

Once Upon a
Time...



A Nice Place to Visit...

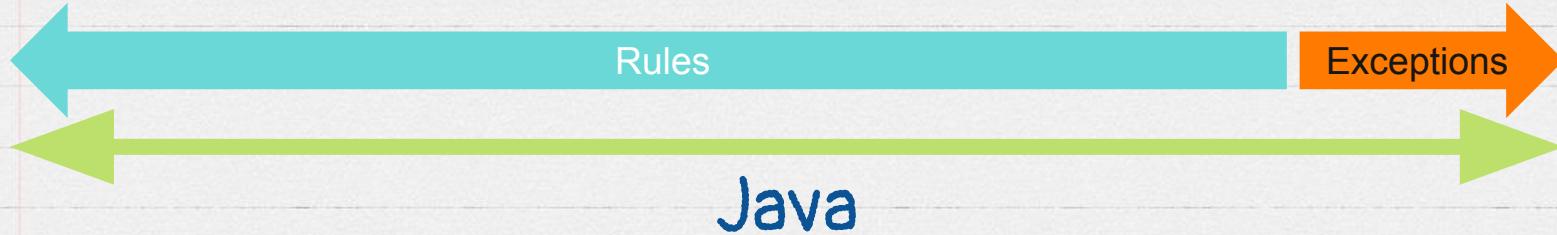
What's the exit name?

"sheb"

Language Rules and Exceptions



Language Rules and Exceptions





Find “**SHEB**” in this picture

Fun Fact!

French was invented
by a sadist.

Obviously.



Technical Empathy

By Leon Adato

Principal Technical Advocate @Catchpoint

\$today = gmdate('D m/d/Y');

Leon Adato

- ~37 yrs in tech.
- ~27 yrs monitoring & observability.
- ~11 yrs as a Tech Evangelist, DevRel Advocate, and (ugh) "Head Geek."
- Tivoli, BMC, OpenView, janky perl scripts, Nagios, SolarWinds, DOS batch files, Zabbix, Grafana, New Relic, and assorted other nightmare fuel.

[@LeonAdato](#) on almost all social media.



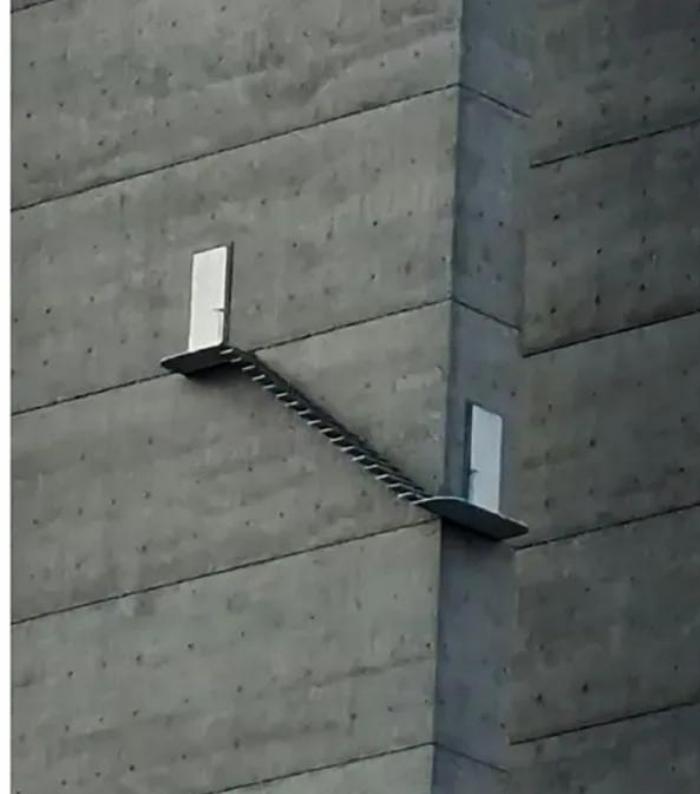
This is an
Oyster Talk™



Go home, Otis, you're drunk.



