

Time the Eternal Enigma

For thousands of years thinkers have tried to understand the passage of time. The Hindi Poet Jaishankar Prasad had noted, time goes running in every second into the newly created (past) time particles. Today another model could be that of representing each instant of time with a Schwarzschild throat. As is well known the Schwarzschild throat is momentary and connects two different Universes. In fact Stephen Hawking used this picture to explain what he called the Information Paradox of Black Holes which gobble up apparently all the information. He argued that the information in a Black Hole goes into another Universe via the Schwarzschild throat. There is an echo of this type of thinking in the ancient Indian philosophical system of Kshana Bhanga Vada, bringing out the momentariness of time as if the Universe gets destroyed every instant to be born again the next.

The Nobel Prize winning Novelist Hermann Hesse in his novel “Siddhartha” speaks of an unchanging ever flowing river which is in sharp contrast to the above ideas of time. These ideas are brought out more by the Greek thinker Heraclitus where he says, “You cannot step into the same river twice, for other waters are continually flowing on”.

In any case today we may have to think of different types of time, one being micro or localized time and the other being cosmic time. Also to feature in this concept is the idea of probability. This is brought out by the famous example of two jars. One empty, the other containing gas molecules. Due to dissipative forces molecules from the full jar flip into the empty jar. The process keeps going on which however is two way. Finally an equilibrium may be reached when both the jars have an equal number of molecules. This may be an equilibrium time with marginal changes which we encounter. So the recent reports that time has been halted could refer to very very localized situations where we have a sort of an equilibrium.

In Quantum Mechanics this has a slightly more elaborate construction. The Quantum Mechanical wave function is complex which leads to the various Quantum Mechanical phenomena. But there are situations where the wave function can be real and these are situations which correspond to a sort of a halting of time.