

*so your classmates can pay attention...*

Please turn off  
mobile phones  
and WiFi

Otiganji? → see Stanford P.D. professor  
or others geometric designs

crown/claw problem up



clawed box  
no vertical bar



closed



open

Alan's idea:  
attach the wires to  
the middle fulcrum



Bill: copyright

visualization of lie



PACHINKO  
passive gate  
array



Scott: a gate that shows  
who walked through it less

Bill: a gate that measures  
ceremonial gates

# Designing for People

SCOTT KLEMMER

FALL 2010

cs147.stanford.edu



G-E  
Airport  
Explosive Counter



interlocking  
mechanism

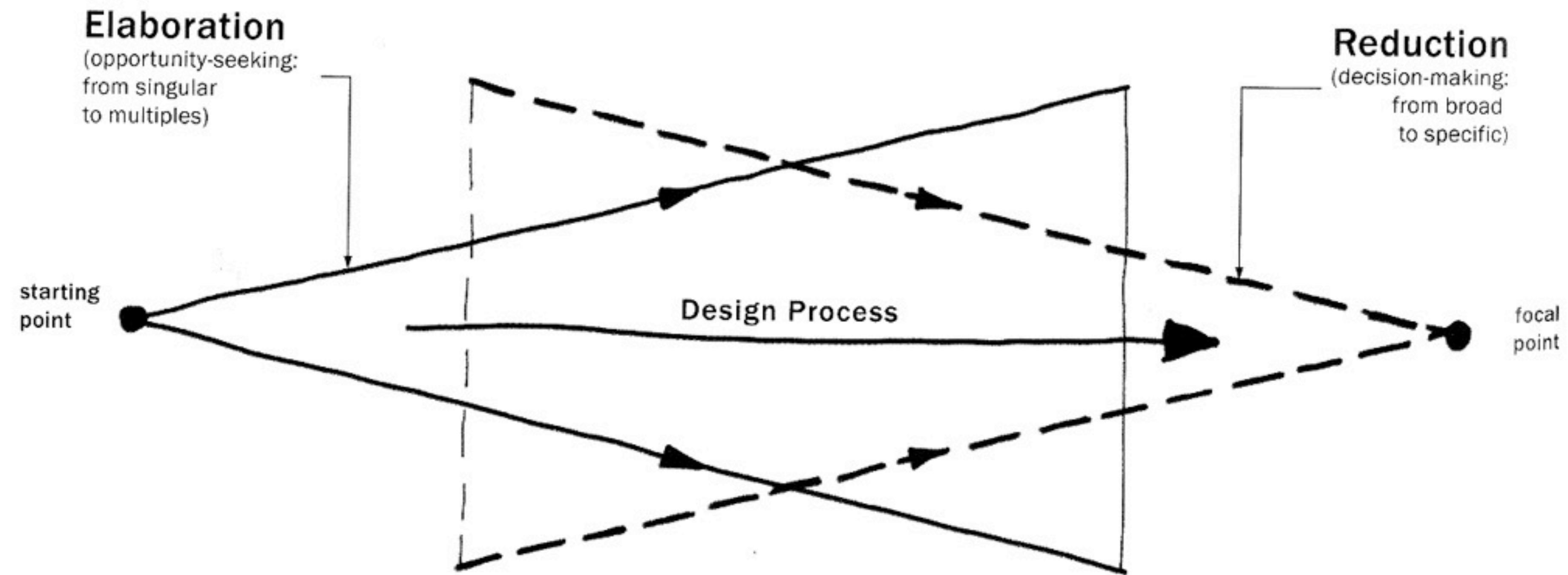


turnstile

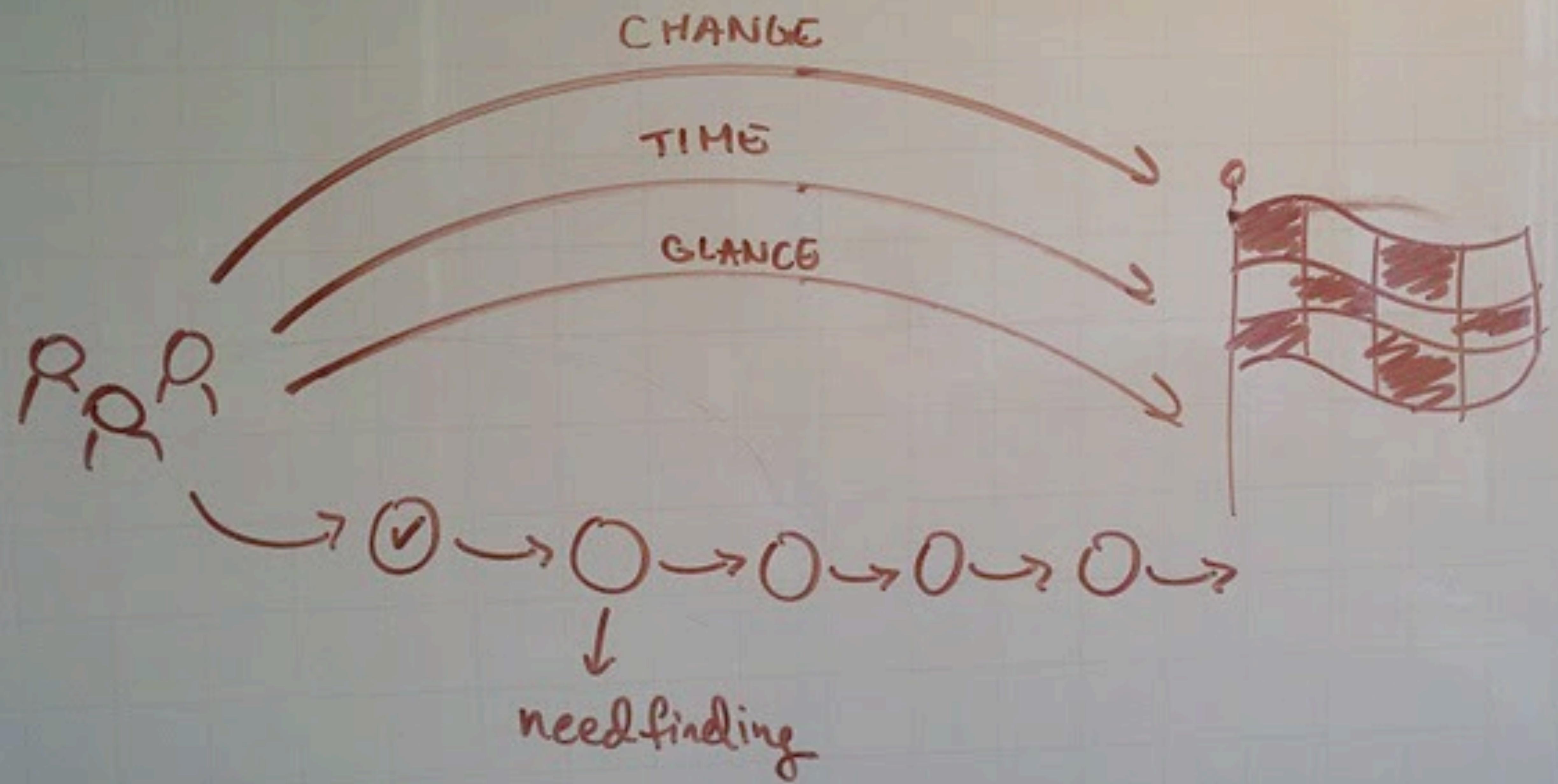


# Brainstorming Guidelines

- Be Visual.
- Defer judgment.
- Encourage Wild Ideas.
- Build on the Ideas of Others.
- Go for Quantity.
- One Conversation at a Time.
- Stay Focused on the Topic.

