Getting information flow

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What is "*information flow*?"

- Information flow is *getting information from the people in the organization who have it to the people who need it*.

Or

- The more effectively the information in the organization is used, the better the information flow.

The marks of good information flow (IF)

- IF responds to the receiver’s need for information
- IF is timely
- IF arrives in a form that can be easily digested
- Its “bill of lading” is intact

What happens when these features are not present?

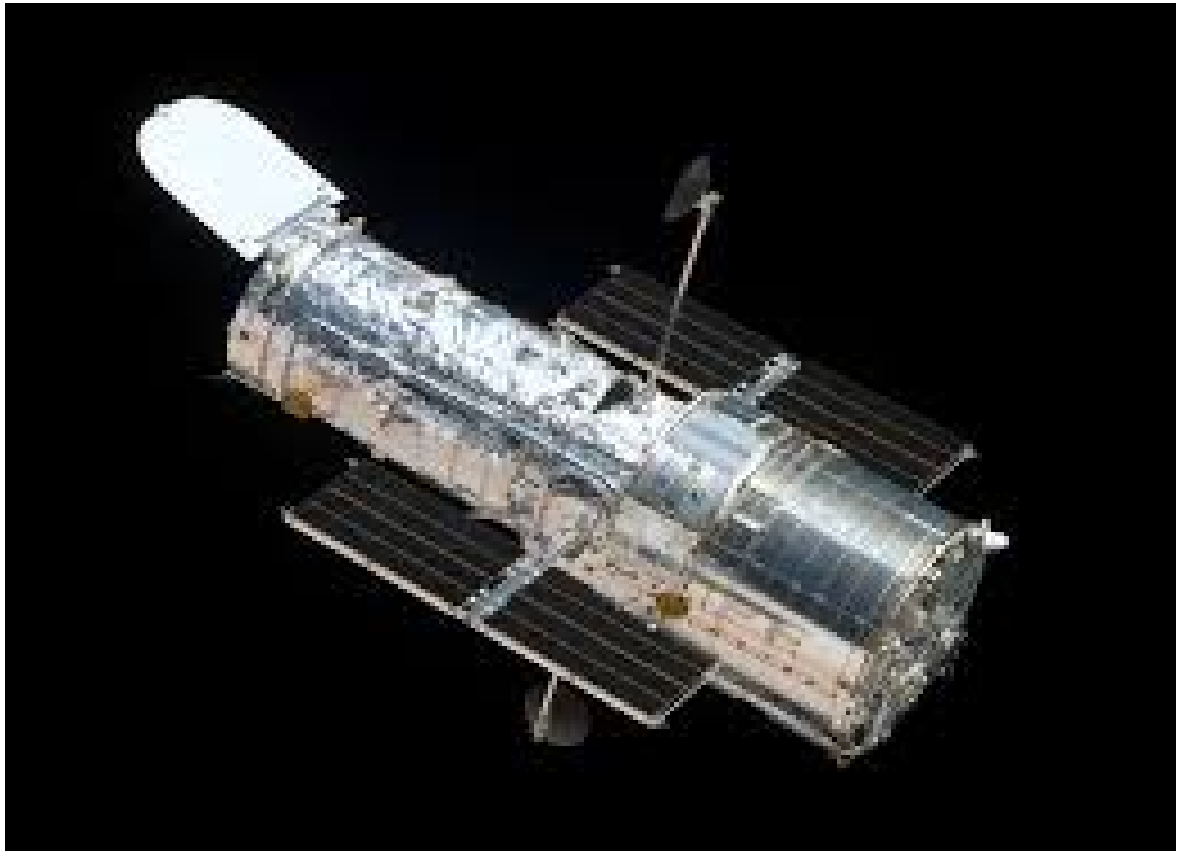
- For instance, what happens when someone needs to know something, but they don’t find out?

- This happened with technicians building the Hubble telescope

Problem # 1

People don’t speak up

A new orbital telescope, the Hubble, can’t get a clear image…..



Because the technicians had made changes they had not cleared with the engineers…

It took about US $3 billion to fix the problem

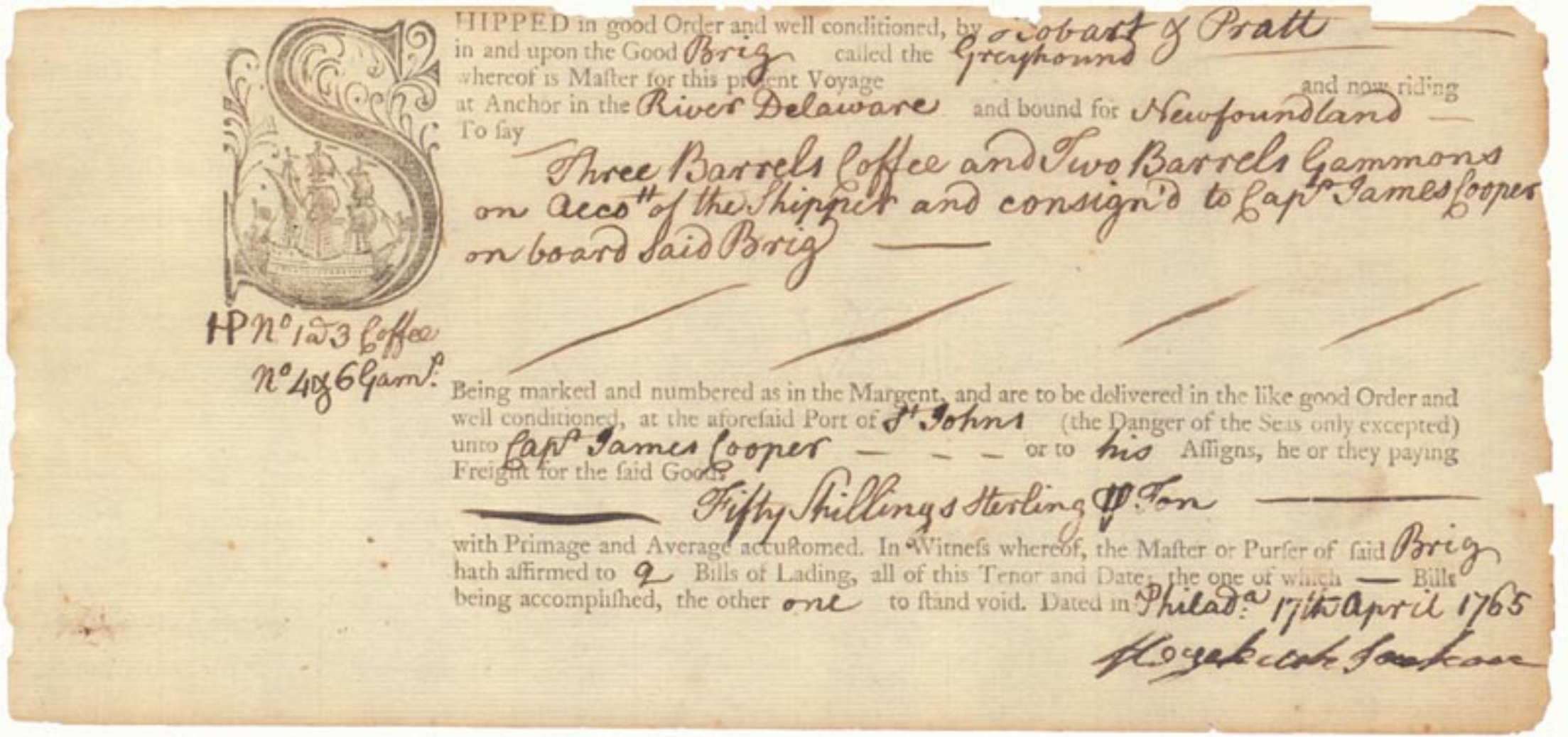
Sometimes a problem is identified, but information about it is not passed on.

