

Intelligence, Stupidity, and Thirst: Two Questions

1. What Are Intelligence and Stupidity?

a.

Once, as I watched, for a total of maybe a second, a car careened through a red light and smashed into the side of my car. As that instant unfolded in extreme slow motion, I had the overwhelming sense of being a cog in a machine. It felt like *stupidity*. I only had time to utter one word. As you can guess, it wasn't anything clever.

What *is* stupidity? And accordingly, what's intelligence?

As a first approximation (keeping in mind that definition is *a process*), let's start with the idea that intelligence involves an ability to step back rather than remaining locked in a single perspective, and to assess and solve problems not just to get down a path to a goal but to imagine new paths and goals and even new selves. Needless to say, none of this was possible for me in the moment of the crash. Intelligence resides in the nonlinear loops between desire and thought and action and result, where each alone and all together retain their capacity to evolve.

Because we are bullied into using the term *intelligence* comparatively-- as if there were a linear scale-- you might think that the more complex the situation you are assessing, the more intelligence required. I suggest we resist this bullying and embrace a mathematical view that, while complex problems seem to be irreducible to simple ones (and thus it is genuinely stupid to try to apply simple solutions to complex problems), all complexity reduces to its most fundamental form, the quantum of complexity represented here by the nonlinear loop.

There are several important implications of this definition. Intelligence does not reside in a discreet agent but in a set of relationships. In some situations-- such as the car crash-- there is no room for being smart-- but notice that the insult to my intelligence was so *impactful* that, long after the fact, I'm still trying to squeeze intelligence from it. On the other hand, evolution itself may be said to embody intelligence-- and thinking to be a process not unique to brains or consciousness. Evolution by natural selection is a nonlinear loop between creatures and their worlds, and adaptation (enacting new goals and paths and selves) happens via genes that are fully stepped back from phenotypical experience.

By this definition, beating your head against a wall is definitive for stupidity. If you're lucky, a kind person might come along and redirect you. Notice that just taking the advice qualifies as intelligence. The emperor who realized, when told, that he had no clothes, was wise indeed. The more typical emperor prefers power to knowledge-- power that includes insulation from the consequences of his stupidity (*My critics are the ones with no clothes. Sad!*).

This definition emphasizes the *thirdness* of intelligence: it's a way of getting beyond the dualism of you versus the wall. Likewise, if you're stuck inside a circle on a two dimensional plane, you

can butt your head against it but never get out. If you realize that the world is three-dimensional, you can simply step out of it, as you would a circle painted on the floor.

In the US, a broken line next to a solid line painted in the middle of the road means that you are allowed to cross it from the side with the broken line but not in the other direction. In a parking lot, a prankster painted such a double line in a circle, with the broken line on the outside, looking to trap a self-driving car that was being tested there. The car crossed into the circle but then, because the car is programmed to obey traffic regulations, it couldn't get out. If you have Luddite tendencies (as I do), this story is a cheap way to feel superior: *stupid smart cars!*



For a capacity for knowledge to count as intelligence, it must be portable: you're not very smart if you learn to go around walls but are still stymied by a ditch. I say *portable* rather than *universal* because it remains to be seen whether there might be anything like universal intelligence (I think not). If it occurs to you that a ditch is a kind of wall, you get points for using metaphor (by positing a parallel between two realms: upward earthen-walls-in-air and downward air-walls-in-earth), abstracting or categorizing (creating a more heterogeneous category of phenomena that includes ditches and walls) or just *thinking* (an activity sometimes claimed to be based in the use of metaphor). It seems here that the portability-- the ability to move an insight or solution from one situation to another-- is part of what constitutes intelligence. The fact that *metaphor* itself means *to move across or over* makes getting around the wall a meta-metaphor. This kind of self-referential loop may be a marker of the internal coherence of these ideas.