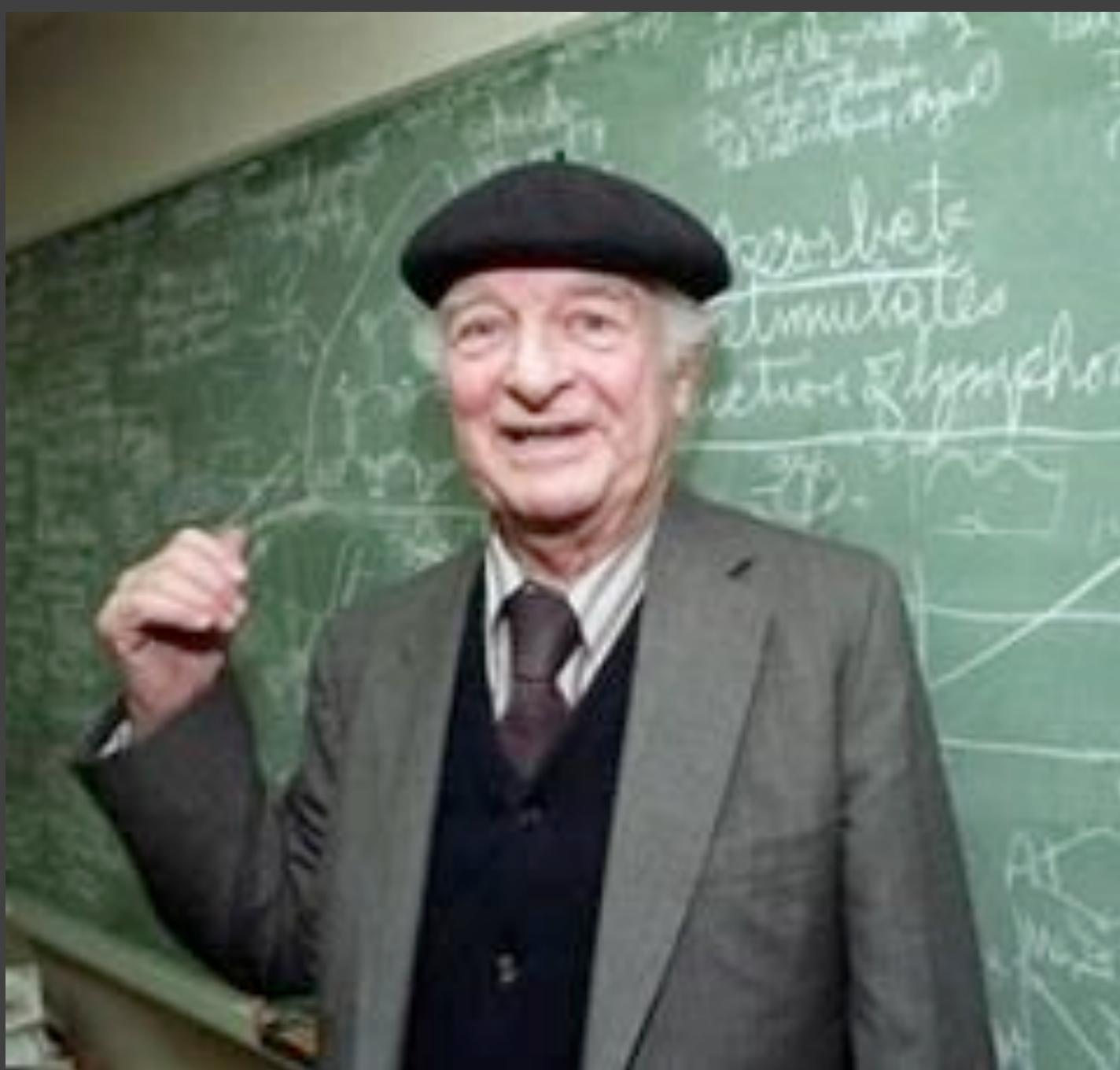


[Buxton, Sketching User Experiences]



“The best way to have a good idea is to have lots of ideas.”

*-Linus Pauling*





Prototypes for the  
Microsoft mouse  
From Moggridge,  
Designing Interactions, Ch2

“the companies that want to see the most models in the least time are the most design-sensitive; the companies that want that one perfect model are the least design sensitive.”

--Michael Barry

How do I  
KNOW where  
The good sales  
ARE?

=

HWW  
Help people  
Find the right  
SALES?

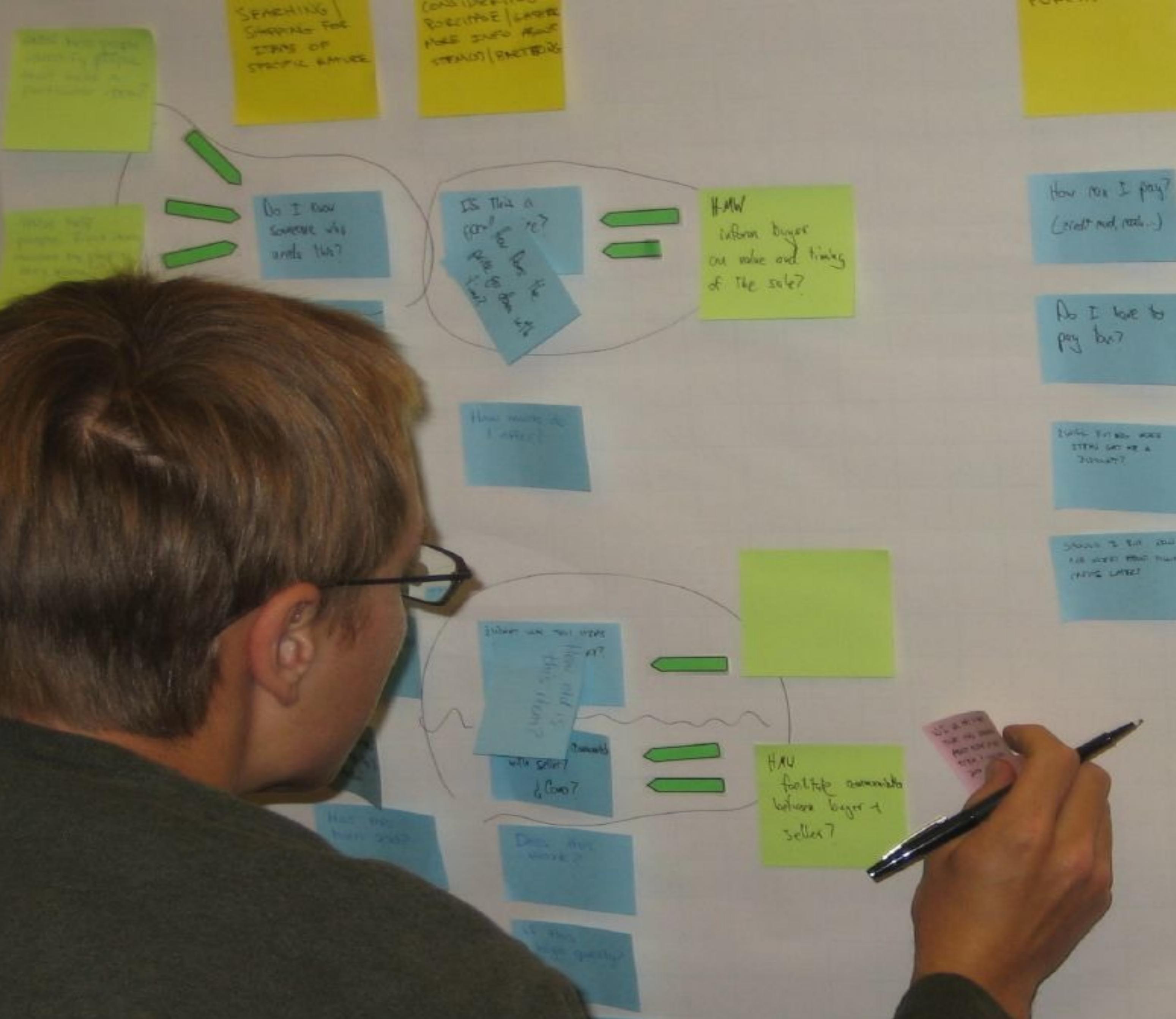
**How might we help people  
find the right train?**

