

COMPANION ILLUSTRATIONS · ENTANGLED HYSTERONS, WITHOUT THE MATHS

Sticky Switches

A picture guide to one idea. Your mind makes some calls like a light switch that is *sticky*: once it has flipped, it stays put. What other people tell you can move how sticky it is. The same mechanism explains a fun internet argument about a dress. It also explains a group of people getting genuinely ill from something that isn't there.

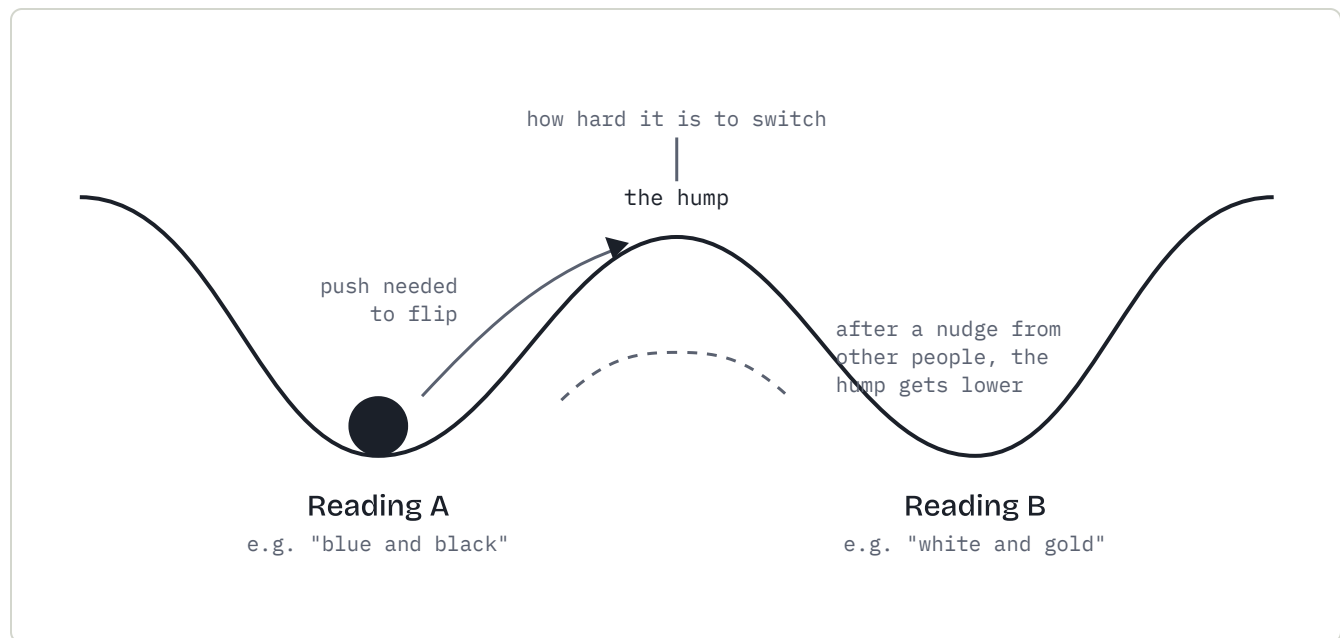
The shared mechanism

Track A: a harmless payload (what you see or hear)

Track B: a harmful payload (what you feel in your body)

PLATE 0 · THE ENGINE BOTH TRACKS SHARE

A switch with a memory



Two valleys and a hump.

Picture a ball in one of two valleys. Each valley is a way of settling something, like what colour a dress is. The ball rests where it lands. Getting it into the other valley takes a real push over the hump. It then stays over there, even after the push stops. That memory is

what the paper calls a *hysteron*. We'll just say *sticky switch*.

The one extra ingredient: coupling

A sticky switch on its own is simple. The paper's point is that the switches in different heads are **linked**. Other people and outside messages change the hump in *your* landscape. They don't carry any physical cause into you.