At the moment, though, I'm not trying to get *directly* at what constitutes intelligence and stupidity. I'm not even sure that they exist as such in the world-- at least, not in any way that can be made rigorous and non-contradictory. At the moment, in all of the above, I'm starting with the question of *what we mean* when we use the words *intelligent* and *stupid*. This way, I can

begin by contemplating how I use the words, since I'm as representative a user of language as the next person, and you can then decide if my observations resonate. For example, one might consider how the word "smart" is being applied to things (cars, phones, appliances, socks): all seem to involve some kind of minimal feedback loop whereby input from the environment causes the thing to adapt (though generally only in a pre-programmed way).

Even so, the reason for this exercise is not just to assess how we use words. As per the practices of philosopher Ludwig Wittgenstein, the identification of assumptions and contradictions buried in our use of the words can be wielded to pry the world from the too-tight grip of language, not necessarily to leave us sitting in languageless contemplation of pure phenomena, but to open up alternatives, to find family resemblances among phenomena we thought were disparate, or to distinguish things we had lumped together.

This is where the rubber meets the road. What actual traction in the world do we get from words and concepts, and accordingly, what new traction can we get from revisiting and revising them? We will have failed if all we accomplish is *abstraction* (a pulling away from the world, the opposite of traction). But if we pull away, it can be a step towards getting a better grip, or a deliberate move to let go of something, such as a red herring.

As you may notice, this stepping back-- from the question of *what are stupidity and intelligence* to the meta-question of what it means to ask such a question-- enacts what what we've proposed as definitive for intelligence. The meta-question loops back to the question.

b.

I'd like to start (one more time) with another exemplary kind of stupidity.

A cat catches sight of something quivering in the corner of its eye, instantly piquing its interest, but when the cat swivels to confront the potential prey, the prey leaps away, and a frenzied chase is on, the prey always managing to stay a step ahead.

A cat chasing its tail is an instance of dramatic irony, defined as a situation where an outside viewer understands something that the participant does not. It is delightful to watch, presumably, because the cat is so guilelessly immersed in its pursuit-- all the more delightful if you have a sense of feline pride and aversion to looking foolish. Of course, this assumes that a cat doesn't know it's chasing its own tail, but because cats are also playful-- at least, when they're well-fed-- it's likely that the chase, not the object of the chase, is the object of the chase-- an object continually *caught* in autotelic play.

The chase, not the object of the chase,



As the stakes get higher, dramatic irony yields tragedy as well as comedy.

Laius argues with a stranger on the road in Thebes, not recognizing him as the son-- Oedipus-- that he had sent away to die as an infant after the oracle told him his son would grow up to murder him. He doesn't know that Oedipus had been rescued and raised in Corinth. Oedipus,



having been told he was destined to kill his father, had been fleeing Corinth, believing it to be his birthplace and having come to Thebes to ensure that he wouldn't be in any danger of patricide. Neither recognizing the other, they fight and Laius is killed. Not to spoil the story, in case you haven't heard it, but things keep deteriorating from there.

What Laius and Oedipus fail to understand is much more profound than the reductive cliché that you can't escape your fate. It's a complex opposite of that-- a flip with a twist. Like the cat chasing its tail, they fail to understand how their own actions co-create the world to which they think they are merely responding. If you have projected onto the world or onto others some conflict that is too disruptive to confront in yourself, then you have indeed "sealed your fate," and you may find, in the most benign instance, that "the world keeps asking you the same questions" or that whatever you have disavowed "comes back to bite you in the ass"-- whether or not, at that point, you are wise enough to say, as Shakespeare's Prospero says of Caliban, "this thing of darkness I acknowledge mine." Such an acknowledgement might come after years of therapy, when you've achieved the thirdness necessary to get this kind of psychological *leverage*.

Othering-- projecting onto others (or onto the world at large) what you disavow in yourself-- is thus an exemplary case of stupidity. But you can't have a coherent self without othering, so another way of saying this is that *the self is an exemplary case of stupidity*.