**3: how might we?**

IDEO

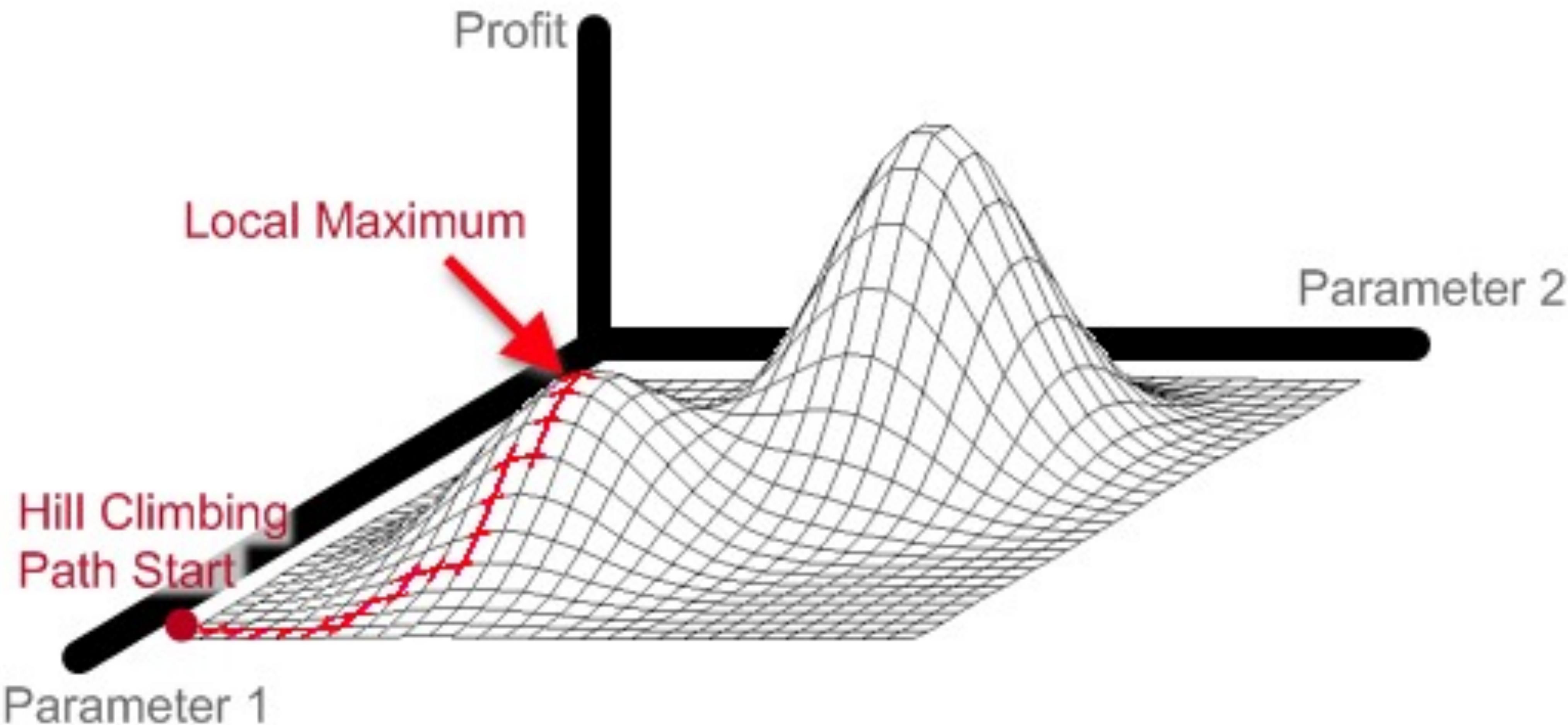


FIND OUT  
ABOUT  
THE SALE

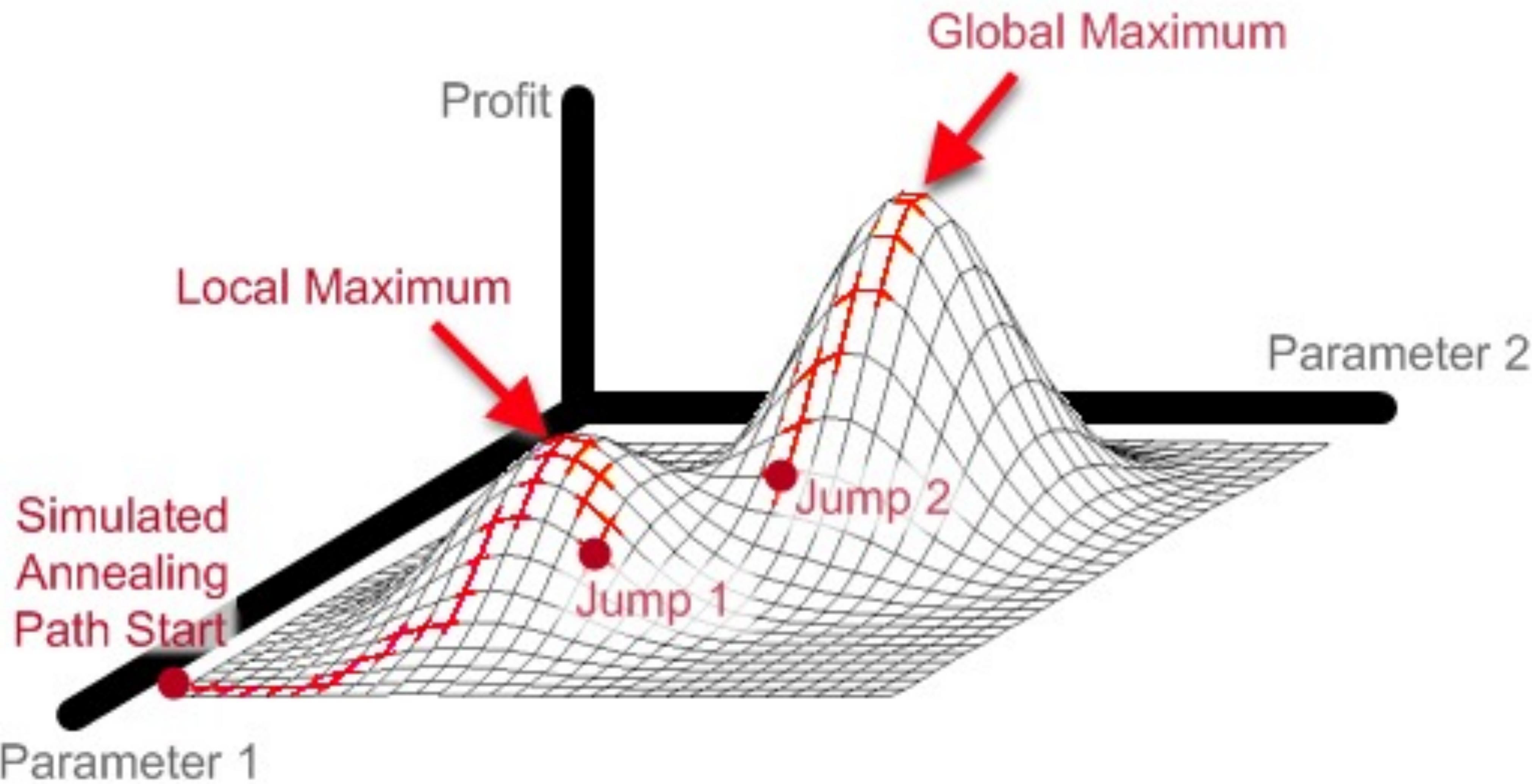


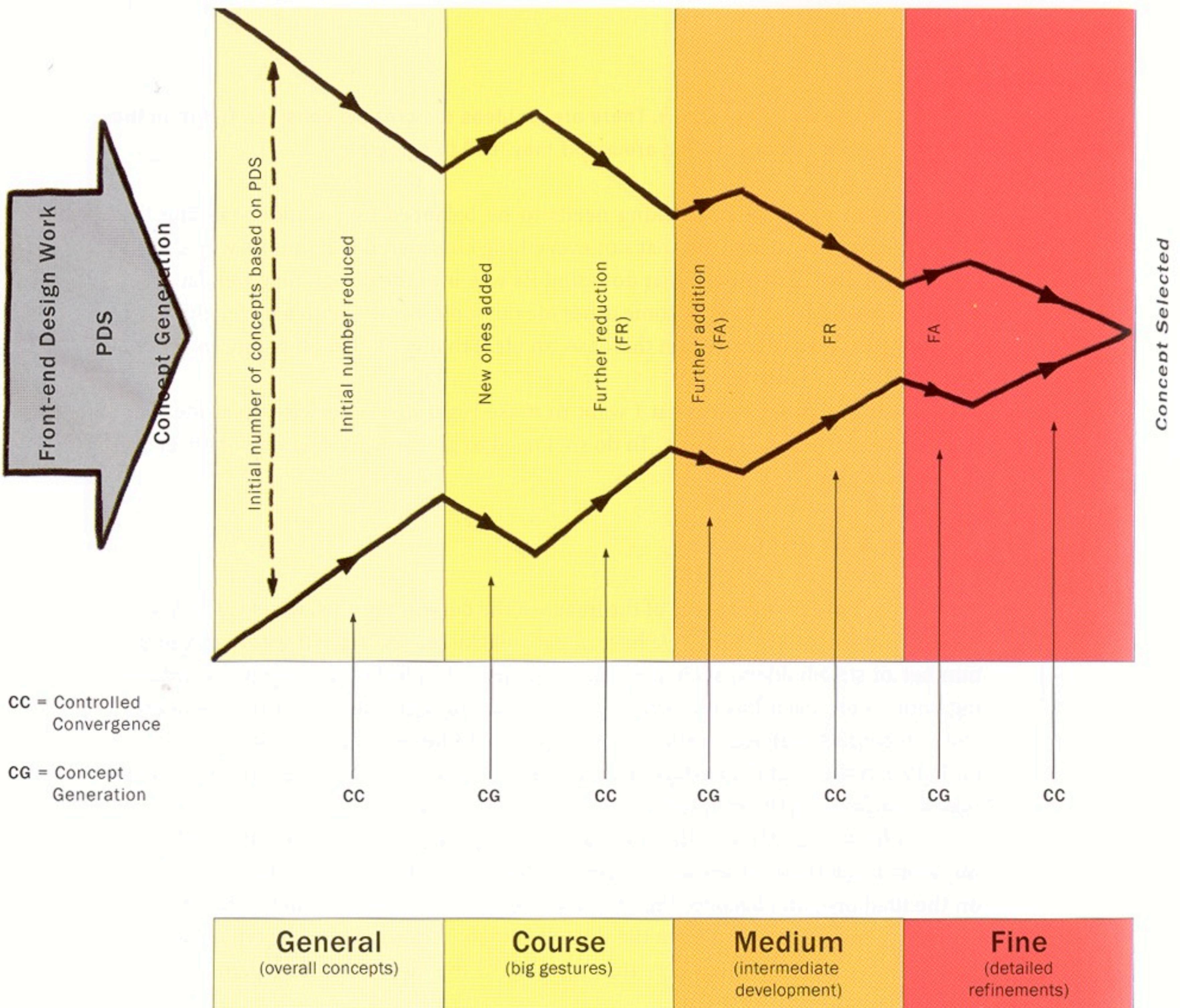
Design as  
Simulated Annealing

The problem with hill climbing is that it gets stuck on "local-maxima"



Simulated Annealing can escape local minima with chaotic jumps





# Design for People

- People's tasks, goals, and values drive development
- Work with users throughout the process
- Assess decisions from the vantage point of users, their work, and their environment
- Pay attention to people's abilities and situation
- Talk to the *actual* experts





Design is choice, and there are two places where there is room for creativity:

- 1) the creativity that you bring to enumerating meaningfully distinct options from which to choose
- 2) the creativity that you bring to defining the criteria, or heuristics, according to which you make your choices

--Bill Buxton



