

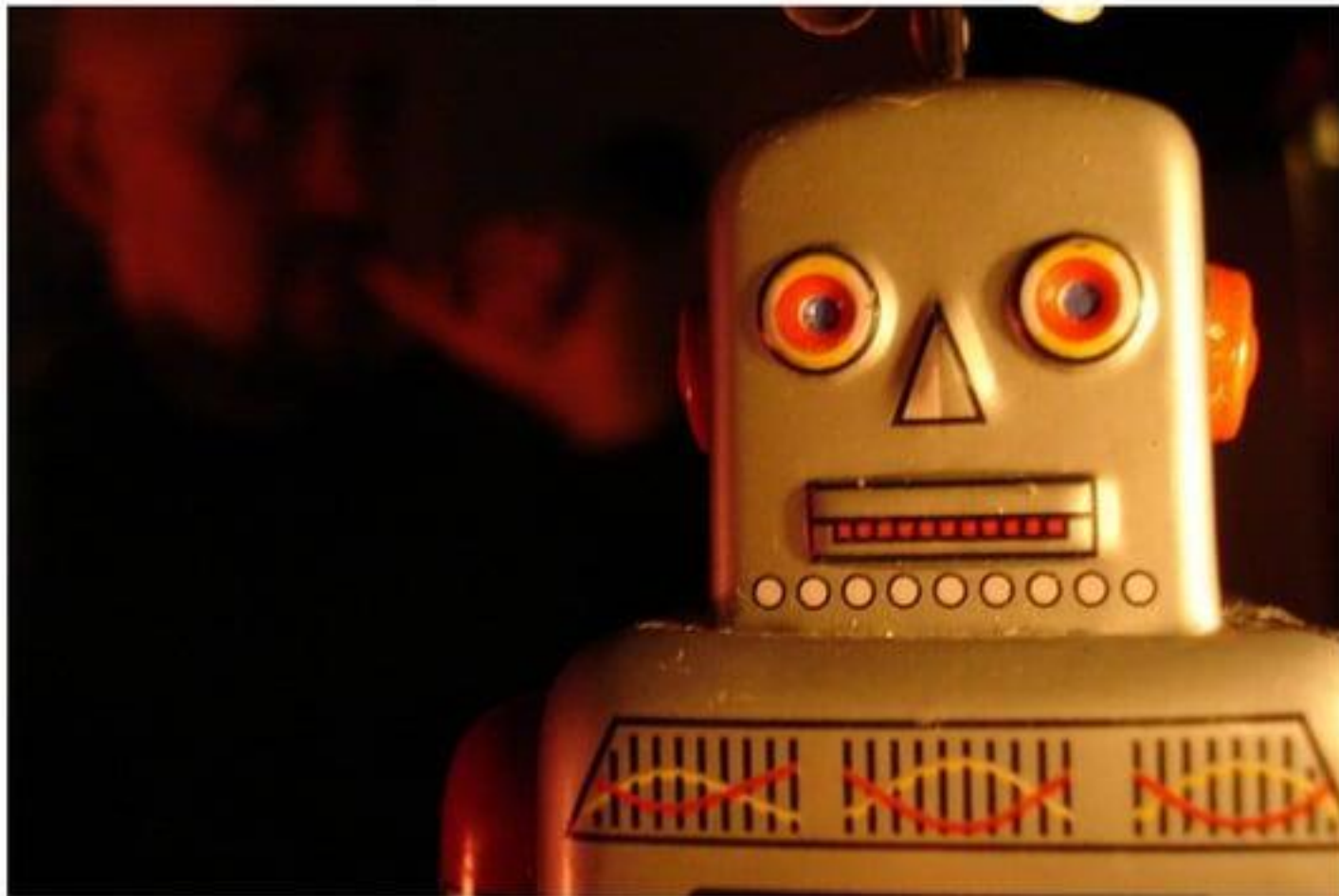
How to run a 5 Whys (With Humans, Not Robots)

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Shameful Mistakes: Humans vs Robots



You Will Totally Experience Shame (I Still Do)

F.A.E.

