

Ghosts in the Interview Loop & Avoiding AI Taylorism

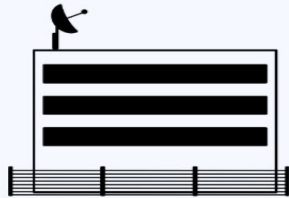


Andrew Hatch

WHOAMI



SWE/SRE Engineering Manager 15 years.



@hatchman76

Takeaways



We cannot hire like we used to. We have to change.



LLMs and AI-enabled tooling have significant productivity value.



Hollowing-out of SRE Expertise is a material risk to any business.



Enshittifying Complex Systems is going to hurt us all.

One more thing...

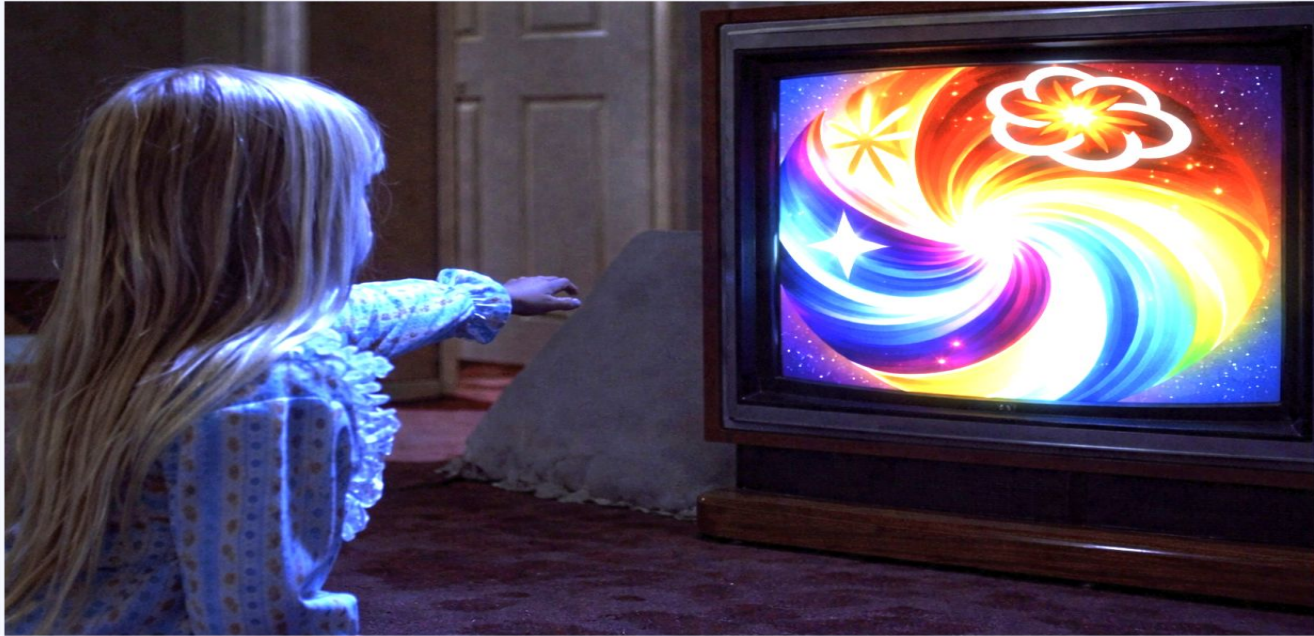


Anything AI!
LLM, Agent etc...

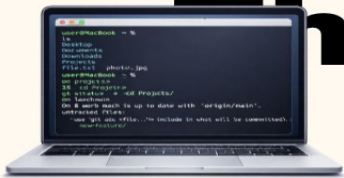


any complex distributed
software system

They're here!



The Good Old Days?



Almost always in person.

~100

2019...