When you REALLY piss off the builder



Microsoft Bob



My Maserati Does 185... But Nobody Cares



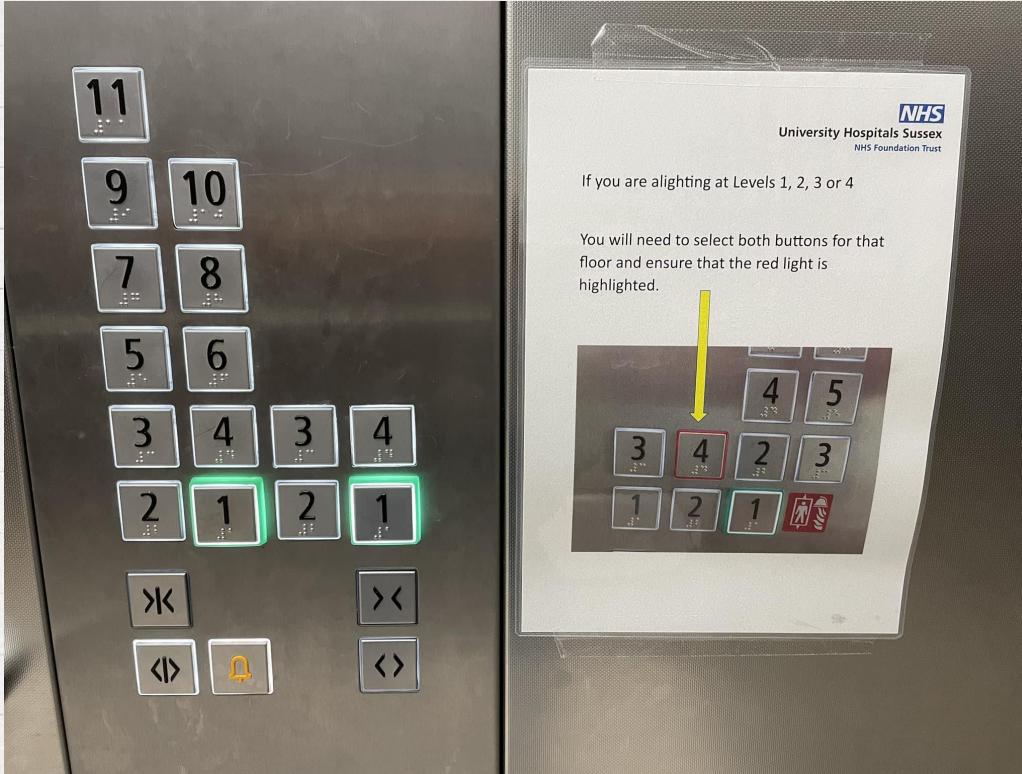
The corner of “WTF” and “GetOutAndWalk”



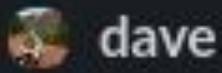
This couch doubles as a portal to Hell



My mistake. THIS is the portal to Hell.



