

The fragility of addiction

I have always, after speaking to critical scholars about it, eventually strengthened my disintegrability idea to the point where it becomes clearly false, an over-simplification. This means I can be on the losing side of an argument.

It can be helpful, if you care about something, and believe in it, to propound an over-simplified version, and when it's contradicted, to admit defeat.

The recent work in Annals of Mathematics, that Nash blowups don't desingularize, relates to my always wanting to work *modulo* Nash blowups, to say, if these reparametrizations are inessential, can every singular manifold be parametrized by an actual manifold? The answer being 'no' means that not everything even if we use singular manifold models, can be taken to be 'infinitesimally linear'. Biology modelled this way in this easy sense can't be understood by thinking that wishes or preferences are infinitesimal possible changes.

A notion of reward in AI, a notion of utility in economic theory, a notion of profitability in business, a 'quality of life' indicator in medicine, already isn't always assumed. There are generalizations in AI, economics, business, medicine where the belief that a vector field of intentionality should be a gradient of a single function isn't assumed. In nearly every subject (von Neumann & Morgenstern etc in decision theory etc) this was already established not to have made sense. It makes sense to pretend I'd been hoping for such an explanation, and listen to people come up with their explanations why that was wrong.

If we look at evolution at drastically different timescales, we also can ask things like why do vestigial traits like some animal tails exist, even if there is no benefit in 1000 generations? An answer would say: structures containing nerves and complicated joints related to the whole body might in such short times actually reverse, they might go forward and backward, there might be flexibility in the number of vertebrae that are part of the tail versus part of the spine. And with the vestigial tail not disappearing, musculature alone can increase the number of spinal vertebrae.

The *general* notion of which vestigial traits are worth preserving is a deep question related to pre-animal evolution.

For features at different timescales, and within each timescale in different contexts and niches, to belong to the meaningfulness of nature could be understood as integrability more general than saying a vector-field of intentions is a gradient of a happiness function, or, if we do away with an assumption of a Riemann metric, saying that a differential one-form is the derivative of a function. Or even saying that tangent bundle distribution has an underlying foliation. I can state a dis-integrability idea simply: when choices exist not preceded during the significant time of evolution, there is no longer a reason for things like infinitesimal concepts of preference in an individual mind, or in a collective community decision, to combine meaningfully as changes propagate through timescales, through drifts and changes of context.

A simple example would be, improving an animal by creating a gmo without the unnecessary vestigial tail. We wouldn't see the mistake til the next ice-age.

Now I'll mention some personal experiences, related to the way information came to me in products and packaging. I remember as a child, the product "Grape Nuts." I knew it had neither grapes nor nuts, nor even the seeds of grapes, but it consisted of small cylindrical hard pebbles that released a flavor when chewed. If I were feeling tired or unhealthy, a bowl of grape nuts with milk seemed to help my health ...until... until Pavlos, arriving from Britain, tasted them and said "Yuck! Overcooked croutons!"

I *had* been influenced by the name. I have *had* those products made of overcooked croutons, they always make me feel a bit sick afterwards. And I've *had* grape nuts, always feeling so healthy when each huge bite of food would seem to settle so nicely in my stomach at the bottom of its path. And it was surprising to learn that the *only* difference between the sick awful feeling, and the nice healthy feeling, was that I'd been influenced by the away over-cooked croutons had been labelled as 'grape nuts.'

Another example was the way a steak submarine was made at a then famous diner, with steaks carved from crispy roasts at a carvery table, the slices served onto submarine rolls with lettuce, tomato, Hellmann's mayonaise, and finally when bitten, washed and pushed down with a 1 or 2 liter bottle of cold Coka Cola.

The thing is, the Coka Cola was a necessary, almost the main needed ingredient. Yet it's based on just an artificial flavor.

In both examples, a feeling of crucial sustenance, of completion, of eating well, was created by something really arbitrary and inessential: the printed name 'Grape Nuts' in one case, the artificial flavor of Coka Cola in the other.

It is true, in the over-simplified example of vector-fields in the Euclid plane, that failing to be a gradient allows having limit cycles, which we can think of as addictive cycles. If we think about singular manifolds that are never equivalent to smooth ones by Nash transforms, or if we think about tangent bundle distributions that do not come from any coherent foliation, we can get ideas of other types of failure of meaning that are more general than addictive cycles.

An example might be me switching from 'Grape Nuts' to 'Froot Loops' not fully taking on board emotionally that 'Froot' is not the same word as 'Fruit.' Then there is a limit cycle of Grape Nuts addiction and a limit cycle of Froot Loops addiction.

The experiences that make food enjoyable come, in earlier evolutionary times, from community understandings and relations. These would be related to rituals even perhaps in some ways generalizing modern medicine.

Note that a youtube influencer or even a doctor may not really be able to provide anything like the competent context that would have created an intricate balance in the minds of children in communities in various niches, with just the natural rate of mobility and intermixing of cultures and niches.

A doctor can do Karl Popper style research, yet this involves very concentrated experimentation on a limited few hypotheses, in a short time of a few years. For example, thousands of years of people using willow tree bark is what led to Aspirin, not random testing of chemical mixtures.

My overall point has been that decisions about future plans for society or the environment should understand ways that thinking is limited if choices are included unprecedented during the significant part of evolutionary time.

But this article has a little practical advice.

If you actually know that you're addicted to something, the thing to understand is, if the addiction isn't to something that actually does sustain you – like water, say – where we'd never call it an addiction – then the statistical likelihood is a *certainty* that the coherence of integrability fails. But that your mind assumes it does not fail.

What this means is, you will *believe* that small variations in your thinking about the substance will not change the apparently hugely important thing that it does.

But, the probability that the belief is true, is zero.

What that means is, *you can be expected to be unaware* of the total instability of the situation. And you can be expected to be *totally surprised* to learn that very very small variations of how you think about the addictive substance, can make it totally totally non-addictive. The way grape nuts are totally non-addictive for me once Pavlos called them burnt croutons.

An addictive substance is going to have caused some type of illusion – and the point is, that illusion even while knowing that it's an illusion, is going to seem persistent and unbreakable. But in fact, the truth is that almost *any* thought about the properties of the addictive substance is able to and likely to totally change how you feel about the possibility or wish of having it.