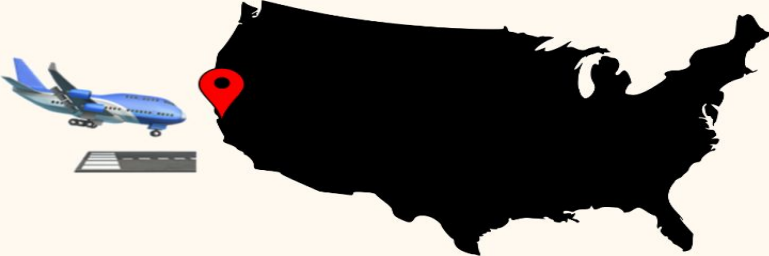
Recruiter Screen
SRE Mindset
Management & Leadership



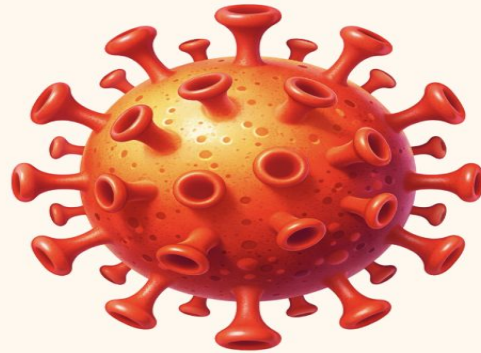
Apache Web Server Diagnosis
Code challenge
Code refactor
Lunch!
Management and Leadership
System Design



15 hours



And then...