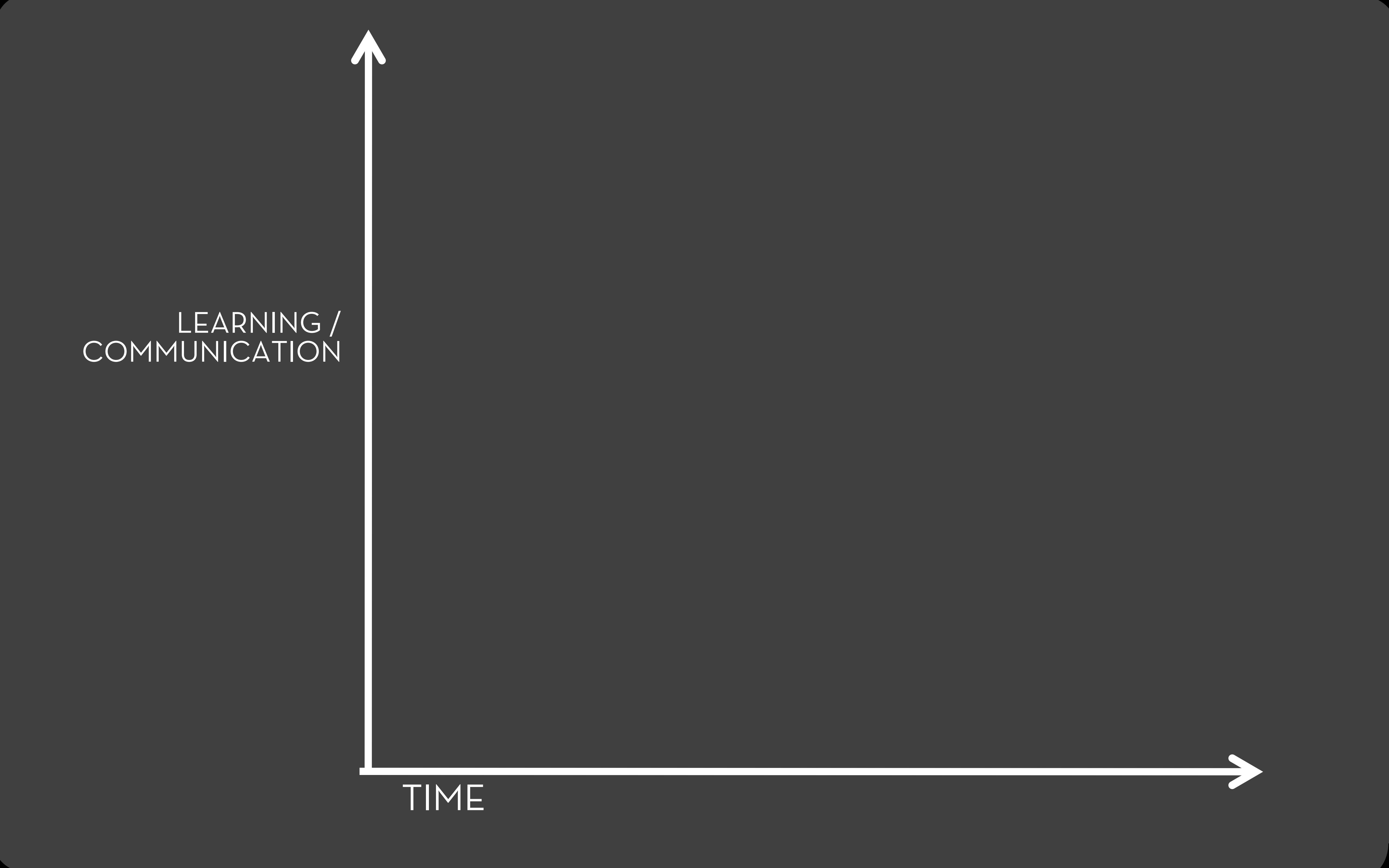
Prototyping is a strategy for efficiently dealing with things that are hard to predict

- SANTA CLARA, California -- People thought Jeff Hawkins was crazy when they saw him taking notes, checking appointments, and synchronizing a small block of wood with his PC, pretending all the while that the block was a handheld computer.
- "If I wanted to check the calendar I'd take it out and press the wooden button"

Jeff believed we had to make the product considerably smaller than current PDAs. He carved up a piece of **wood** in his garage and said this is the size he wanted. He'd walk around with this block in his pocket to feel what it was like. I would print up some screenshots as we were developing UI, and he'd hold it and pretend he was entering things, and people thought he was weird. He'd be in a meeting furiously scribbling on this mockup, and people would say, "Uh, Jeff, that's a piece of **wood**."