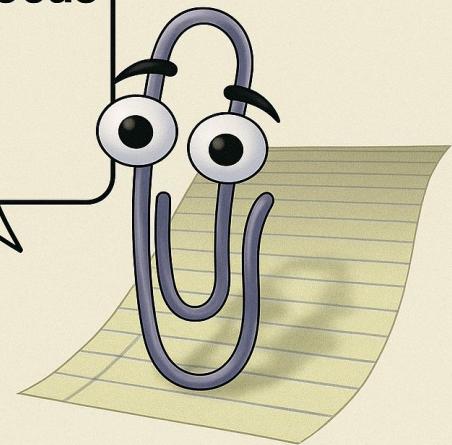
dave 4 minutes ago

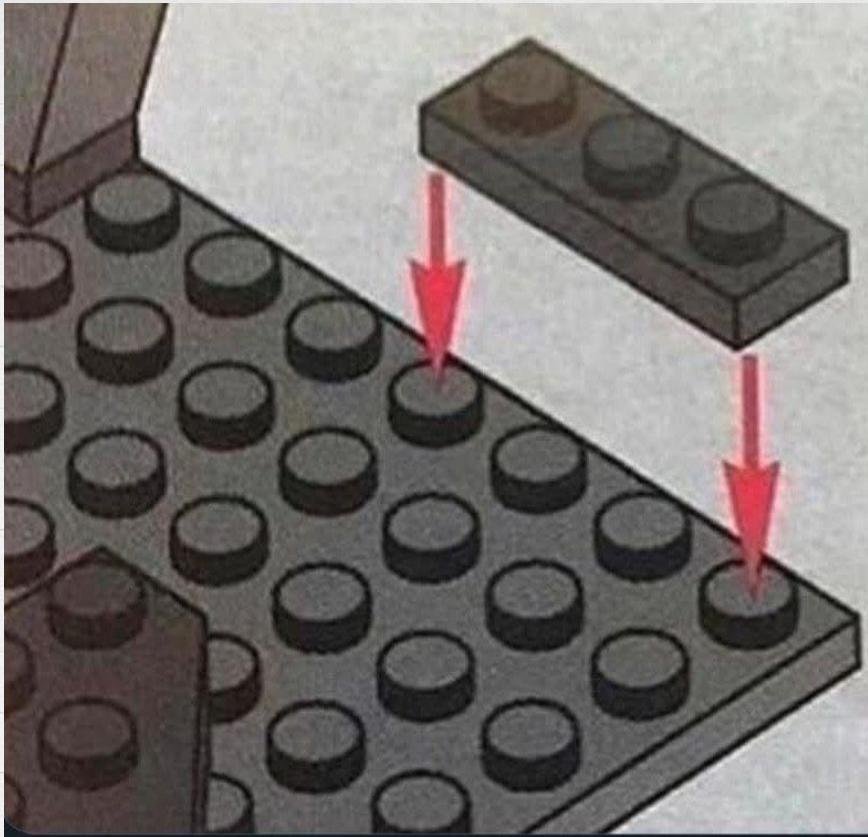


dave

I was watching a Gong
"God damnit get out of
Tooltip on a chart

I see you're trying to focus
on something without
interruption.
Can I help?





Design horror, redux



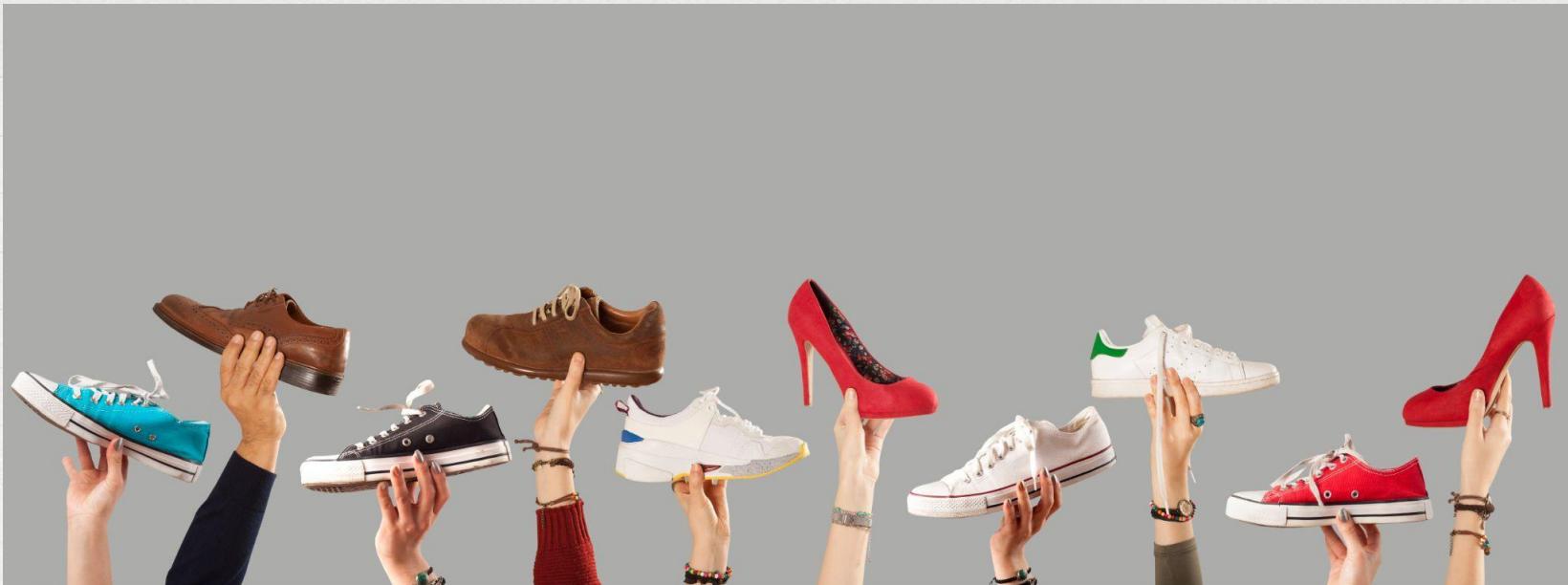
“Empathy” defined:

em·pa·thy

/'empəTHē/

noun

The ability to understand
and share the feelings of
another.