2025

CISCO
ThousandEyes







```
class TreeNode:
    def __init__(self, val=0, left=None, right=None):
        self.val = val
        self.left = left
        self.right = right

class Codec:
    def serialize(self, root: TreeNode) -> str:
        """Encodes a tree to a single string."""
        values = []

        def dfs(node):
            if not node:
                values.append("null")
                return

            values.append(str(node.val))
            dfs(node.left)
            dfs(node.right)

        dfs(root)
        return ",".join(values)

    def deserialize(self, data: str) -> TreeNode:
        """Decodes your encoded data to tree."""
        values = iter(data.split(","))

        def dfs():
            val = next(values)
            if val == "null":
                return None

            node = TreeNode(int(val))
            node.left = dfs()
            node.right = dfs()
            return node
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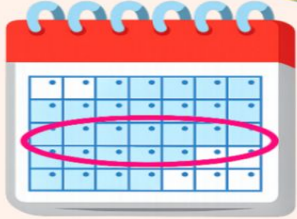
We made some changes



2 - 3 days



It needs more thought



Please share your ideas in Slack!



The irony though



Top down pressure to use AI.



No-one wants to be left behind.



Tell candidates not to use it.
Then demand they do on Day 1.

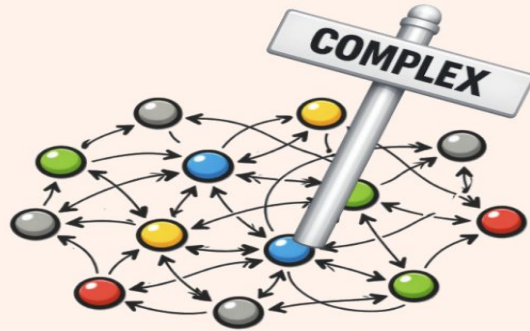
Is this what we want?



High



Low



Invest hard to hire for expertise, only to engineer it out of the role?

And what happens to....



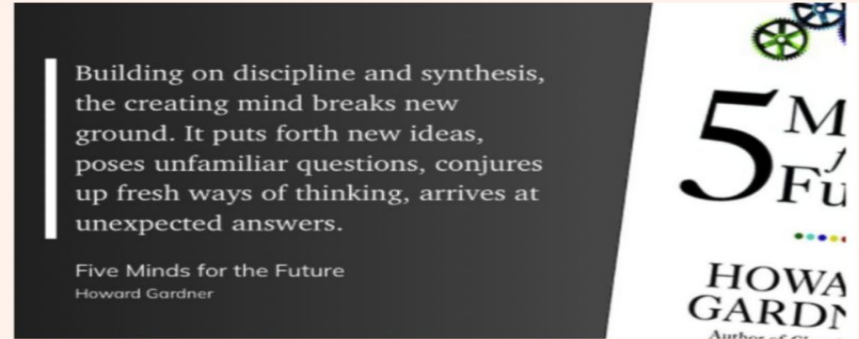
Creativity?



Innovation?



Critical Thinking?

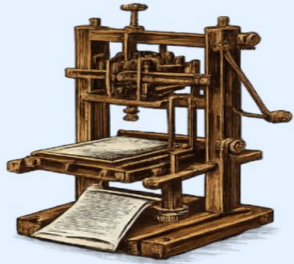


We don't just hire for raw tech skills.

The War on Expertise

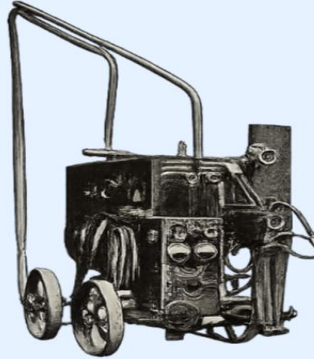


We've engineered it out for centuries



Printing Press

~1440



Arc Welder

~1885



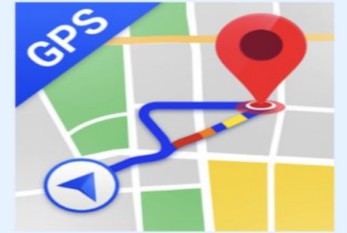
Spinning Jenny

~1764



Power Mitre Saw

~1964



GPS Navigation

~1990s

Distributed Complex System Expertise is different

dynamic

stochastic

emergent

unstable

non-linear

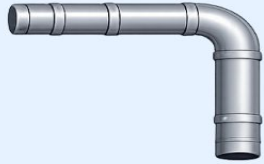
heterogeneous

evolving

context-sensitive

and many more...

Socio Technical Systems



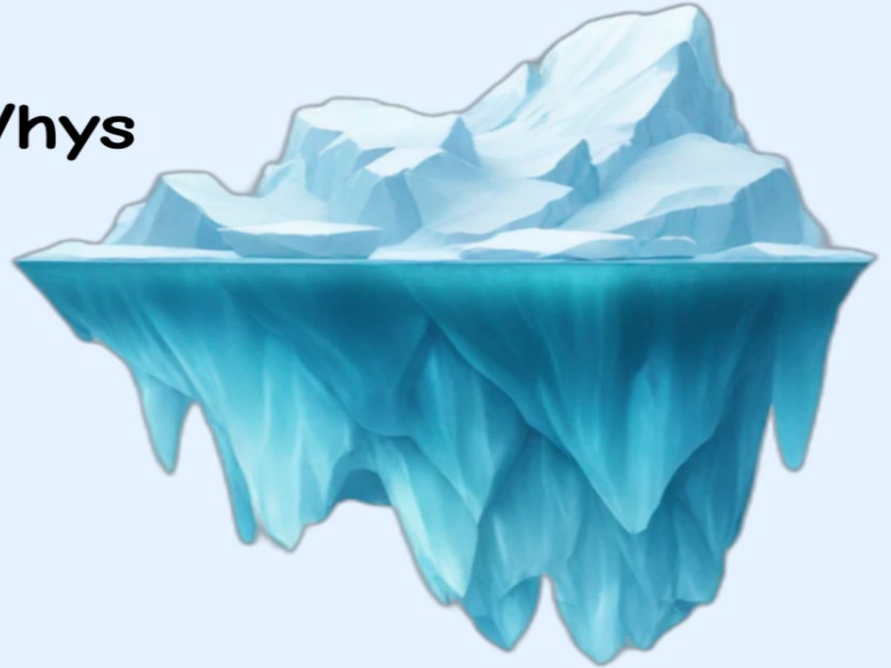
splunk>
a CISCO company



Complexity is hard



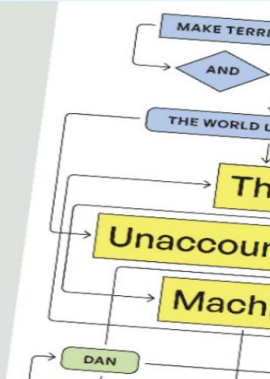
5 Whys



Simplifying complexity does help

Acting on the basis of consistent, simplified versions of reality is fundamental to our ability to work together, and we've been doing it for a long time.

The Unaccountability Machine
Dan Davies



Occam's Razor



William of Ockham
1287 – 1347

Because we always need humans with complex system expertise

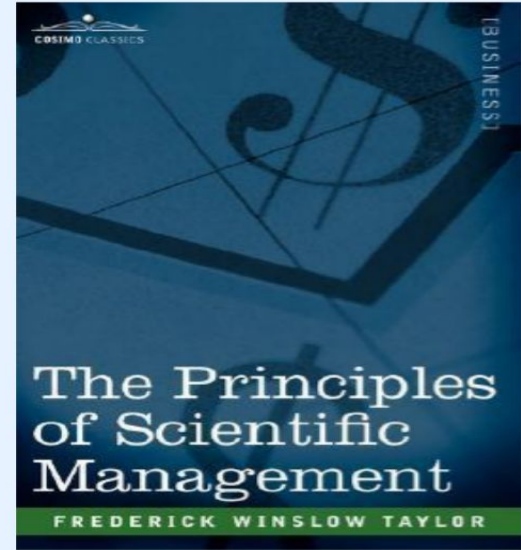




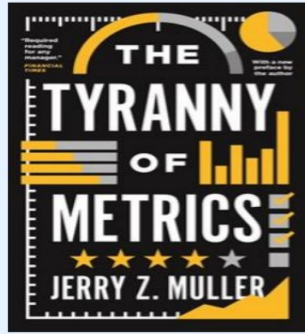
