

The Real Size of Things

“And by habit they shortened their thoughts so that they would not wander out into the darkness beyond tomorrow.” Carson McCullers The Heart is a Lonely Hunter

Prologue:

The nature of being human means we have consciousness. That consciousness, being a visual tool, seeing the world around us, then becomes the central creative actor in the dramatic theatre of our lives. This same seeing tool informs and integrates the visible drama of the moment with our memory, however inaccurate, of past experience. First, for the average individual, what our consciousness cannot remember especially well is everything that is not based on the size of our bodies. Beyond a vague intuitional notion of the scientific knowledge and spiritual “magnitude” of our universe, any cosmology in the 21st century based in new knowledge must still have as the primary, however inaccurate, measuring tool of the human body. Second, because the realm of magnitude on a macrocosmic and microcosmic scale are not in a normal way visible, we have little experience or memory of these realms of magnitude. There begins our use of imagination and intuition, both very inaccurate tools.

I wonder if, as life in the 21st century races faster and faster ahead of us, the actual “scale” of size, speed, and distance become irrelevant. I am also curious about the powerlessness we feel as scientific data becomes dominant over spiritual information. I wonder if the need to understand our spiritual “magnitude”, no matter where or how we may intuit it, appears always to fade in relevancy against the force of other information. I am continually

pressed to understand that if we are stretched to mere transparency, veiled as electronic information, not actual physical and spiritual embodiment, we may increasingly find that magnitude feels like living through the experience of others, not as our own magnitude of spiritual and physical being. I wonder at the end of every day if our aversion to cosmological magnitude is so easily and fatuously “fixed” by the seductive tsunami of data, what we really find is that the crux of the problem is our 21st century relationship to mortality, i.e. embodiment, and Time, i.e. increased powerlessness.

If having consciousness of self, we then have as our only measuring tools that of our bodies, then to understand and embrace the magnitude of our 21st human century universe, there is quite a bit of re-scaling needed. Thus, the goal of each installation in the MAGNITUDE project is to retool accurate scientific information and spiritual knowledge to set a new standard for understanding “magnitude”. Creating new, rational, integrated experience of our place in the universe, the intersections of scientific and spiritual knowledge become embodied in a more powerfully accurate and intimately meaningful way.

In using the metaphor of a focused consciousness being a kind of sight, the idea of a size scale can be understood not as a physical tool or thing, but instead as a kind of zoom lens. From there our language to describe magnitude must tend to the poetic because we cannot so easily describe the facts of a “magnitude” as we can create an image. The zoom lens we can use will be both intellectual and spiritual. We are, after all, describing entities that are not actually “infinite” in size, either small or large, but instead, magnitude can be seen as not pertaining to

the boundaries, edges, or mass as we can see size in our ordinary reality. We are powerless to gain the proof and understanding of magnitude by “seeing” that magnitude, but we are not powerless to allow our consciousness to become an emergent property which will gain fresh values and beliefs around the magnitude of the universe and our unique relationship to that new understanding. In fact, according to the suggestions put forth by 1981 Nobel Prize winner in medicine, Roger W. Sperry, conscious behavior is more determined by beliefs and values than by the functions of consciousness found in the physical and chemical exigencies of the right and left hemispheres of the brain, whose functions he discovered, i.e. proved.

The “Cosmic Ouroboros” installation helps give us an idea of where reality based consciousness leaves us and the realm of intuitional MAGNITUDE begins. Unless trained as a scientist, “wandering out into the darkness beyond tomorrow” is not usually a popular journey for most humans.

To understand size and its role in assigning laws of physics to different sizes, we need to try to see where our intuition leaves us actually counterintuitive. With that in mind visualize, if you would, the average adult average normal size. That is the center of our scale, intuitive or real. Now going in the smaller direction, you can see that an ant will be about 1 centimeter long. The height of the average human is around 100 centimeters, (that’s 10 to the power of 2, or 2 0’s after the 1.)

Now on the chart you can see that the Himalayans are 10^5 /cm, or 100,000 cm in height. At 10^2 /cm, we differ from the Himalayans in only 3 magnitudes of 10. In the opposite direction, the average cell in our bodies is approximately 10^{-3} /cm. At 10^2 /cm, we differ in size

-5/cm. In layman's terms, the size of a human differs from the Himalayans much, much, much less than the difference between our size and the size of a single cell. The difference is 1000 cm times difference between us and the Himalayan peaks; and minus 100,000 cm times difference between our bodies and the size of a single cell in our bodies. Thus, about scale, common sense and intuition usually tells us the opposite of what is really true.

The scale of the diameter of the Earth on the chart is 8 orders, ours being 2, that making that difference between us and the Earth's diameter being 6 orders of magnitude, or 1,000,000 cm. Even more radical is the size of an atom, which is 12 orders smaller than we are; that's 1,000,000,000,000 cm of difference.

It is easy to see why humans either inaccurately intuit themselves to be much bigger or much smaller than we actually are. Again, if I am introducing the subatomic scale to your inner world, and then expanding that world to a quantum field that is worldwide, we will need to revision scale. The 3-D installations of the MAGNITUDE Project aim to revitalize and retool this understanding.