# WHAT IS THE 5% UNIVERSE?

***To understand what the 5% universe is, we'll have to take a short journey into the cosmos—into dark matter and dark energy.***

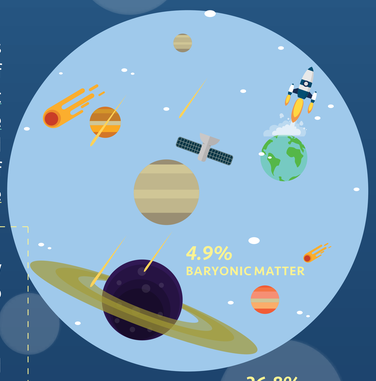
Dark matter and dark energy are unknown substances and forces that we cannot see or observe using any of the instruments we currently have. We only know it exists because of its effects on celestial bodies and the universe we can see. Together these unknowable and unobservable substances and forces make up 95% of the universe. This means we exist in a cosmos where we are capable of perceiving only 5% of it!

In other words, **built into our consciousness, our way of processing information, is an inherent inability to see and intra-act with 95% of all that is!**

If we are incapable of perceiving 95% of all that is, could it be possible, then, that we are also only perceiving 5% of ourselves, each other, and the world we live in?

If we think about human intra-actions, most people aren't having relationships with each other. Rather, it's our beliefs that are having relationships with one another.

So the question is, **who are we beyond our beliefs?** Who are we beyond our 5% understanding of ourselves?




There is some unknown mass creating enough gravitational force to hold a galaxy together and maintain its shape. Scientists have called this unknown matter, dark matter. There is also an unknown energy force accelerating the expansion of the universe. This unknown energy force is similarly deemed dark energy.

My belief of myself and my belief of you are having a relationship with your belief of yourself and your belief of me. The next time you intra-act with someone, pay attention to who you are intra-acting with. Are you intra-acting with the person, or their beliefs, or your beliefs about them?

Ordinary matter, baryonic matter, the stuff you and I are made of, the stuff everything on this planet is made of, and the stuff this planet is made of and the other 100's of billions of planets and stars and galaxies make up only 4.9% of the known universe. Dark matter is 26.8% of the universe. And the remaining 68.3% of the universe is dark energy.

# WHAT IS INCLUDED IN & WHAT IS EXCLUDED FROM OUR 5% REALITY?

According to cognitive scientist Donald Hoffman, our brains perceive a fraction of reality to keep us alive. Hoffman states, "Evolution isn't about truth, it's about making kids." Hoffman has proven through numerous simulations that if we were to see ALL of reality, we would expend too much energy, lose sight of this Prime Directive, and die. Hoffman's argument of what is included and excluded in our 5% reality is decidedly based on our belief that we are driven by procreation.

Physicist and feminist scholar Karen Barad developed a theory of agential realism, which describes how reality is actually shaped. According to Barad, the deeply connected way that everything is entangled with everything else means that any act of observation makes a "cut" between what is included and excluded from what is being considered. This extends to our belief of ourselves as individuals.

Intra-action, a concept within agential realism, unsettles the belief that there are individually constitutive entities or agents. It is generally assumed that *inter*actions happen between individuals who preexist prior to the exchanges. Intra-action queers this assumed belief of causality by asserting that individuals materialize within phenomenon. Essentially, there are no intrinsic properties that define things (including us), which precede our intra-action with particular apparatuses. This view of knowledge provides a framework for thinking about how culture and habits of thought can make some things visible and other things easier to ignore or to never see.

Agential realism is not just an epistemological theory, but an ontological one, as it emphasizes "not merely that knowledge practices have material consequences but that *practices of knowing are specific material engagements that participate in (re)configuring the world*" (Barad, *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning*, 91)

Nothing is inherently separate from anything else, but separations are temporarily enacted so one can examine something long enough to gain knowledge about it.

Intra-action can be entangled with intersectionality, a term coined by civil rights advocate and critical race theorist Kimberlé Williams Crenshaw. Intersectionality is the recognition that social identities, related systems of oppression, domination, or discrimination, and multiple group identities intersect to create a whole that is different from the component identities. These aspects of identity are not "unitary, mutually exclusive entities, but rather ... reciprocally constructing phenomena." Intersectionality proposes that we consider each element or trait of a person as inextricably linked with all of the other elements in order to fully understand one's identity.

