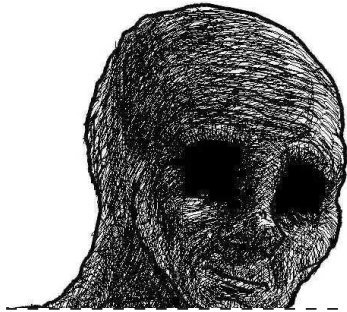


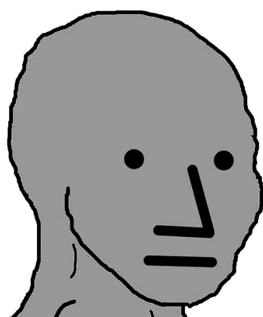
BROKEN
METAPHORS
MEMES
VIRALITY



MORRY KOLMAN

BROKEN METAPHORS: MEMES AND VIRALITY

Visible light has a wavelength of 400-700 nanometers. The largest viruses rarely reach a size above 450 nanometers. Most viruses then, being smaller than the wavelength of light, are clear.



This concept was best illustrated by Luke Jerram, a colorblind artist who, fed up with colorful depictions of viruses in popular science materials, sought to show people the reality of what they looked like. The result was Glass Microbiology, a series of sculptures that brought viruses and other deadly microbes to human scale in their true palette; transparency. As intricate presentations of deadly diseases, Jerram's creations straddle the line between immediacy and abstraction, power and fragility. The medium is almost ironic. Imagine telling a scientist squinting down a microscope that you could give them a better look at Smallpox if only they would let you melt down their lenses. A better look, however, is exactly what Jerram gives. The technical precision is staggering. Each sculpture takes his team months in terms of research, collaboration, and assembly. The viruses must be rigorously modeled from the latest papers, delicately constructed from the inside out to fully depict their structure, and sometimes even updated to keep up with the latest developments in microbiology; his HIV sculpture is on its third iteration.

In his essay "What Metaphors Mean", philosopher Donald Davidson remarked that "all similes are true and most metaphors are false". This distinction is the rub of Glass Microbiology. As faithful recreations, there are many ways that these sculptures are like viruses. Formally, it can be argued that they have no difference aside from scale. Jerram has taken great lengths to make sure the sculptures exactly mirror their subjects. Without metabolic processes of their own, you could go as far as to say viruses are just inanimate sculptures of a different hand. In fact, these sculptures are more like viruses than pretty much anything else. They are shaped like viruses; they are translucent like viruses; and they are inert like viruses. As physical similes, "this sculpture is like the COVID virus", their comparison is true. The metaphorical formulation however, "this sculpture is the COVID virus", is clearly false.

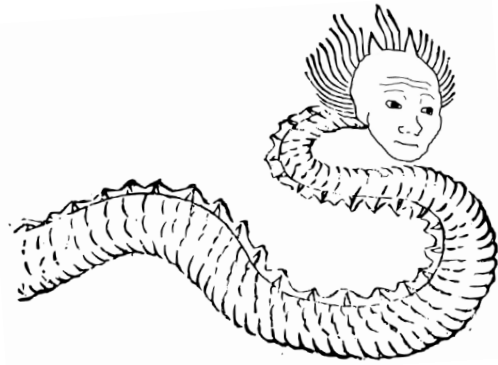
In itself, that falsity is not particularly unique. It is what we would expect of any such brazen comparison. Take a second, however, to list off the different ways that it is false. Think about the differences in size, in danger, in science, in life force. What you end up with is a list of qualities that make viruses unique. Each of those qualities is in all likelihood individually shared by something else, the same way glass and sub-400 nm particles are both see-through, but the completeness of the list is what makes a virus. Now that you have that list, think about how many of those qualities you associate with the term "going viral".

It would seem that viruses have little to do with virality, or perhaps that "virality" makes little use of what viruses have to offer. If the quality of virality is merely a fast and repetitive ability to spread and mutate through a population, then why viruses? Bacteria and parasites do the same. Laughter, yawning, and panic are similar in the abstract as well. Sure, "going bacterial" doesn't have the same ring to it, but the virus is a very specific metaphor for a very vague phenomenon. What does a virus have that these other options do not? What does virality look like without a virus?

