

Chapter 1. Foundation

Some basic concepts such as matter, mass and energy etc. will arise in this book. The explanations for them are different in some books. Therefore, it is necessary to state the author's understanding here. Otherwise, if a reader has different understanding for a concept in this book, it would be hard for the following reading.

1. Science and Theology

What is science? Science is some cognition validated by practice again and again. It is to say that the essential characteristic of science is validation of practice.

For example, the old Chinese saying “sky is round and land is square” is negated by later practice of navigation.

Professors Yang Zhenning and Li Zhengdao proposed “parity nonconservation in weak interaction” in 1950s. And Professor Wu Jianxiong has validated it. Later it has been validated by many experimentations. So, “parity nonconservation in weak interaction” is scientific.

1959 J. Weber of Malilan University said that he discovered gravitational wave. A lot of people interested in it and repeated his test but nobody can get positive result. Therefore, although many people still consider that gravitational wave should exist from theory it is not considered as science.

The practice test is not ones-offs. It should be many times, long-term, again and again. The discovery of many new element, new particle, etc. have undergone the process of first discover and many validations.

A scientific theory has undergone many validations for years. If new practice shows that it should change, this theory has to change according to practice.

Before the discovery of professor Yang and Li, the parity conservation is a general law in field of particle. However, after this discovery, the parity conservation is appropriate only in strong and electromagnet interactions.

Newton motion law has experienced a lot of validations. Then a new theory special relativity was proposed by Einstein and validated many times. After this, the Newton law is only appropriate in case of velocity smaller than light velocity.

Classical physics, including theoretical mechanics, thermodynamics and statistical mechanics, electrostatics, has experienced a lot of validations. However, after 1920s, many practice showed that they are only appropriate in macrosystem, inappropriate in microsystem.

For one thing, only the statement validated by practice is science. It is to say that science has unique nature.

Scientific theory has to be self-consistency. It can not self-contradictory and inconsistency.

Theology is different. It does not need validation. Its key is belief. "Buddha is in heart." "God exists with us."

It does not have unique nature. One person can have many beliefs. In childhood he/she maybe believes in hero; when making business he/she maybe believes in money god maybe; when being in love he/she maybe believes in Bodhisattva and predestined relationship etc.

When studying theoretical physics, some basic concepts, such as matter, motion, time, space, etc. and some fundamental problems are encountered frequently. Also, philosophy touch upon them frequently too. Besides, the author can not think of a definition of time more exact and succinct than "continued nature of motion of matter". So, do not evading philosophy, studying without wallowing in it, maybe a sensible choice for anyone who studying theoretic physics.

2. Matter Mass

In the world, many things are constructed from atoms. There are more than one hundred atoms, including man-made atoms. Atom is constructed from nucleus and electrons, nucleus is constructed from proton and neutron. These are all matter, and photon is matter too.

Briefly, matter is proton, neutron, electron and photon, and all the constructed and derived things from them. Its basic characteristic is that it can be tested and measured.

Matter is objective reality.

All newly discovered matter, including new galaxy, new comet, new species, new element, new particle, have undergone the process of first discovering and later validating by other person. If a thing only first discovered, but can not be tested by other person, it is not matter and this discovery can not be accepted.

Deity, spirit, immortal and Buddha are not matter. Their characteristic is that if your believe, it exists; if your do not believe, it does not exist.

Some people have seen mirage. The things they saw actually exist on land rather than in the sky. The image they seen is formed form refracted light. Similarly, Buddhist light of Emei Mountain is refracted light too. Because of special conditions, the appearance is abnormal. It needs carefully explore and analysis with science.

Is unidentified flying object (UFO) matter? Are they in reality? For UFO, we should investigate, study, analyze and judge concretely for each event individually.

One UFO observed by many persons should be considered as real, because their results can validate each other. In fact, after follow-up investigation and serious research, many UFO are identified as meteorological balloons, military stealth aircrafts etc. These things are not identified at first time because people are not familiar with them or the climate was special at that time.