- This happened with the American use of the ATR-72 aircraft, one of which fell out of the sky in Indiana in 1994, due to an instability the manufacturer knew about, but decided to keep out of an accident report.

The problem had appeared with the crash of an ATR-42 crash on Mt. Crezzo. But the cause was not made clear.

So when an ATR-72 encountered the same problem, it went down in, Roselawn, Indiana, October 1994….

A helicopter model needs to arrive with a proper “bill of lading”



HIPPED in good Order and well conditioned, by Cobart & Pratt
in and upon the Good Brig called the Greyhound
whereof is Master for this present Voyage and now riding
at Anchor in the River Delaware and bound for Newfoundland
To say
Three Barrels Coffee and Two Barrels Gammons
on Accot of the Shipper and consign'd to Capt James Cooper
on board said Brig

HP N° 1 2 3 Coffee
N° 4 & 6 Gam.s

Being marked and numbered as in the Margent, and are to be delivered in the like good Order and well conditioned, at the aforesaid Port of St Johns (the Danger of the Seas only excepted) unto Capt James Cooper — — — or to his Assigns, he or they paying Freight for the said Goods
Fifty Shillings Sterling ℔ Ton
with Primage and Average accustomed. In Witness whereof, the Master or Purser of said Brig hath affirmed to 2 Bills of Lading, all of this Tenor and Date, the one of which — Bills being accomplished, the other one to stand void. Dated in Philad.a 17th April 1765
Hoyle Cobart Pratt

But sometimes it doesn’t…

And problems ensue… A Chinook crashes on the Isle of Mull 1994

So, the pilots were at fault?

- No, it turned out that the engine was controlled by software that had left the development process too early.

- But the aircraft was approved in spite of the bad software. An accident waiting to happen.

Another instance of this problem took place when there was , …a “dress rehearsal for an accident”---a near-miss Iraq 1992

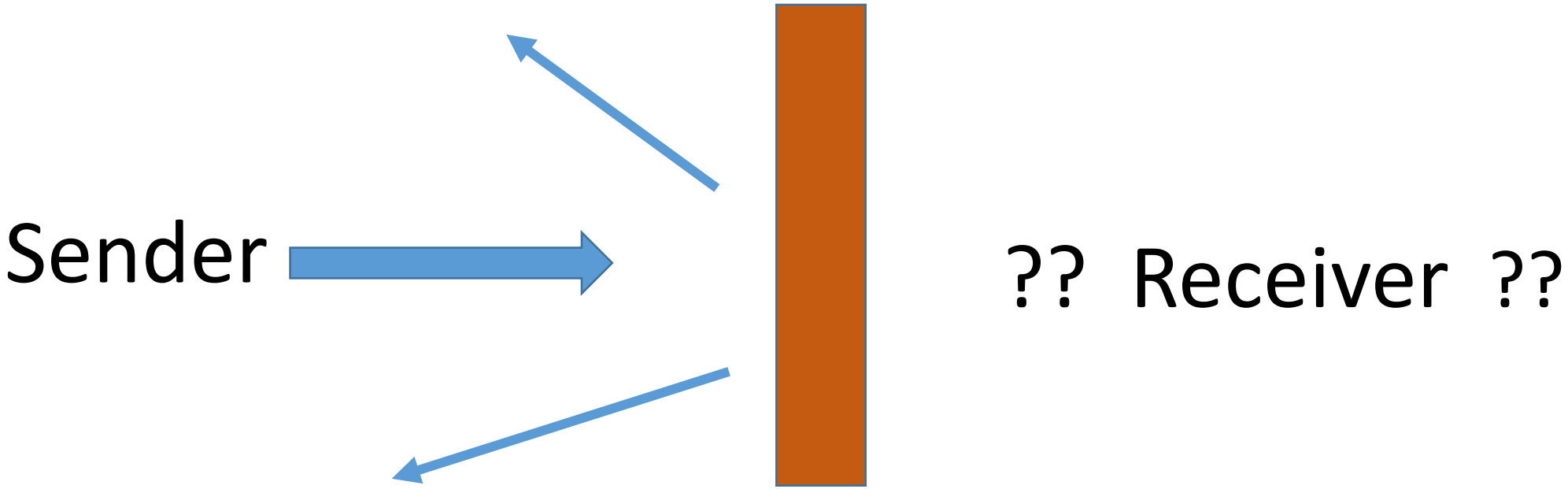
The problem was revealed one night in a bar shared by the US Army and the US Air Force

But no one picked up the telephone to report it---whose job was it, anyway?

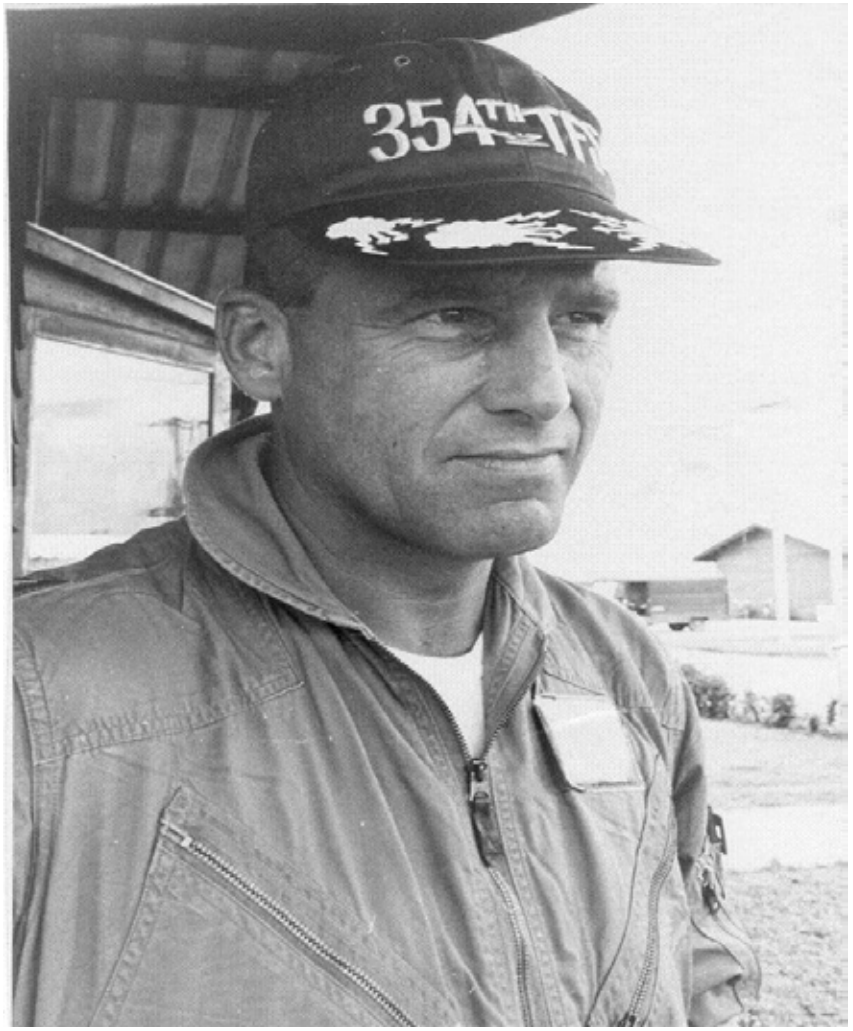
So, the next time it happened, the close encounter was fatal—Northern Iraq, 1994

This time, there was no near-miss. Instead two Blackhawks were downed and 26 people died.

So what are the structural features that prevent proper flow?



