

# Physics, Mysticism, Postmodern Craze, and the Latest Fashions

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## How Physics Is Reflected in Society and Social Life

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### A Few Words about Physics

Physics today is divided into two fields, a separation which concerns size. The first is classical physics – Newtonian mechanics or Newtonian physics. The foundations of Newtonian physics were laid in 1687. This kind of physics examines matter macroscopically, and has been remarkably successful in explaining macroscopic events and has even attained an iconic status of reliability. What gave it that reliability was that if you knew the causes and variables of an event, you could predict the outcome with certainty. By using the predictive rules of classical Newtonian physics, we can exactly predict the dates of future eclipses of the Sun and the Moon, and know the precise positions of galaxies, stars, planets and satellites.

The situation in quantum physics, or quantum mechanics, is very different, however. This second branch of physics is relatively new, dating from the beginning of the 20<sup>th</sup> century, around two centuries after Newton. New research started because classical physics was unable to explain certain events, and in this way quantum mechanics was born. Quantum physics is to be found at

the very center of basic particle physics; although it is a perfect theory for explaining describing and explaining atoms and molecules correctly, it is seen by many as a rather unclear theory in which probabilities and uncertainties hinder precise descriptions. But without quantum physics, we would be unable to describe the structure and function of DNA, the color of the stars, the stability of atoms, chemical bonds, diodes, LED TVs, superconduction, or lasers.

### Classical Newtonian Physics and its Effects

When we look at the history of science, physics affects our daily lives and understanding of life, whether we notice it or not. Let's take classical Newtonian physics for example. Starting in 1687, this philosophy of physics had a great effect in the background of social life, other branches of science, and even on the economy. For example, an observer was placed outside the events, observing what was happening and in no way interfering with the observed system. This had social and economic repercussions. In the world of work, an attitude arose of making people work like machines, seeing them as living automatons. In social life, individuality came to the fore, and in art it inspired dadaism and cubism. In religion, it gave rise to the perception that 'God is dead', because in a deterministic universe where everything is fixed in advance, there is no need for a transcendental or organizing concept such as God. This same Newtonian

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physics produced, as a result of its close linking of cause and effect, the economic viewpoint on which Karl Marx based his theories of class struggle, Adam Smith's self-regulating liberal economy, Charles Darwin's theory of evolution, and even Hitler's genocidal policies.

It was the source of inspiration for Pavlov's work on conditioned reflexes and the "Pavlov's dog" experiment. Before the experiment the side of the dog's mouth was operated on so that the amount of saliva could be measured easily. Then it was secured in a soundproofed laboratory and once it had been accustomed to the situation the experiment was begun. In the experiment, a bell was sounded so that the dog could hear it, and a few moments later meat was given to the dog. At first, when only the bell was sounded, the dog showed no salivatory function, but when the meat was given to the dog it produced saliva normally. When this was repeated many times, it was observed that when only the bell was sounded and no meat was given, the dog salivated just as if meat had been given to it. This cause and effect, which we know as classical conditioning, is widely accepted as the clearest example of a causal relationship in psychology.

In a universe ruled by Newtonian physics, we believed that we could measure everything, including human intelligence. Thus in 1912, IQ tests were developed and we were persuaded that people could be categorized according to their IQ scores. This gave the concept of a master race and further scientific justification, and the age of genocide began. Supporting Hitler's attempts to create a master race or a pure race were the IQ tests which science had created. For this reason Hitler's approach was not only derived from ideology and politics; it was an unfortunate result of the understanding of science and the philosophy of the time.

Even after 1945, states were divided from each other by clean lines drawn on the map as if with a ruler. Many independent and famous companies came into being. Social events, the economy, supply and demand and almost everything else, was understood in a reductionist way as the sum of its component parts. Then physics did the same with the atom, separating it into its sub-components of protons, neutrons and electrons. In the 400 years or more in which Newtonian physics

held sway, it was accepted that life was wholly observable, measurable and quantifiable.

### **The Effects of Quantum Physics**

With the birth of quantum mechanics at the beginning of the 20th century, science was affected by something that ran counter to all that had gone before, and this was reflected in social life, art, the economy and religious belief. We started to see the universe as an inseparable and indivisible whole. We accepted that when we measured things we were part of the measurement, and that in certain cases it was impossible to measure with certainty. We began to believe that borders between countries should be lifted. Inspired by this, associations were formed between countries. Behind the visible material universe there was another, hidden, system; we believed more and more in the existence of this hidden reality, and it seemed logical to us. We understood better that we had to work not only for ourselves but for others, and that the flap of a butterfly's wing in another part of the world could affect us, and even upset all of our calculations. Now we are living in a network where economic or political upheavals in any country in the world can within ten minutes affect other economies in the world, the stock markets, and even the price of the bread on our tables. We are no longer passive observers of the universe and the world around us: we have started to accept that we are part of it. Thus we have become more environmentally aware and in protecting the environment we have realized that we are living within it. The place of the conditioned reflexes of Pavlov's dog has been taken by Schrödinger's quantum cat, a cat which is not conditioned, and whose actions over an extended period cannot be predicted with any certainty from previous data. This new physics has begun to affect many fields in this way. Of course, the most obvious effects began to show up in mysticism, metaphysics and philosophy. Thanks to new scientific viewpoints like quantum physics and chaos theory, the place of the tangible material universe was gradually taken by first waves, and then by pure *information*.