# The rights of a prototype

- Should not be *required* to be complete
- Should be easy to change
- Gets to retire

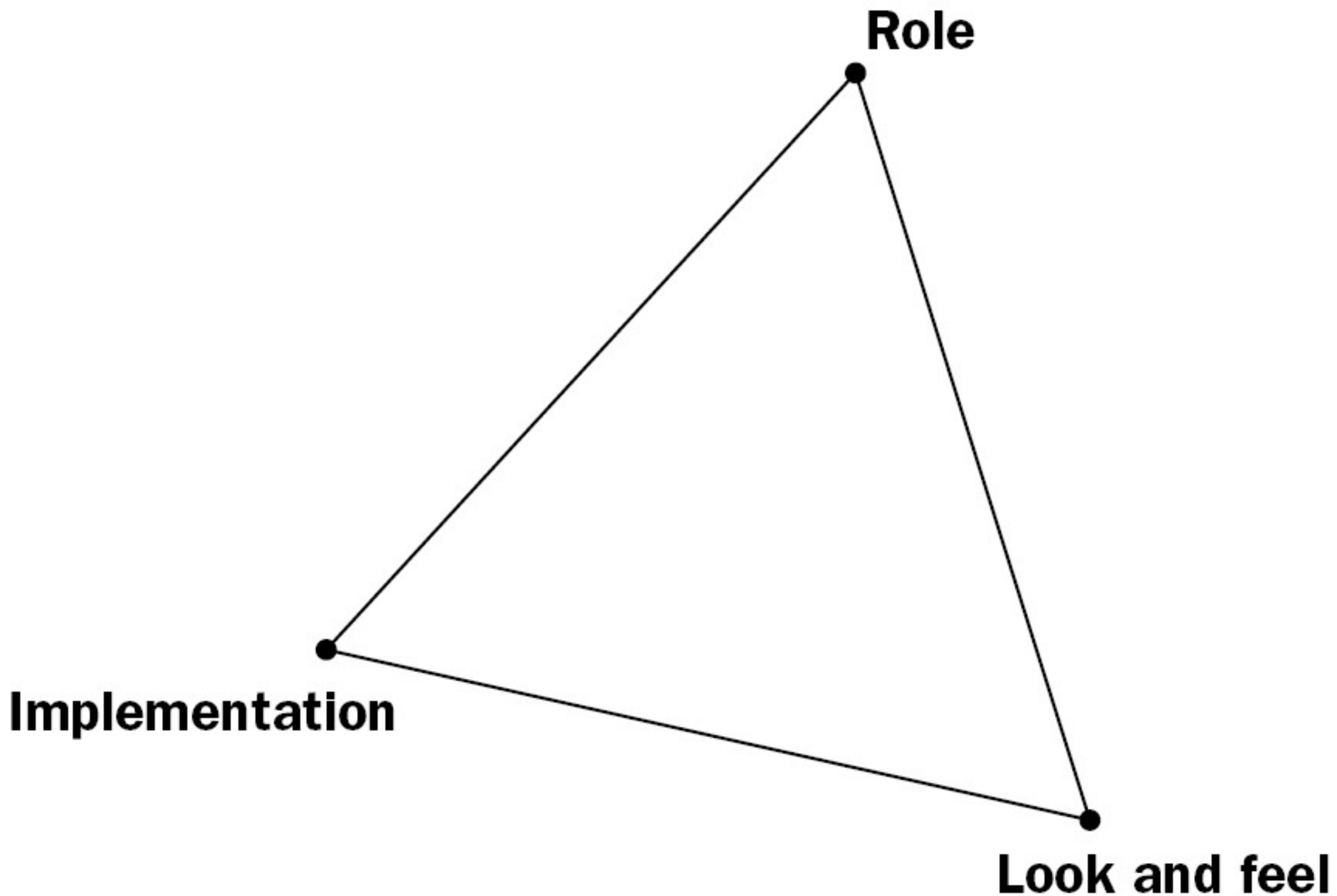


LEARNING /  
COMMUNICATION

TIME

# Have a Goal

# What Do Prototypes Prototype?

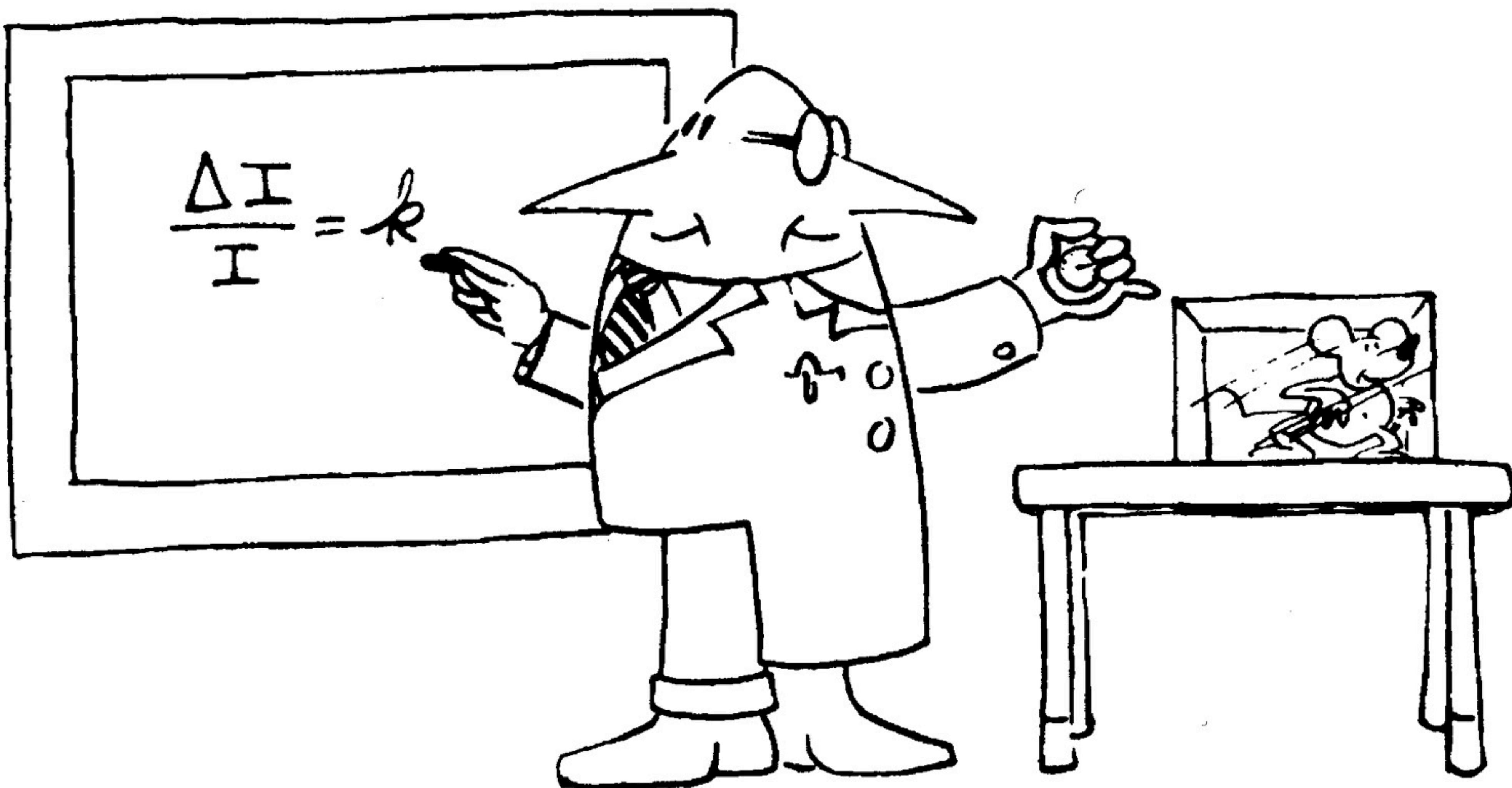






# Prototyping as Communication







A close-up photograph of a person's hands holding an open book. The book is open to a page with handwritten text. One hand is pointing to a specific section of the text, while the other hand rests on the page. The text on the page is a speech by Franklin D. Roosevelt, likely the "Four Freedoms" speech, with several sections highlighted by hand.

What (and when) does  
formality get you  
somewhere?