The principle-- that one co-creates the world to which one belongs-- is how nonlinear systems work. Because language tends to demand individual subjects with agency and stories that unfold (even at the sentence level) in linear arcs, it systematically obscures nonlinear causality and, at the same time-- if you care about language enough to be bothered by this-- demands that it be theorized.

We are uniquely stupid because we have consciousness and selves and language, those circles painted on the ground. And uniquely smart when we can step out.

But understanding this principle-- and nonlinear causality generally-- is no guarantee that we will understand or even suspect how it applies in any particular situation in which we are immersed.

A couple argues, each unshakable in the belief that the other "started it"-- say, that the other gratuitously poked at one's sore spot, or became defensive and hostile at something one said innocently. Notice the double standard: the other is expected to respect and avoid one's own triggers but not to have triggers of their own. The question of *who triggered whom* ("*Innocently*"?? *Did I really hear you say that??*) will only conserve the tail-chasing logic of cross-triggering-- unless the participants can take a step back to consider how the triggers and cross-triggering got wired into the system to begin with, and how they came to be conserved. There aren't any shortcuts: simple identification of triggers and hypervigilance to avoid them will almost certainly conserve and amplify them, like a Star Trek plot where some malign alien intelligence feeds off the energy exerted by the Starship Enterprise in trying to rebuff it.



When you're caught in quicksand, struggling not to sink is only going to get you in deeper and faster-- but it's also the case that you'll keep sinking if you do nothing. It's an uncanny predicament, a one-hand-clapping kind of question that might bring enlightenment if you could meditate on it at your leisure, when the stakes weren't so extreme and immediate. At the

moment, though, panic will only feed into what seems like the tragic and unavoidable fate into which you have stumbled-- the classic self-fulfilling prophecy.

As you may have heard, there is a way out. You have to exert yourself *transversally* to the vertical axis of sinking: paddling with your hands *to the side* will bring the axis of your body first diagonal and then mostly horizontal as you begin to move faster towards the edge than you are sinking. In order to have a chance of accessing this leverage, you have to learn not to push back and fight against the existential threat along its axis, which keeps you locked in a system with it.

Intelligence is transverse. Oblique.

You see people and even nations locked in self-destructive cycles and you want to yell: *Swim to the side! Swim to the side!*

What you do when you figure out how your yelling is part of the cycle will be definitive.

2. How Do You Know When You're Thirsty?

a.

In my experience, you just know when you're thirsty, but it's impossible to explain *how* you know. It doesn't necessarily manifest itself in any particular symptom such as a dry mouth.

Even so, you don't necessarily *know* you're thirsty or even *feel* thirsty. There can be an after-the-factness involved in both cases, as marked by a statement such as *I realized* (that is, after the fact) *that I was thirsty*. If water is readily available, and unless you've been sensitized to the need for hydration, you may just go on your way, drinking every now and then but often without it even occurring to you that you're thirsty.

Thirst is closer to a reflex: we're thirsty, so we drink (or we find ourselves drinking and realize we must have been thirsty). Reflex is usually understood as a linear sequence where some stimulus triggers a response without the intervention of consciousness. But the addition of consciousness doesn't categorically change the complexity of the stimulus-response loop.

Stimulus-response is not a linear causal sequence because the system *selected* stimuli according to its own sensitivities in the first place (and thus is insensate to other events that might be stimuli but aren't, such as sounds or light outside a narrow frequency range)-- or to put it in more accurately nonlinear form, the stimuli and the system were co-built around each other. Consciousness just adds another node to the loop or network that was complex from the start. To make an aphorism of it: *reflection* sometimes flatters itself by defining *reflex* as an other, lesser thing, without noticing that it is looking in a mirror.

Only recently, scientists have brought the thirst mechanism into focus. Two parts of the forebrain are in direct contact with the blood (unlike the rest of the brain, which is buffered by

the "blood-brain barrier"). They are triggered when the blood gets saltier and they convey a signal to other parts of the brain via a third structure.