**"In the past man has been first;
in the future the system must be first."**



Remember me?



I wrote a book once in 1911!



Separate Thinking, From Doing



Centralize tacit worker knowledge into prescriptive procedures.

Hire cheaper workers to "follow the script".



Centralize tacit engineering knowledge into prescriptive LLM prompts.

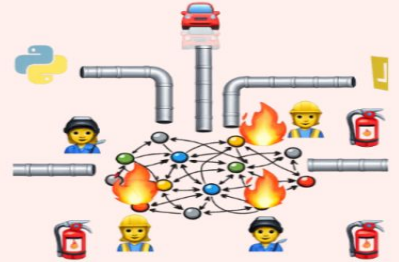
Hire cheaper "prompt jockeys" to follow them.

This works when processes are repeatable and linear...



...but only if you don't care about worker engagement, happiness and innovation!

Modern software systems aren't like this.



And haven't been for decades.

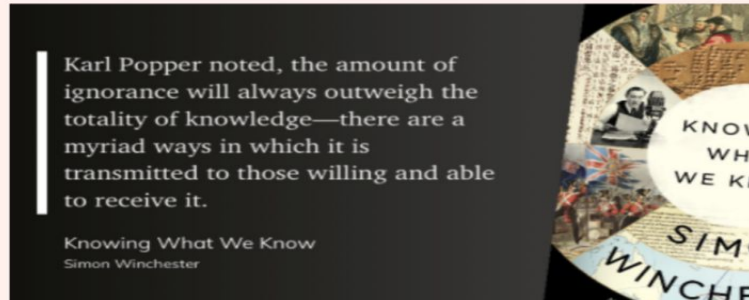
AI says "Hold my beer!"



the speed at which it can generate beliefs; and

The cost?

the distance between apparent certainty and actual understanding will grow continuously.





4:12 PM

I am getting concerned regarding the **quality of code** being pushed to our **main repo**.

People who do not have a lot of experience committing or working with Terraform (*or they don't care*) have been *using AI* to make stacks and changes and **the amount of time I am spending** doing reviews for **poor code, anti-patterns and naming conventions** is **wasting hours**
How can we fix this?



BI Business Insider

AI is giving workers the illusion of expertise -...

Researchers say that overrelying on AI can dull critical thinking, distort expertise, and disrupt how workers learn and advance.



Cognitive Offloading

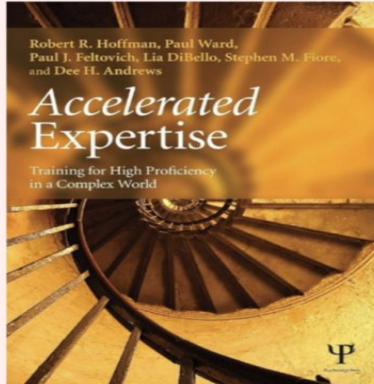
Without Guardrails, Generative AI Can Harm Education

August 27, 2024 · 4 min read

Students who rely on generative AI to help them learn may be missing out on basic skills, according to a paper co-authored by Wharton's Hamsa Bastani.

"...GPT Base helped students solve about 48% more practice problems correctly, but when the exam came without AI, those same students scored 17% worse than the kids who never used AI at all..."

<https://knowledge.wharton.upenn.edu/article/without-guardrails-generative-ai-can-harm-education>



Hoffman et al. (2014). Accelerated Expertise.

Novices vs experts need different conditions:

What helps experts possessing learned causal models, will *hurt* novices who still need to build mental models.

Desirable difficulty:

Training that's too easy only produces shallow learning.

Scenario-based practice in messy, real contexts:

Exposure to realistic, varied situations and feedback, not just perfectly guided walkthroughs.

Experts seek out corrective feedback:

They *want* to be told where they're wrong; they don't want a tool that just makes them look right.



*"Adults learn most of what they use at work or at leisure, while at work or leisure. Most of what is taught in classroom settings is forgotten, and much of what is remembered is irrelevant."
