

Hein Heinsen skulptur: "**ØJEBLIKKET, FØR OG EFTER**".

Skulpturen er i grønpatineret bronze og tænkes opstillet på Sortedam Dossering udfor kollegiet "Sølund". Højde 150 cm, længde 170 cm og dybde 80 cm.

Den er en gave til Københavns Kommune fra Frans Schwartz' Legat .

Skulpturens tema er *rum og tid*.

Fortiden er uendelig og begynder efter *big bang* . Fremtiden er også uendelig og ender måske i lidt før *big crunch* . Nuet varer et øjeblik og ligger i det rum, vi kender, lodret, vandret og dybde. Hvordan rummet er forbundet med tiden forstår vi ikke. Ordet evighed får det til at svimle for vor fornuft.

Skulle nogen have matematisk indsigt, kunne skulpturen være et eksempel på en model af en Ligth cone ; men her står jeg af . Så meget matematiker er jeg ikke, måske de unge på kollegiet kan få noget ud af den tanke?

De lidt håndformede kryds i midten er de mange mere eller mindre heldige forsøg vi alle gør for at finde os tilrette i rummet.

Bemærk! Cyklisten på billedet har været "gennem alle tider".

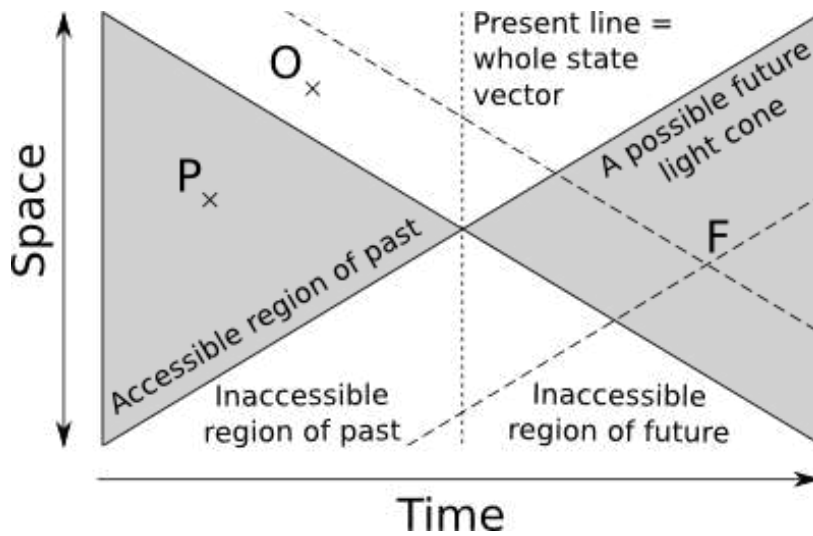






### **Predictions in a physical context**

In a physical framework information transfer is limited by the speed of light. In this view the system present is a single point in state-space. Contrast this with dynamical systems where the present is the whole state vector, the line in the figure below. Here there is no instant propagation of information, and only a small portion of the state vector is accessible.



The past light-cone is the collection of all points that could possibly have an a priori causal influence on the present. The future cone is the collection of all points that might possibly be influenced by the present state. The problem is that in order to infer correctly the state of a point  $F$  in the future cone we might potentially need all points in the past light cone of  $F$ . It would theoretically be possible to have access to the points like  $P$  in the system current past, provided in practice that we indeed recorded the value of  $P$ . However there is by definition no way of getting the value of points like  $O$  that are outside the current system past light cone. Since both points belong to the past light cone of a point  $F$  in our own future, the consequence is that even for deterministic systems we get a statistical distribution of possible futures for a given observed past, depending on what information present outside the current past cone is necessary to predict the future. In other words, boundary and/or conditions in inaccessible regions may determine part of the future.

*Hein Heinsen, Stevens den 23. september 2016*