

Psychedelics, Nonlinear Thinking, and Reality

People who live in glass houses and want to get out of them should throw stones.

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“The art of asking questions is more valuable than solving problems.”
— **Georg Cantor**, mathematician

Michael Winkelman’s 2017 article titled, “The Mechanisms of Psychedelic Visionary Experiences: Hypotheses from Evolutionary Psychology,” reports:

“Psychedelics reliably elicit experiences that are virtually indistinguishable from mystical experiences induced through prolonged austerities and disciplined contemplative practice.”

This indicates that the changes wrought by psychedelics are not exogenous. More strongly, we can argue that these changes are not chemical, but psychological. That is, the changes are changes of the brain’s mind, not changes of the brain’s chemistry. He goes on to say,

“The similarity of psychedelic and non-psychedelic mystical experiences suggests that the explanation of psychedelic experiences is not through mechanisms unique to psychedelics, but rather through shared mechanisms affected by non-drug procedures.”

This distinction is unclear to many. It's not understood by psychologists, neurologists, and pharmacologists. We're still seeing attempts to recreate the results of the use of psychedelics using chemicals that are modified to have no mind-altering effect.

Consensus opinion in science is that the brain is a biochemical machine. Machines are narrowly understood to operate deterministically; they can have no free will. But this definition must fail because determinism is now seen as relative to scale and causes. At some scales, and as the result of some causes, the world is not deterministic.

We presume nothing intelligent comes from randomness, and there is nothing mechanical in free will. Yet we describe the world statistically at scales from the geological to the astronomical and from the microscopic to the subatomic. In the middle range, on the human scale, we conceive ourselves as authors of intelligent designs.

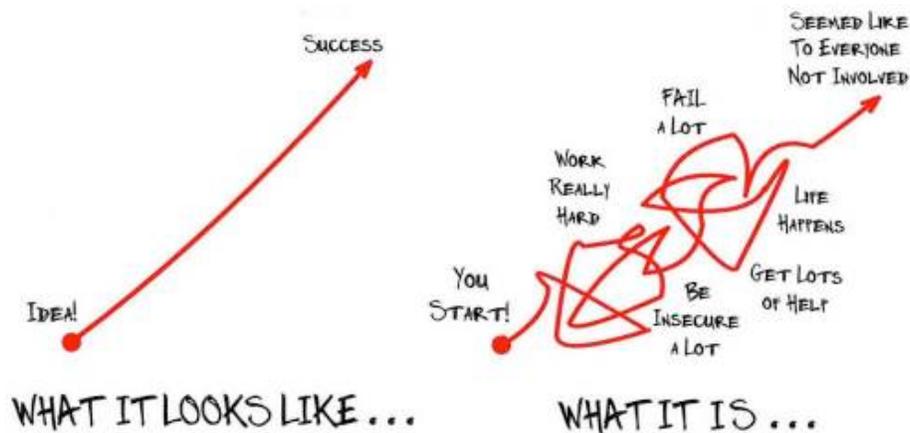
Our notion of free will applies only to us, and only subjectively. This dichotomy of free will versus determinism is something we've created for the purpose of describing ourselves. That is to say, it is an invention that only applies to us.

The generally understood alternatives are determinism, free will, and randomness. These three lie at opposite extremes, and the world seems to alternate between them.

If you view the world as being in one of these three states—mechanical and unchanging, chaotic and decaying, or intelligently evolving—then there is no path between them. Any alternation between the three must be abrupt.

There are plausible intermediates. In a changing system, that is a system through which energy flows, deterministic structures collapse and new structures emerge from the debris. The key is having enough energy to build unlikely structures. Once such unlikely structures are built, they sustain themselves by tapping into the energy.

Intelligence itself, as is required for any design, appears to emerge simply through the occurrence of unlikely structures that feed off the available energy. The appearance of intelligence, which means little more than new, complex, and unlikely structures, appears and disappears as an explanation for how organized constructions seem to come from and then disappear back to nowhere. Intelligence itself appears to be part of the structure-building process.



What Nonlinear Means

Linear means “in a line,” and when applied to structures it means “more of the same.” Linear progressions can change, but only in quantity, not in quality. Linear systems can get larger and smaller, as they rarely stay the same, but the changes add nothing new.

Linear thinking is a bit of a contradiction, since thinking has so many effects and is so unstable as not to be linear. Moving on its own power, healthy thinking never repeats itself. It only repeats itself when constrained to a pattern.

Before the written word, oral history evolved and there was a limit to the amount of information that could be learned and accurately repeated. After the written word, there was no limit. Thoughts of any length could be permanently recorded.