“Empathy” explained (for real):

Technical Empathy is NOT:



*"Does this
sorting algorithm
fill you with joy?"*

It's also NOT:



*"I'm sure your
data
is in a
better place now."*

Technical Empathy, explained:





Part 1: Accessibility

MYTH:
*"We all have
the same 24 hours
in a day"*

NOT if it takes longer to...

- Get dressed
- Share thoughts
- Travel
- Communicate by phone
- Read
- Input Text

The bare minimum

- Screen readers
- Alt-text
- Closed captions
- Customizable colors
- Localisation ~~localization~~
- Checking for accessibility

Web Accessibility Checklist

A checklist for creating accessible websites and web applications.

Share:

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Want a custom audit for your site or webpage?

[Request Audit](#)



<input type="checkbox"/> Images should have meaningful alternative text	+
<input type="checkbox"/> Links should be visually identifiable	+
<input type="checkbox"/> Use descriptive section headings	+
<input type="checkbox"/> Use correct semantic HTML element structure for your content	+
<input type="checkbox"/> Forms have descriptive labels	+
<input type="checkbox"/> Information should not depend on color, sound, shape, size, or visual location	+

- Deaf / HoH - 430 million worldwide
- Lang Processing Disorders - 400 million
- Visual impairment - 245 million
- Colorblind - 350 million
- Neurodiverse - 1.2 billion

**Not enough
demand?!?**

16% of the world population - 1.3 billion people - have a disability

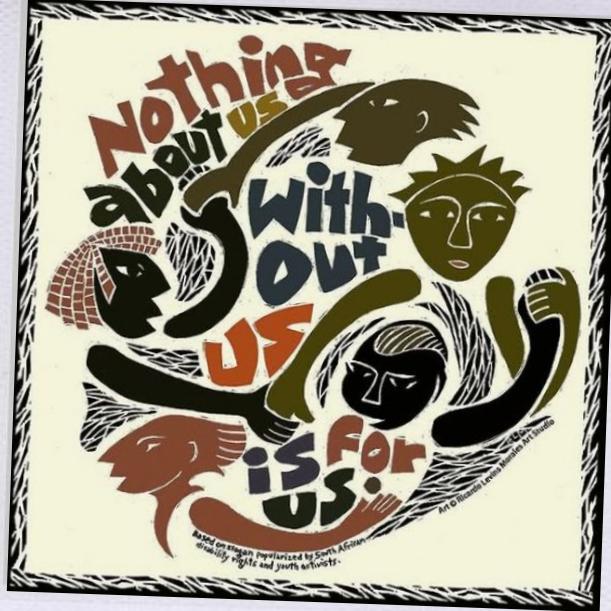
**If someone says, "I'm not disabled!" They're wrong.
They're not disabled... YET.**

Aren't we doing enough already?



Accessibility isn't a feature

It's as fundamental as your framework



Part 2: Assumptions





anchoring

The first thing you judge influences your judgment of all that follows.

Human minds are associative in nature, so the order in which we receive new information helps determine the course of our judgment and perception.

We're especially mindful of this bias during financial negotiations such as houses, cars, and salaries. The initial price offered is proven to have a significant effect.



sunk cost fallacy

You irrationally cling to things that have already cost you something.

When we've invested our time, money, or emotion into something, it's hard to let go of it, even if it's better to move on and make better judgments and decisions.

To regain objectivity, ask yourself: had I not already invested something, would I still do it now? What would I counsel a friend to do if they were in the same situation?



confirmation bias

You look for ways to justify your existing beliefs.

We are primed to see and agree with ideas that fit our preconceptions, and to ignore or dismiss information that conflicts with them.

Think of your ideas and beliefs as software you're actively trying to find problems with rather than things to be defended.

"The first principle is that you must not fool yourself – and you are the easiest person to fool."

– Richard Feynman



dunning-kruger effect

The less you know about something, the more confident you'll be.

Because experts just know how much they don't know, they tend to underestimate their own knowledge, while laypeople overestimate what they know.

"The whole problem with the world is that fools and fanatics are so certain of themselves, yet wiser people so full of doubts."

– Bertrand Russell



backfire effect

When core beliefs are challenged, it can cause you to believe even more strongly.

We can experience being wrong on some level as an attack upon our selves, or our belief system. This can lead to motivated reasoning, which causes us to double-down, despite disconfirming evidence.

"It ain't what you don't know that gets you into trouble. It's what you know for sure that just ain't so."

– Mark Twain



barnum effect

You see personal specifics in vague statements by flattery in the gaps.