Sometimes it takes courage to report a problem—Col. Jack Broughton



Jack Broughton and the F-106 ejection seat

- Broughton was commander of a squadron when he had to confront a problem with the ejection seat of the Delta Dart fighter aircraft. After the seat had killed 13 pilots, Broughton wanted to ground the plane, but had to convince a three-star general.

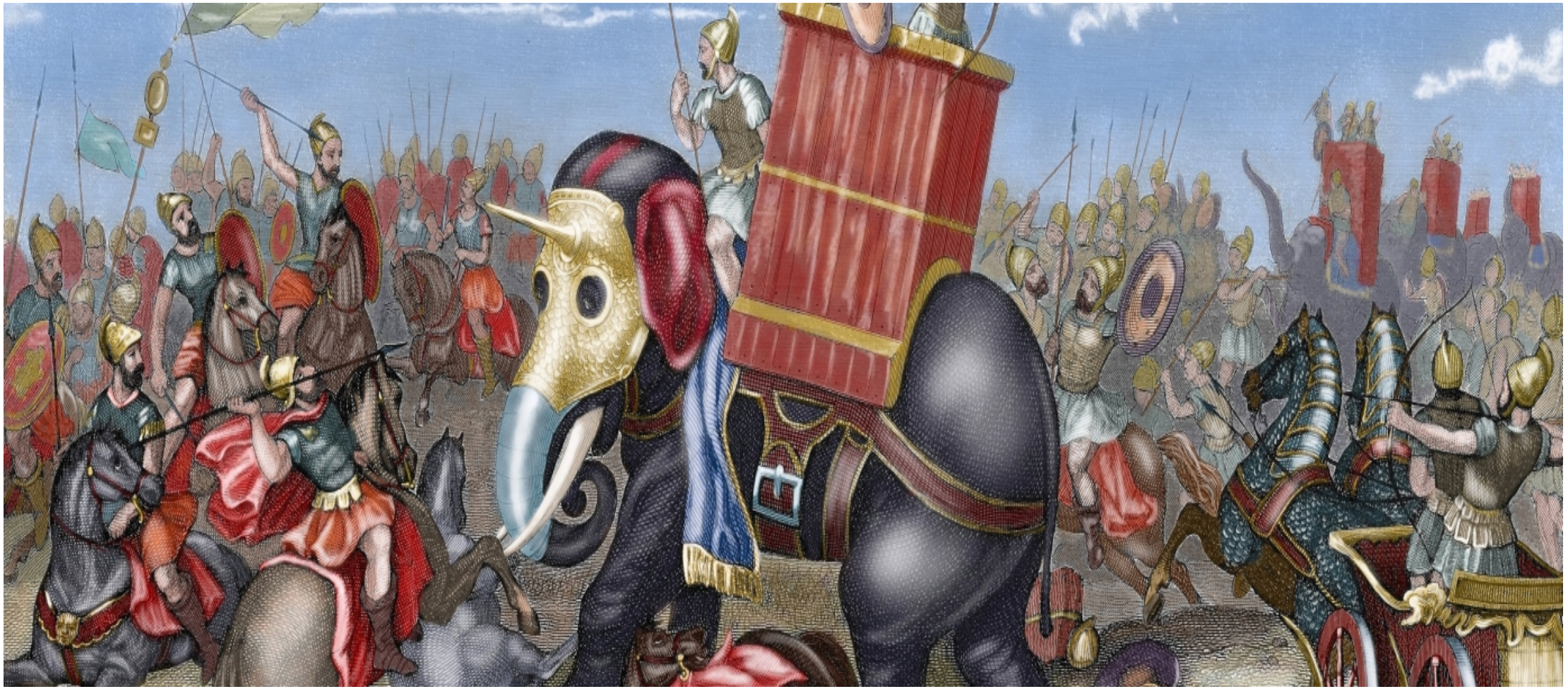
- Putting his job on the line, Broughton insisted he would not fly the planes unless the general would take personal responsibility for the next pilot death. The general gave in and the seat got changed.

Hierarchy and differences in rank can interfere

Bosses don’t always help…

In fact they can be a serious problem….

And then we have organizational conflict….



The negative factors are shaped by the organization's culture

- The culture might be:

- **A. Pathological----centered around power**

- **B. Bureaucratic---centered around "turf" and rules**

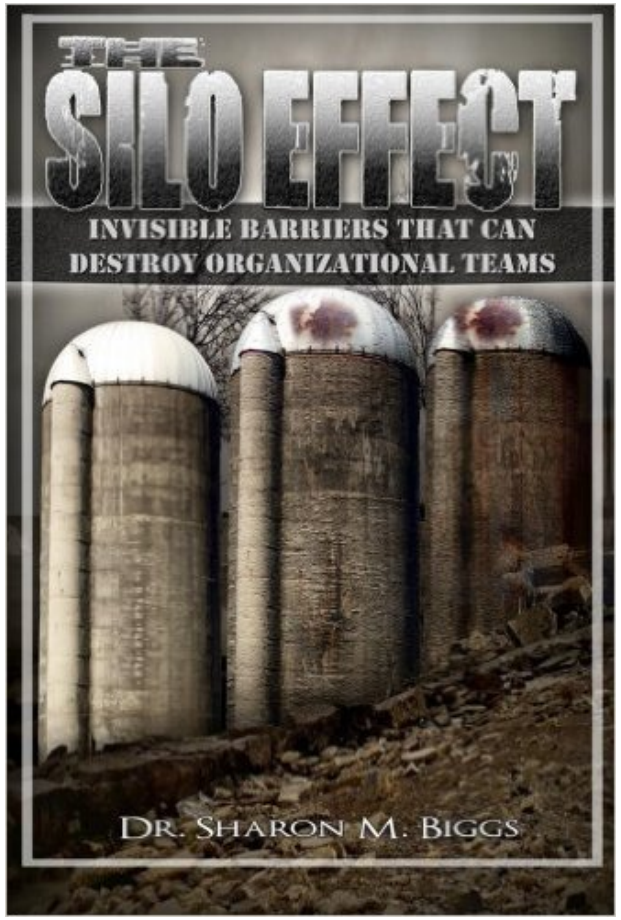
- **C. Generative----focused on the mission**