The answer to this question is simple; it looks like medieval Italy. An era when - according to historian Rosamaria Alibrandi - a theory of contagious disease had been around for centuries, yet the "notion of infection was almost non-existent". In the early 1500s, disease after disease was wrecking the populace. Without infection - the idea that a disease was caused by a specific transmittable agent - contagion was a phenomenon without explanation; devastating epidemics swept the countryside, an invisible force rippled death out in waves, people were getting sick, then more, and then even more. The microscope would not be invented for another several decades, so instead of looking down a lens for an explanation, Italians turned to finding their answers in the sky. This was a time of deep astrological significance, and stars were thought to emanate an ethereal liquid that flowed off their bodies, affecting the lives of people below. It was determined that their secretions, called *influentia* (from the latin "fluere", the same root as "fluid" and "flux") were behind these tragedies. Appropriately, the diseases took on the name of their cause, and within the first few decades epidemics started to be referred to as *influenzas*. This is how we get the term "the Flu".



What is fascinating about the story of influenza is that as unscientific as its reasoning is, it's a reasoning. It takes the observation of contagion and fills in the gaps with imagery and metaphor; a phenomenon spreading through a population, undulating outward as a liquid yet powerful enough to get stronger with each instance instead of wearing itself thin, a danger whose threat is compounded by its invisibility. It's a theory of virality, without the virus.



Ironically enough, the virus has always been the tricky bit. While a theory of infectious "seeds" was put forth later that century, it would be another hundred years before microbes were even observed, another 150 after that for bacteriology to develop as a rigorous science, and then almost a final century more for viruses to even be theorized. Before they could be conceived of, the explanatory powers of every other visible microorganism had to be exhausted. That turning point came in the late 1800s, when Russian biologist Dmitry Ivanofsky passed an infectious extract of tobacco plants through a filter meant to remove all bacteria. The filter worked, the bacteria were gone, but the fluid was still infectious. Enter the virus.

But not really. Scientists had merely isolated something contagious and smaller than bacteria, and isolation is not comprehension. Still, though, it needed a name. After replicating Ivanofsky's experiments in 1898, Dutch microbiologist Martinus Beijerinck coined the resulting substance a "virus", borrowing the Latin word for "poisonous liquid" as it was already in generic use for "agent of contagion". He defined them as "contagium vivum fluidum", or contagious living liquids, and was about 40% right. Viruses are indeed contagious, but they are not liquids, and whether or not they are living is a matter of opinion. Almost 400 years had passed since the theory of influenza, but viruses were still in liquid, and we still couldn't see them.

The history of the virus is a history of indeterminacy. The fact that the meanings of "virality" as the term is popularly employed today are similarly ambiguous is as much a factor of its progression as a hard scientific object as the slipperiness of social phenomena. The "Tobacco Mosaic Virus" (TMV) as it's now known, is about 300 nanometers in diameter. Being smaller than the wavelength of light, it wouldn't be observed until the invention of the electron microscope in the 1930s, and its structure would remain unknown throughout the 1950s. No stranger to grand theories with shaky objects, however, this did not stop viruses from becoming the ur-contagion, with further ideas built on top of them destined to exist on a veritable jenga tower of metaphor.

No term has been affected more by this than memes, which were inaugurated in direct comparison to viruses in Richard Dawkins' 1976 book "The Selfish Gene". "When you plant a fertile meme in my mind", Dawkins wrote, "you literally parasitize my brain, turning it into a vehicle for the meme's propagation in just the way that a virus may parasitize the genetic mechanism of a host cell". Memes, the argument goes, are the cultural counterpart to genes. Genetics can explain the past several million years of human evolution, but it cannot account for the cultural explosion and development of the past 10,000. Memes fill this gap. They are like genes in that they compete with each other to reproduce and the fittest survive, but they are unlike genes in that they are immaterial and not something we are born with. Seeking an infectious, replicative, slippery analogue for his concept, Dawkins found viruses to fit quite cleanly.