With the ability to record thoughts, humans could now create structures independent of memory, and progress could be redefined, made resilient, or stopped altogether. The written word made it much easier to break out of old patterns, and to create patterns that moved in new directions.

Nonlinear equations are still predictable, so when we talk about nonlinear thinking, we’re referring to something that’s more than mathematical. Nonlinearity thinking is the breakthrough into realms of possibility that starts with the addition of something unpredictable. There are endless realms of complexity, and adding a little novelty may not get you much. It’s the idea of it; the idea of no longer being constrained to the pattern of what’s come before.

Interactions and chaos

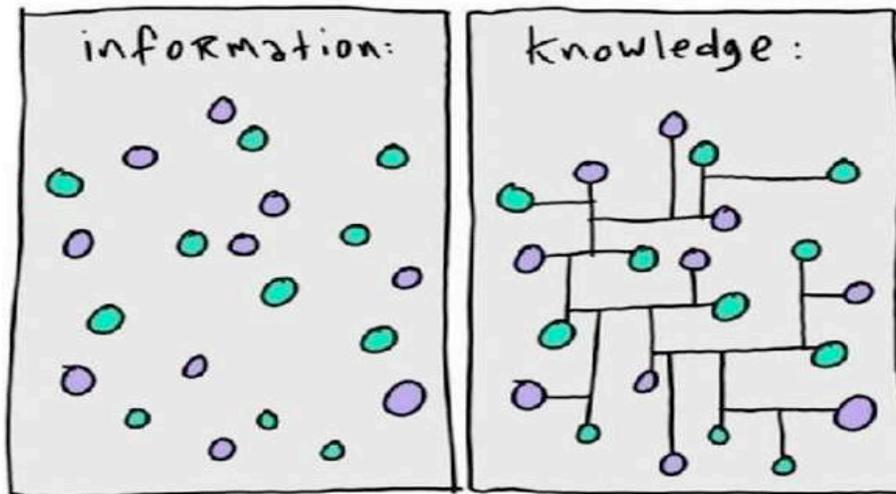
The promise of nonlinear thinking is not in what’s unusual, it lies more in what’s unpredictable. And of this I see two important areas: interaction and chaos. By interaction, I mean ideas, systems, and models that affect each other. Adding together simple ideas does not ensure novelty, but combining complexity and interaction generally gives you something that’s unpredictable. At least it looks unpredictable.

Chaos is the paradigm of unpredictability, and adding a little chaos to any simple pattern is guaranteed to generate something new. Nevertheless, chaos is not too interesting in and of itself, it’s more a question of the kind of novelty you get when you add it.

These abstract ideas give us a foundation, a way to look for opportunities. Interactions and chaos play

big roles in unpredictability because they apply to thinking, culture, and human events. In addition to our penchant for pattern following, which is our linear inclination, we are curious, opportunistic, and interactive. I find it helpful to notice the branching of these three paths: more of the same, combinations of the familiar, and taking new risks. Namely, the linear, interactive, and chaotic paths.

Most of the people who come to me with problems are either encountering the unpredictable, or feel they're losing control. In terms of controlling one's life, how are you managing these three paths forward?



Networks

A network is an inherently nonlinear combination of influences. Networks provide another starting point for nonlinear thinking because they presume little about the structures they contain. A network picture says little about the things in the network or the connections between them.

Life is a network. This doesn't explain much, but it does highlight the interconnected nature of our experience. It also encourages a contrast between our naturally reductive focus on one thing at a time, and the more naturally inclusive aspect of the things we've brought together.

We'd like to think we can get our needs met by working on each need separately. One of our greatest global problems stems from this kind of separatist thinking. Ecologies are prime examples of networks, and our lack of network thinking obscures our ecological roles. More than that, it obscures the imbalances in the ecologies we create for ourselves.

Culture, community, family, and personality are ecologies of a sort. The "epidemics" of mental illness, family decay, community dissent, and global antagonism are reflections of our failure to maintain balance in the ecologies we've created. It's only to be expected that, from this blindsided mindset, we'll be remiss in our custodianship of resources in the natural world.

In my two failed marriages—failed from my point of view—I marvel at how easily my partners abandoned these endeavors. Did they not realize that a family network is inherently unbalanced and requires constant involvement? We see the same question being asked in our tumultuous culture, where the population behaves as if the system should be taking care of them. At the level of international politics, war is a broken network.