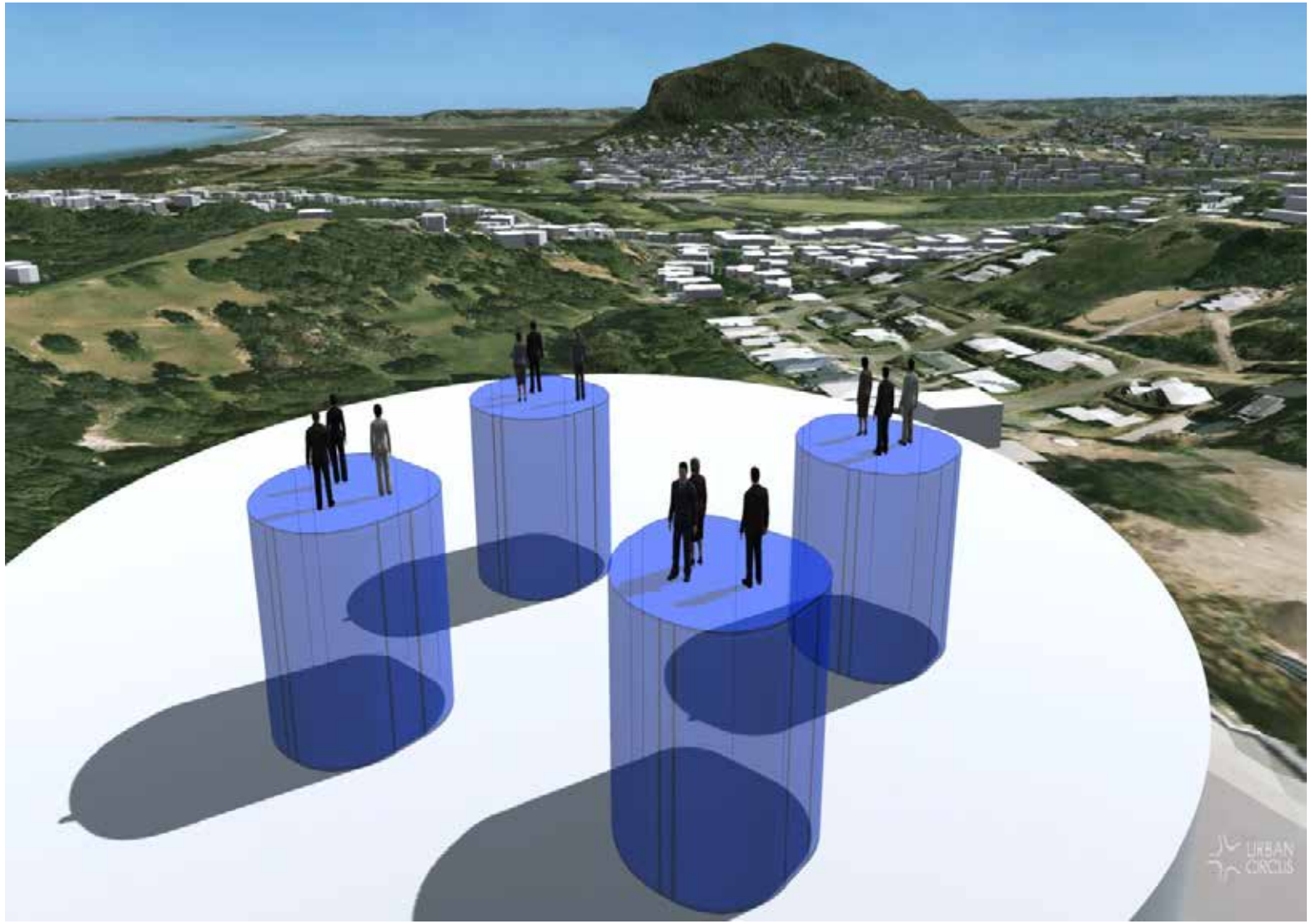
Pathological cultures focus on the needs of the chief

And a lot of energy is spent on conflict…..

Whereas bureaucratic cultures focus on the needs of particular departments

Yet departmental silos can impede the flow of information





In a generative culture, Information flows because people believe they belong to a common enterprise

