Twitter Thread by Carlos E. Perez



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It's a very different perspective when we realize that our bodies consist of an entire ecology of bacteria and viruses that are also passed to our ancestors. Mammals rear their young and as a consequence transfer the microbiome and virome to their offspring.

> What is the nature of our (evolved) relationship with viruses? We are literally flooded by them. Welcome to the human virome, with harmful but also beneficial members. Great paper in @sciam "The Viruses Inside You" https://t.co/aWszsNq61d pic.twitter.com/eFsoxV4M9K
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> — Ricard Sol\xe9 (@ricard_sole) December 12, 2020

What does it mean to treat our individuality as ecologies? We are all ecologies existing in other ecologies. Nature is constantly performing a balancing act across multiple scales of existence.

There are bacteria and viruses that are unique to your ancestry as that of your own DNA. They have lived in symbiosis with your ancestor and will do so for your descendants.

It is an empirical fact that the microbiome in our stomach can influence not only our own moods but also our metabolism and thus our weight and health.

It is also intriguing to know that brains evolved out of stomachs and that our stomachs contain hundreds of millions of neurons. Humans can literally think with their gut.

But when we think with our gut or if our gut is influenced by the microbiome and virome, then we can't really claim that we act completely independently of the ecology we carry.

When we claim that the mind is inextricably connected to the body, do we also mean that it is also connected to the microbiome and the virome. That is organisms that have evolved independently of our DNA?

When we speak of the epigenome that expresses traits based on its environment, are we not also talking about the environment that also includes the microbiome and virome?

This also places in question the tired debate of nature vs nurture. Can we truly create a crisp boundary between the two ideas. Is there really such a thing as a core nature now that we realize that it's more than our DNA that generates who we are?

We are the holistic sum of a milieu of processes, processes that our epigenome is in constant interaction with. These processes include our local ecology and the much wider culture that we live in. This happens at a multitude of scales and thus under an unimaginable complexity.

The discovery of quantum mechanics revealed the fuzziness of the most elementary of things. It also revealed the inescapable subjectivity of reality. The discovery of the complexity of biology also has revealed both but at the scale of our individuality.

We are walking ecologies analogous to the fuzziness and subjectivity intrinsic in every atom that we consist of. It is irreducible complexity and subjectivity all the way down.

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