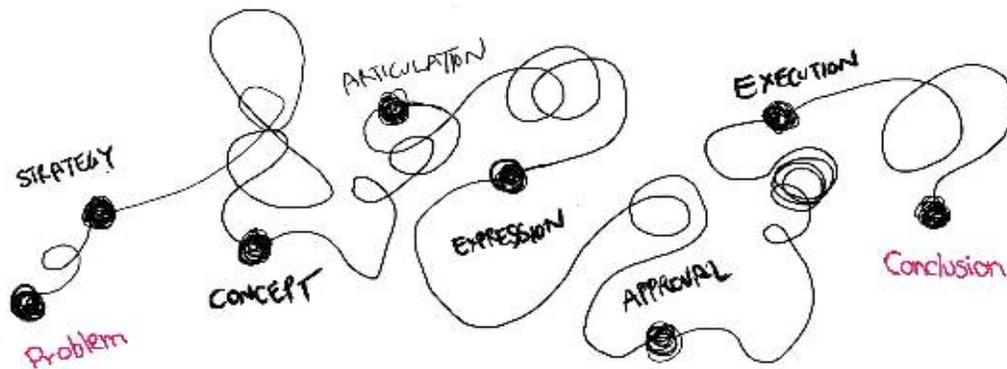
Networks are defined by the interactions of their nodes. Typically, what's happening between any

two nodes spreads to others. Or to put it more directly, repairing balance between any two nodes requires the adjustment of what surrounding them.

In relationships, we talk about the chemistry between people and the physics of the situation. The chemistry is a term we've coined to represent the predestined force between individuals. The frustrating blindness of that term has led others to introduce the idea of "the physics" of personal interactions. The physics refers to the larger stresses, opportunities, and interactions that support the illusion of predestination.

In other words, it is the physics of relationships you manage that creates the chemistry that you don't. It seems that people don't understand their roles in the increasingly sensitive and complex networks of family, community, culture, and politics. Their belligerent behavior is reminiscent of children who are typically frustrated when their small view of the world goes sideways.

Networks are not a third form of nonlinearity, they are a context in which we can combine the other two. A network contains the parts that interact with each other, and is a container for the chaotic forces that operate within it. A network is essentially the space in which things happen, but it's a space defined more by the connections between agents and less by the space that separates them.



Psychedelics

A number of my well-organized friends are repelled by psychedelics. I recognize their aversion to be a dislike of disorder combined with the reputation that psychedelics have as a form of disorganized recreation. My well-organized friends are careful about the kinds of chaos that they entertain. For them, chaos is carefully orchestrated creativity.

I appreciate this, and it resonates with the scientist in me, but I feel this also prevents insight. There are some network structures that are not reached by careful creativity, and these are often the structures that we need to reach the most.

It's plausible to think of an emotionally distressed person as someone who is having trouble making things work. These are people who are carefully orchestrating changes to the networks of their thinking, but are not finding the solutions that they need. They may be too attached, too angry, too afraid, or too insecure to let go of the networks that they have built in order to reach other ways of thinking.

I've been stressed out myself lately, frustrated by a lack of growth in my personal relationships and limited professional opportunities. I have a flagging self-confidence that I'm on a better path than before. It seemed that this might be a good time to take a psychedelic.

Not surprisingly, as a highly structured person with highly structured friends, none of my friends showed much interest in joining me, so I resolved to go alone. I do have this independent streak, and I tend to go alone in most of my adventures, so this was nothing new.

The first rule of doing things by yourself is to be careful, and the first thing in being careful with psychedelics is to get the dosage right. I was amused when I noticed I was measuring things in ounces when I should have been measuring them in grams, setting myself up for an overdose by a factor of 32.

The good thing about being careful and working by yourself is that you both get the benefit of making mistakes and catching yourself before suffering the consequences. I will now better remember that grams are the proper measure.

Shaking the network

It continues to amaze me that therapists can think that they can assist clients in the use of psychedelics without having to explore the experience themselves. This is stupid, but it's a stupidity that's legally enforced because as long as psychedelics are seen as medicines, their use by people who are not sick is disapproved. That's the root of the problem for psychotherapy: psychedelics are not medicines, they are psychedelics: substances that expand the psyche.

