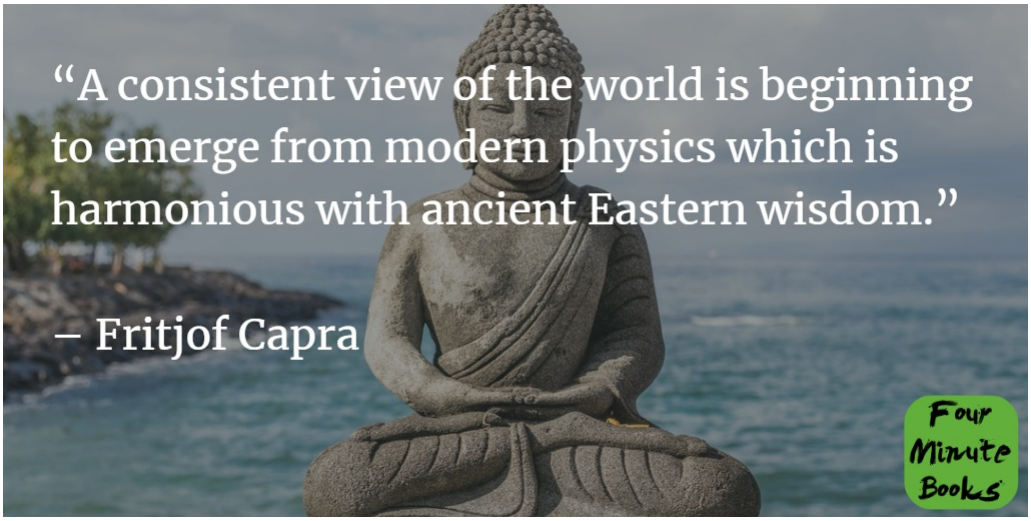
The Tao Of Physics Summary

1-Sentence-Summary: *The Tao of Physics questions many biases about Western science and Eastern spirituality, showing the close connections between the principles of physics and those of Buddhism, Hinduism, and Taoism.*

Read in: 4 minutes

Favorite quote from the author:



People think of science and spirituality as opposites. Western science is the realm of rationality, whose language is mathematics. It expresses itself through numbers and formulas deduced from rigorous experiments.

In Eastern religions, rationality is not encouraged. Knowledge can be achieved only by intuition, through which we might learn to perceive immeasurable truths.

Scientists learn from observing the outside world, Buddhist practitioners need introspection. Yet, somehow, both end up with a similar vision of the world. How is this possible?

In *The Tao of Physics: An Exploration of the Parallels Between Modern Physics and Eastern Mysticism*, a 1975 classic, Fritjof Capra attempts to answer this question.

When we say 'science,' we usually refer to the basic mechanics of how reality functions on a macroscopic level. From this point of view, space and time are separate entities which are easy to measure, as are matter and energy.

If we take a closer look, however, things appear rather differently deep inside the structure of matter. It is on this level that it's possible for quantum mechanics and the theory of relativity to reach conclusions long held by Eastern mystics.

These are the 3 main concepts from the book:

1. The more theories of modern physics have been refined, the more they seem to agree everything is connected.
2. From planets to subatomic particles, each entity in physics is ever-changing and ever-moving.
3. Asian mystics have long believed in the ideas of unity and temporality – as now do modern physics!

Ready to see how these two seemingly disparate disciplines connect? Let's go!

Lesson 1: Time and space, energy and matter, phenomena and their observers, everything is interconnected according to modern physics.

One of the most disrupting concepts in Einstein's theory of relativity was that time and space are interdependent. Since light takes time to reach the human eyes, the further an event takes place from an observer, the later it occurs.

Before this 1905 discovery, time was the absolute, measurable frame in which everything happened. Now, it is the fourth dimension of our formerly three-dimensional space.

This means it's impossible to speak about time without speaking of space and vice versa. Each of them only exists in connection with the other, an inseparable entity called space-time.

But there's more! Einstein even discovered that matter and energy are also just two different aspects of the same reality. This is the deep meaning of his famous formula: E = mc2. Any amount of energy can be represented as a certain mass at a certain speed and vice versa.

Until 1905, there were 2 theories about light. Newton had declared it was formed by small photon particles while Huygens had observed light could behave like energy. In the end, they were both right in light of Einstein's theory.

Moreover, modern physics has revealed that if you observe something at a quantum level you connect with that, becoming someway part of the scene. In quantum mechanics, there's no such thing as an outer observer!

Given these many equivalents, modern physicists now agree that everything in the universe

is connected, quite literally!

Lesson 2: Movement and change are consistent behaviors of the universe and all matter that's in it.

In 1929, the astronomer Edwin Hubble discovered that the universe was born around 10 billion years ago from a big explosion called the Big Bang. Since then, it had kept on slowly expanding.

Most physicists assume this growth will go on forever, but others say it will slow down one day and maybe even begin to contract. In either case: its movement is never going to stop. Movement is a fundamental rule for all entities big and small, from planets to subatomic particles.

Protons, neutrons, electrons, all of these only exist in dynamic structures. Particles are continuously created and destroyed, energy patterns flows incessantly changing from one form to another.

When stable, atomic particles give birth to matter as we see it in our everyday lives. But they're never still. They keep oscillating rhythmically.

Going back to Einstein's famous equation, matter turning into energy and energy into matter is another, neverending cycle of movement.

Energy itself is also a form of movement in the form of waves and particle vibrations. Clearly, the dance of elements in our universe never stops!

Lesson 3: Eastern wisdom has known reality is oneness and dynamism for millennia.

Hinduism, Buddhism, and Taoism are among the most ancient religions. They were born in India and China between 2000 and 500 B.C..

One of the key concepts of Hinduism is *Brahman*, the inner essence of all things. What's more, the world is seen as an ever-changing reality, where things and their mutual connections evolve continuously.

The highest spiritual state one can achieve in Hinduism is liberation. It happens when you are able to feel this unity and constant movement. However, liberation is not something you can achieve using rationality. You can only develop your perception through the practice of yoga and meditation.

Buddhists also believe in the oneness of everything, or Dharmakaya, as the way to enlightenment. This is because most of our negative feelings come from seeing ourselves as separate from the rest of the world.

Here, too, perceiving that everything is transitory is important to free ourselves from this suffering. Buddhists think almost nothing in life is worth worrying about, since “all things arise and pass away”.

The Taoist master Lao Tzu also taught that there’s an energy that pervades and unites everything, such as the Hinduist Brahman and the Buddhist Dharmakaya. He called it the Tao, or “the way”.

The Tao is a dynamic force too: “Returning is the motion of the Tao” and “going far means returning”, said Lao Tzu in the 7th century B.C..

In the end, after millennia of fights and quarrels, science and spirituality are much closer than we think. Of course, some knew all along, like one of physic’s greats, Werner Heisenberg:

“In the history of human thinking the most fruitful developments frequently take place at those points where two different lines of thought meet.”

The Tao of Physics Review

The Tao of Physics might not be perfectly scientifically accurate anymore, but it’s only gained more charm over the years. Physics continues to provide more and more evidence of Asian religions’ intuitions. Naturally, people are now curious to better understand the connections between the two. For all of them, this book is a great place to start!

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Who would I recommend The Tao of Physics summary to?

The 45-year-old westerner that is interested in spirituality and would like to understand the basic concepts of Asian religions, the 22-year-old physics student who is curious about the unbelievable behavior of quantum particles, and anyone who wants to understand why there’s no real contraposition between science and eastern spirituality.