# Make multiple prototypes simultaneously to get most value

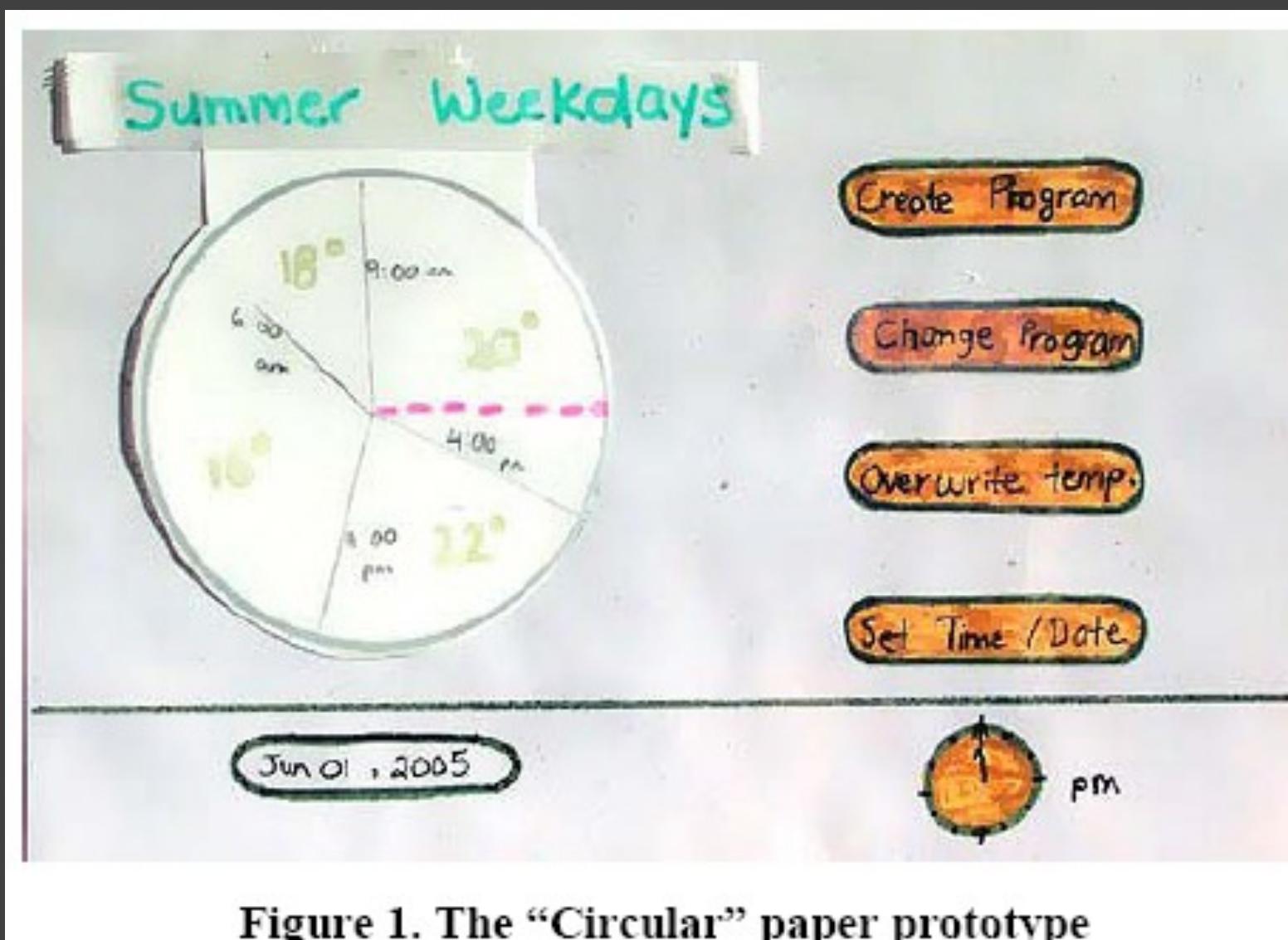


Figure 2. The “Tabular” paper prototype

Figure 3. The “Linear” paper prototype

What is the cost of making  
changes over time?

