

The Need For Novelty or Why Is Stuff Funny?

Humans do not *all* find the same things to be funny, but all humans do find *some* things to be funny. The ability to detect humor & the tendency to reflect (through a smirk or a laugh) the detection of that humor are universal human traits. And if our brain has turned these mechanisms into universal human traits, then humor *must* have some purpose beyond simply adding a little entertainment to our lives. This conclusion leads us to a couple of obvious questions: why is certain stuff funny, and why do our brains care?

What Is Humor?

First, we have to define exactly what human brains judge as "funny." In terms of our *response* to amusing stimuli, that's a simple task. The brain mechanisms that are engaged by our humor response have a fairly obvious *tell*: they cause us to *physically express* our amusement somehow (often unexpectedly or even uncontrollably). This expression of amusement occurs along a broad continuum—ranging from that mere smirk to hysterical fits of laughter. No matter where along the spectrum one's response falls, if our brain

has identified something as funny (or even just *quirky*), we're highly prone to show it somehow in our face.

What, then, is our brain actually *identifying* when it deems something as funny or quirky? *Novelty*. Every joke is, in essence, a *surprise*. Whenever you smirk or laugh or are otherwise *amused*, your brain is tagging that surprising event, observation or narrative as *uniquely novel*. Why does our brain care so much about novelty that it's devised a special universal human mechanism devoted to identifying & analyzing uniquely novel data? Because above all else, the human mind & consciousness are built to maximize that primary, evolution-conquering tool: creative problem-solving.

In the brain's game of creative problem-solving, novel data & patterns *always* have some potential future value. Whether it's the smile-producing & *genuinely odd* way that the errantly-floating feather seemed to skip alongside your feet (and whose uniquely new presentation of locomotion might spur an engineering *a-ha*) to that *hilarious* narrative

twist you didn't see coming (but which, since it's now been experienced, you can apply as a possible narrative predictor in a future unique circumstance).

This creative problem-solving boost is the same value we get from clever word-play jokes like puns & other novel verbal linguistics—which are the source a literally *volumes* of humor. As we first explained in essay #1, the human brain's thought-conjuring & problem-solving machinery is primarily language-based, and the ability to cross-associate unlike ideas via their related modular word-based components is *enhanced* by words that have those unique, highly-malleable & flexible multiple-associations. Puns & word-play jokes help reveal to our brains even the most-hidden of these useful multiple-usages & associations between words, which supports humor's ultimate purpose: to aid in creative problem-solving.

From our mind's point of view, every current or upcoming unsolved problem might be unlocked someday by that as-yet-un-encountered, uniquely-novel data or pattern. For these reasons, the human brain is built to *love* consuming & cross-applying novel data in its quest for more creative & unique solutions. And what does our brain do when it wants us to love something? *It feeds us pleasure in response to that something.* Our brains need novelty, therefore, humans love humor.

Parsing The Pleasure

This pleasure response mainly does two things for humans: it helps us to take special note of the uniquely novel data or pattern, and it helps us to *remember* the novelty for future use. This is why it's so useful (& adorable) for babies to be giggling & smiling at stimuli all of the time. And to a brand-new baby, nearly everything that's even the slightest bit novel is likely to be judged as uniquely (and thus, humorously) novel.

Particularly in those earliest (infant & toddler) stages of our brains' cognitive-rule development processes (mechanisms thoroughly explained in essay #4)—discerning, distinguishing & remembering specific new patterns is vital to building & sorting the plethora of new rules that our left hemisphere is stocking for a lifetime of use. As we age, the needs of our brain change, leading to a change in the way we respond to that uniquely novel data (aka, our *sense of humor*).

For one thing, you might say that our "giggleness-quotient" decreases with age. That once unendingly-amused toddler eventually, over the years, tends to find fewer & fewer events, observations & narratives uniquely novel. Although the *full scope* of what we find to be funny generally grows much broader & deeper as we age, it seems that the sheer number of experiences

that we judge as humorous is still much greater in our youth.

However, in terms of humor & aging, what we give up in quantity might be made up for in quality. Mature, experienced & fully-analytical minds are likely to find humorous experiences more *rewarding*. This is because, generally speaking, those minds are ferreting more-useful data out of these novelty-based experiences. How exactly does our brain turn a novel experience (aka *a comedic narrative*) into more-useful data? By using the same primary tools that it uses to analyze all narratives: the value & validity judgements that fuel our emotional equations (explored extensively in essay #2).