This must be why you can't put your finger on how you know you're thirsty: the sensor is deep in the brain, under the radar of consciousness. In this, *interoception* (the sense of what's going on in your body) seems to be unlike the signals from your five senses, as well as being distinct from *proprioception* (the sense of your body's status in space, such as via balance). But the trio of perception/interoception/proprioception is as crude as the proposition that our senses can be numbered on one hand. We can get further by thinking of senses as more like a skyful of complex constellations. Neuroscientists are coming around to realize that senses are less about transmission of signals from the outside and more about model-building. The world *triggers* our senses (again, with the senses having been built around triggers of their own selection). The rest is model-building: we are all, in all of our senses, the blind men and the elephant. If we were wired differently, we could see sounds and hear images-- as some people already do, such as people have learned to use echolocation. This is all the more the case with interoception, where the designation of an inside and outside (of consciousness and the body, reflection and reflex) is even more arbitrary. It is even easier to imagine that, with different wiring, we could see or hear thirst-- maybe, say, as a slight reddish tinge to everything, or a ringing in the ears.

The discovery of the brain structures involved in thirst highlights another question: why does your thirst feel quenched immediately when you've guzzled down a certain amount of liquid, since it will still be a while before the saltiness of your blood has been reduced? There must be another brain mechanism that, when triggered by a certain amount of drinking, inhibits the thirst signal. Scientists have ascertained that this trigger is not activated by little sips, nor by ingesting anything but liquids: even eating water in gel form will not trigger it.

How would the system have evolved in this way? In addition to preventing over-drinking (which can be unhealthy), lead researcher Yuki Oka suggests that "there are good reasons to drink only the minimum amount necessary. When an animal lowers its head to drink, Dr. Oka speculated, it's in quite a vulnerable position. 'If you double the time of ingestion, that should double the risk of being prey,' he said." ("You Get Thirsty and Drink. How Does Your Brain Signal You've Had Enough?" by Veronique Greenwood. NYT Feb 18, 2018).

We walk the line between suffering or even dying from thirst and being preyed upon.

b.

What if you only feel or think that you're thirsty-- or hungry, or horny-- but you're *really not*? Is this even possible? To some extent, the thought or feeling that you're thirsty is the definition of *being thirsty*. The distinction between *feeling and/or thinking* that you're thirsty and *being* thirsty only opens up when the thought or feeling is habitual to the point of being addictive: constant thirst, absent any ongoing physiological cause, is known as *psychogenic polydipsia*. The feeling in question-- whether thirst or hunger or horniness or something else-- may displace other disavowed needs or fears or desires, as when drinking, eating or sex can become the go-to substitute that takes the edge off a deeper craving for love and intimacy.

It's complicated, though, because needs and desires-- appetites, as they used to be called-- can overlap and morph into each other. Sex may take the edge off a disavowed craving for intimacy-- or intensify it. Intimacy could take the edge off the craving for sex. Sex may lead to-- or follow from-- sustained intimacy-- or not. Intimacy and sex can be sought and found in different places and persons, or disjointly with the same person. Drinking could take the edge off a disavowed craving for sex or intimacy-- and so on.

Freud named several specific kinds of movements and arrests of cathexis (psychological attention and investment) and of eros or libido (sexual drive) that make for a shifty set of constellations of needs, desires, and objects. For example: through *sublimation*, sexual drives and desires are translated into "higher" pursuits. Through *transference*, cathexis is transferred from its original objects and relationships into new relationships, as when a patient falls in love with a therapist. Through *fixation*, cathexis or erotic charge is attached-- through *condensation* and *displacement*-- onto very particular objects or scenarios such as fetishes. These cannot neatly be divided into "normal" and "pathological"-- or even into what's adaptive or fulfilling and what's not, especially since what's adaptive when you're a child-- what is usually, in fact, crucial to a survival strategy-- can become dysfunctional for you as an adult. Even Freud, who tended to pathologize erotic fetishes, knew well that there's always something suspect, something opaque, some not-fully-recoverable backstory about all erotic attraction and its particularities. Is it normal to be attracted to partners with particular characteristics such as looking like you or unlike you in specific ways, being smart and funny, having a particular hair color, being like your mom or dad (without you realizing it), having dirty fingernails, belonging to a particular gender? A nice answer is *nope, it's all weird*.