The apparatus enacts cuts that create differences based on the measurements determined by the apparatus and then renders us as individuals with defined properties based on those particular measurements within that phenomenon only.

To understand the usefulness of a simplified reality, Hoffman employs the analogy of a computer desktop interface. "When you click a square, blue icon to open a document, the file itself is not a blue, square thing." The icon is a stand-in for a complex application, an entire universe, hidden until we click on the icon. Navigating the desktop and using the computer would be significantly more difficult if we were to see the entire reality of the computer.
Similarly, the physical objects that we see in our world, including ourselves, are stand-ins, icons that obscure a much more complicated reality because it's more useful to conceal 95% of it. But useful for what and for whom, exactly?

The belief that we are driven by procreation is, in fact, a belief as challenged by queer life, which offers an alternative to the 5% notion that procreation is our Prime Directive. Therefore, what is included and excluded from what is being observed and considered may be different for someone who lives a queer life than someone who lives a heteronormative life.

Intra-action, which can be loosely described as "the mangling of people and things and other stuff's ability to act," questions the making of differences, of "individuals," rather than assuming their independence or prior existence.

# WHAT IS THE APPARATUS?

The apparatus, which enacts cuts that define who we are and constructs the 5% universe we live in, is our habits of thought, our beliefs. Our beliefs, which are inextricably rooted in binaries, hierarchies, and capital (to such an extent that even our imagination cannot envision beyond binaries, hierarchies, and even capital) determine what is visible and invisible to us, such as the "invisibility" of 95% of the universe or multiverse.

Similar to how individuals do not preexist as such but rather materialize in intra-action, Barad acknowledges the inseparability of the apparatus and the objects (subjects) it observes. In other words, the apparatus and subject/objects mutually create and define each other. We are both the apparatus and the subject/objects it creates: we, as bodies that materialize as individuals with defined properties and differences determined by the apparatus (cuts made to adhere to and perpetuate binaries, hierarchies, and capital)—bodies that materialize as self and other, which we cannot know beyond beliefs/the apparatus—that then simultaneously become the apparatus. This apparatus as a body of beliefs continues to enact cuts rooted in binaries, hierarchies, and capital and determines what is included in and what is excluded from our realities.

It seems we find ourselves locked in a cycle that traps us within a 5% universe. In a sense, our 5% reality is similar to the science fiction film, *The Matrix*, but instead of machines rendering our computer simulated reality while our human bodies lie dormant, co-opted as energy sources to sustain the machines, we are the ones rendering our own simulated reality. We are entangled with the apparatus in such a way that to expand beyond the 5% requires death, a death of beliefs and a death of self, a complete collapse of the systems that form our reality into the impossibility of observation.

Philosopher, historian of ideas, and social theorist Michel Foucault used the term dispositif to refer to the apparatus. "What I'm trying to pick out with this term is, firstly, a thoroughly heterogeneous ensemble consisting of discourses, institutions, architectural forms, regulatory decisions, laws, administrative measures, scientific statements, philosophical, moral and philanthropic propositions–in short, the said as much as the unsaid. Such are the elements of the apparatus. The apparatus itself is the system of relations that can be established between these elements" (Foucault, *Power/Knowledge: Selected Interviews and Other Writings*, 1972-1977, 194). Foucault is talking about a "microphysics of power" or biopower, how the multitude of seen and unseen applications and materializations of power regulate all aspects of human life.

The apparatus not only observes and implements but helps produce and is part of the body it images. Barad uses the example of the transducer in a sonogram machine. "...the transducer does not allow us to peer innocently at the fetus, nor does it simply offer constraints on what we can see; rather, it helps produce and is 'part of' the body it images" (Barad, "Getting Real: Technoscientific Practices and the Materialization of Reality," 101).
The transducer in a sonogram is not a passive instrument that simply observes; it actively participates in the production of an image of a fetus (it is an entangled part of the materialization of the fetus), both in how it transforms auditory input (sound waves) into visual outputs on a screen and how it makes the fetus seem to be more real and existent than it would have been without.