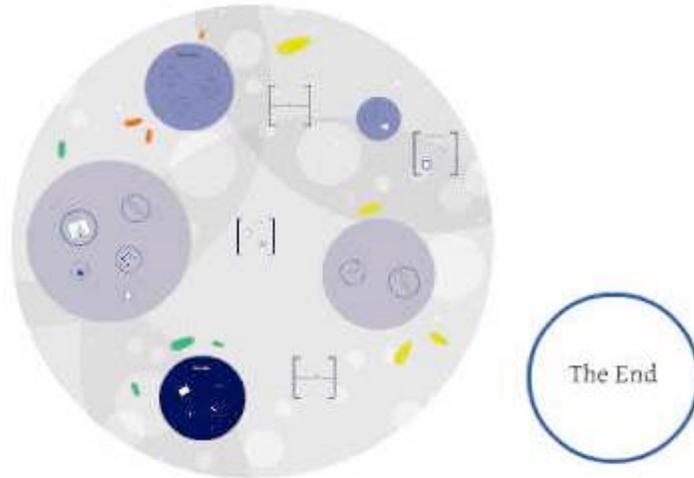
The salutary effect of psychedelics is psychological, not chemical. Their action requires cognitive engagement whose benefits can be enhanced by support, guidance, and encouragement. If a therapist thinks that they can play a useful role while being unfamiliar with the experience, then they don't belong in therapy, they belong in pharmacy.

One of the things a psychedelic does is shake the network connections. In the extreme, they can rupture the network, allowing separated components to rearrange themselves. We call this becoming dissociated, which means losing touch with normal reality. This can be a good thing, or an unproductive thing, but, by its temporary nature, it's not a damaging thing.

The exception is for people who are dangerously unstable to begin with. For them, a broken network may not repair because they were not on solid ground to begin with. That's why, as a general rule, the psychedelic experience can be dangerous for psychotics, schizophrenics, epileptics, and others who have a serious vulnerability.

Mine was not a pleasant experience, but I believe I will profit from it. I've had many psychedelic experiences, many non-chemical psychedelic experiences, and many of these have been alone. Still, it's been many years, times have changed, and my Covid-19 experience has changed my health. So I was careful.

The upshot is that I achieved greater resolve, and this is fortifying. The psychedelic experience released pent-up sorrows and frustrations, but it also reconnected me with a sense of confidence and discernment. The experience has given me greater focus and, in a sense, made me less tolerant of my own hesitation. My situation has not changed, but my self-confidence has grown. I feel that certain sources of wasted energy have been plugged.



The use of talking

Another aspect of the psychedelic experience that inexperienced therapists do not understand is how the experience resolves. The experience does not end when the chemical wears off, any more than a rocket's trajectory ends when the propellant is exhausted. It is a mistake to think that one immediately comes to ground and starts integrating.

I had many unusual ideas during my psychedelic experience, fewer than normal for an altered reality, but more than I would have in a normal state. Writing this review is part of the experience, but I also went back and reread Roger Penrose's 1989 book "The Emperor's New Mind."

In this book, he compares his work in mathematical physics with speculations on the mind. I was looking for a particular quote that I'd long since lost, and which I finally found on page 424 where he says:

"Almost all my mathematical thinking is done visually and in terms of non-verbal concepts, although the thoughts are quite often accompanied by inane and almost useless verbal commentary, such as 'that thing goes with that thing and that thing goes with that thing'."

Why are we so hung up on words? Visual artists give words little importance. Doctors don't much care what you tell them. Musicians can barely speak intelligently. And here's a mathematician saying the words do not make the ideas happen. Yet therapists, counselors, coaches, psychologists, and others in the industry continue to obsess over dialog.

Sure, words are great as any writer will attest, but they are not everything. In particular, they do not start one's thinking, but tend to be the end of it. I think psychology's focus on words reflects the business of endorsing "the party line," which requires that something be written down. Getting people to say the right things is the same symptom-focus that garners allopathic medicine disrespect.

It's not about words, it's about experience. You can't teach life in a lecture, and you can't empower a transformative experience by talking about it. This is the same reason that talking doesn't resolve conflict. Talking might help us better see things in perspective, but it is not the creative experience.

To my friends who hold the psychedelic experience as too disruptive to their well-order worlds, I say the same thing that I say to the therapists who think the psychedelic experience has nothing to add to

their well-ordered theories: you're afraid of throwing stones because you live in glass houses. Those houses may be providing for you today, but they are insufficient for tomorrow.

References

Penrose, R. (1989). *The Emperor's New Mind; Concerning Computers, Minds, and the Laws of Physics*. Penguin Books. Retrieved from:
<https://archive.org/details/emperorsnewmind00roge/page/n3/mode/2up>

Winkelman, M. (2017, Sep 28). The Mechanisms of Psychedelic Visionary Experiences: Hypotheses from Evolutionary Psychology, *Frontiers of Neuroscience*, 11, article 539.
<https://doi.org/10.3389/fnins.2017.00539>