistent, but not representative of the larger world

Absolutely Yes, Absolutely No

- When we aren't sure about information, we tend to make a yes/no decision, ignoring nuance and complexity
 - If we are pretty sure it's true, we accept the information fully
 - If we have doubts, we completely reject it

Persistence Phenomenon

- Our erroneous beliefs and impressions tend to persist, even after we receive conclusive proof they are false
 - Experiment: College students were erroneously made to believe they were above average (or below average) on a particular skill, when in fact they weren't*
 - When told they had been deceived, they still tended to believe the original assessment
 - Moreover, observers of the experiment — not just the participants — also tended to continuing believing the original assessment
- This persistence phenomenon is even stronger in the real world, where we rarely receive conclusive refutation of anything