Hear that someone else has flipped and your hump gets a little lower. Hear it from ten people, or from a headline, or from someone in a white coat, and it gets lower still. At some point the ball rolls over by itself.

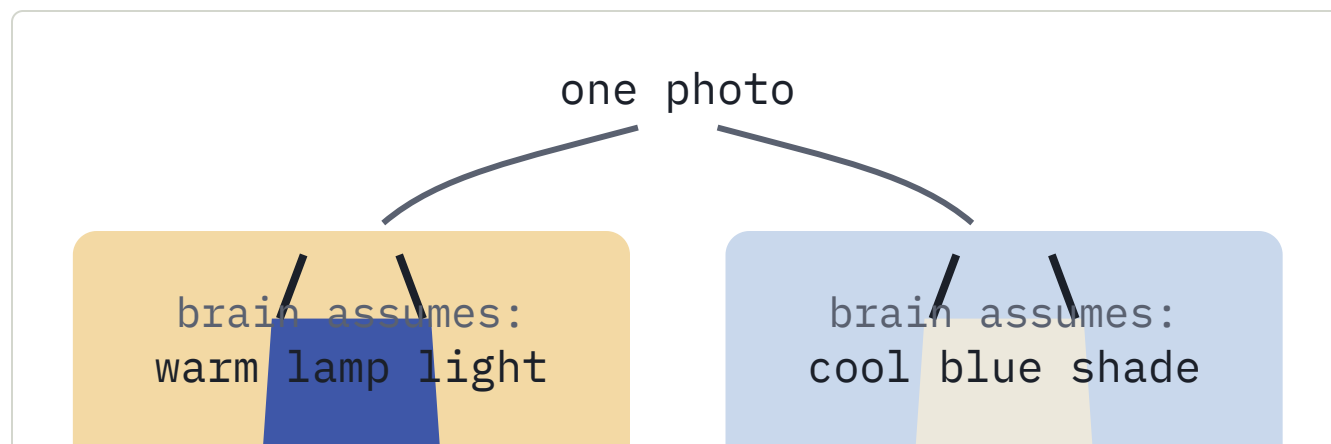
About the word "entangled." The paper borrows it to mean this: once your perception has met the information, you can't fully describe one without the other. It's a picture of mutual dependence. It has nothing to do with quantum physics.

STEP 1 • LOCKING IN

Something ambiguous comes in, and the switch settles one way

Same mechanism in both columns: the input could go either way, your brain picks a valley quickly and without asking you, and after that the pick feels like plain fact.

TRACK A • PERCEPTION



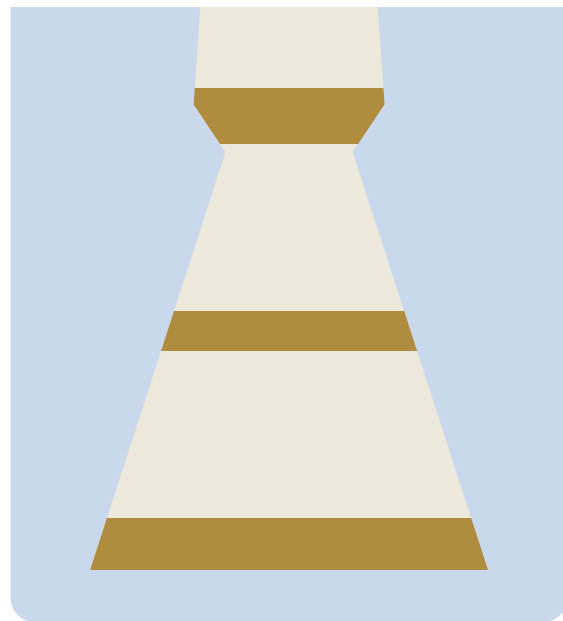
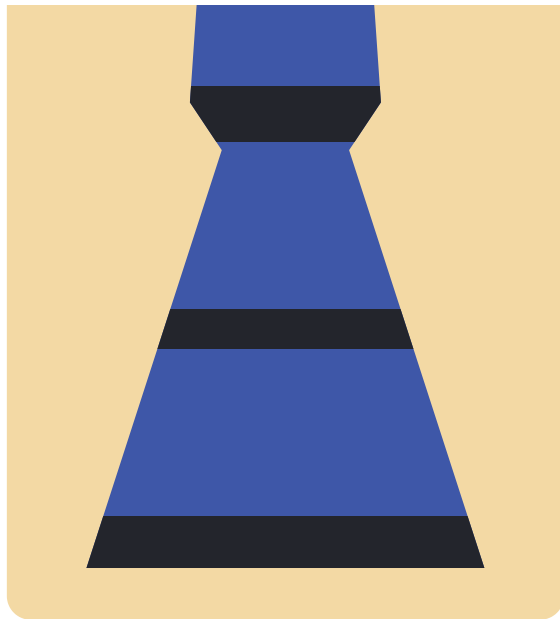