People work together to get the job done

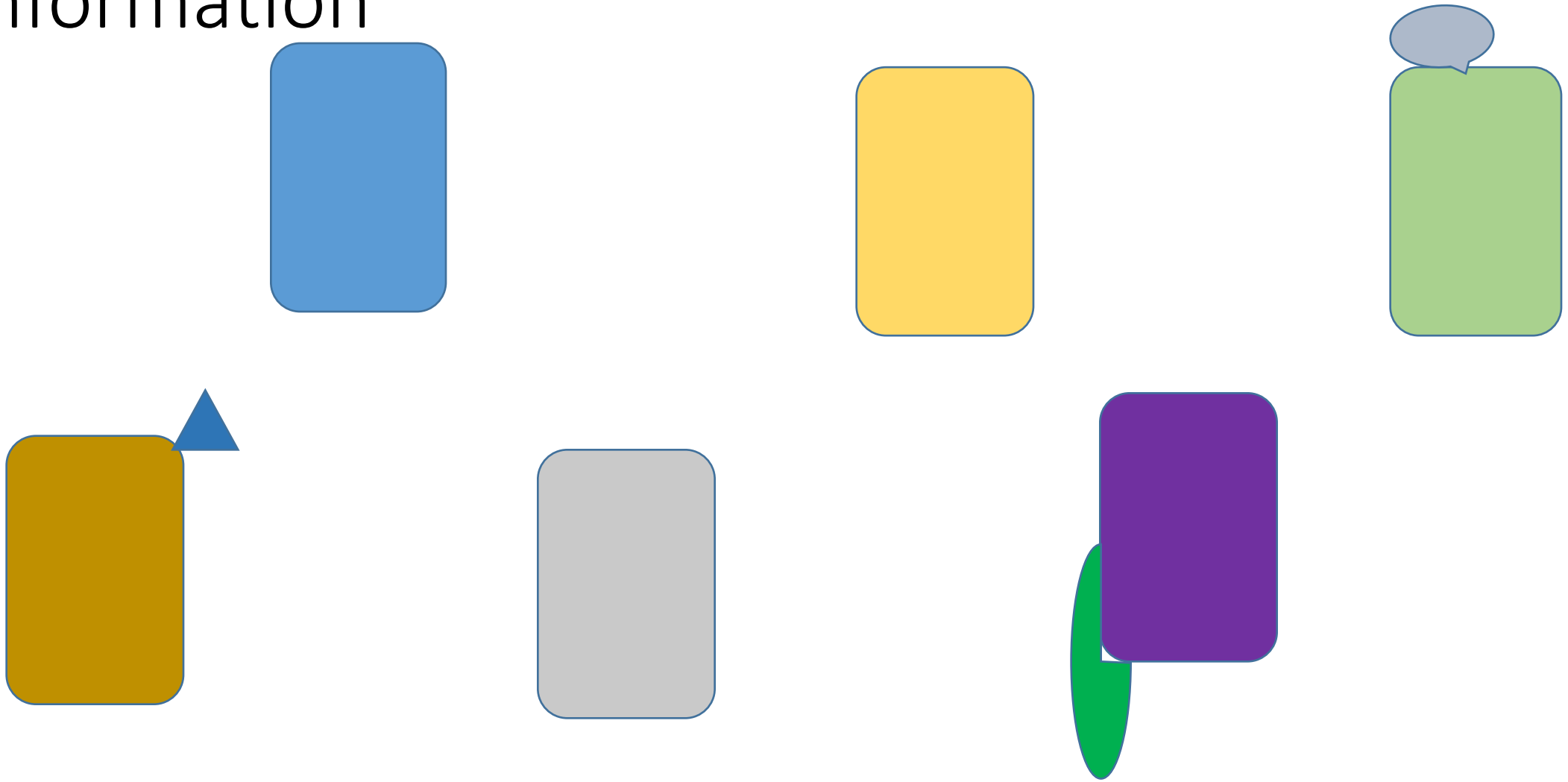
Problem #2 Unseen Issues

- Hidden profiles
- Anomalous events
- Latent Pathogens

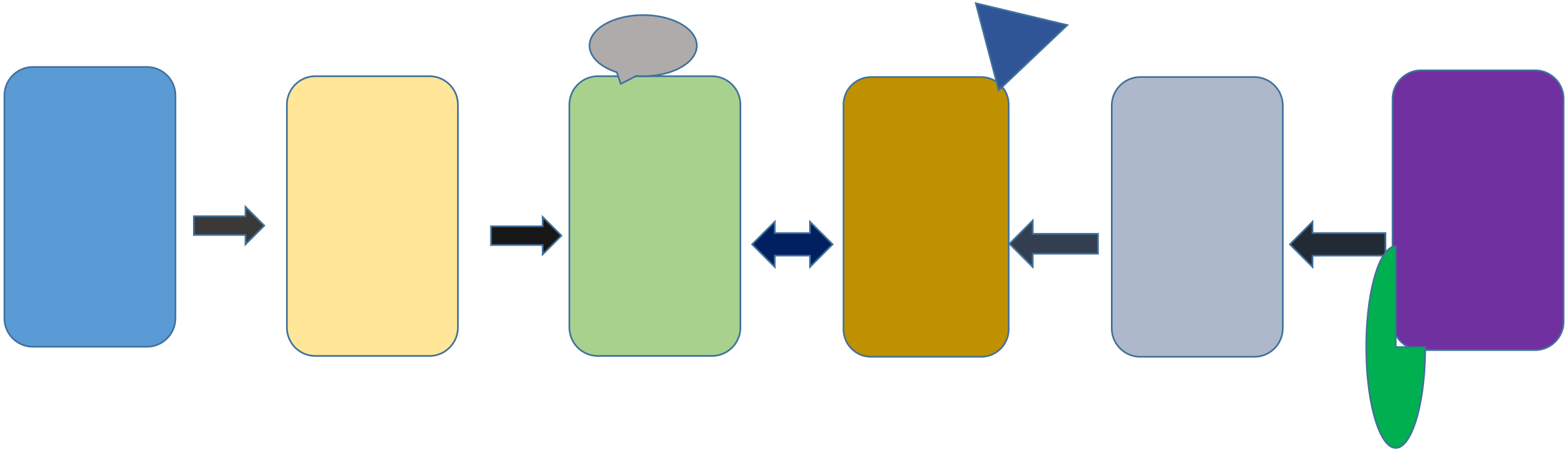
Hidden profiles

- At Miami University in Ohio, a social psychologist named Gerold Stasser did a number of experiments on what he called “hidden profiles” in group decision-making.

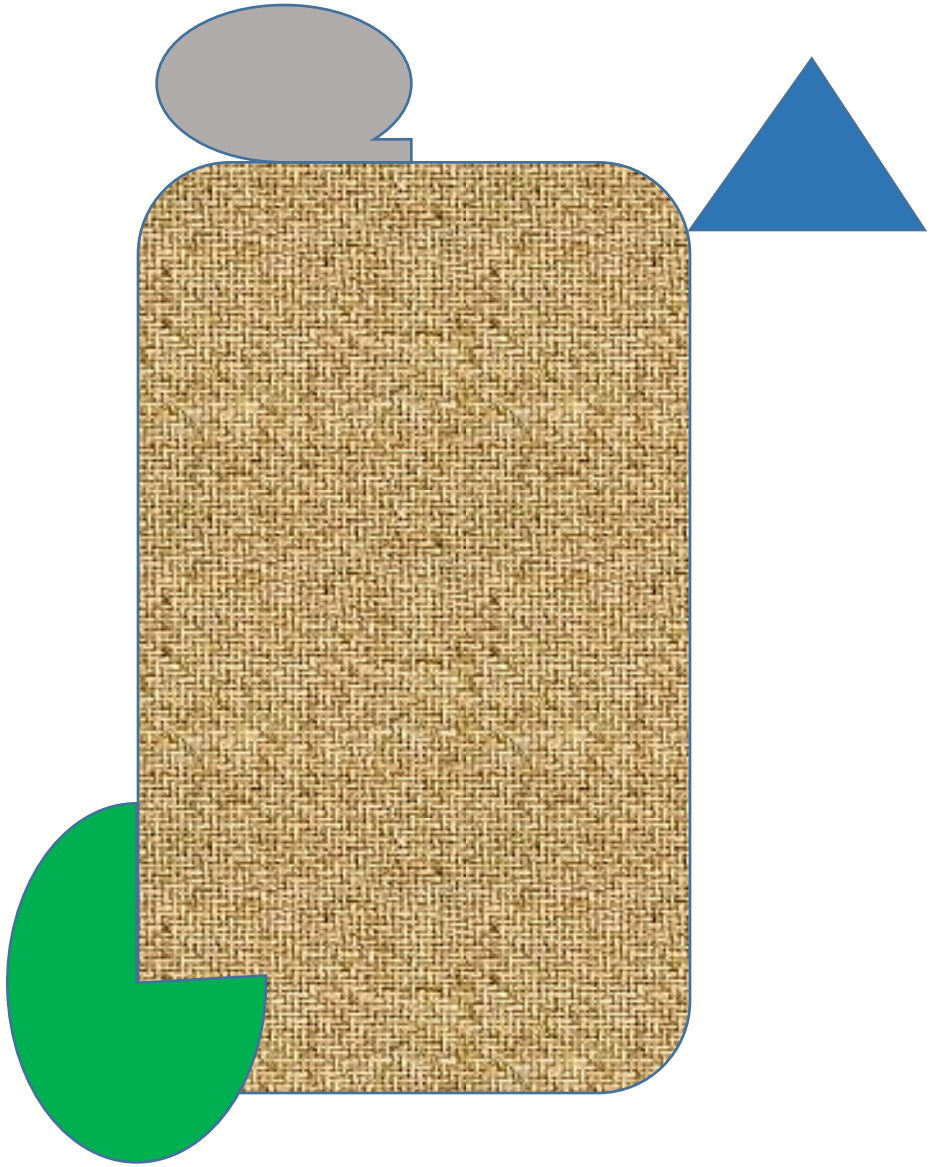
Stasser's "hidden profiles" involved people who had both shared and unshared information



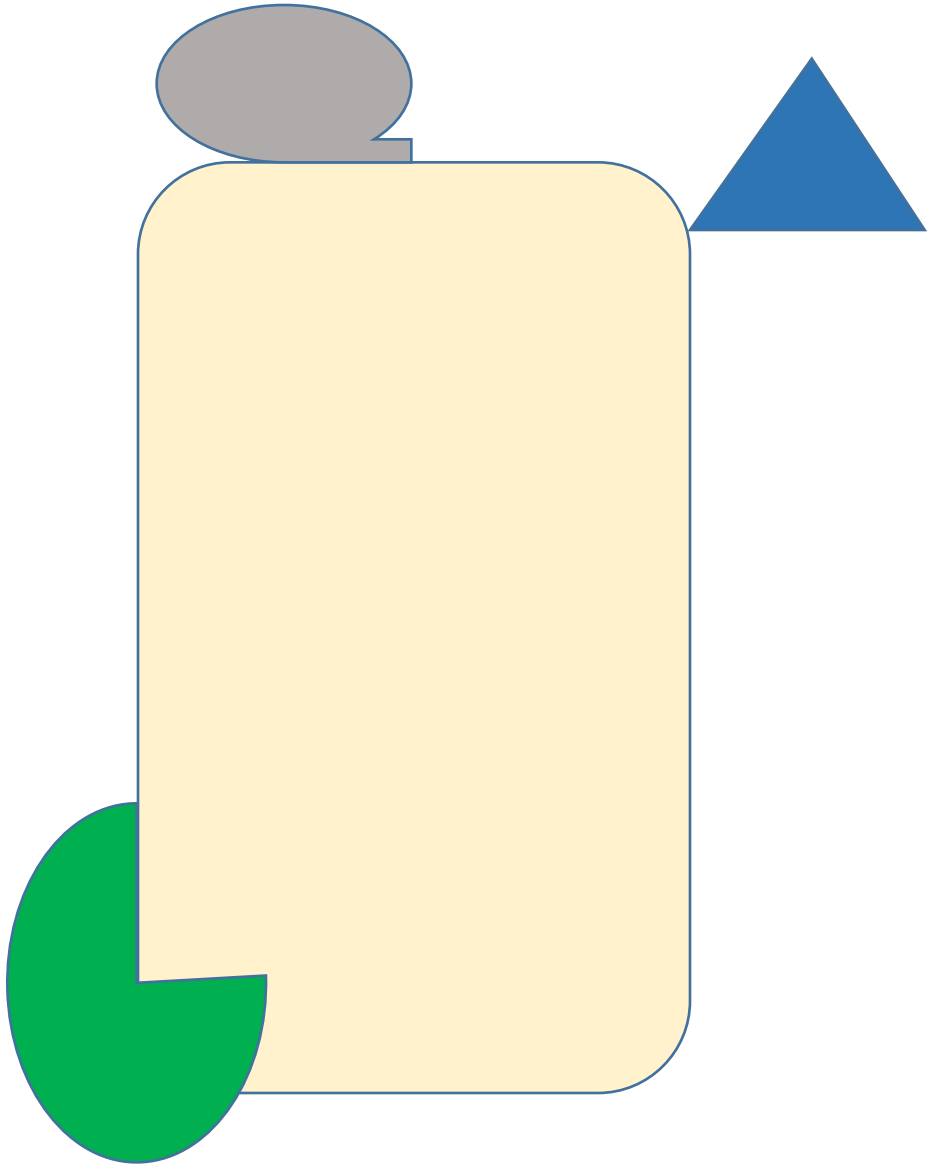
Group discussion, though, focused on the shared information, not the unshared



So participants explored the common ground….