Big Idea: Adopt Economic, Not Moral Mindset

\$, FTW

Parable: A Tale of Two Factories



Factory 1... Broken Machine



Economic Mindset = Broken Machine

- “How much is it costing us?”
- “How much does it cost to repair?”
- “Can we kludge a partial fix?”
- “What are risks if we delay a fix?”

Factory 2... One Employee Is an Axe Murderer



Moral Mindset = Axe Murderer

“Search for villains,
elevation of accusers,
and mobilization of authority to
mete out punishment”
(Pinker, The Blank Slate)

Your Challenge, As Person Running 5 Whys

Get team out of moral mindset.

Note: this is not, in fact, easy.

Fundamental Tool: Make 'Em Laugh



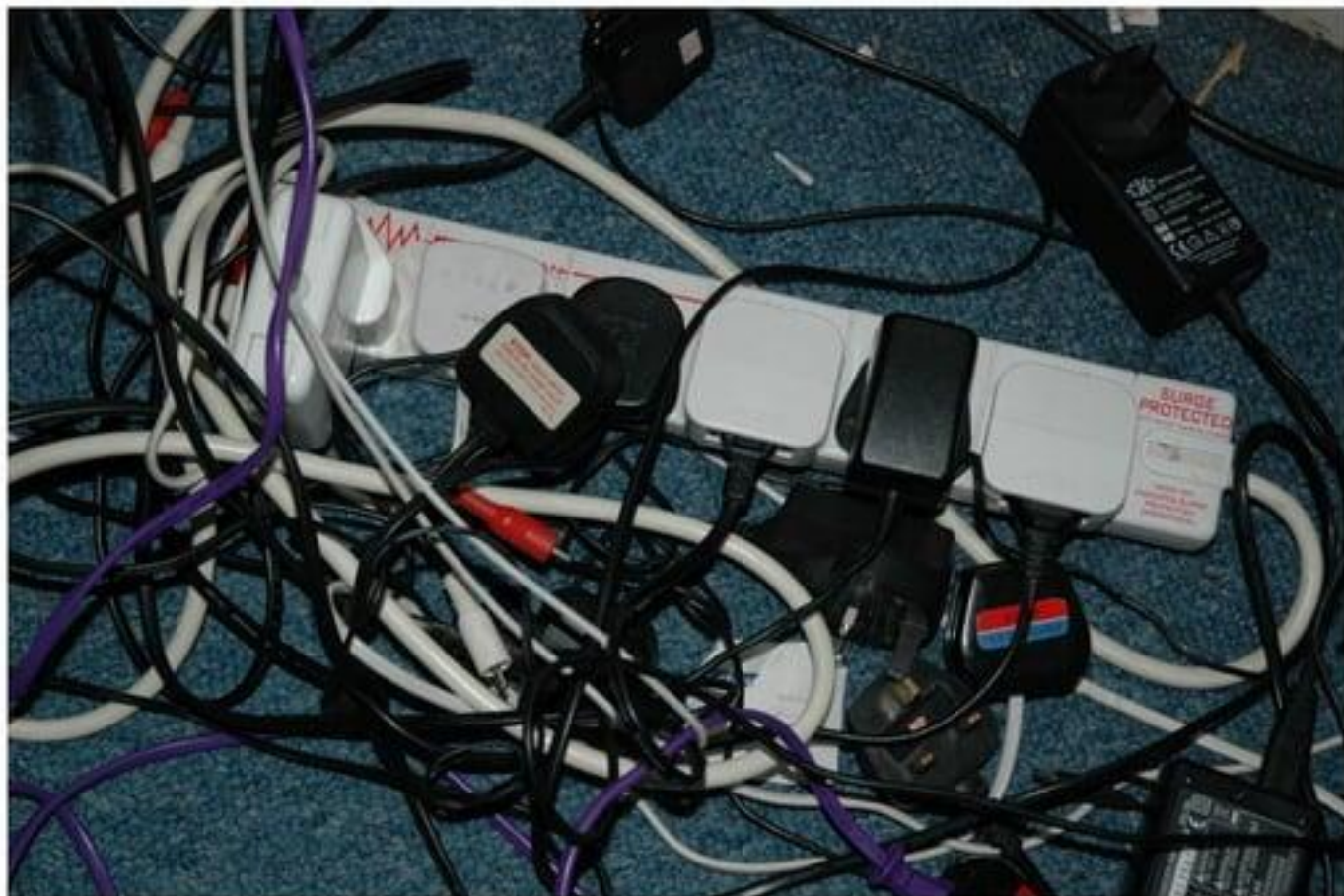
Tip 1: Always Share Worse “Bad Things”



Tip 2: Mock Hindsight Bias To Its Face

“Let’s plan for a future where we’re all as stupid as we are today.”

