

# TIME has to exist even if we deny its existence!

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## 1) Abstract :

- Does Time really exists?
- This question has bothered a lot of researchers.
- TIME exists even if we deny it's existence.
- Time is not a man-made concept, it has been existing before humans and will continue to exist.

## 2) Introduction :

- First of all, **TIME** can be defined as a *irreversible, unidirectional temporal dimension*. Or simply as a *Periodic change*( in normal cases ). It might be just an concept or idea created by humans, or an actual considerable entity. Time is not '*Absolute*', it is '*Relative*' in nature. That is, faster particle would need lesser time and slower particle would require greater time to move or to change its position.
- Time helps us to plot events that happened in Past or might happen in Future. Which indirectly means that every action that takes place is to be done in accordance to time, because every action(work) should take some time period to get completed. Now, presently even if time is taken for some work to get done, but at the beginning of Universe; the Big-Bang and before it was there any time?? A great question that still bothers us!
- Time is very crucial part of *Physics*, its properties help us to solve many problems in real life. It is used to measure the **ENTROPY** (degree of disorder) of a system. So we come to know that in some time, how the object has changed.

**\*The 2nd law of Thermodynamics** states that the **ENTROPY** of a system can either remain constant or can increase, but can never decrease (with respect to Time). If it had to decrease, then time should move backwards; which is *Impossible*. For instance, take a glass that might fall down and broke or remain as it is. Here, it's disorder (entropy) would either increase or remain constant, but can't decrease; the glass can't be brought back to its best state (condition in which it was made). This proves the irreversibility of Time.

### 3) Existing Techniques :

- If we consider time just flows continuously and everything, atleast in this universe takes place with time, so even before the Big-Bang time should have existed so that after some time Big-Bang event happened. Also, during the Big-Bang, time would have existed. And continues to exist at present too. By this approach, if we even ignore time or not consider or not measure it, as it has to exist!



\*(image credits

:[https://www.google.com/url?sa=t&source=web&rct=j&url=https://en.wikipedia.org/wiki/Pocket\\_watch&ved=2ahUKewj\\_nY3Ag4XyAhUIrpQKHVS\\_AVAQ8g0wBHoECBsQBg&usg=AOvVaw1dqtUwyhTSo\\_Zw5dNjzv9x](https://www.google.com/url?sa=t&source=web&rct=j&url=https://en.wikipedia.org/wiki/Pocket_watch&ved=2ahUKewj_nY3Ag4XyAhUIrpQKHVS_AVAQ8g0wBHoECBsQBg&usg=AOvVaw1dqtUwyhTSo_Zw5dNjzv9x) )

- If we consider time to be Zero, or consider no concept of time, then every task would take no time to get completed. So, then the change in *momentum, entropy, acceleration, etc.* of an object would not be measurable anymore. Also, the *velocity and position(displacement)* won't be measurable. And according to **Heisenberg's Uncertainty principle**: the accuracy of measuring the velocity and position of an *quantum objects*(microscopic) is very less. If time won't exist, so even measuring the velocity and position of normal objects(macroscopic) would become very difficult. And this would mean that every object is an quantum object; which is wrong! For example, a chair or a book are not quantum objects. So the hypothesis of '*Zero*' time is impractical.

- Also, by considering no time, we won't be able to know whether the work is done or not. As every work would take 0 or infinite time to get completed. For example, if a object travels 100 meters distance in 0 seconds, then that would mean that the is travelling at *infinite velocity*, which is impossible as nothing can travel faster than light(*velocity of light*= $3 \times 10^8$  m/s). As velocity of light is the universal speed limit!

#### 4) My Contributions :

- I proved the real nature of Time.
- I proved that time existed before the Big-Bang.
- I emphasized on the importance of considering time.
- I proved that Physics is incomplete without time.

#### 5) Conclusions :

- Time will never end, because the universe is expanding.
- Every task(or Work done) takes some time to get completed. Ex - (You required some time to read this line.)
- Time exists even if we don't consider it.

*My upcoming articles would be regarding the creation of time, Black Holes and more.....*

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