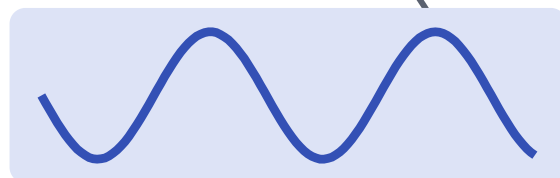
PLATE A1 · THE DRESS (2015)

The lighting in the photo is ambiguous, so your brain guesses it.

Your brain always subtracts the colour of the light to work out the colour of the object. If it guesses warm indoor light, it removes yellow and you see blue and black. If it guesses bluish shade, it removes blue and you see white and gold. Neither group is looking harder. Each has a switch that landed in a different valley and stayed there. The real dress was blue and black.

one recording

high pitches → "Yanny"



low pitches → "Laurel"

PLATE A2 · YANNY / LAUREL (2018), BRAINSTORM / GREEN NEEDLE (2020)

One sound with two words packed into it.

The Yanny/Laurel clip carries both words at once, one mostly in the high pitches and one in the low. Which one your ear grabs depends on your hearing, your speakers, and your first guess. Brainstorm/Green Needle works the same way, except the tipping factor is simply which word you're reading while it plays.

TRACK B · THE BODY

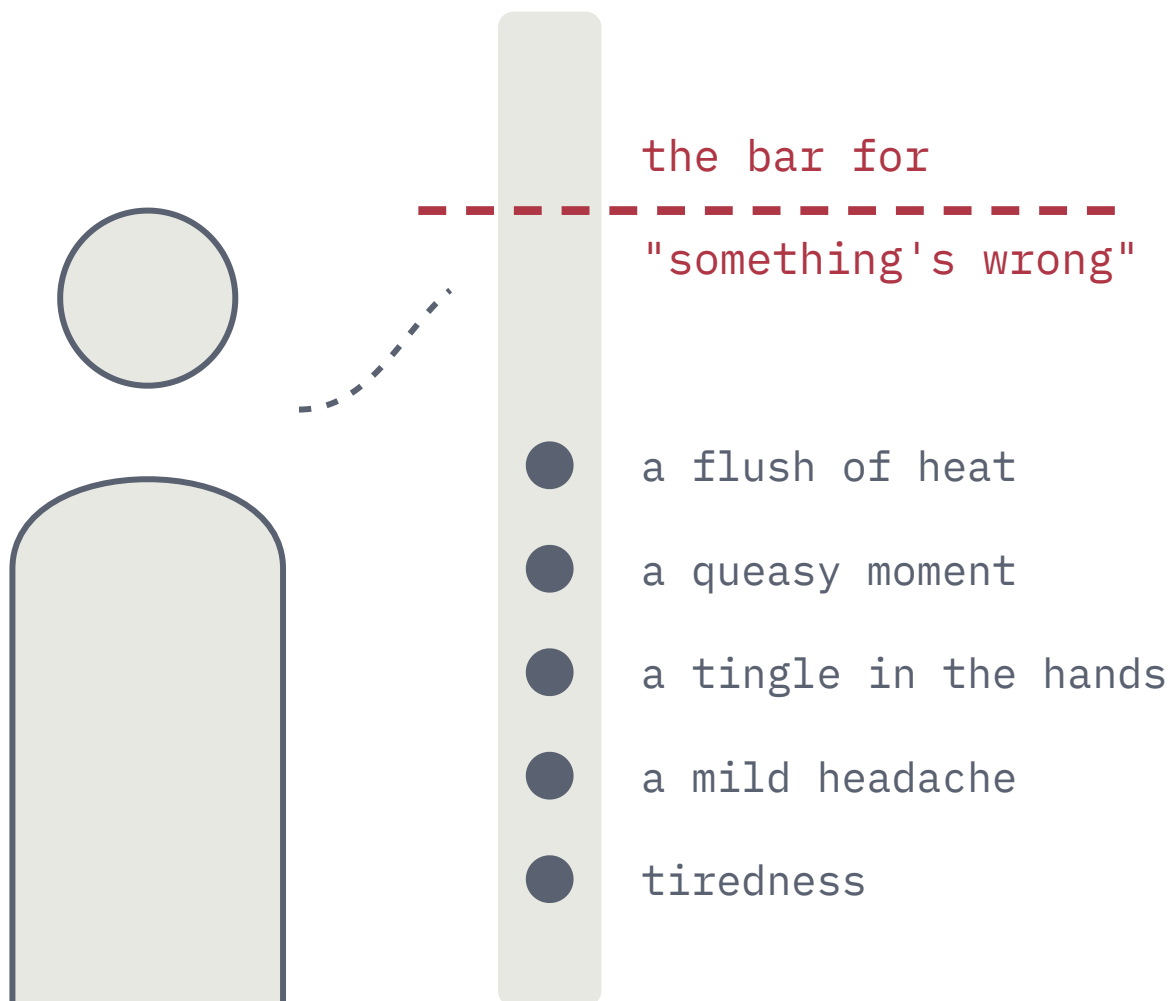


PLATE B1 · THE QUIET BODY

Everyone runs on background noise.

On any ordinary day most healthy people feel something: a dull head, a tingle, a wave of tiredness. These signals are ambiguous in the same way the dress photo is. The switch here is "is this just me, or is something wrong?" Normally it sits in the "just me" valley and the bar for "something's wrong" is high above. Nothing gets reported.