But tended to leave the unshared unspoken….

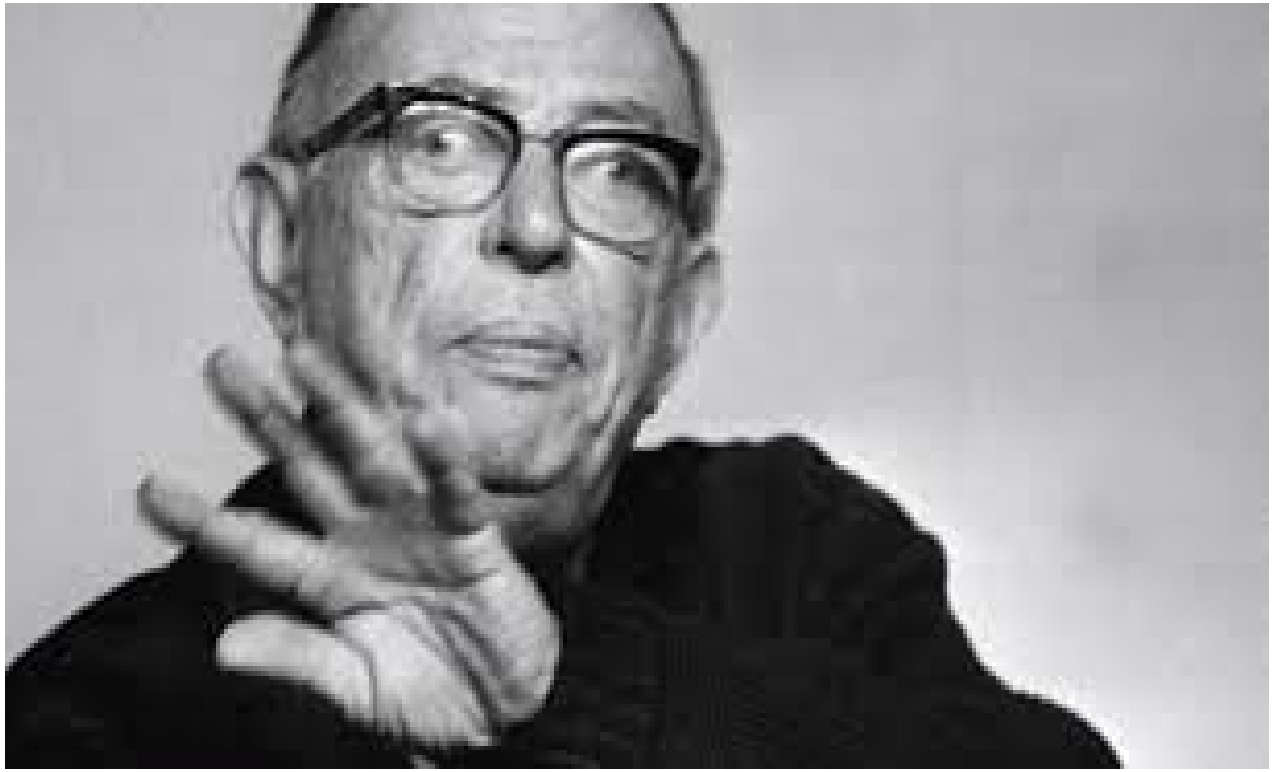


This can happen in organizations as well…

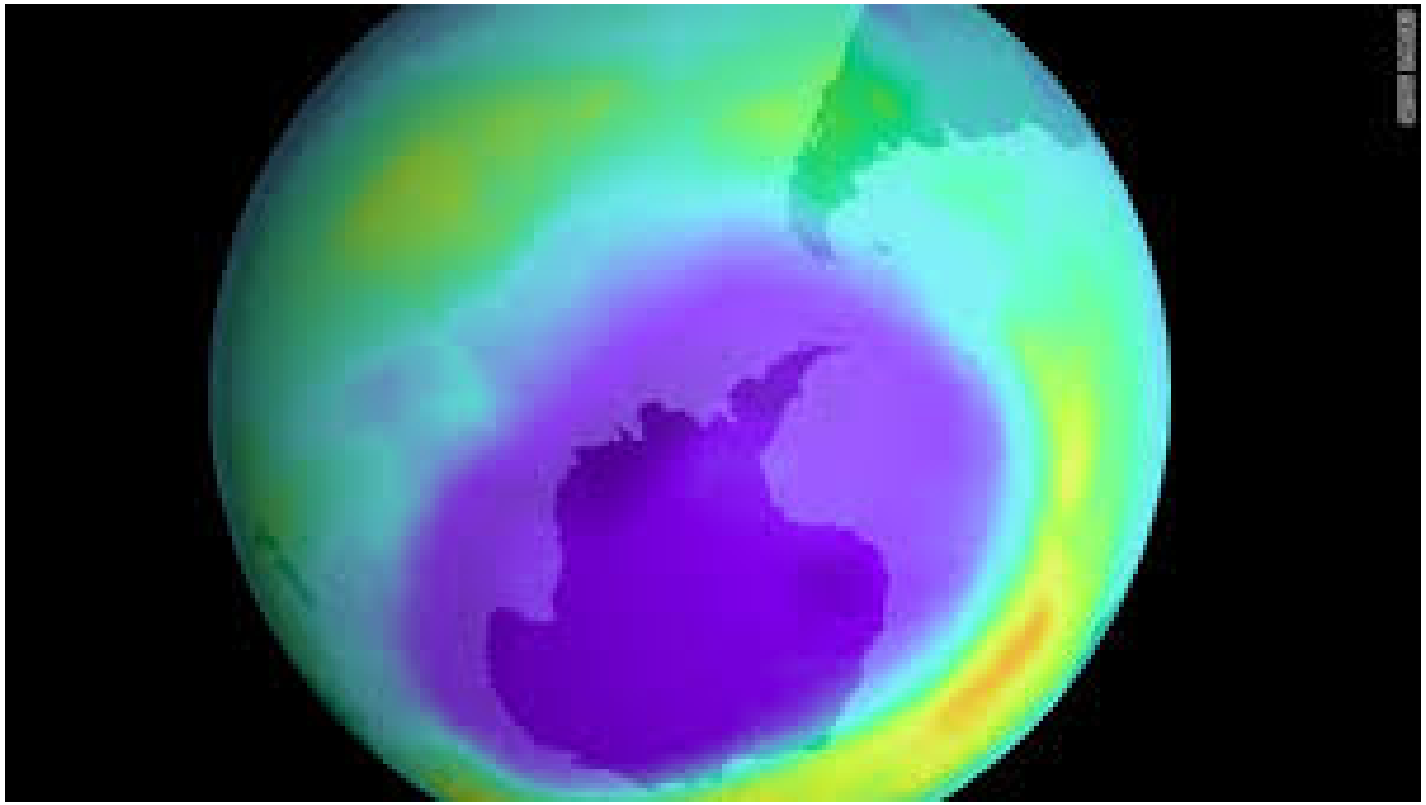
- Organizations are more likely to focus on the well-known, the normal, and the good news.
- They tend to leave aside the unusual, the abnormal, and the problematic.