Because our minds are wired to make connections, it's easy for us to take nebulous statements and find ways to interpret them so that they seem specific and personal.

Psychics, astrologers and others use this bias to make it seem like they have special powers of prediction. Consider how things might be interpreted to apply to anyone, not just you.



declinism

You see the past as better than it was, and expect the future to be worse than it likely.

Despite living in the most peaceful and prosperous time in history, many people believe things are getting worse. The 24-hour news cycle, with its reporting of overtly negative and violent events, may lead us to believe that the world is getting worse.

Instead of relying on nostalgic impressions of how great things used to be, use measurable metrics such as life expectancy, levels of crime and violence, and prosperity statistics.



framing effect

You allow yourself to be unduly influenced by context and delivery.

We all tend to think that we think independently, but the truth is that all of us are, in fact, influenced by delivery, framing and subtle cues.

This is why the ad industry is a thing, despite almost everyone knowing that ads are manipulative.

Only when we have the intellectual humility to accept the fact that we can be manipulated, can we hope to limit how much we react.

Try to be mindful of how things are being put to you.



just world hypothesis

Your preference for a just world makes you presume that it exists.

A world in which people don't always get what they deserve, bad people don't always pay for their sins, and good people are rewarded is an uncomfortable one, and thus our preferred narrative. However, it is also the reality.

More than just world understanding, rather than blame.

Remember that everyone has their own life story; we're all fallible.

And bad things happen to good people.



in-group bias

You unfairly favor those who belong to your group.

We presume that we're fair and impartial, but that is not true. We unfairly favor those who are most like us, or belong to our group.

Try to imagine yourself in the position of those in out-groups, while also attempting to be dispassionate when judging those who belong to your in-groups.



availability heuristic

Your judgments are influenced by what springs most easily to mind.

How common, emotionally powerful, or unusual your memories are can make them more memorable. This, in turn, can cause you to apply them too readily.

To try gain different perspectives and relevant statistical information rather than relying purely on first judgments and emotive influences.



curse of knowledge

Once you understand something you presume it to be obvious to everyone.

Things remain simple once you understand them, so it can be tempting to assume that others will understand them too.

To build comprehensive understanding and forget how intricate the path to our available knowledge really is.

When teaching someone something new, go slow and explain like they're ten years old (without being patronizing). Repeat key points and facilitate active practice to help embed knowledge.



belief bias

If a conclusion supports your beliefs, you'll rationalize anything that supports it.

It's difficult for us to separate our existing beliefs from the true reality of the situation. In this way, our preexisting ideas become impervious to criticism, and are perpetually reinforced.

A useful thing to ask is When and how did I get this belief? We tend to automatically defend our ideas without ever really questioning them.



groupthink

You let the social dynamics of a group situation override the best outcomes.

Groupthink is uncomfortable and dangerous to one's social standing, and so to often the most confident at first voice will determine group decisions.

Rather than openly contradicting others, seek to facilitate agreement of evaluation and critical thinking practices in a group activity.



negativity bias

You allow negative things to disproportionately influence your thinking.

The past is darker, our fears are more intense and persistent than the present realization of pleasant things. We are primed for survival, and our aversion to pain can distract our judgment for a modern world.

Pro-and-con lists, as well as thinking in terms of probabilities, only help you evaluate things more objectively than relying on a cognitive shortcut.



optimism bias

You overestimate the likelihood of positive outcomes.

There can be benefits to a positive attitude, but it's unwise to allow such an attitude to adversely affect our ability to make rational judgments (they're not mutually exclusive).

If you make rational, realistic judgments you'll have a lot more to feel positive about.



pessimism bias

You overestimate the likelihood of negative outcomes.

Pessimism is often a defense mechanism against disappointment, or it can be the result of depression and anxiety disorders.

Perhaps the worst aspect of pessimism is that even if something good happens, you'll probably feel pessimistic about it anyway.



reactance

You'd rather do the opposite of what someone is trying to make you do.

When we feel our liberty is being constrained, our inclination is to resist, however in doing so we can over-compensate.

Be careful not to lose objectivity when someone is being controlling, manipulative, or trying to force you to do something.

If there's an emergency situation, presume to be the one who will help or call for help. Be the change you want to see in the world.



spotlight effect

You overestimate how much people notice how you look and act.