“Good artists borrow, great artists steal”  
- Pablo Picasso

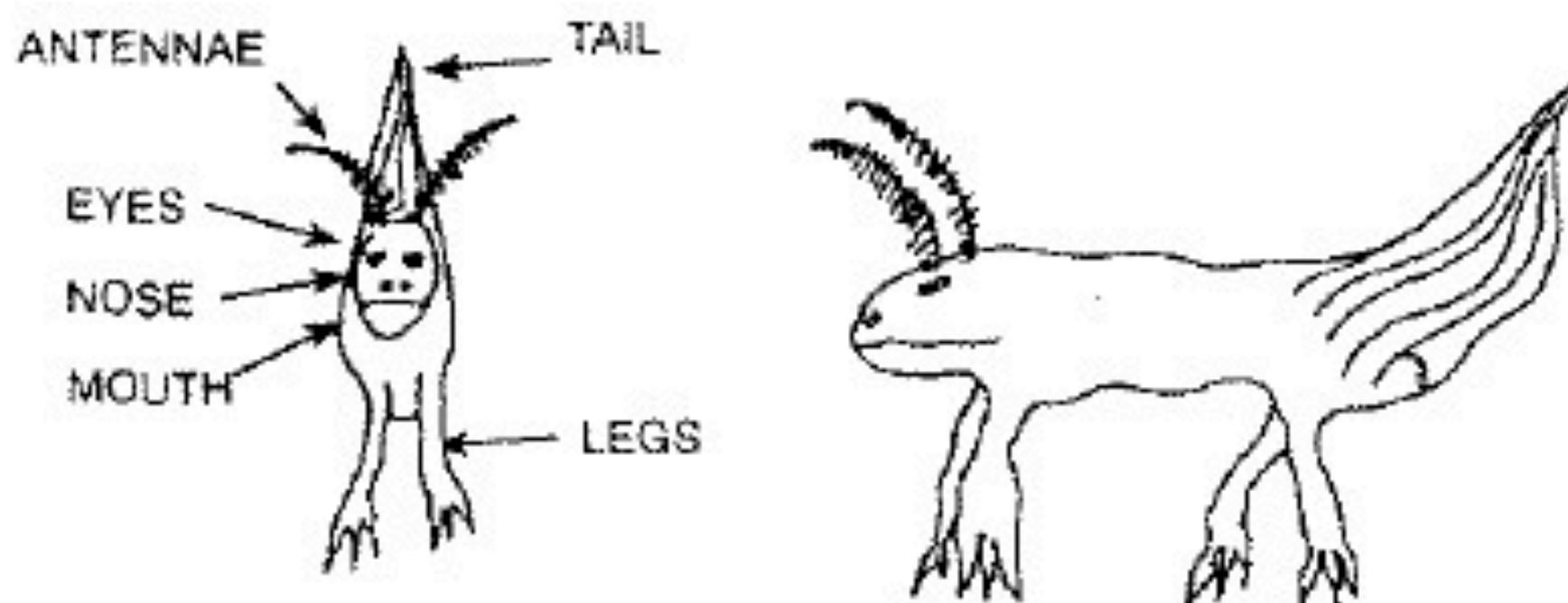


Les Demoiselles d'Avignon

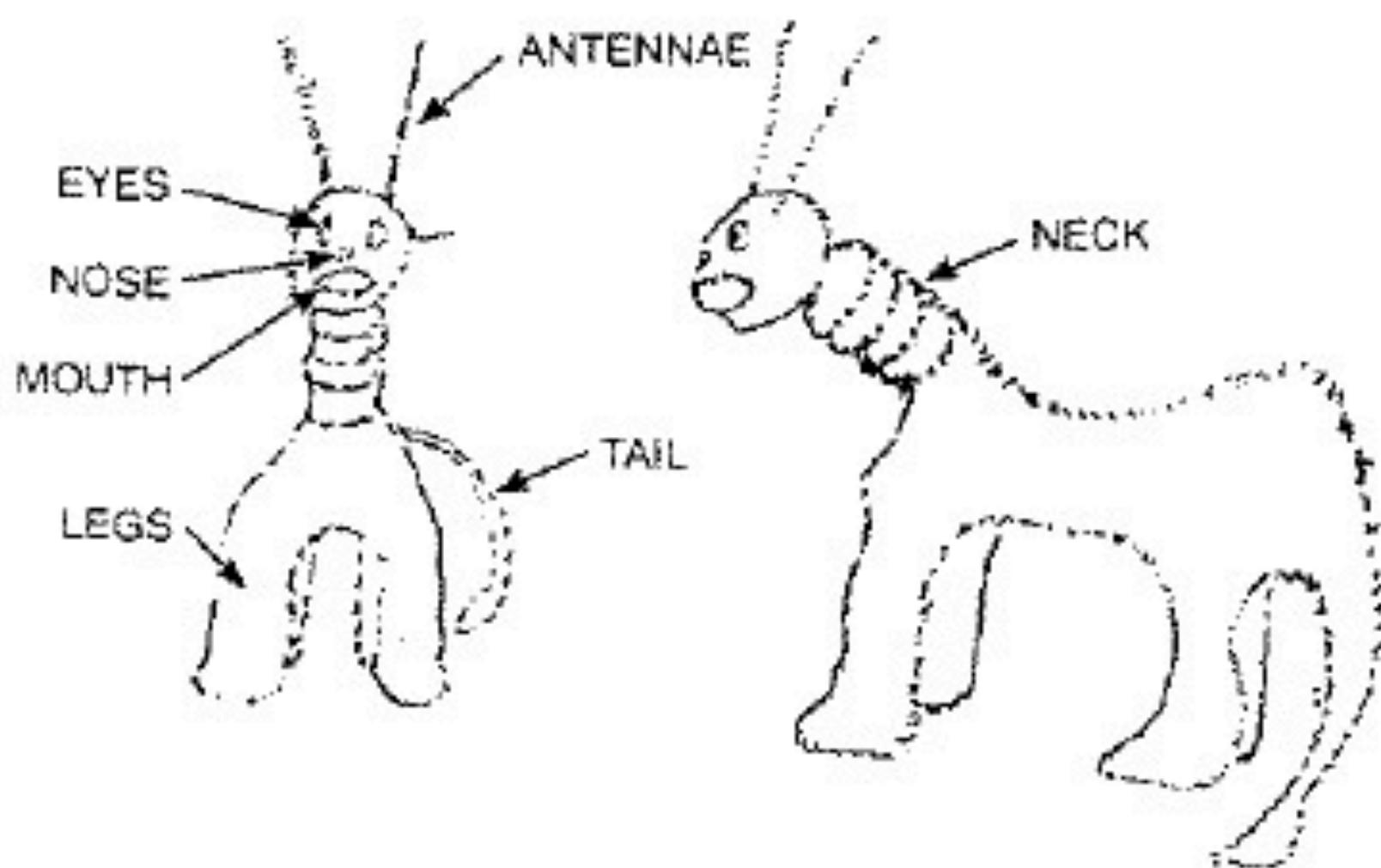


19th century Fang sculpture

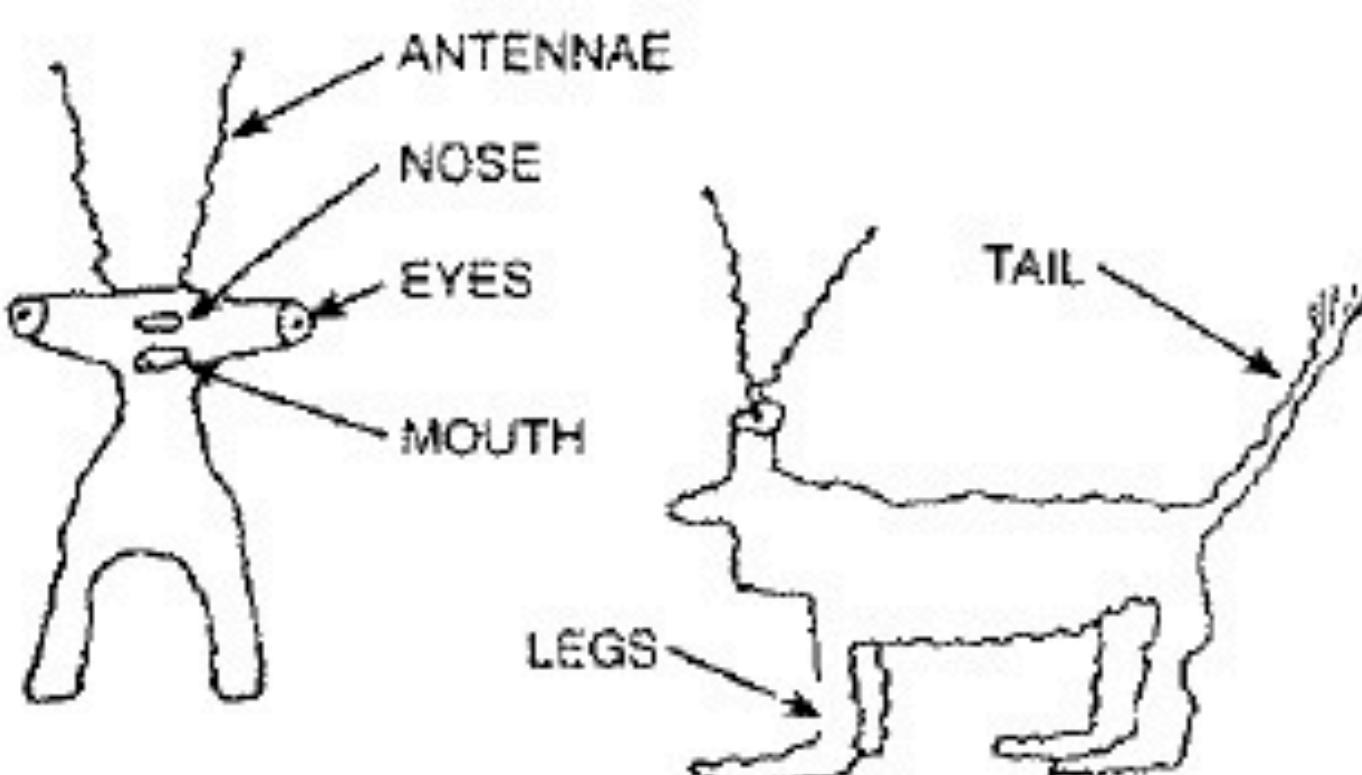
# Examples can increase conformity...



This creature can walk  
on land and swim in water  
very well.

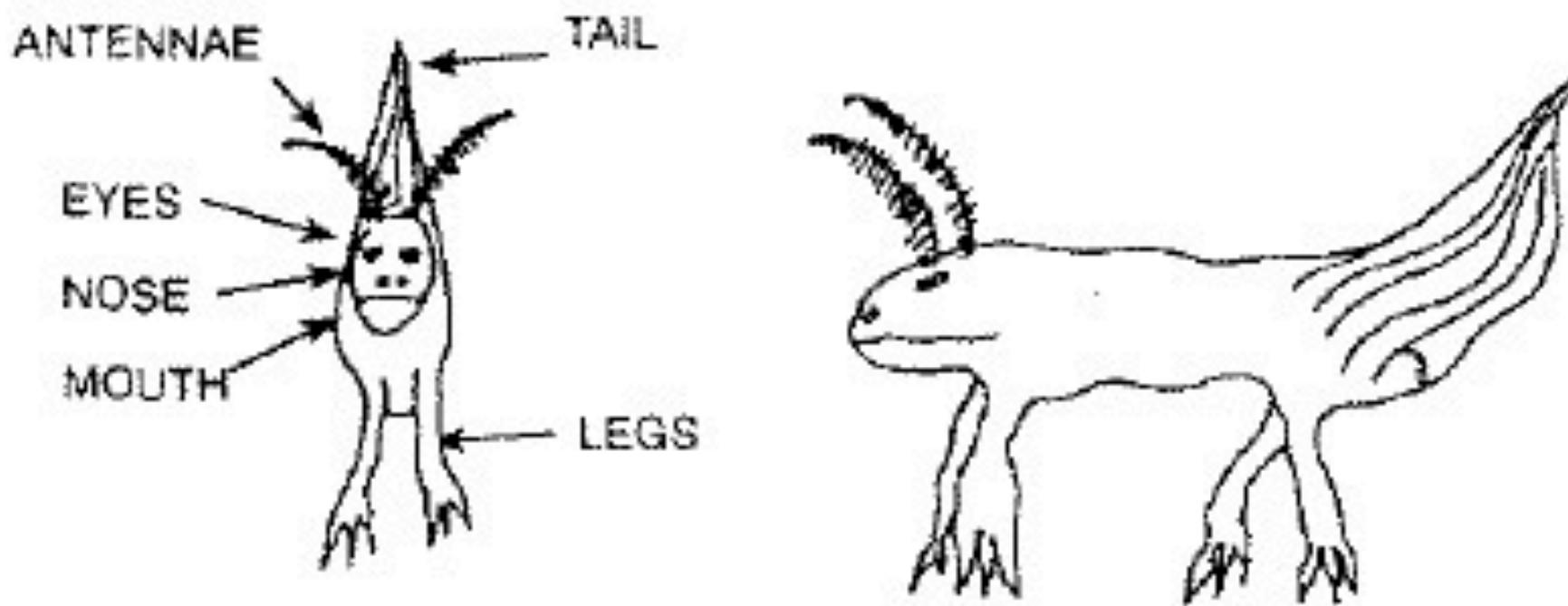


A very funny creature, it  
is so soft that it makes no  
noise when it walks.