According to Narrative Complexity's hypothesis, the human brain makes 7 specific narratively-based judgements when analyzing any of these uniquely novel events or comedic narratives. In other words, there are 7 judgements that the brain makes when determining its response to a joke. As we age & our minds mature, our brains tend to weight some of those specific judgements differently, leading to both different responses to novelty & different preferences for certain kinds of uniquely novel experiences or narratives.

When we're younger, our brains tend to be less capable of flexibly & subtly balancing & analyzing those 7 judgements of a comedic

narrative, and are thus less capable of receiving the humor-based pleasure derived from narratives that generate their comedy in more balanced & complex ways. Younger individuals have what we might think of as a less-sophisticated humor palette, one that only requires high scores in a few key categories in order to generate our humor response, but that is less responsive when those categories are more balanced with the other 7.

These younger humor palettes are also willing to soak up lots of seemingly-redundant experiences that hit those few key notes—because they're likely still developing their initial sensitivities to the subtleties *within* those few key categories. In the construction of the human mind, one of the brain's complexity-developing tricks is to start narrow & go deep—providing complex-but-microcosmic early neural models to found the building of broader, more robust & more flexible mechanisms later. In terms of humor, this means that in order to teach your brain how to eventually laugh at a *New Yorker cartoon*, in your youth you must first master an understanding of all the subtleties of *fart jokes*.

What exactly are the 7 independent, narratively-based judgements that our brain makes about uniquely-novel data? Behold, the anatomy of a joke:

1. Likelihood Judgement - This first judgement is essentially about the expectation or the "set-up" of a joke; therefore, this defines the general emotional state of our mind *prior* to encountering the joke's surprise.

During a comedic narrative or event, we either see a novel twist coming or we don't. If we feel that there is a strong likelihood of something unexpected happening (a joke with a "set-up") we feel the *anxiety* of that predictive uncertainty. If we are *not* anticipating something unexpected happening (low likelihood or no "set-up") then we feel the security of our predictive *confidence* (and are thus very likely to be more surprised or even *shocked* by the upcoming novel twist).

2. Loss/Gain Judgement - Once the unexpected event occurs (in essence, the "punchline") the first thing our brain does is determine whether the event represents a loss or a gain to us. If the surprise is a rock falling on someone's head, that's likely viewed empathically as a loss (making it a pain-based joke). If the surprise is a diamond necklace falling on someone's head, that's likely viewed empathically as a gain (making it a pleasure-based joke).

However, this judgement is also impacted by how we feel about the individual to whom these events happen. If it happens to

someone whom we don't like or whom we have disdain for, then the rock might feel like a gain & the diamond necklace like a loss. No matter how many different factors are at play here, the unexpected event is ultimately judged by our brain as a personally-felt gain or loss.

3, 4 & 5. Importance, Relevance & Novelty Judgements - These three judgements (which are essentially simultaneous) are those fundamental measurements that the brain uses to determine the overall *value* of the loss/gain identified in judgement #2 above.

If the rock that unexpectedly falls on the character accidentally kills him (or if the falling necklace came from the Titanic) that makes the event more *important* (and the joke more *outrageous*) than if the falling rock merely annoys him. If the character is a small child and you also have a small child, that might make the uniquely novel event more *relevant* (essentially making the joke more *insightful* to you). And if you've never unexpectedly seen a rock fall on anyone's head before (because you've been living under one—or maybe you're, like, 2) then this event might actually seem highly novel (increasing the joke's most vital element, its novelty-based *humor*).

Together these 3 judgements essentially determine the *intensity* of our emotional/

physical response to the joke. Low scores across these categories create a smirk; high scores in these 3 are likely good for big laughs.

6. Reliability Judgement - After observing (or experiencing) the unexpected & novel result within a comedic narrative (and feeling those initial emotions) our brain wants to assess the actual *usefulness* (or the *impact*) of this attention-grabbing new data discovery.

In other words, some of these surprises provide data that's more valid—more reliable as a behavioral or narrative predictor or model in the future. Although *all* punchlines are unexpected or unlikely narrative results, the *plausibility* or the ultimate *truth* (to us) of that unexpected result (often gleaned after a moment of post-surprise reflection) helps to determine our different subsequent validity-based emotional responses to the punchline.