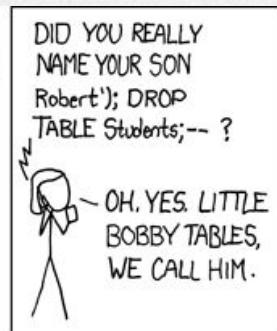
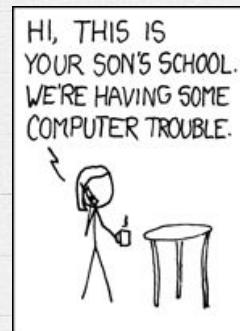
Most people are much more concerned about themselves than they are about you. Absent overconfidence, people generally want to be liked and get noticed. If a given situation gives them that opportunity,

Instead of worrying about how you're being judged, consider how you make others feel. They'll remember this much more, and you'll make the world a better place.

thou shalt not suffer cognitive biases

Say my name, say my name

- William Test
- Christopher Null
- John Wyndham Parkes Lucas Beynon Harris
 - John Beynon
 - Lucas Parkes
 - John Wyndham
- J. R. R. Tolkien
- Pieter van der Meer
- יהודית עדת

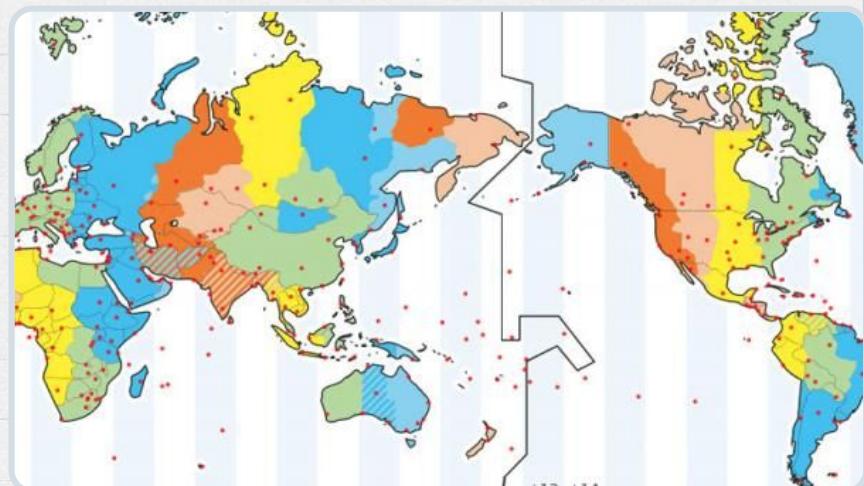


Obligatory XKCD reference



Wibbly-wobbly, timey-wimey... stuff

- Samoa, 2011: Thursday, December 29
 - IMMEDIATELY followed by Saturday, Dec 31
- A day in Unix epoch time is always 86,400 seconds.
 - Except for "leap seconds"
 - And "negative leap seconds"
- India std time is UTC +5 ½



The int'l dateline people are drunk.
Obviously.

Why your mail carrier cries themself to sleep

- 0 Egmont Road
- -1 Priory Road
- Ten Post Office Sq
- Apartment 001
 - Apartment 1 is in the same building,
 - ...on a different floor
- Gondel 2695
 - “The town of Gondel, street 26, building 95”

Assumptions beyond the tech

- If I know it, it must be simple and everyone knows it.
- We can learn everything we need to know by looking at the data.
- My experience is both complete and definitive.
- The senior dev *must* know something I don't.
- If we solve 10% of the problem we can work out the rest as we go.
- Users of our product will automatically understand our jargon, internal code words, and "special" definitions for industry-standard terms.

Part 3: Asking questions. The RIGHT questions.

Or: “Don’t sit in a room
smelling your own farts.”

Interview technique

- Multiple staff on the call. One leads, everyone else takes notes.
- Write exact statements. No summarization.
- Start with a list of questions (script).
- Prioritize because you **will** run out of time.
- More listening, less talking.
- *“Before I share what that is supposed to do, I'd first like to hear what you'd expect to happen.”*
- Debrief immediately after the call.

You.
Know.
NOTHING.

Keep pushing:
Down and
to the right

Johari Window

	Known to self	Not known to self
Known to others		
Not Known to Others		
Arena		Blind Spot
Façade		Unknown

Remain unbiased

Instead of	Ask
Is that helpful?	"How do you use that today?" "How is that working for you today?"
Was that easy to do?	"How do you feel about what you just did?"
Did you like ABC better than XYZ?	"Compare ABC and XYZ."
Do you think that is good?	"So when you think about that process . . . "
It would work like XYZ.	"How would you expect it to work?" ...and later... "What are your thoughts if I said it worked like this: _____?"