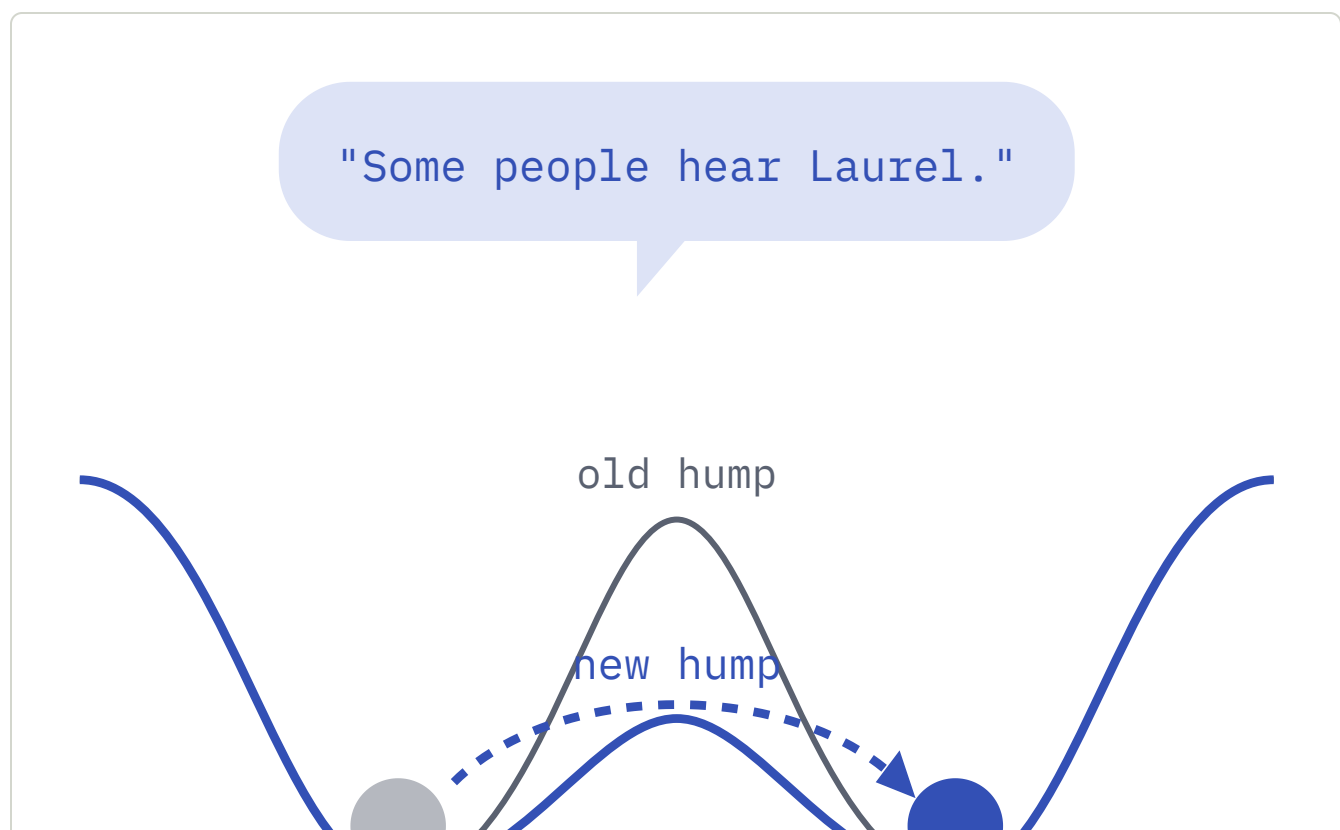
The paired point. The dress photo and a passing headache are both unclear inputs. In each case the brain settles on an answer quickly and treats it as fact. What differs is what the answer is *about*.

STEP 2 · BEING TOLD

New information lowers the hump

This is the coupling happening right in front of you. Nothing about the photo, the sound or the body has changed. What changed is what the person has heard, and that alone moves where their switch sits.

TRACK A · PERCEPTION





"Yanny"



"Laurel"

PLATE A3 · THE LIVE DEMONSTRATION

Hearing that the other reading exists is itself the experiment.

With Brainstorm/Green Needle the hump is low. Read one word and you hear it. Read the other and you flip. That's a switch visibly tied to information, live. Yanny/Laurel sits in between: many people can flip once they know what to listen for. The dress is the steep one. Plenty of people are told "it's really blue and black" and still see white and gold. They don't flip, but they aren't the same as before either. Now they know the other valley is there, and they can't un-know it. That lasting link between person and information is the entanglement.

