IBICT

BEYOND UNCERTAINTY

We have talked about certainty, risk and uncertainty scenarios.

In the uncertainty scenarios we invest resources by looping to narrow down the uncertainty.

Today we will talk more about this and about another, related topic: ambiguity.

EXAMPLE OF UNCERTAINTY SCENARIO: CUBAN MISSILE CRISIS

HISTORICAL MOVIE:

13 Days

- During the Cold War, URSS and USA were powerful enemies

↳ Mutually assured destruction → Both sides were capable of destroying each other, also when if only one of the two started the attack (both would be dead)

Cuba (communist) was believed to have nuclear weapons, and USA embargoed them, by blocking the country with the navy.
The Soviet ships wanted to run the blockade.

None of the two sides knew the plans of the other side, because they did not communicate; but they wanted to find out more information.

For example, USA wanted to verify if M.A.D. was actually true, if CUBA really had missiles.

↳ They sent a scout airplane, but this was shot down because they believed it was for attacking them

(Cuba actually has weapons)

Both parties were investing resources (time, communication, military power) to find more about the other; more gets a complete overview.

This is an example of a more contemporary perspective, based on subjectivism, rather than on objectivism.

SUBJECTIVISM → more way of seeing things; plurality of opinions and perspectives

OBJECTIVISM → same experience, same data

(Nowadays, all have different opinions also on topics of discussion already "closed" - see vaccines)

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CONTEMPORARY PERSPECTIVES

- Subjectivism

- The Unreal

- Post-Modernism (also in Art)

        eg. Grim Fandango : main character is cheating on
        players.

- Ambiguity

    Take two Roman generals Titius and Caius:

    C. is running away, T. wants to hunt him down.

    Their forces are more or less the same, but they have
    to use the environment in order to win.
                        ↓
                    terrein with hills / forests ...

    The elements of the terrein are both an advantage
    and a disadvantage:

        - high ground → good for chavalry attacks and   +
                        archery (down hill ↓)
                     → more defensive   +
                     → probably siege ?   −

        - forest → hide troups +
                 → chavalry has less impact −

    There is no pre-established probability on who wins and
    who exploits the terrein at their best.
            ↳ HUMAN FACTOR is important to leverage advantage

    Also, by exploring the terrein, the two troups have a
        MAP , but this theoretical knowledge mismatches the
    (real EXPERIENCE they will have on the terrein.

    MAP ≠ TERREIN

    UNCERTAINTY ⤳ AMBIGUITY

          ↙   ↓   ↘ Stimulates
    Things are   No objective world   mistakes in
    not well defined   that represents the truth   judging

Natural
environment

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LEVERAGE ENVIRONMENT

- Static Environment
- Enrolment: actions of generals

eg. Fisherman - Regulatory Body : the fisherman wants to leverage his actions to make sure the way he fishes is shaping the regulation

[Inactive things impact decision making] !

eg. Classroom: The teacher enrols/engages students in the way the physical classroom allows him

Artifact

- projector/blackboard are fixed, in front of class
- desks are so that they address the attention in one direction
- teacher desk : higher for control & visibility. It also determines who is in charge and has a physical role of hiding the cables
- people → roles (as we are doing)

TRANSLATION : process through which you transform something to another (involves enrolment)

eg. phd students transformed in teachers

DIFFERENCE between room and territory

No

- Artifact vs natural → the artifact follows the designer's intent : 1 possible configuration, removes ambiguity
- Degrees of freedom / type of use
- Natural field → can be in favor or contrary with respect to what you have to do

CAUSE & EFFECT

- Same environment (Highways), 2 countries (Italy, Germany)

Speed limits :

- Italy : 130
- Germany : unlimited, more space   } equally safe because everybody moves at same speed

difference in
Culture, norms and rules

Which of these is the cause ?   Norm → Rule ?
                                 (drive well) (speed limit)

                                 or Rule → Norm ?