Express understanding == Get more info

Situation	Ask
If you're trying to understand something a user said.	“Can you give me a specific example?”
When the user gave an unexpected answer.	“I didn’t know that. Thanks for sharing that and helping me understand.”
When user talks about a specific solution, need, or desire.	“Why do you want that?” “How would that help you?”

Other types of questions

Instead of	Ask
Tasks	"Can you show me how you determine which user abandoned their cart and what was in it?"
Specific example	"Tell me about the most recent time your application went down."
Sequence	"Walk me through the steps you take to find the root cause for an alert storm."
Peer comparison	"Do the other sysadmins do it that way?"
Clarification	"You said ' it seems odd. ' What do you mean? What did you expect?"
Detailed list	"Tell me about the tools you use to troubleshoot a problem."

Take requests

NEWEST FEATURE REQUESTS

All Feature Requests ▾ With any open status ▾

By highest score ▾ Descending ▾

Granular Node Management Rights.

13 Aug 2012 8:47 PM

967

 FormerIdeaCreator

▼

Open for Voting on 20 Feb 2020 142 Comments

EIGRP support

23 May 2013 3:38 PM

625

 FormerIdeaCreator

▼

Open for Voting on 20 Feb 2020 29 Comments

Calendar's for maintenance windows, SLA's, and production monitoring windows

14 Aug 2013 10:11 PM

520

 FormerIdeaCreator

▼

Open for Voting on 20 Feb 2020 308 Comments





Part 4: Putting it
into practice

I Used
The
*Golden
Ratio*

BAD

IS
STILL

But My
Design

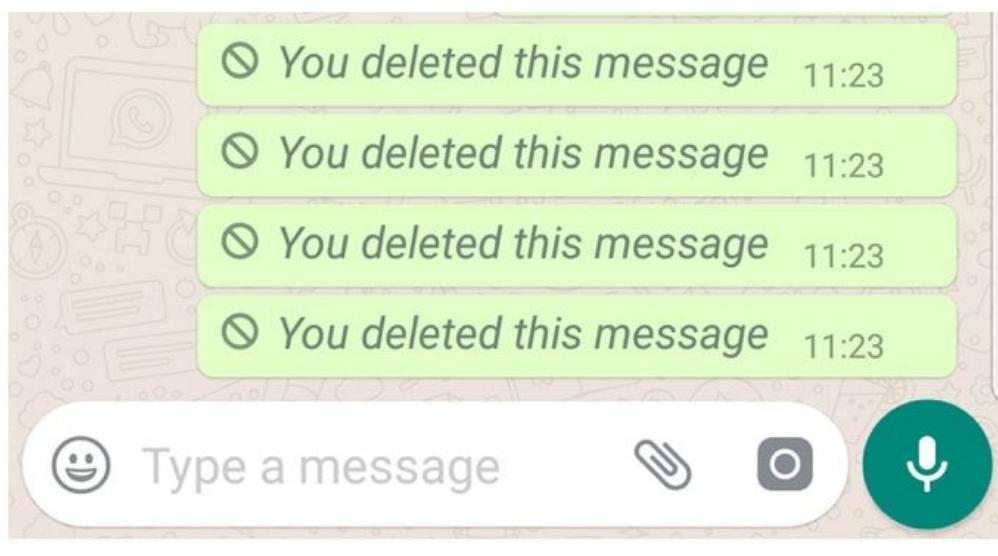


UI



UX

Suuuuuper Smooth!



Are they part of the E.U.?

The screenshot shows the Ryanair website's travel insurance section. A dropdown menu is open, asking "Please select a country of residence". The menu lists several European countries, with "Denmark" and "Don't Insure Me" highlighted with a red border. The "Don't Insure Me" option is also highlighted with a blue background.

Passenger(s)

All passenger names must match those in the passport/ad

Duplicate names must not be entered for passengers (excess of £15)

Passenger 1

Title: Harry Last name: Brignull

Travel Insurance

Medical Expenses up to £2,500,000 (excess of £75, double excess for aged 65+)

Personal Belongings up to £1,500 (excess of £75)

Cancellation circumstances (excess of £15)

Ticket Refund in case of Ryanair cancellation (excess of £15)

