

# SUPERWAVE REALITY\*

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Here I present the elegant reality that is the natural universe. All existence is waves – *only* waves. This entirely new understanding of waves – what I call SuperWaves – is the single universality that generates the entire natural universe of motion, of order and of matter, space, and time. SuperWaves is not a theoretical model or mathematical law *about* nature; nor is it a hidden reality *within* nature; it is the simple reality that *is* nature.<sup>1-4</sup>

## 1. Motion is SuperWaves

All motions and all changes are *only* waves. To create complex features in an existence that is comprised only of waves, waves must wave. All changes are changing. Waves do not move in straight lines. Waves move only within waves and contain waves, as an inherent continuum of wave motion in wave motion. This new understanding of waves as SuperWaves is an entirely new understanding of motion. Constant uniform, or linear, motion does not and cannot exist. Waves, which *are* in motion on one scale, are *in* motion, moving up and down on another scale. This is an innate continuum of nested scales within scales, unbroken fractals within fractals.

Linear frequencies, linear amplitudes, and linear interference patterns of superposition do not exist because nature is SuperWaves. Rather, in SuperWaves, smaller waves repeat in non-linear frequencies, climbing up and down the trajectory of the larger wave. In turn, the larger wave is moving with its own progressively changing frequencies and amplitudes within a yet larger wave – ad infinitum. Frequencies and amplitudes can now be recognized as existing as a seamless continuum, generating in all directions within and across scales.

## 2. SuperWaving Motion is Order

The order of nature exists because of the unbroken fractal order of SuperWaves. Towards the peak of the carrier wave, spiraling waves are accelerating and are most concentrated. The peak contains the highest super waving frequencies and amplitudes of inner waves, whose stability is maintained at a maximum by the peak of the carrier wave. The reverse occurs toward the trough of the carrier wave: the frequencies and amplitudes of the inner waves decrease; they spread out and disperse in all directions as change and become relatively unstable, susceptible

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to perturbation. As SuperWaves are the stuff of nature; and as SuperWaves are intrinsically self-similar; we can now understand why nature is fractal in form, at all scales. Nature exhibits only relative degrees of order; absolute chaos does not exist.

The puzzle of action at a distance, or non-locality, is explained by the SuperWave order of nature. A change in the form of a carrier wave will cause changes in the form of inner waves, simultaneously within and across scales. The reverse occurs as well. Changes of inner waves can simultaneously change the form of the carrier wave, depending on the degree of stability of the inner waves. I call this simulcausality.

Science has looked for absolute causality, or determinism, but has failed to find it. Redefining action at a distance as simulcausality explains this failure. The reason is that waves waving are always changing, never being precisely circular or linear; as they are constantly influencing each other, they cause further change. Nature exhibits no invariance or absolute constancy. This explains why all linear measurements are inexact and approximate, and ultimately exhibit non-linear complexity.

Science separates frequencies and amplitudes as linear dimensions, and then superimposes them to explain interference patterns. From the perspective of SuperWaves, interference patterns are explained by the (non-linear) continuum of amplitude and frequency, which is the same phenomenon as action at a distance and causality, which is simulcausality. This unbroken fractal motion of SuperWaves generates the order of nature.

### **3. The Order of Superwaving Motion is Matter, Space, and Time**

The compression of waves in the peaks of SuperWaves exhibit confined stability which manifests as matter, at all scales. At the smallest scale, matter is the confined compressed wave packet, termed a particle. At higher and higher scales of SuperWaves, the compression of clusters creates the stability that is an atom, a molecule, an organism, an ecosystem, Earth, the Solar System, our galaxy, galaxy clusters, to the whole universe itself. At each scale, SuperWaves organize and bring relative coherence to the inner waves, in seamless fractally nested jumps – this is relative order. Conversely, the gaps between particles or object masses that we presently perceive as space are regions of SuperWave dispersion – this is relative disorder. Matter and space are therefore different manifestations of the same SuperWave continuum; this applies to matter and space on all scales.

The forces of nature – the weak and strong forces, electromagnetism, and gravity – are also manifestations of SuperWaves. Gravity and the strong force are the attractor peaks of carrier waves, or matter, with gravity being at a higher scale than the strong force, fractals of each other. The weak force and electromagnetism are also fractals of each other, being the repulsion or dispersal of waves which is space.

The understanding of SuperWaves gives a new understanding of how organization comes about in nature. Matter is described above as the relatively stable compression of waves at the peak of a SuperWave. The process of waves waving within waves, moving toward the peak in continuous scalar jumps, is what science calls the emergence and evolution of organizational order. The process of dispersal

