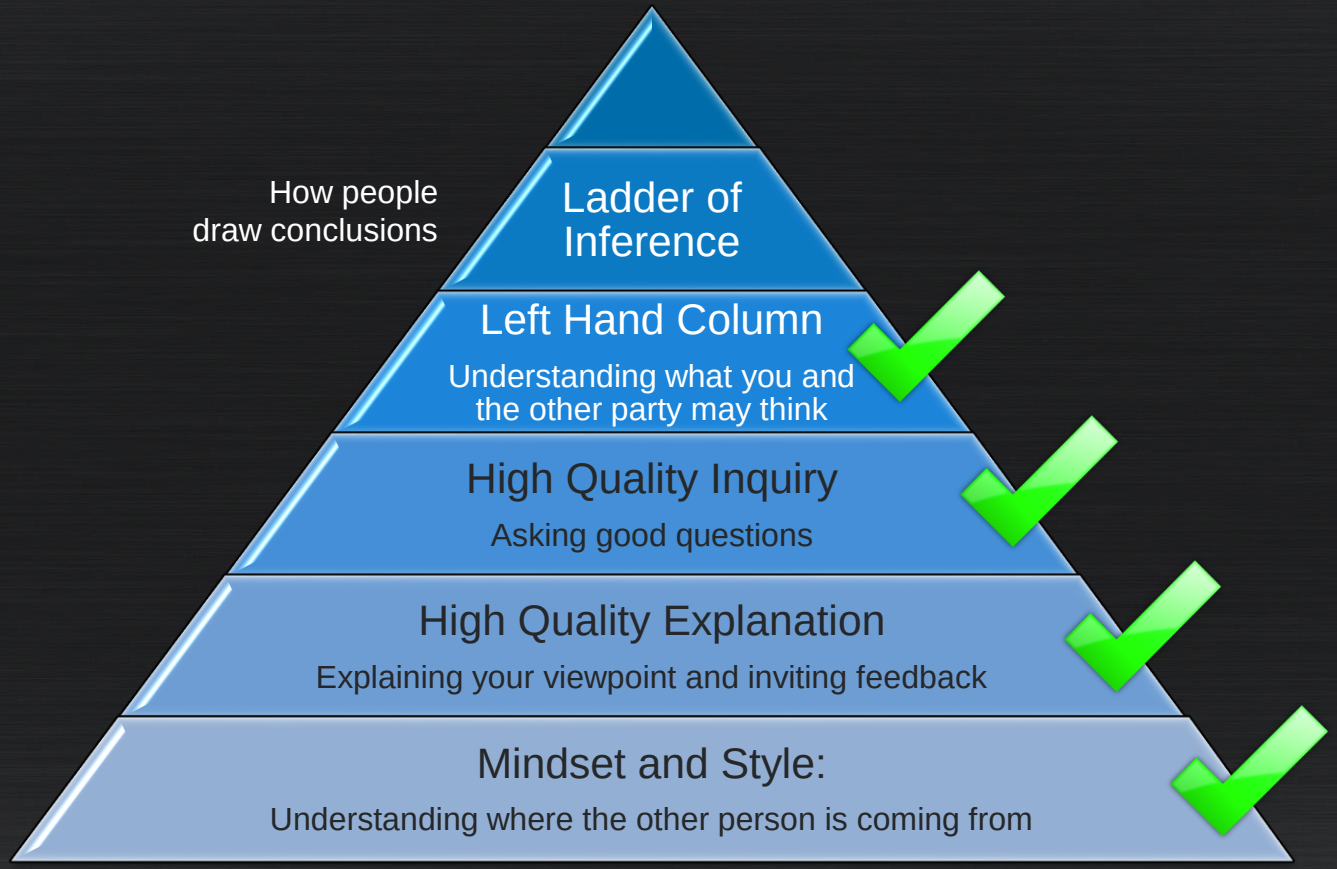