Tip 3: Relish Absurdities of Your System



Tip 4: “Broadest Fixes” vs. “Root Causes”



Remember, There Is No Axe Murderer (Probably)

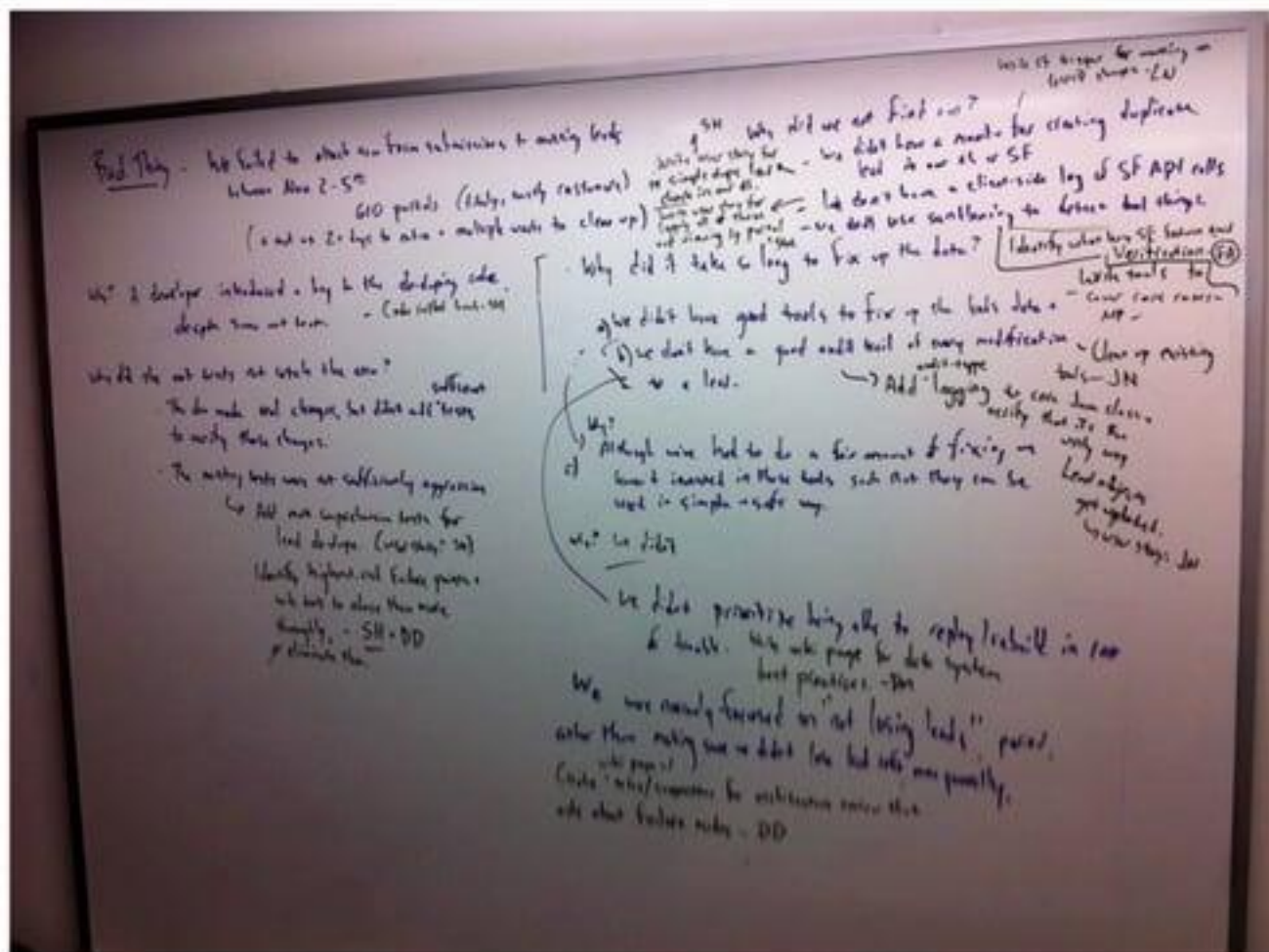


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Thanks...