Brignull Harry

Already insured

United Kingdom

Ireland

Germany

Spain

France

Italy

Sweden

Austria

Belgium

Czech Republic

Denmark

Don't Insure Me

Finland

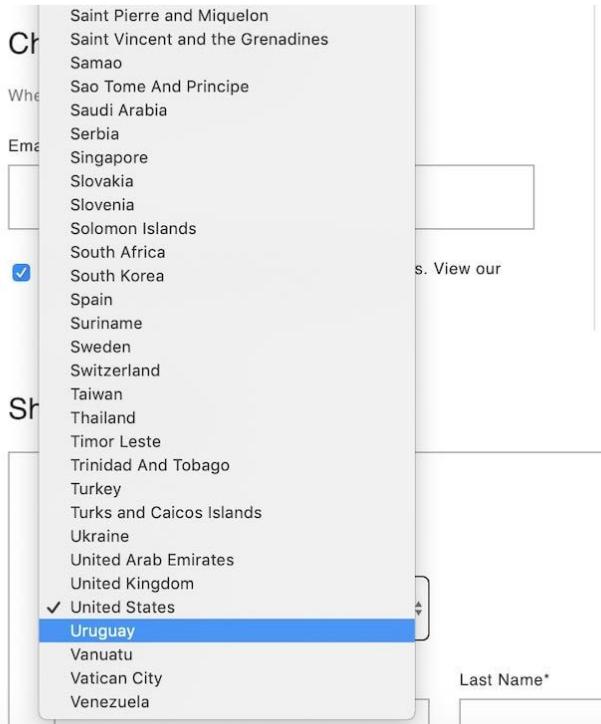
Hungary

Latvia

Lithuania

Malta



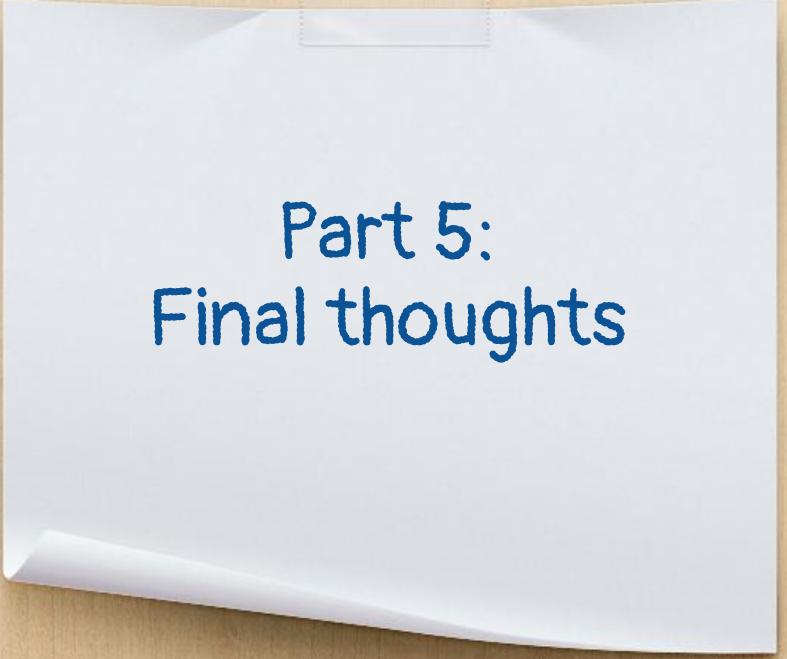


Keeeeeeeeeee
eeeeeeeeeeee
eeeeeeeeeeee
eeeeeeeeeeee
eeeeeeeeeeee
eeeeep

Scrolling

Is that one really good star?





Part 5:
Final thoughts



Users are NOT
“stupid”. They:

... don't really care about
your product.

It's the 37th UI they use in their job.

If you make it hard to use,
it's not worth their time to learn.



Users are NOT
“stupid”. They:

... are working in a situation of
high cognitive load.

95% of their mental capacity
is holding an intricate model
of a work-related problem.

You get the remaining 5%
whether you like it or not.



Users are NOT
“stupid”. They:

... are exhausted and just trying to complete a task.

as quickly as possible so they can go home,
or go to lunch,

or go do things that matter
(to them).



Users are NOT
"stupid". They:

Getting out of the user's way when they're trying to accomplish a task.

**Technical
Empathy
is:**

Identifying and removing
friction to make a
challenging process easier.

**Technical
Empathy
is:**

How??

Acknowledge that
THE USER is the expert

...and we know absolutely nothing.

The alternative... well, it kind of sucks



Are you ~~IRRITATED~~?

I'm ready for your
questions!

A Reward for your patience



bit.ly/Catchpoint-Rockies