So when something out of the ordinary happens…

- People hesitate to report



The British at the South Pole were first to spot the “ozone hole” over the Antarctic



Their instruments told them the ozone was getting thinner.

a Dobson spectrometer

But the Americans' Nimbus 7 satellite didn't report any such effect…They thought.

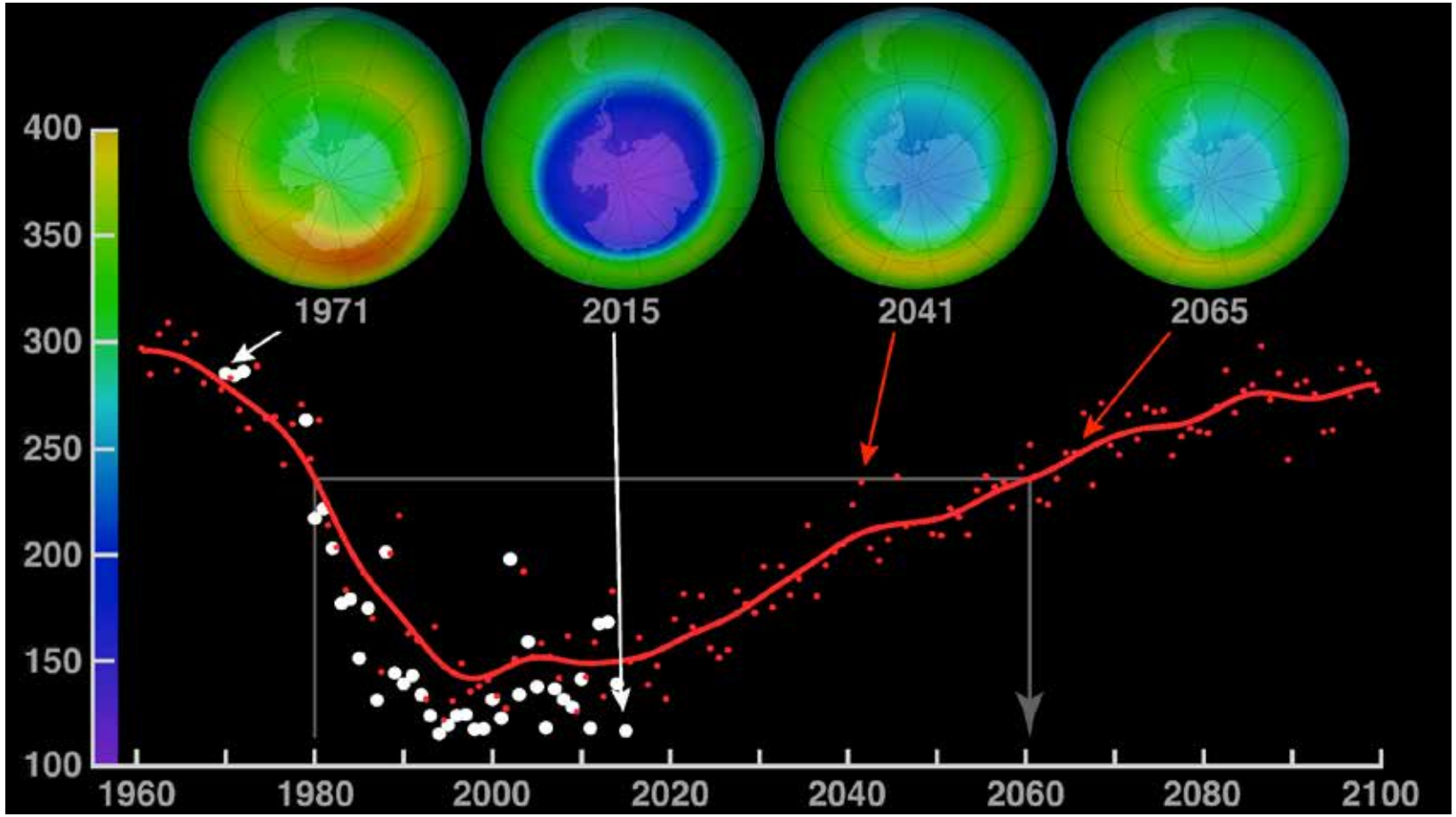
The Nimbus 7 had a TOMS sensor, specially designed the measure the thickness of the ozone layer. It seemed to show nothing.

The British Antarctic team didn’t want to look stupid, so they sat on their data for 3 years

But it turns out the satellite was OK!

What was wrong was not the Satellite, rather that the ground-based computer had edited the data out. There was a built-in blind spot.

When the British finally spoke up, the Americans rechecked, and discovered what they had missed



And then we have the Fukushima disaster

The Japanese committee system was flawed, and often ignored the exceptional opinion

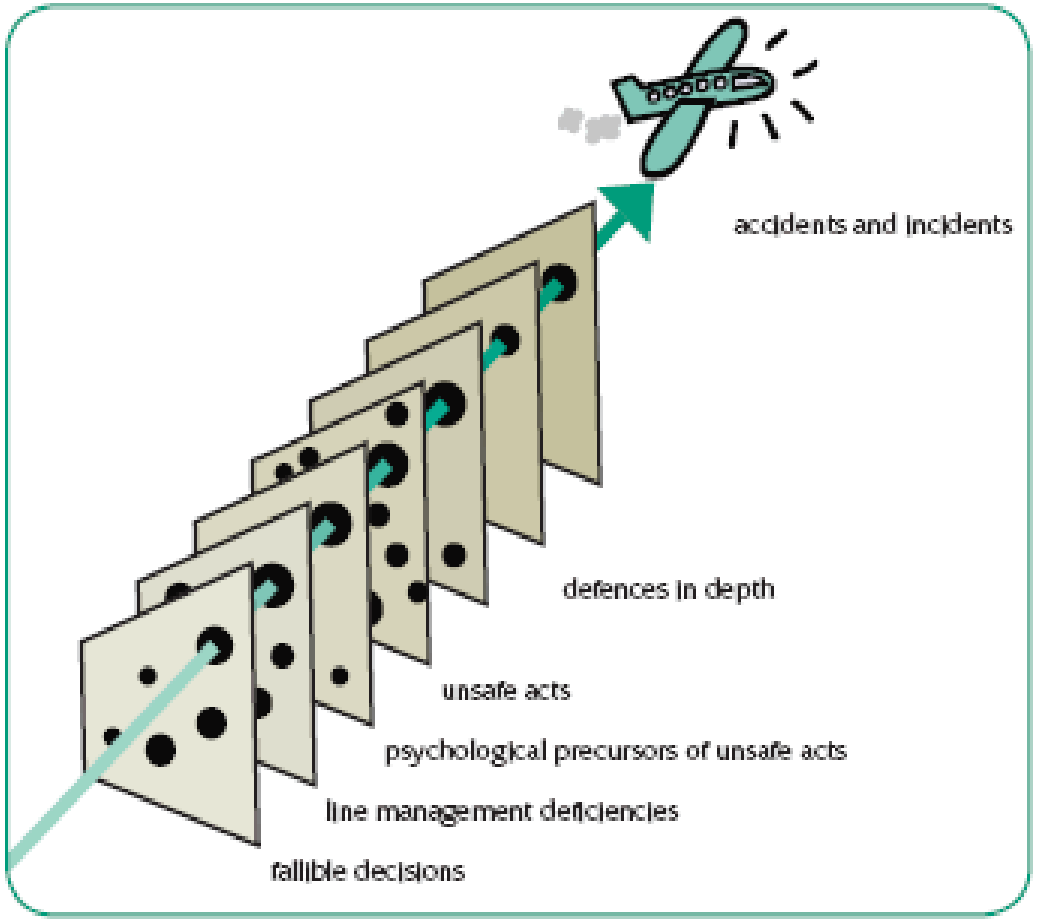
Such as that of Kunihiko Shimazaki, an expert who warned that the earthquake could trigger a tsunami that might be double the height of the seawall built to protect the coast.

