

Introduction to Technology Battles

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Lesson 07/10

1 What is a Technology Battle?

Probably, a Case study!

1.1 Class Brainstorm: what is a case study?

- Something similar to a business idea
- Different applications of the same topic, and explain one is better than the other
- level of analysis of a topic which is open handed (critical element)
- element of analysis for competing solutions
- Story to illustrate a concept (narrative element)

Usually case studies seen from 2 angles: Induction and Deduction

2 Induction

Mathematical approach: Proof the law for the base case, then proof it for the next number, then it'll hold for the following too.

Epistemological approach: I'm taking a law starting from a big number of observations

For both, get a general understanding of a phenomena (generalization) starting from particular instances!

2.1 Class Brainstorm: when induction doesn't work?

- if a data set is not general enough, and you get a law (an abstraction), it might not be a correct in general!
- there are situations in which you don't even know the data set is partial!

- when you don't have to learn a general rule, but a specific rule -i when you use just part of the data set, not all of it
- there is not single induction you can do! you can reshape the problem for another generalization
- there is also a problem of information gathering, if we sample from a too narrow space! need enough samples for a good generalization! (must be general enough in all dimensions)

2.2 Example: Popper turkey and the fail of Induction

Karl Popper example says that a farmer goes to feed his turkey every at 8 AM. One day the turkey was waiting the farmer very happy to receive his daily food, but the farmer came and killed him to cook him for the thanksgiving! :(The turkey was purely using induction, there's no way he sampled for that type of event, he did not know it could happen! [What we have seen in the past is not enough to have a complete vision on what is happening in the future!]

3 Deduction

I have a theory, then i try to verify or deny it sampling from the real world. Scientific method example: The scientific Method is falsificatory, not verificatory. Starting from a theory, we set up an example to deny it!

3.1 Example: Boiling water

The starting theory is that the water boils at 100deg. Then, we set up an experiment to deny it, for example changing the environment (pressure), like boiling it on a mountain, so it won't boil at 100deg bot at 99deg! The law must be changed to hold! So it becomes the water boils at 100deg AND a certain pressure.

3.2 Class Brainstorm: when deduction doesn't work?

- Flat earth! If i have in my head the idea that heart is flat, and i gather datas strategically to confirm my theory i will keep my idea! BUT i am not sampling enough informations!
- Conspiracy theories! moonlanding, september 11, etc... if i don't see any proof that my theory is wrong, than it must be right!

Both elements will be in the battle!

4 British Parliament

[video example]. What are the main elements?

- "keep order" cit. (moderation?)
- stand up when talk
- shout if agree or not!
- procedure to ask questions, desinated place for people who want to speak
- desinated person to ask questions
- bold speaking! easy to hear
- concise
- sarcastic!
- leadership

All those elements should be in the battles!

5 Why use Battles to teach I and E?

5.1 Why use battles to talk about Innovation?

- they want us to be open-minded
- they want us to be critical (teach us how to analyze situations)
- simulation for the future! we'll need them to succeed!
- teaching us how to carry on our ideas!

5.2 Why is it about Entrepreneurship?

- boldness!
- ability to represent our ideas/company, speak as representatives!
- need to be competitive! win the majority! persuade other peoples to support us!

6 Open and closed debates

6.1 Open debate

Topics that have no optimal, but multiple and concurrent solutions! Examples:

- Global pollution
- Growth/Degrowth of population
- Privacy issues
- Rights for who don't identify with binary genders

6.2 Closed debate

Topics that have an optimal and sure solution! Examples:

- junk food is good for you or not?
- right to vote for woman
- earth is not flat
- vaccines prevent illnesses

7 Retrospective and Prospective rationality

7.1 Collective exercise! Learn and predict Star Wars!

3 volunteers, 1 Star Wars expert, 2 that knows nothing about it (test subjects).

(1) At the first test subject: the expert explains the plot of Star Wars 4-5-6-1 (exalting the role of Anakin), then the test subject try to guess what happened in 2-3.

(2) At the second test subject: the expert explains the plot of Star Wars 1-2-3-4 (exalting the role of Anakin), then the test subject try to guess what happens in 5-6.

(1) plot: A young Jedi team up with his redeemed father (Bad Anakin that is Vader) to kill the emperor of the bad empire. In the first film a Jedi master discover a kid (Anakin) that is supposed to become the strongest Jedi of the universe. guess: The kid join the dark side and fight his master! reality: pretty accurate

(2) plot: A Jedi master discover a kid (Anakin), that is supposed to be the strongest Jedi ever, but growing up he becomes evil (Darth Vader), in the last film the master Jedi discovers a new strong kid. guess: The kid grows up and overcome the bad guy (Anakin). reality: They team up to kill the bigger badder guy!

7.2 Retrospective

example(1): guess the prequel! We know that at some point he should have became evil! I'm in a world in a certain state and i try to guess how i got there!

7.3 Prospective

example(2): guess the sequel! No way he could know he redeemed and team up to fight the bigger badder guy! We know the beginning, we know how it's progressing, but we have no clue about the end! I've seen the world develop, i know the development, but i don't know the end!

For the Battle try to think in prospective! Try to make the questions! Not to find the answers!

8 Conflict and Competition

Last point about the vision over battles! There are both elements of cooperation and competition! Competittion during the battle, but still we will have to write the report all together, cooperating!

8.1 Example: Competition between companies

A company should overcome others to emerge! An innovating company should be more impactful than the others. The start of a competition of an Innovating Company entering the market can happen in 2 ways.

Distruptive Innovation: The company completely change ALL the market. Example: Illiad, online banks

Incremental Innovation: Start from a small part of a fragmented market and try to get larger. Example: Restaurant, Ice cream shop

For the Battle try to be disruptive! Think about big ideas! Market changing! Learn ways to be disruptive!

9 Who wins a Battle?

Is there any strict better option? no! The more convincing, the more persuasing wins! There is not someone right and someone wrong! The more CONVINCING wins the battle!

10 Contents

There are different levels of contents.

- Horizontal content: some common thing among battles, economic/social impact questions that will hunt us between battles
- Vertical content: specific topics for the battle, that we will not encounter again
- Scenario: example: we want to colonize Titan, should NASA (statal, is top-down) do it, or should private companies (private, bottom-up) do it?

11 Battle topics

Some examples given:

- Steve Jobs vs Bill Gates
- Uber vs Taxis
- Realpolitik vs Ideology
- Tesla vs Edison
- Robots vs Cyborgs
- Reforming the EU's Copyright Law

12 Class flow

12.1 Pre-class

Before each Battle, a meeting with groups setting ground topics allowed/ that fit and that doesn't.

12.2 In-Class

15 mins for each group are given to show their topic, then open the class for debate. People stand up and ask questions, the teams interact over the question creating a debate. Each team will tell their conclusion after the debate and the class will vote, who gets most votes will win. In come cases there will be a jury.

12.3 Post-Class

The report! the bigger part! 10-15 points respect to Battle in class that are 3 points!