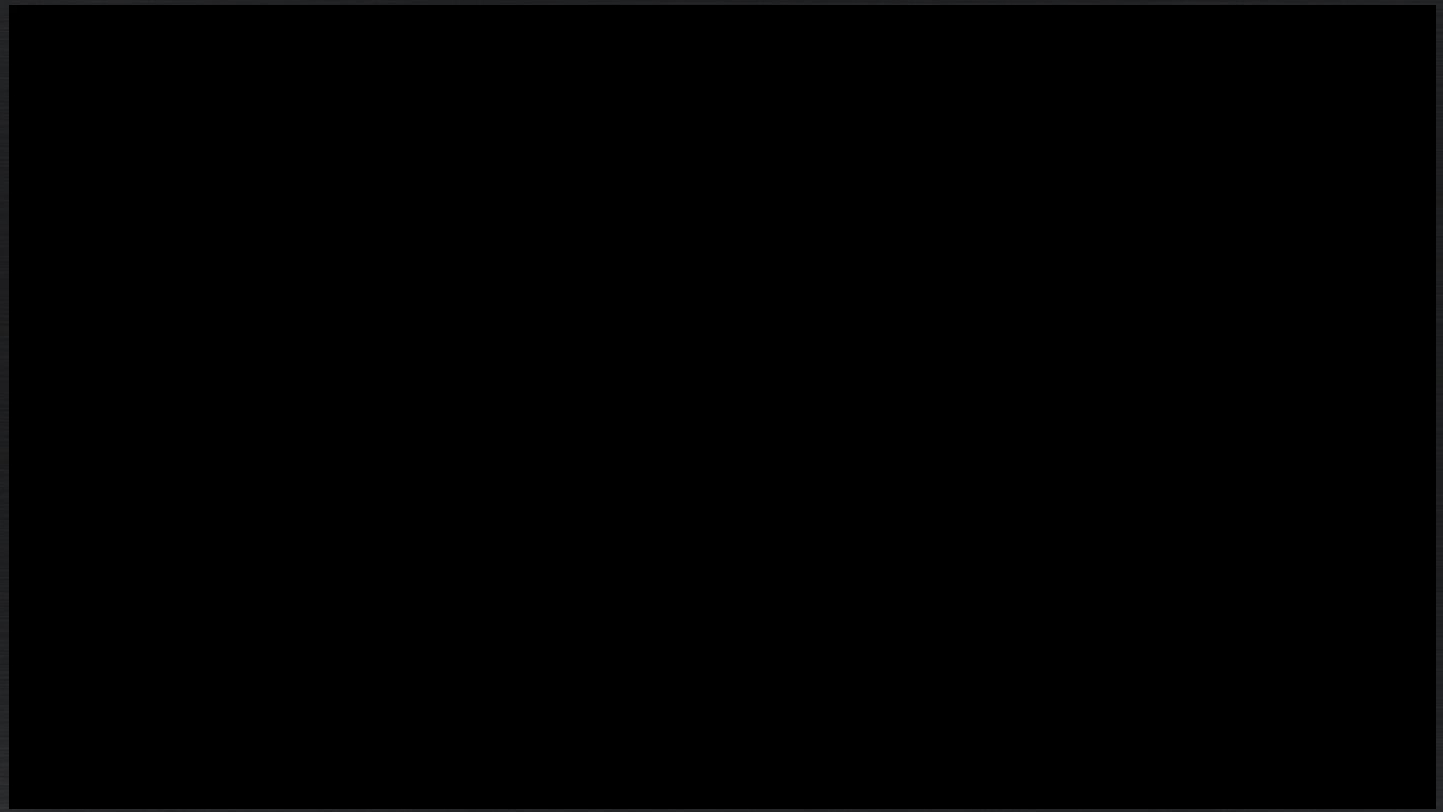
A positive outcome