If, in the end, the surprise feels contrived or phony—making it more unreliable as a predictor—this tends to dampen our enthusiasm for the joke. In contrast, if the punchline or unexpected twist feels *especially* true or plausible—declaring itself a reliable predictor—that tends to bolster our enthusiasm for (and the pleasure derived from) the joke.

7. Belief Judgement - The other half of this post-surprise *assessment* of a novel result's usefulness or impact: determining whether

the comedic narrative or event complies with or violates any of our beliefs (defined in essay #2 & explored further in essay #4).

In the end, even if we initially (and somewhat involuntarily) laughed at a joke, during this assessment our smile might still morph into an expression of *disgust* if the punchline or character behavior ultimately *violates* one of our stronger beliefs. Comedic narratives are, after all, still *narratives*, which means that (according to Narrative Complexity's mechanisms) before they enter our conscious awareness they're automatically analyzed by our belief system for emotional generation.

And when a comedic narrative scores high in belief *compliance*, it tends to enhance our *connection* to the humor & its source—a result of that admiration-based modeling mechanic triggered by others who demonstrate compliance to our beliefs. Comics that play heavily with these belief judgements are the kinds of comics who tend to inspire devoted worship: individuals whose comedy is founded upon strong & distinct beliefs that are shared by its audience. These are the controversial, boundary-pushing & revered comedians (like Joan Rivers, George Carlin, Richard Pryor, Bill Hicks, Marc Maron, Chris Rock, Doug Stanhope, Louis C.K., Sarah Silverman, Dave Chapelle and Hannah Gadsby) who not only seem to speak uniquely novel & cleverly arrived-at high-value truths, but surprisingly *profound*, belief-defining truths.

In fact, challenging-but-worshipped comics like those named above (or the ultimate example: Lenny Bruce) tend to build their envelope-pushing comedy around a clever belief-engaging trick. These comedians usually work off the premise that “the truth rules above all”—this belief posits that nothing is more valuable than expressing the truth, even if it is offensive or painful. Then they reveal the most offensive or painful truths that they can muster, but do so while complicatedly & cleverly remaining within the confines of “truth-telling” about some high-value topic, allowing (or forcing) us to “accept” the offensive or painful (yet still important, relevant & *hilarious*) unexpected truth.

In a comedic situation or narrative, tolerating the *violation* of a powerful belief in the service of complying with an *even higher* belief causes some *very interesting* (& often oddly pleasurable) emotional responses in humans. Part of what we’re

feeling is likely the result of little neural renovation, because jokes like this probably cause some subtle rearrangement of our own belief structures (in order to accommodate this clever new comedic conundrum).

In other words—no matter how it’s structured—deep down in our brains, a joke is rarely *just a joke*.

The Comedy Gun

Before we go, I’ll leave you with a little eye candy. In order to provide a more visual way to break down his 7-step comedic process, I’ve built a handy chart—something that’s a bit like the mutant offspring of the *Mothership of Emotions* (presented by our theory in essay #2). And this mutant offspring has its own semi-clever name: *The Comedy Gun* (a tiny homage to that deathly classic, and truly-certainly-never-funny-to-begin-with comedy “device” of prop guns that either explode loudly or spit out a silent, dangling “Bang!” flag)...

the Comedy Gun

the Lead	the Surprise				the Assessment	
Likelihood Judgement	Loss/Gain Judgement	Value Judgements			Reliability Judgement	Belief Judgement
Strong Anticipation of Surprise >Set-up< (Anxiety)	Loss (Disappointment)	Low Importance	Low Relevance	Low Novelty	Unreliable (Invalid Pattern)	Belief Violation (Disgust / Guilt)
(For each element of comedic narrative, judgement either $\wedge \sim \vee$. Each element judged independently; 128 combinations.)						
Weak Anticipation of Surprise >No Set-up< (Confidence)	Gain (Delight)	High Importance	High Relevance	High Novelty	Reliable (Valid Pattern)	Belief Compliance (Pride / Satisfaction)
Expectation	Pain/Pleasure	Outrageousness	Insightfulness	Humor	Truth	Connection
Barrel	Intensity				Impact	