

Comment on the following excerpt from Alan Lightman's *Einstein's Dreams* (1993) from the point of view of a modern-day physicist, scholar of religion, and historian. In particular, discuss how the passage's fictional universe might relate to the historical development of timekeeping and the contemporary scientific and religious concepts of time. Review how important methodological distinctions between the fields necessarily impact their understanding of time.

Questions you may or may not choose to discuss might be as follows: How has the Western, Augustinian concept of time manifested itself in the given excerpt? In what ways does the scientific understanding of cosmic time influence the human experience of time? How might the religious notions of cosmic and microcosmic time be present in Lightman's fiction?

This class fulfills the GE writing requirement. Therefore, your essay response to the prompt must effectively employ formal language, logical structure, and textual analysis. You may use no less than 1,800 words. Keep in mind that the paper is due on or before Friday, May 29th, 2009.

24 April 1905

In this world, there are two times. There is mechanical time and there is body time. The first is as rigid and metallic as a massive pendulum of iron that swings back and forth, back and forth, back and forth. The second squirms and wriggles like a bluefish in a bay. The first is unyielding, predetermined. The second makes up its mind as it goes along.

Many are convinced that mechanical time does not exist. When they pass the giant clock on the Kramgasse they do not see it; nor do they hear its chimes while sending packages on Postgasse or strolling between flowers in the Rosengarten. They wear watches on their wrists, but only as ornaments or as courtesies to those who would give timepieces as gifts. They do not keep clocks in their houses. Instead, they listen to their heartbeats. They feel the rhythms of their moods and desires. Such people eat when they are hungry, go to their jobs at the millinery or the chemist's whenever they wake from their sleep, make love all hours of the day. Such people laugh at the thought of mechanical time. They know that time

moves in fits and starts. They know that time struggles forward with a weight on its back when they are rushing an injured child to the hospital or bearing the gaze of a neighbor wronged. And they know too that time darts across the field of vision when they are eating well with friends or receiving praise or lying in the arms of a secret lover.

Then there are those who think their bodies don't exist. They live by mechanical time. They rise at seven o'clock in the morning. They eat their lunch at noon and their supper at six. They arrive at their appointments on time, precisely by the clock. They make love between eight and ten at night. They work forty hours a week, read the Sunday paper on Sunday, play chess on Tuesday nights. When their stomach growls, they look at their watch to see if it is time to eat. When they begin to lose themselves in a concert, they look at the clock above the stage to see when it will be time to go home. They know that the body is not a thing of wild magic, but a collection of chemicals, tissues, and nerve impulses. Thoughts are no more than electrical surges in the brain. Sexual arousal is no more than a flow of chemicals to certain nerve endings. Sadness no more than a bit of acid transfixed in the cerebellum. In short, the body is a machine subject to the same laws of electricity and mechanics as an electron or clock. As such, the body must be addressed in the language of physics. And if the body speaks, it is the speaking only of so many levers and forces. The body is a thing to be ordered, not obeyed.

Taking the night air along the river Aare, one sees evidence for two worlds in one. A boatman gauges his position in the dark by counting seconds drifted in the water's current. "One, three meters. Two, six meters. Three, nine meters." His voice cuts through the black in clean and certain syllables. Beneath a lamppost on the Nydegg Bridge, two brothers who have not seen each other for a year stand and drink and laugh. The bell of St. Vincent's Cathedral sings ten times. In seconds, lights in the apartments lining the Schifflaube wink out, in a perfect mechanized response, like the deductions of Euclid's geometry. Lying on the riverbank, two lovers look up lazily, awakened from a timeless sleep by the distant church bells, surprised to find that night has come.

Where these two times meet, desperation. Where the two times go their separate ways, contentment. For, miraculously, a barrister, a nurse, a banker can make a world in either time, but not in both times. Each time is true, but the truths are not the same.