TRACK B · THE BODY

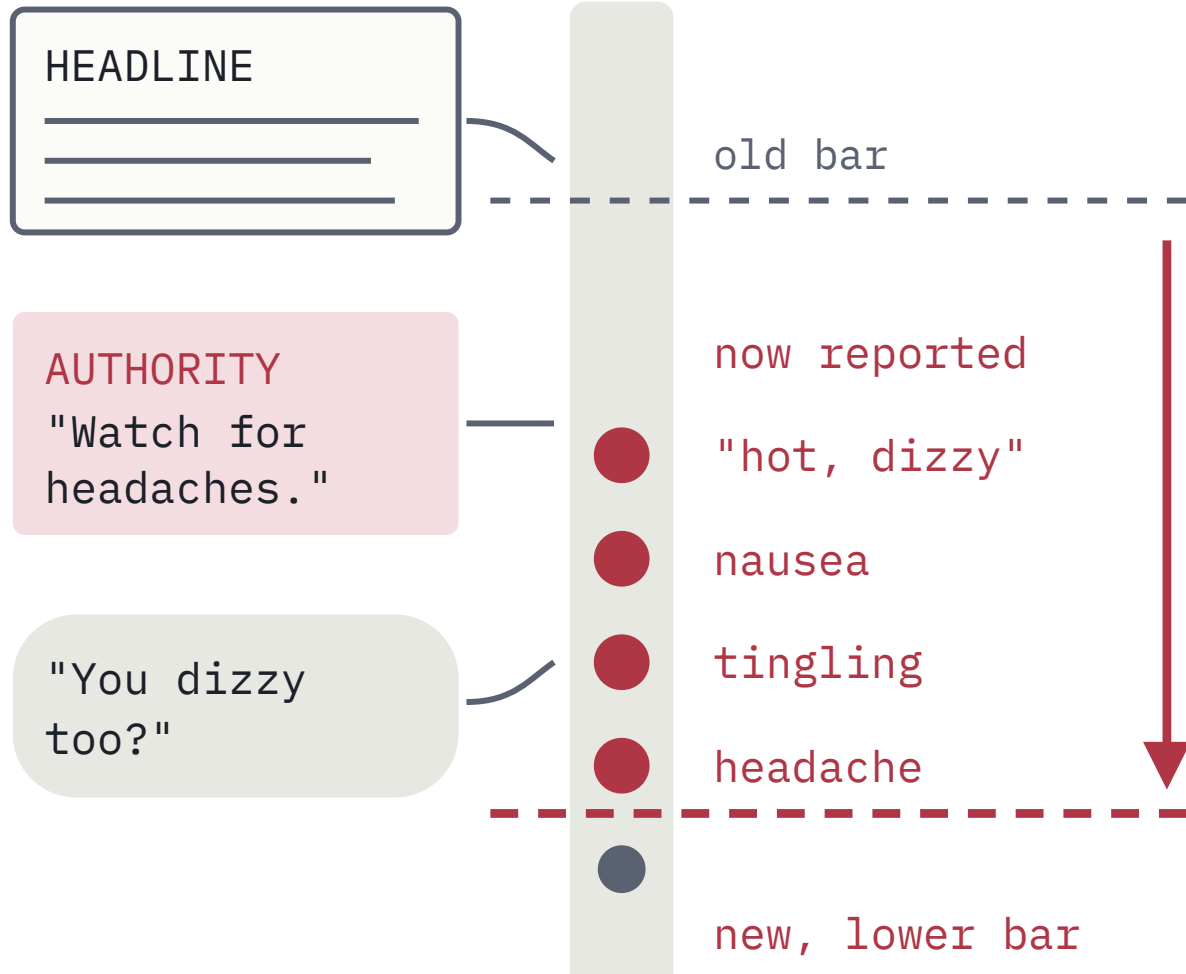


PLATE B2 · THE NOCEBO NUDGE

Nothing new entered the body. The bar moved.

A rumour, a headline, or a teacher, doctor or manager saying "tell us if you get a headache" lowers the bar for "something's wrong". The ordinary background sensations from Plate B1 now clear it. They get noticed, then they get worse under attention, then they get reported. This is the *nocebo effect*, placebo's darker twin. In drug trials, people taking a dummy pill regularly report the side effects they were warned about. In one 2020 study of heart patients, most of the aches blamed on statins turned up on the dummy tablets too.

STEP 3 · COUNTING NEIGHBOURS

Each flip makes the next one easier

Put many sticky switches side by side and let each one feel the ones around it. Every person who flips lowers the hump for their neighbours. The spread follows who can see or hear whom. It doesn't follow air vents or water pipes.