Ladder of Inference



Watch on https://www.youtube.com/watch?v=KJLgOclPqis or http://ed.ted.com/lessons/rethinking-thinking-trevor-maber

Ladder of Inference

Decision / Actions / Code / Design

Beliefs

Conclusions

Assumptions

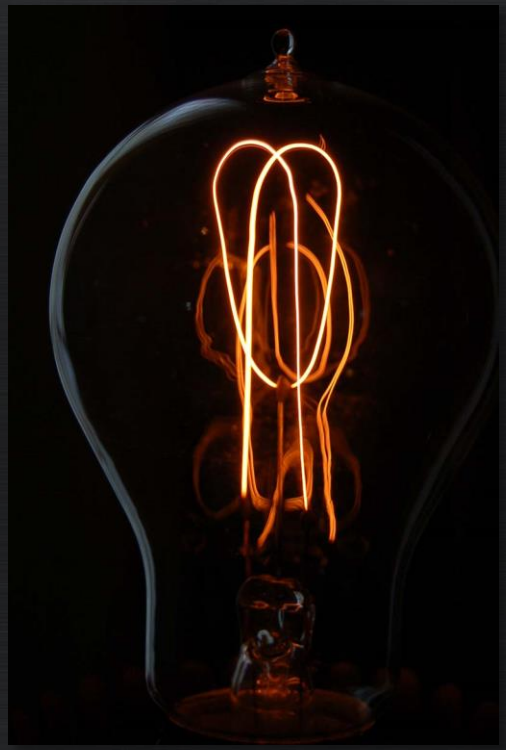
Selected Data

Observable Data

We make Decisions often in split seconds

And sometimes these are bad decisions

Geraint Rowland @ Flickr, cropped



Realization:

You can use HQ Explanation to verify how you came to a Decision / Proposed Action

You can use HQ Inquiry to work with someone else to verify how they came to a Decision / Proposed Action

Vinovyn @ Flickr

When is this technique useful?

- Discussion is not very specific
- Comments are generalizations
- Interpretations without explanation
- Many blinking words without clarification
- Advocacy wars
- BUT: note that this technique can be time consuming

Ladder of Inference : Self

Decision/Actions/…

Beliefs

Conclusions

Assumptions

Selected Data

Observable Data

Stop! Time to consider my reasoning

Identify where you are on the ladder

Work downwards

- Why have I chosen this course of action?
  Are there other actions I should have considered?
- What belief lead to that action?
  Was it well-founded?
- Why did I draw that conclusion?
  is the conclusion sound?
- What am I assuming, and why?
  Are my assumptions valid?
- What data have I chosen to use and why?
  Have I selected data rigorously?
- What are the real facts that I should be using?
  Are there other facts I should consider?

Geraint Rowland @ Flickr, cropped

Ladder of Inference : Self

Stop! Time to consider my reasoning

Identify where you are on the ladder

Work downwards

- Why have I chosen this course of action?
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  Are there other facts I should consider?

You play back HQ Explanation to yourself

I assumed that …
Because … of <reasons>
Are my assumptions valid?

Ladder of Inference : Other

Interject the conversation

You can use the Left Hand Column to do this
Or you can start from the bottom and work up

Work upwards

- Why has he/she chose this course of action?
  Are there other actions I should have considered?
- What belief lead to that action?
  Was it well-founded?
- Why did he/she draw that conclusion?
  is the conclusion sound?
- What is he/she assuming, and why?
  Are my assumptions valid?
- What data has he/she chosen to use and why?
  Have I selected data rigorously?
- What are the real facts that he/she should be using?
  Are there other facts I should consider?

I am concerned that it is nor clear how we/you got to <this Decision>. I am observing that <blinking word is ambiguous>. Shall we try and explore the assumptions behind the decision through a series of questions?

You use HQ Inquiry for each stage

What assumptions lead you to <this Decision>? I am asking, because I may be making different assumptions, such as …

I believe you are assuming … Have any assumptions that should have been considered been missed?