We have entered a period of thought where subjectivity has replaced objectivity, processes have replaced objects, feelings have replaced logic, thoughts have replaced actions, and simple relationships have replaced simplicity in an incredible complexity. Even



the words we use have changed to conform with this. In the time of classical physics, we talked about “this or that”, now we say “both”, or “both this and that”. Now, instead of a “brain” or “mind” which merely observes and decides objectively, examining the outside world with human thought and asking “what happened there?”, we are asking “what happened to us, here?” The isolated observer, looking at systems from a distance and expecting to discover all the laws independent of him or herself, is no more. The mind and consciousness are no longer passive but have taken center stage. Some interpretations even have begun to discuss mind and consciousness by fitting reality to the level of a phenomenon which can be brought into existence by way of observation. What we have enumerated so far are only some of the projections which may not be new for humanity as a thought, but which for a scientific world which had for centuries been based on a deterministic tradition were revolutionary concepts, and which took a long time to assimilate.

### **Physics and Mysticism**

Comparison of the changes in thinking brought about in fields we call new science, especially quantum mechanics, is a way of thinking totally based on metaphor. However, even before quantum physics, classical physics had an undeniable effect on the belief in God and the understanding of creation. In fact, it's not surprising that people should have used sometimes forced and sometimes explicit metaphors to search for answers in their urge to derive meaning from information for each situation and each piece of information. This urge is a natural characteristic of the human mind. Most of the similarities between quantum physics and mysticism are based on random analogies and metaphors. Physics research about the world does not in fact make many inferences about transcendental fields, and most of the mystical ideas derived from physics are new, attractive analogies based on similarities. These similarities can probably make new contributions to our ideas and thought processes by making new connections. Of course, as ideas advance, it is necessary for those who see God in physics, in the future as at the beginning of the twentieth century, with the understanding of physics undergoing great changes, to change their understanding of God, and take into account the fact that the “old God” has been superseded by the arrival

of the new physics. This even coincides with belief in a transcendental creative force. The idea that man, a work of God, should be able to understand completely the ways of God through the laws of physics runs counter to the absolute existence of God. In fact science makes no claims on this topic; the basic job of science is to understand the workings of the physical world. For this reason some scientists characterize this kind of association as empty words, false-pathological science, or humbug. Physics is a branch of science, and God is a matter of belief. Science has nothing to say about God, especially his existence or non-existence. This “God” is not a scientific term, but a human and deeper concept.

### **The Postmodern Craze: the Latest Fashions**

On the other hand, scientific charlatans have appeared in this age as in any other. One noticeable feature of this is that some scientific terms like “quantum” which have mysterious connotations in the public imagination have become popular. So we have quantum drama, quantum feeling, quantum spirit therapy, quantum life coaching, quantum hair removal, quantum collars, water bottles and bracelets, quantum leaps, quantum psychoanalysis, quantum life, quantum sex, quantum improvement and quantum physiotherapy... quantum cows and sheep, and other incredible and sometimes amusing examples. Everywhere seems to be caught up in this quantum craze.

In addition to this, there are innumerable other ideas related to quantum physics. We come across strange things like Himalayan salt and salt room therapies, Kirlian and Chakra therapies, Pranic healing and Atma Namaste, energy therapy, touch therapy, automatic-charismatic therapies, Cosmic-Quantum-Atomic therapies, stories of screens in the brain, holographic brain techniques and therapies, and many more. In fact all of these are in tune with the spirit of the times, and must be seen as the natural by-products of a scientific concept with such powerful repercussions. We are faced with a significant problem when people come up with these kinds of claim to intervene in fields which may have a direct bearing on human health, and in particular when this door to hope ends in frustration for people seeking solutions to health or other problems. Of



course all possible measures must be taken to inform the people targeted and to save them from exploitation. On the other hand it must be remembered that in spite of all this quantum talk, quantum physics and other new fields of physics do indeed open up new possibilities affecting our daily lives. This concept and the inflation of expectation have undesirable results in that they hide the

occasional developments that do take root. For this reason, these fields should be carefully examined, researched and tested by the scientific community rather than being rejected out of hand. This is because quantum physics itself is a science which appears to us as counter-intuitive and goes against all the laws of the universe that we have learned and become used to. 

