



## 3rd floor – TIME

### The passage of time

*Place the stones in the correct order. Start at the line.*

*There are three circles:*

*The daily schedule - small stones.*

*The course of the year - medium stones.*

*The course of life - large stones.*

*When you have finished, you can always touch the first stone, then you will see how one event comes after the other.*

### *Time is a sequence of events*

*Humans cannot smell or feel time. We only notice time by changes around us.*

*Events happen and then are over We recognise times of day by the fact that it gets light and dark. We recognise seasons by the blossoming flowers or the snowfall. And we notice that our years are passing by the wrinkles and grey hair. That's how we measure time*

### No sense of time

Humans have no independent 'sense of time'. We can neither see nor hear, smell, touch or taste time. We only gain an understanding of the passing of time by the fact that the place where we are changes: It becomes light and then dark again, it becomes warm and then cold again. The rotation of the earth around itself creates the times of day, the movement of the earth around the sun creates the seasons. The change in the sky - the course of the stars - therefore plays a special role in the emergence of perceptible time.

### We perceive time as change

We perceive the passing of time as a sequence of events.

The course of the day and the course of the year create a cyclical form of time: sunrise and sunset, spring, summer, autumn and winter recur in regular rhythms. It is true that the course of human life can also be understood in terms of such a cycle: Youth then corresponds to spring, adulthood to summer, old age to autumn and death to winter.

But at least modern people experience their lifetime more as linear time: as an irreversible line from birth to death.

### Modern life is detaching itself from nature

In modern times, everyday life and the course of the year have largely detached themselves from the rhythms of nature: our day and our year are structured by social rather than natural events. Our life's task here is to coordinate the chains of events of everyday life, the year and the course of our lives. The daily routine of a student, for example, no longer fits when we transition into professional life - and when we retire, we in turn develop new life rhythms.

## Dice of time

*Compare the amount of time.*

*If we assume a cube of 1mm edge length for one year, then the black block is the time since the beginning of the universe. The big bang took place 14 billion years ago.*

*The golden cube above is the time since humans have existed.*

*Fossil finds are dated to about 200,000 years ago. The tiny red cube at the top shows the lifetime of a human being. On average, we individuals walk the earth for about 80 years.*

*Half an hour of boring waiting seems to last forever. Half an hour's break at work is short. Our brain stores things that have meaning for us or impress us. When nothing happens, time seems long in passing but short in memory.*

### **Time is relative**

Half an hour is an unimaginably long time when we have to spend it on hold on the phone. It is short when it is available for a lunch break, it is too short for a holiday and it disappears before the scope of our lifetime. And yet, as the cubes make clear, this lifetime is nothing compared to the history of the earth or even the age of the universe.

### **Time is paradoxical**

The psychological time paradox is the fact that the slower time passes, the shorter it appears in memory - and conversely, it stretches in memory when it has passed quickly. If we spend a whole day in a boring waiting room, the clock seems to stand still, the hours become long - but when we go to bed in the evening, we have the feeling that we have just got up, the day has flown by. If, on the other hand, we do something very exciting - for example, a trip to the Mediterranean where we have lunch on Lake Constance, drink coffee in the Alps and sit on the terrace on the Riviera in the evening - then time passes quickly, but at night, looking back, it seems to stretch: It seems as if we have been on the road for three days already

### **Time is memory**

The reason for this is probably that in the first case nothing impresses us, the brain does not create any memory traces, so that in the evening nothing is there - on the second day, on the other hand, we collect many impressions that create a long memory trace. But not only the 'mental, i.e. the perceived and remembered time is relative, but even the external, physical one: this is what Albert Einstein's theory of relativity says. The faster we move through space, the slower time passes. In a black hole, it even stands almost still: if only one day passes there, thousands of years have already come and gone on Earth.