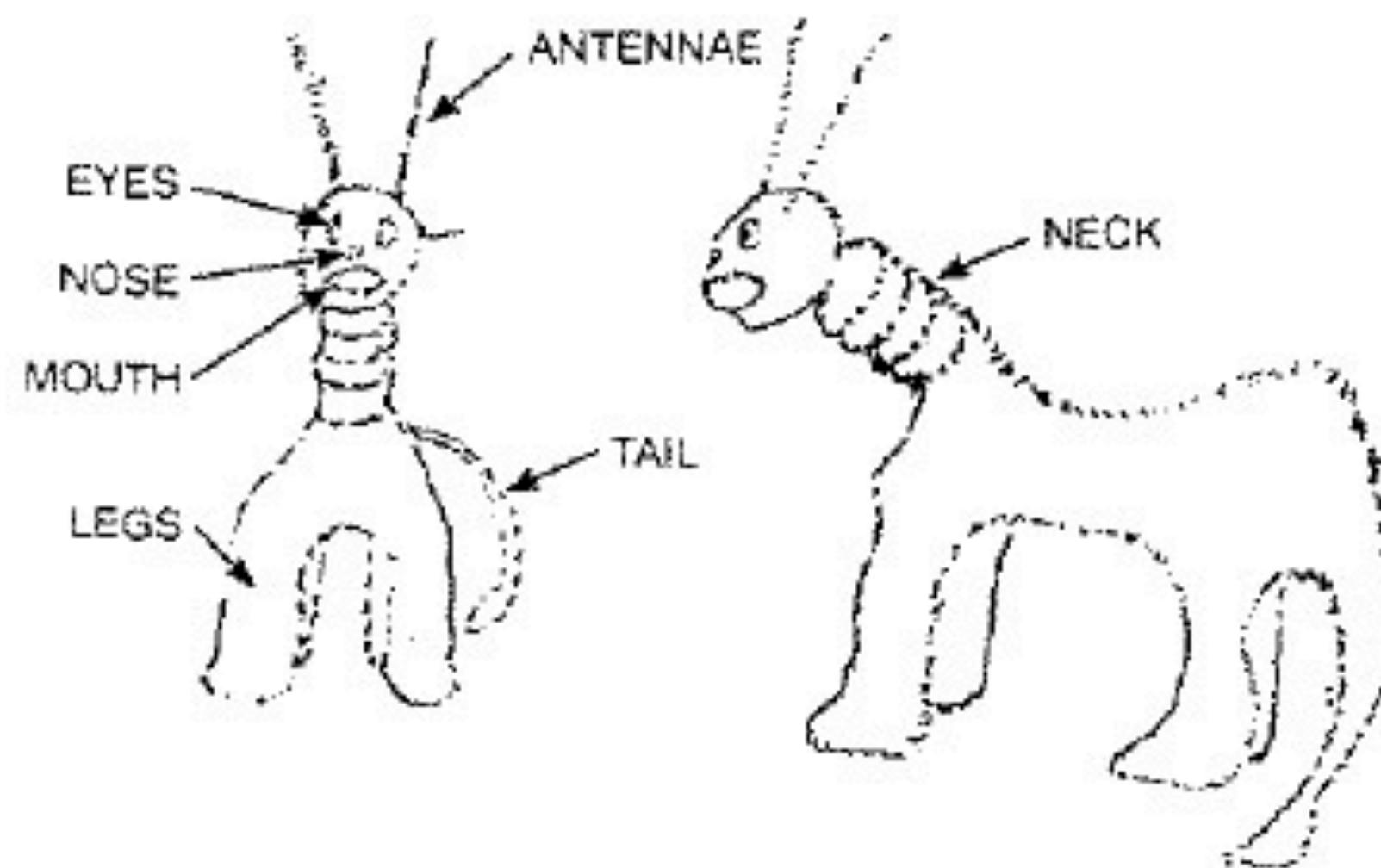


This is a blue-green  
creature that is very  
wrinkled but gentle.

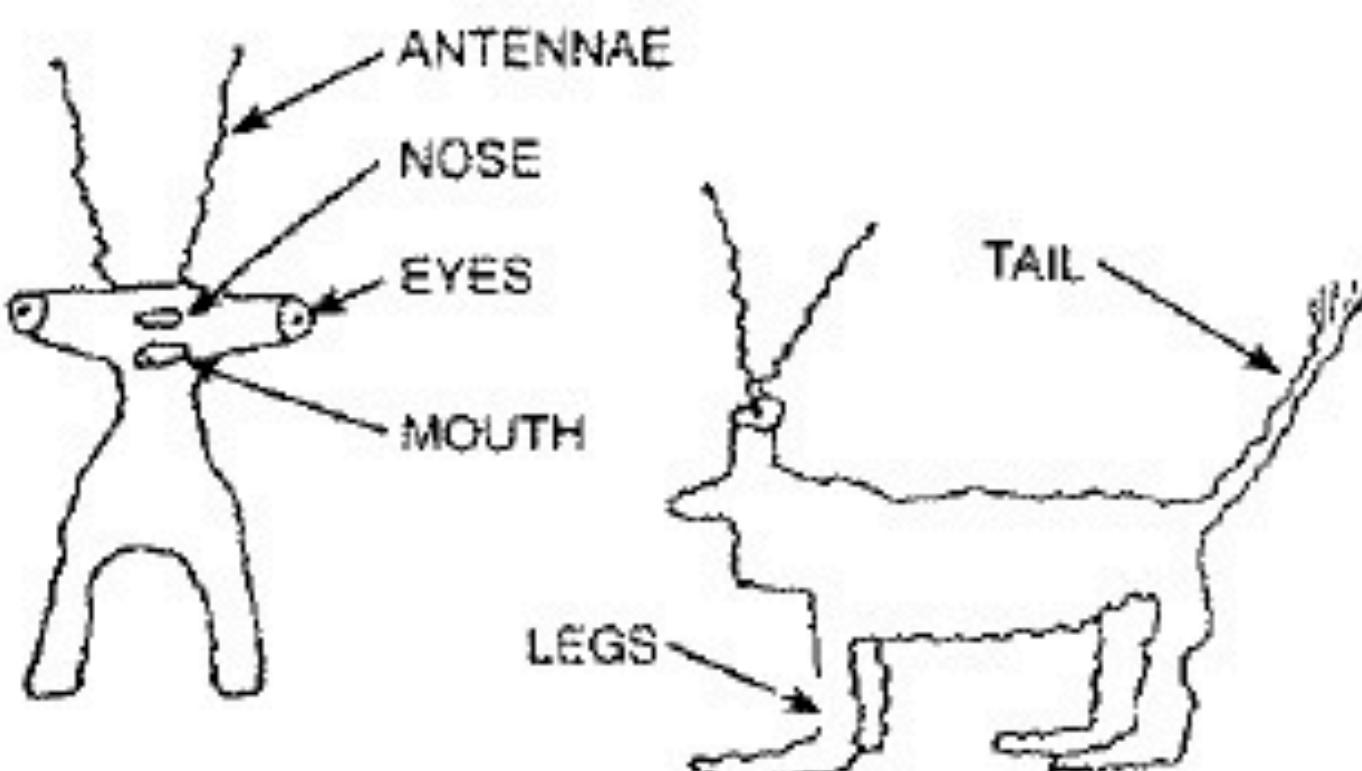
# ...without reducing novelty



This creature can walk  
on land and swim in water  
very well.



A very funny creature, it  
is so soft that it makes no  
noise when it walks.



This is a blue-green  
creature that is very  
wrinkled but gentle.