From then on, in both reference and spirit, memes have continued the viral tradition of missed targets. The cause of the problem is twofold. Mainly, as Tony D. Sampson, author of *Virality* put it, despite meme theorists' best efforts, "[for memes] the unit of imitation, unlike the gene, has yet to be located". In lieu of their own form, the most stable point of reference for memes remains the viruses they were initially analogized to. Compounding that, however, is that even though nobody can identify a meme, everybody pretty much agrees it's not what he was talking about. Every era of meme studies disavows its predecessors, leading scholars like Geert Lovink and Marc Tuters to lament the "humiliating ritual of distancing" that current treatises on memes often perform to signal to readers that they have moved on from their predecessors. In the 50-odd years since its inception, memetics has changed hands from evolutionary biology (1970s-1980s), to advertising science (1990s), to now whatever disciplines take up the question of internet culture (2000s-present).

Given that history, memes are a large umbrella, holding everything from dogecoin to the idea of hell. Each iteration brings a new redefinition of the term and new methods for studying them, but the terminology of virality still persists as glue. Memes, like viruses, are simultaneously unalive, completely inanimate, and totally out of control. Unlike viruses however, people are the ones that create memes. As we've seen, mismatched metaphors are a recipe for tension, and this is no exception. Being a concept stuck between viral unpredictability and human invention, how, exactly, do memes do things? The question is almost political. It is clear that memes affect our lives, but are they tools for us to use or actors that we must deal with? Alternatively stated; who is the vine, and why am I doing something for them?

Where you fall in the debate is largely a factor of how comfortable they are with the viral comparison. Henry Jenkins, on one side, argues that "'the metaphor of 'infection' reduces consumers to the involuntary 'hosts' of media viruses" and argues for a model where "spreadability relies on the one true intelligent agent – the human mind – to cut through the clutter of a hyper-mediated culture". BuzzFeed, on the other hand, seems to think it's a bit messier, regularly switching the agency around memes from trend-centered headlines like "Little Miss Memes Are Taking Over The Internet" to more humanist ones like "Rihanna's New Meme Of Herself Is Hilarious But Also Real AF". Both sides have important points. Jenkins is right in that there is a lot at stake here. As silly as memes may be, saying that sharable little pieces of content that go around Twitter are not wholly at the whim of the human mind is to admit that those same images are, in some way, wild and dangerous. BuzzFeed, however, shows that that attitude may indeed be the case.

I brought up Jerram's sculpture series to emphasize the abstraction inherent in virology. The problem is not that viruses are beyond the scope of our eye's magnification, the problem is that many of them physically do not interact with information we can observe. Scholars that fret over giving memes agency worry about reducing the role of human choice that drives their creation and spread, especially to an object we cannot observe. I would argue though that this reduction goes the other way. No stranger to meme studies' problem of isolating its unit, virology stumbled blindly for decades towards its object of inquiry before it had the requisite science to isolate it. First viruses were small bacteria, then "living contagious fluids", then no longer fluids, then no longer living either. Despite this, viruses are still very much alive. Scientists have found ancient viral fragments in our DNA, our gut microbiome's connection to our affective states is well documented, and COVID is wreaking havoc on the world. Our own lives clearly unfold in concert with viral action, and for disciplines as diverse as anthropology, virology, and philosophy, that is enough to constitute at least some form of agency.



A meme is not an object, it's a label. It gets slapped onto media whose dynamics we don't fully understand but actively participate in such as a diseased Italian countryside, and the weird agency they seem to have is an aftershock of our own self-sovereignty slowly siphoning into the realm of media. Understanding memes and viruses is not about their circulation, it's about their slippery status as ungraspable objects that exert power over our lives. This is not to say that understanding virality as a dynamic of spread is not important. It is just to offer, a la Jerram, that there are more interesting things to think about. 🍷