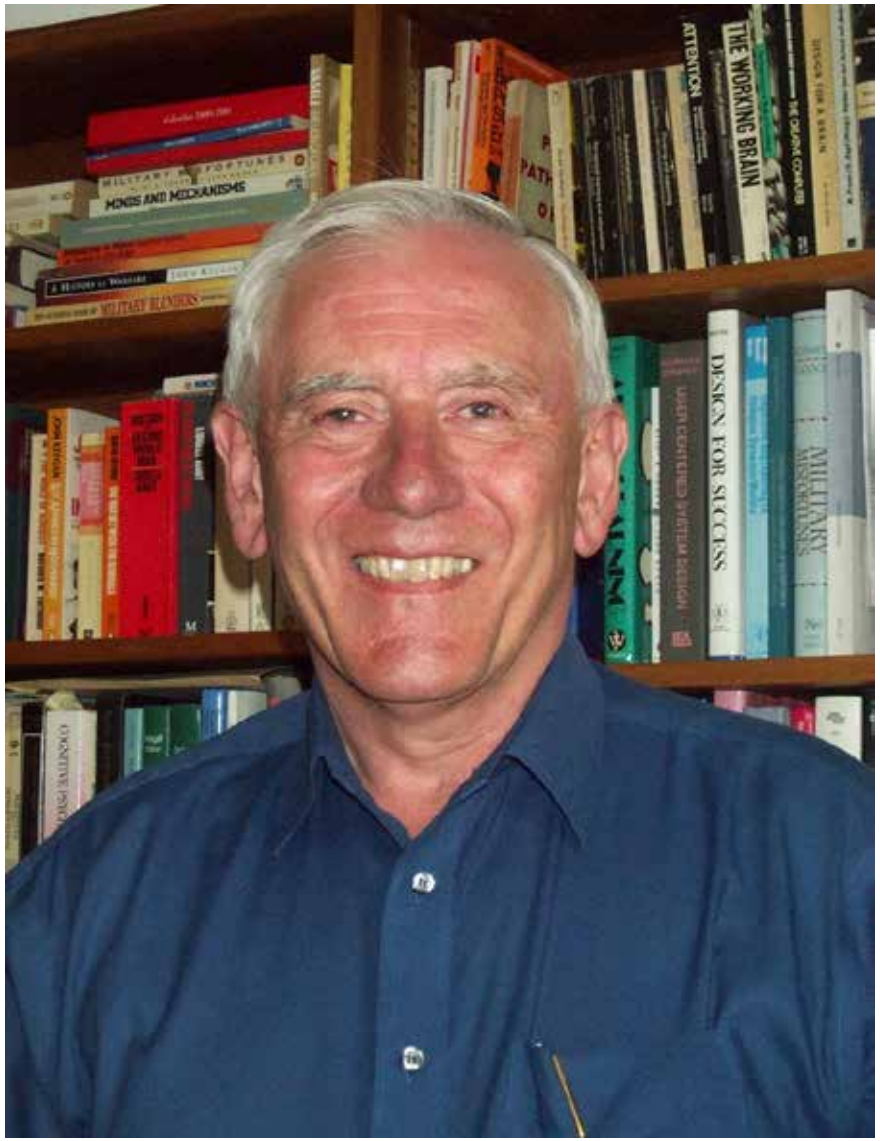
But Shimazaki's opinions were largely ignored

- They were edited out of committee reports.
- The Seawall built was 17 feet high.
- The Tsunami might be 50 feet high, Shimazaki thought.
- The actual Tsunami was 40 feet high.

In the event, the tsunami in fact exceeded expectations….

Professor James Reason, years ago, warned of the dangers of “latent pathogens” for potential accidents





But then, who would see the latent pathogen?

How can we be sure we hear the “faint signals?”

- The issue was raised one day by the head of a nuclear power plant, and I had to admit that I couldn’t tell him.

- But I thought about it.

This is what I think now.

- To report faint signals, the labor force must feel three things:

- 1. They must feel aligned with the organization's management.

- 2. They must feel they have (or can get) the key expert knowledge to determine if something is wrong.

- 3. They must feel empowered to speak up.

Enrico Fermi, a nuclear physicist defines the "will to think" about a problem.

"The *will to think* is the belief that something will happen because of your thought. I was willing to think about nuclear power because the American government was willing to put forth the effort to try what I envisioned. That gave me the will to think."

- Enrico Fermi was the prime intelligence behind the creation of the world's first nuclear power plant.

- So how do we create "the will to think?"

Problem #3 Disjunction between management and operating level

"I just sent them up,
who knows where they come down,
That's not my department!
says Wernher von Braun."

from a song by Tom Lehrer

A study about lying in the U.S. Army

- According to a field study carried out by professors at the Army War College, systemic forces in the Army encourage lying. For instance, it happens that training requirements often exceed the number of hours available for such training.

- Since commanders cannot do that much training, and since they cannot change the requirements, they are forced to “prioritize” and cherry pick which training requirements they will do, and lie about the rest.

The paradox of “smart knowledge”

- This is a very scary situation, because:
- 1. Who knows if the commanders make the right choices about which training to do?
- 2. The requirements cannot be altered.
- 3. No commander will admit that he or she can’t meet the requirements.

And worst of all

- The unit commanders are in a stupid situation, which they can’t change, and which encourages lying, deceit, and dangerous improvisation. It undermines morale and the military ethic.

- And about this the top commanders have no clue.

In Britain

- When Jimmy Savile, top TV celebrity and close to the royal family, died, a beautiful tombstone was made for him. But unknown to the public, Savile was also a serial rapist and abuser. Within weeks, evidence of his widespread crimes suddenly exploded in the media. His tombstone was demolished.

- How had he gotten away with groping, abusing, and raping hundreds of women and children, right under everyone's noses?

They commissioned reports to find out

- At the National Health Service, the report stated that often the lower levels in the hospitals knew about Savile's crimes, but this information never reached management.

- At the BBC, they found that Savile's outrageous and often criminal behavior was well known at the studio level, but top management continued to operate on false assumptions and stereotypes, as well as the benefits of Savile's popularity. Savile continued along.

The reality

The reality is that no one at the top wanted to hear the bad news. After Savile had raped an 8-year old patient in a hospital ward, the nurse told her not to cause trouble by reporting the crime. She didn't.

- If you don't want to hear it, you probably won't.

- But then you won't know what you are not hearing.

Requisite imagination

Often management is too busy with its immediate concerns to inquire into things at the lower levels.

- Management needs a “requisite imagination” to imagine how and why things might go wrong, and then probe deeply along potential fault lines.

- But usually they don’t ask.

Conclusion: So what can we do about such things?

- To get better information flow, we need to do the things that go along with better reporting .

First, a generative culture

- A focus on the mission, not on privileges
- “A level playing field” where hierarchy is minimized

Information flows when barriers come down

Second, a workplace focused on cooperation

- A team that extends throughout the organization, rather than just for the “Jedi Knights.”
- A just culture rather than a punitive one
- High trust and respect

A common vision and friendly feeling help

A different emphasis?