Show Me! Show Me!

by R. Salvador Reyes [Excerpted from "Narrative Complexity: A Consciousness Hypothesis," Essay #4-Memory & Cognition, pp. 135–137.]

Fundamentally speaking, this whole rule/vocabulary/belief-building process uses the same simple technique that's at the root of how our brain builds all of its systems from the ground up in a mostly-blank mind. It is using accumulated correlation to help determine rules of causation. In short, to our brains, repetition equals truth.

There appear to be at least two main reasons why our brain is so well-suited to use this deceptively-simple, correlation-leads-to-causation mechanism when building its self-defining architecture. One reason, that amazing loop. Here's a cool view of the loop that we haven't shared yet: it's basically our brain's way to apply the scientific method to human experience. We begin by observing (our external & internal data input systems), then we analyze (that subconscious process of associating, comparing & evaluating data), then hypothesize (our narrative/prediction-pattern building), then test our new hypothesis (act, speak or behave as a result of the narrative/prediction) and finally observe that result, beginning the loop again.

Amusingly, this cognitive-analysis sequence also exactly matches an acronym that was taught to me *many many moons ago* by an unlikely *Agent of Gain*—Mr. Kurtz, my high school *driver's ed instructor*. The acronym: SIPDE—*Search Identify Predict Decide Execute* (which is *still* a sound driving strategy). The more familiar you become with the basic neural principles behind our experience of consciousness, the more you realize how frequently they seem to "accidentally" duplicate themselves within every aspect of culture.

(In fact, if you really want to *freak yourself out* & become suddenly *over-aware* of how deeply & powerfully words are engrained in the way that humans interact with the world: next time you're in a retail establishment, take a good look around at all of the *words* that are plastered *everywhere*, addressing *everything*. Product content, use & category, store organization & procedures, "lifestyle" & marketing messages, special product & service enticements, legal disclaimers, employee rules, name tags, exits, *etc*., *etc*., *etc*. Even in our heavily image-based & visually-overstimulating modern world—a huge portion of that *overstimulation* in our urban settings comes in the form of huge volumes of everywhere-in-sight *words*.)

Just as the repeated application of our *not-so-coincidentally-brain-loop-based* scientific

method has helped humans to build a set of rules that govern construction within our physical universe, our internal dialogue loop uses this same process to build our own individual set of rules that govern construction within our mind. And because this loop is perpetually running at unimaginable speeds, it's able to conduct an almost uncountable number of tiny, rule-building experiments over the course of a lifetime.

Which leads us to the second reason why our brain is so well-suited to use this deceptively-simple mechanism to build its self-defining architecture: that extraordinary *computational depth* of our mind. In order to effectively build, manage & apply this massive collection of rules, you need a computer like—well, a computer like the one-of-a-kind human brain. And when you have that kind of processing power at your disposal, a seemingly-simple method like correlation leading to rules of causation can still result in a creature of amazing (and amazingly accurate) complexity.

As we noted, resource-building occurs—conveniently & elegantly—in exactly the same loop locale as resource-application. How do the same mechanisms handle the tasks of both building & application? Think of it this way: when our brain seeks to *apply* rules (& words) to that emergent data, the first thing it must do is discern a *pattern* in that data—so it can determine which rules will be used in narrative construction (undertaken in relation/response to our problem or goal). Part of this pattern recognition is a matter of matching emergent data to those learned rules. Another part is a matter of matching that data against those more fundamental inborn rules that define syntax itself.

When new data contains a pattern that exactly matches a learned rule, it reinforces that rule—makes it *stronger*. This pushes it further along that spectrum of correlation becoming causation. The causation "threshold" (likely determined *on a curve* based on our current hierarchy) is essentially the point where a pattern's validity/reliability scores high enough to qualify it (in our flexible hierarchy) as a rule or belief.

When new data contains a pattern that doesn't match any learned rules, but still matches some of those fundamental rules (thus defining it as a usable syntactic pattern) then our rule system takes that new pattern & makes it a new rule. *This* is one of those ways in which we build our resource of rules. Unfortunately, in these cases—because this is a rule's first appearance in our hierarchy—it's likely very, very low on that rule totem pole. This makes it easy for the rule to go unapplied—even when it's useful. In fact, the just-born pattern is barely a real "rule" at all. But this is how the *source* of this new rule can help. If the source is well-trusted (or involves a high-impact event) then the data is immediately judged as highly valid or significant, giving it

greater prestige when this first-timer is placed in our rule hierarchy.

Nonetheless, a rule doesn't even have to come from a *consciously-known* source to be built. Our brains automatically ferret-out rule-building pattern data from *every* experience. Having a "teacher" is simply a case of someone calling a rule to your attention, allowing you to rapidly accelerate that immersive, *soak-it-in*, rule-learning process of experience.

There are also those cases when new data contains a pattern that *partly matches* an already-learned rule or the new pattern *contains within it* an already-learned rule—and *in addition* this new pattern is also judged overall as a fundamentally valid expression of syntax. These new patterns can also become new rules—ones that have essentially been *built upon* or are *variations* of a known rule.

Beliefs & vocabulary are built in essentially this same way. The primary difference between these beliefs, rules & vocabulary are their purposes: beliefs are used to influence our actions out in the world (decisions & behavior), rules are used to influence the actions within our brain (narrative construction & syntax), and vocabulary is used to create definitions in our brain.

Ever wonder why we all seemed so obsessed with stuff like top ten lists, rankings, and "commandments" (regarding pretty much *anything*) or why we seem to prefer viewing everything in our world as some sort of hierarchy? You can stop wondering. We're addicted to this stuff because our brains can never really get enough rule-building data —our minds are rule-building & hierarchy *junkies*.

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