- Russell Ackoff*

**Understanding comes through trial and error,
adaptation at the edge, testing.**

This is the fundamental mindset of good SREs.

**This is the capability we hire for and must
cultivate on the job.**

When does AI stop being a tool?



And become the Operator?



COMPLEX

Who is accountable?



SREs?



or...



And who has the expertise to fix it now?

Just another layer of complexity

However, all our lessons learned in cognitive systems engineering and complexity theory imply that more automation may result in simplifications, but they will hide deeper complexity, and at those moments where resilience and high-performance are needed, there will have to be greater operator expertise.

Accelerated Expertise
Robert R. Hoffman, Paul Ward, Paul ...



Fact: Complex System control planes become as complex as the systems they represent.

but it may just get a lot harder now.

Final thoughts



Complex System SRE skills



Understand interactions between components, build awareness of unintended consequences.



Adapt to dynamic conditions, rebuild mental models.



Think critically, make trade-offs under pressure.

Tool vs Operator



As a tool it vastly improves productivity and reduces mundane, repetitive tasks.



But as an Operator it threatens to enshittify your systems.



We have to adapt



Understand the impacts on hiring and recruiting - the old signals are changing.



Be clear on what we are cultivating and incentivizing with AI - and the impacts.



Know distinctly on what the value of AI is, to your role, to your teams, to your business.



What really matters is how we adapt to it, not how we fight it.

Humans are, and always have been, the most adaptable components of any complex socio-technical system.



The ability to learn and build expertise in these systems is critical to their success and safety.

AI must be our partner, not a replacement.

Thank you!

Just another layer of complexity



Fact: Complex Systems control plans become as complex as the systems they represent!



Fact: If they just get it, they control them.



We have to adapt

- 1. Adapt to the system
- 2. Adapt to the system
- 3. Adapt to the system



Fact: If they just get it, they control them.

<https://srecon26.hatchman76.com>



@hatchman76

References



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From Mechanistic to Systemic Thinking — Russell L. Ackoff (YouTube)



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How Complex Systems Fail — Richard I. Cook (2000)



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The Unaccountability Machine — Dan Davies (2024)