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Actually the causal relationships are very muddy, mixed in the cause and effect.

eg. if someone comes from outside, they adapt to norm, but add more uncertainty to the system

WHY important for Innovation?

- When you create something you are limited by the environment (obstacles, cause), but you can also change and alter it.

eg. Roman Generals: act, use environment
Mammy Calavera: can't proactively change roulettes

Different strategies:

- When the environment is driving you → react
  ↳ it is unknowable
- When you are changing environment → act

⇒ ACTOR NETWORK THEORY →

(see reading)

Idea: designed artifacts are telling you what to do; are taking (a limited set of) decisions in your place
↳ are they your equal in taking decisions?

eg. phone in communication:
no more communication between two people, but between two phones

The actor network theory proposes how to map relations between humans and non humans

NON HUMAN AGENCY

- phone : shapes the channel of information, cuts some information (eg body language)

- Google search : results are selected by an algorithm which takes decision for you
  (your agency is diminished)

IDEA:
Business-
Model
of Google
is shaping
you
{
- Filter bubble on FB: search and results based on history
  ↳ uncertainty reasoning applied on you: profiling, narrow you down → better advertisement (MONEEEY!)

Keep feeding you with info that you want to hear
⇒ fallacy inductor, because you won't be able to falsify your ideas
}

Designer's intent → know the goal and act by embedding intent in artifact

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eg. seatbelt → "don't drive w/o seatbelt" embedded in car

CASE OF FAKE NEWS

This is an innovation of the last years : it is very difficult to falsify.

Problem : difficult to define and to understand if news is fake

Solution → fact checking : find another, reliable source
(falsification, but not simple)

Other options:

Costly - time consuming
{
→ delegate trust to institution, eg trusted newspaper
(Base Case)

→ research, informed position based on academic knowledge
- consensus (eg. climate change)

→ different sources/opinions → formed own unbiased opinion

→ Most of people: believe it if it is written
}

↓

Breaking this would be as finding the needle in a haystack without any tools

How was this fact leveraged?

- Propaganda

- Claim everything is fake news   Eg. someone has done something stupid

- Spread controversial news to "cover" simple facts   e.g. decisions (economical political)
  eg. when increasing taxes

  ↳ Donald Trump uses this a lot : hide the needle by adding more useless news

  This is an example of Actor Network Theory :
  → Trump
  → poor guy
  → public
  → Social Media: Twitter → spreads the news

Feedback loop

(same idea of viral marketing and exponential growth)
{
In case of 2 news at the same time

eg attack of Trump over   potentially dangerous
random person   fact

Twitter shows news w/ most shares
  ↳ False association RELEVANCE ↔ SHARE
}

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COST OF FALSIFICATION

Flatearthers → filter bubble; cost of falsification is not high, but the system is pushing it to increase

Why did the JOKE become a REALITY?

→ Because people only search for what they want to believe

→ People are uninformed

→ Rationalization of a feeling

→ Also, who started it got lots of likes (measure of success in social media)
     ↳ when successful ⟹ Authority

Again, loophole in false correlation

POPULARITY ⟷ VERACITY

Understand fake news by tracking them, their origin
    ↳ "black box"

POST-TRUTH flows all these phenomena where there is no single truth, and where it is very easy to open closed debates (Earth is flat?)

Conspiracy theory → no proof, "hidden information", consistent messages for a narrative

Reading: Center for Civic Media (MIT) - Ethan Zuckerman (resigning after Epstein scandal (sexual charges)

#FiveJobsIveHad → how can you falsify a meaning? (school in Nevada believed to be under attack)

Creation of meaning:

    eg Italian → "buonista" → good person
                  ↘ used to attack people in politics ("too nice")

    English → "friend" → real friend? Facebook? Connotate the word to make it precise.

CONCLUSION: What can we do about all this?

Now we have problems of fake news thanks to the power of technology → ~~befo~~
        ↳ be RESPONSIBLE!

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