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Fundamental Tool: Make 'Em Laugh



Humor == Breaking Frames

- That's what humor actually *is* -- something that stretches or breaks the mental frame that people are using to interpret a situation
- So, you use humor to break the frame, release people from the blame/fear/punishment of the moral mindset, and then refocus them on the economic challenges you're facing
- The humor is, IMHO, not a nice-to-have. It's absolutely central. I've seen smart, caring leaders get this one wrong, and finish their post-mortems with a room full of tense, closed-up team members (and no good ideas on the table)
- Rest of talk is specific examples of this, but this is the main point

How Hindsight Bias Shows up in a 5 Whys

- Someone says “Oh, yeah, I screwed that one up, I knew I had to run the deploy in that one order, and I just forgot. I’m really sorry, I **won’t make that mistake again**, totally my bad.”
- You have to utterly reject this. It’s pure hindsight bias (easy to see errors after the fact, very difficult in the moment).
- I say “It’s like we’re saying ‘I was stupid, this one time, and we’ll fix that problem by never being stupid again.’”
- Hence: “planning for a future where we’re as stupid as we are today”
- aka “Must create a system which is resilient to occasional bouts of really intense stupidity”.

Tip 3: Relish Absurdities of Your System



Tip 4: “Broadest Fixes” vs. “Root Causes”



Handling a Fork in the Road

- Example: bad outage at Wingu: was triggered by a mistake in db access code. But we couldn't fix it for three hours, because our error reporting system was trying to send us hundreds of emails/minute, so our email provider throttled us, and we didn't get those email until hours later.
- Which is the Root Cause? DB access bug or monitoring failure?
- Answer: don't care about "root causes". They don't exist (multiple things conspire for failures to happen). Also, kind of moral/blame-ish.
- Ask instead: if we made an incremental improvement in area A or area B, which would prevent the broadest class of problems going ahead?
- Much better conversation. Answer here is clear: monitoring.

Remember, There Is No Axe Murderer (Probably)

Final Thing - We failed to attack our own submissions to missing leads before Nov 2, 5th

610 portals (early, mostly customers)
(= not as 2+ logs to enter + multiple ways to clean up)

Why? 2 developer introduced a bug in the developing code.
despite some unit tests. - Code review had 94

Why did the unit tests not catch this error?
- sufficient
- to do make and changes, but didn't add 'tests' to verify these changes.
- The existing tests were not sufficiently aggressive
- to full new expectations tests for lead dedupe. (user change - 94)
- identify highest and fastest paths, we had to show them more strongly. - SH + DD
- to eliminate them.

Why did it take so long to fix up the data?
- we didn't have good tools to fix up the leads data.
- (b) we didn't have a good audit trail of many modifications - (Close up missing audit-type but - 3M)
- to a lead. -> Add logging to core data class, verify that it's the only way lead objects get updated, to our steps log

Why?
- Although we had to do a fair amount of fixing up
- (c) wasn't invested in these tools such that they can be used in simple + safe way.

Why? to do it

We didn't prioritize being able to replay/rebuild in 100% of trouble. We also gave for data system best practices - 3M

We were mainly focused on "not losing leads" point, rather than making sure we didn't lose leads more generally.
- who gave it
- Create "what/compensate for architecture rather than who what feature makes - DD

Work SF trigger for missing - GUID drops - 1M

SH Why did we not find it?
- we didn't have a monitor for creating duplicates
- lead in our SF or SF
- we didn't have a client-side log of SF API calls
- we didn't use something to detect bad things.
- Identify where SF leaves and Verification (FA)
- write tests for
- cover rare corner case -

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