Communication Anti-Patterns

Spotting Issues and Resolving them

Advocacy Wars

When …

- Persuading and convincing dominate
- Low Quality Explanation
- There is no HQ Inquiry

Action Tips:

- Shift to HQ Inquiry
- Use Left Hand Column to name the issue
- Walk others down the Ladder

Recycling

When …

- A discussion has no closure
- The same arguments are recycled with different words
- Individuals repeat themselves often

Action Tips:

- Use HQ Inquiry to test for closure
- Use Left Hand Column to name the issue
- Use HQ Inquiry to confirm others feel that their viewpoint is understood

Up the Ladder

When …

- A discussion lacks specifics
- Comments are generalizations
- Many blinking words without clarification

Action Tips:

- Walk down the ladder slowly using HQ Explanation and Inquiry
- Inquire “Blinking Words” to create common understanding
- Use HQ Inquiry to get examples, use-cases, specifics

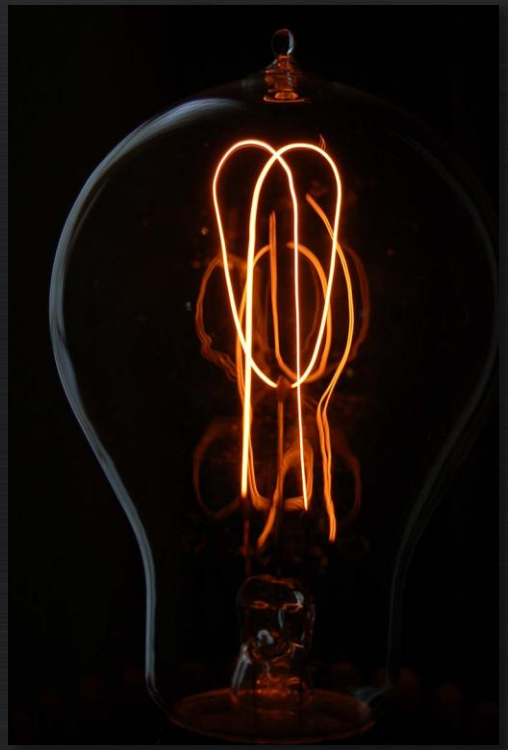
Blaming

When …

- Past events become the focus
- The discussion is focused on justifying past actions/decisions and there is no way forward
- People are heavily invested in being “Right”

Action Tips:

- Use HQ Inquiry to try and understand all contributing factors
- Use Left Hand Column to point out the issue
- You and others take responsibility for your parts of the outcome



Communication Techniques:

Applied to Reviews

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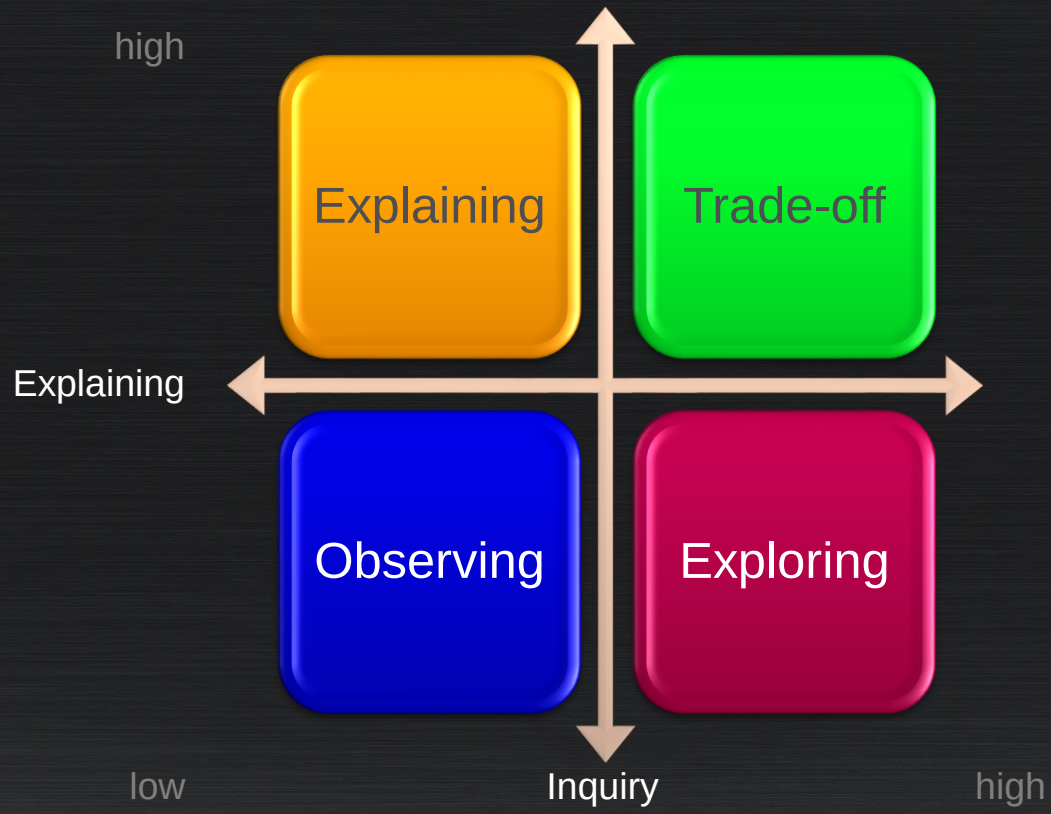
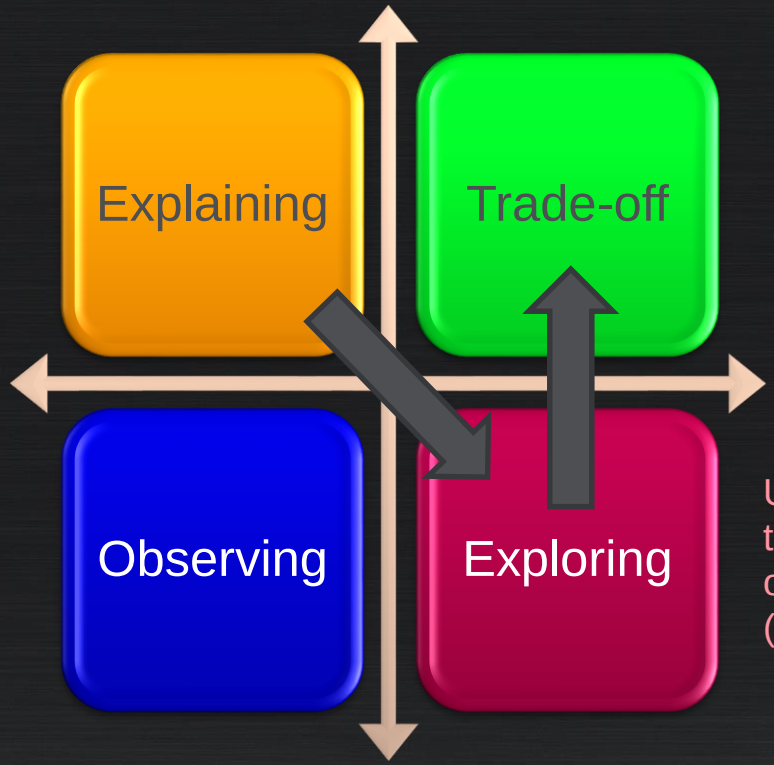
Balancing Explanation and Inquiry



Explanation and Inquiry in Reviews



Useful for explaining a design/patch/series or reasons for such (minimize iterations)

Useful for finding a compromise if there are differing views on the best technical approach (find a “good” trade-off)

Useful for exploring the trade-offs and implications of a design/patch/series (understand a problem)

Left Hand Column and Ladder in Reviews

Left Hand Column

- Good when exploring concerns about trade-offs, design decisions, etc.
- Can be useful when exploring solutions and discussing trade-offs
- Can be used to defuse disagreements and conflicts
- Can be used to deal with Bad Behavior

Ladder of Inference

- Can help break down the chain of reasoning that lead to a piece of code, design, etc.
  - Useful when there is disagreement and you want to explain how you got somewhere
  - Or vice versa, to explore how someone else got somewhere (useful technique for reviewers)