In this complex and moving network of desires and objects, how do you know if any particular desire and object has borrowed its charge from some other desire/object that thereby goes disavowed or unfulfilled? What if you only think you crave intimacy, but you really don't? Is what makes you seethe with anger the cover for a unacknowledgeable part of yourself? (BTW, *yes*.)

Do you really want to eat x, or to buy y, or to travel to z, or to pursue a career in a or b? If you find such thoughts paralyzing you with ambivalence, chances are there is *something else* that you want but can't acknowledge-- or that you can acknowledge but think you have no chance of getting. The paralysis could just be paralysis-- or the beginning of a productive detachment and self-reinvention.

So, on the other hand, what if you're thirsty-- at least, as defined by the salinity of your blood-- but you don't know it or act on it?

This has happened to me! I spent a few days in the desert in southern California and came down with what I thought might be the flu; I could barely get out of bed. My friend told me it sounded like dehydration, and sure enough, after I started guzzling down water, the symptoms vanished. This makes it clear that the thirst trigger is not so simple as the pressing of a buzzer. The buzzer is wired into habits, and if the amount of hydration you need increases, the buzzer might be buzzing continuously in the background without you hearing it unless you are able to re-calibrate.

This is likely to be the case if you've been attacked while you were vulnerable, maybe throughout your childhood, when your head was bent down while you were drinking, or the water-- the love, the intimacy-- turned out to be toxic.

Maybe that's why, even now, you drink in such big gulps, then jump back so anxiously and then get thirsty again so soon.

Maybe that's why we walk around thirsty without knowing it.

c.

Overall, we are more than half water, the brain and heart close to three fourths, just like the earth's surface: watery creatures in a watery world. Like waves, whirlpools or storm systems, we are dynamically sustained (for a time, anyway) by continually orchestrated inflows and outflows.

The old doctrine of humoralism-- whereby the body is composed of four elements that continually need rebalancing by adjustments such as bloodletting-- may have gotten the details wrong, but its "open systems" approach is again being validated as against the modernist "closed system" model-- the fortress body protected against external invaders, germs.

A closed system can be understood in terms of homeostasis or equilibrium, whereas an "open systems" approach recognizes that the base state is not stasis but restless dynamism. This is especially the case for living things-- whose base state is to grow, sustain, change, mutate, evolve, die-- but it is also the case for everything from the universe as a whole down to its tiniest components as they ceaselessly cluster, meta-cluster, constellate, sustain, shatter, decay, re-cluster, and apparently even (at the smallest scale) wink in and out of existence.

We tend to think of thirst as the base metaphor for various other "thirsts" for love or meaning-- that at the bottom of all metaphors of complex psychological states is the body with its raw needs and cravings. But this hierarchy needs to be deconstructed.

I use the word *meaning* somewhat technically to refer to how the relationship between the components of a system (such as between the thirst triggers in the brain and the salinity of the blood) interacts with the relation between the system and its environment and other systems. This is how things and entities have not just percussions but repercussions for each other. This is how the insides and outsides of a system are produced-- always partially and provisionally-- and continually negotiated and renegotiated.

Before there was thirst-- before there was hunger, horniness, the craving for love and intimacy, greed-- there was *meaning*. The primordial thirst is for meaning, which we find everywhere in play. Far-from-equilibrium organisms, we continually fall and fail forward-- and as we do so, it is around this primordial thirst that our intelligence revolves.