

Linear

Cyclical

Block

“The distinction between the past, present and future is only a stubbornly persistent illusion.”

– Albert Einstein, theoretical physicist

“A life has a beginning and an end.... time is bookended by two final points. Everything exists along a line with ‘before’ at one end and ‘after’ at the other.”

– Jonny Thomson, philosopher and writer

“If I observe the microscopic state of things, then the difference between past and future vanishes... in the elementary grammar of things, there is no distinction between ‘cause’ and ‘effect.’”

– Carlo Rovelli, theoretical physicist

“There is only one day left, always starting over: It is given to us at dawn and taken away from us at dusk.”

– Jean-Paul Sartre, philosopher

“A timeless universe is hard to imagine... Even when you try to imagine its absence, you sense it moving as your thoughts shift [and] your heart pumps blood to your brain.... time never seems to stop.”

– Sara Walker, astrobiologist and theoretical physicist.

“The arc of the moral universe is long, but it bends towards justice’... [The] trajectory of history is imperceptible as we struggle through it; but rest assured its contours are there.”

– Chris Hayes, political commentator

“We have all some experience of a feeling, that comes over us occasionally, of what we are saying and doing having been said and done before, in a remote time — of our having been surrounded, dim ages ago, by the same faces, objects, and circumstances.”

– Charles Dickens, writer

You can't unscramble an egg.

“Time is unidirectional. We are born, we age, we die - in that order. Time is irreversible; we can't travel back in time and we can't know the future... Things fall apart...My hot cup of tea becomes cold, it doesn't heat up. A dead body decays, it doesn't come back to life. Cars wear out. And I'm ageing.”

– Stephen Nash, historian of science and archaeologist

“I’m sick and tired of this block universe ... I don’t think that next Thursday has the same footing as this Thursday. The future does not exist. It does not! Ontologically, it’s not there.”

– Avshalom Elitzur, physicist and philosopher

For most of human history we have relied on circadian rhythms rather than cumulative measurements of time. We use time measurements that reflect the periodic movements of the earth and the moon. We recognise the recurrent return of the seasons.

“We live in a universe which has neither past nor future. A strange new world in which we are alive and dead in the same instant. In this eternal present, our sense of the passage of time is nothing more than a giant cosmic illusion.”

– Steve Farrar, describing the views of theoretical physicist Julian Barbour

“Time is a flat circle.”

– Friedrich Nietzsche, philosopher

“The felt difference of quality between past and future... is not an intrinsic difference, but only a difference in relation to us: to impartial contemplation, it ceases to exist... Whoever wishes to see the world truly... must learn to overcome the difference in attitude towards past and future, and to survey the whole stream of time in one comprehensive vision.”

– Bertrand Russell, philosopher

"No occurrence is sole and solitary, but is merely a repetition of a thing which has happened before, and perhaps often.”

– Mark Twain, writer