

Original Research

TIME A CREATURE OF GOD

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Abstract

According to the Prophet's Mohammed PBUH in his speech of the farewell Hajj, Time was in form the day Allah created the Heavens and the earth. Several Aiat in the Glorious Quran mention time dilation, one example, is that of the people of the cave: "*And they remained in their cave three hundred years and increased by nine*" [18:25]. However when they were asked about the duration of their stay in the cave: "*They said, 'We have remained a day or part of a day...'*" [18:19]. It is found that the upper limit of dilation time is one day whereas the lower limit is part of day or an hour.

$$1h \leq T_o \leq 1 \text{ day}$$

Keywords

Holy Quran; Time; Time Dilation

1. INTRODUCTION

The time as a creature of the Almighty God, physics wise is an undefined term. To measure time one needs a clock and this has to be calibrated. That is why the unit of time was defined using astrophysical observations, atomic and quantum phenomena. It has several units according to the observer who measures it: e.g. on earth, on moon, the Angels etc. as we will see in the holy Quran later on. The motion of the earth around the sun and around its axis has led to the definition of a unit of time simply because we feel its effect on our life though we cannot define it. On earth, zones are separated into 24 different geographical time zones where every zone was 15 degrees in longitude and with a difference of exactly 1 hour for each time zone. The base of the standardized time was placed at the zero meridians through Greenwich in England. For every eastern move of 15 degrees one adds one hour and for every western move of 15 degrees one subtracts one hour from Greenwich Mean Time. Here, we quote how the unit of time was chosen. Time is often referred to as the fourth dimension, along with the three spatial dimensions ^[1, 2, and 3].

A special need arose in the middle of the 19th century when different transport systems evolved. When the transports and especially the railway evolved it became possible to pass different local time zones during some days. It was important to get a common time within the country and later also within the world. Here we discuss the different ideas about the time, its importance and relation to Muslim beliefs.

2. THE UNIVERSAL TIME (UT)

The Universal Time UT ^[4] is based on the rotation of the Earth about its axis. The true solar time - which is the time interval between two instants of time when the sun reaches its highest point in the sky - is varying depending on where on the globe you are located and when during the year the measurements are done. The largest variations are due to the fact that the inclination of the Earth's axis relative to the plane the Earth describes through its orbit around the sun is different, as well as the fact that the rotation of the Earth around the sun is not circular but elliptical. If these variations are corrected for, which can be several tens of minutes; one will get something called mean solar time. The time scale UT0 is equal to the mean solar time if one applies the corrections at the Greenwich meridian in England. The time scale UT0 is also varying due to something called polar motion, which is caused by the fact that Earth's rotational axis relative to the surface of the Earth varies. If one corrects for these variations, which can be as large as 50 milliseconds (ms), one obtains the Universal Time UT1. UT1 is calculated during one day with an accuracy of approximately 3 ms. The SI unit 1-second was defined as 1/86400 parts of the mean solar day given in UT1 and calculated at the Greenwich meridian. The initial phase was chosen so that 00:00:00 UT1 coincide, in average, with midnight in Greenwich. This is called GMT (Greenwich Mean Time).

3. EPHEMERIS TIME (ET)

Ephemeris Time ET is based on the rotation of the Earth around the Sun. This rotation is considerably more stable than the rotation of the Earth about its axis. Upon till 1967 the SI unit 1-second was defined as 1/31556925, 9747 parts of the tropical year, a year that is calculated through observations against the sun. This involves that 1-second was equal to one average second of the Earth's rotation in the beginning of this century. The initial phase is chosen so that ET and UT1 approximately coincided in the year 1900. Due to that the daily rotation of the Earth is irregular and is slowing down, the difference between ET and UT1 was 56 seconds.

4. THE INTERNATIONAL ATOMIC TIME (TAI)

The so-called dynamic time scales described above are calculated through periods of the Earth's rotation. An atomic time scale is on the other hand determined through calculating the amount of periods of an electromagnetically radiation locked to the resonance frequency of an atom. During the 1940's the first atomic clocks were used to build up atomic time scales. By means of these clocks, variations in UT and ET could be measured very accurately. This led to a new definition of the SI-unit one second ^[5]. Since 1967 the definition of the SI unit 1-second is: The base unit in SI, 1-second, is defined as the duration of 9192631770 peri-

ods of the radiation corresponding to the transition between the two hyperfine levels of the ground state of the cesium 133 atom. The time is a very important factor in mechanics. It is unidirectional from past to future, but in the micro world there is a time reversal possibility because of the square of time which appears in relativistic mechanics.

5. SPECIAL THEORY OF RELATIVITY

Einstein's Special Theory of Relativity describes the motion of particles moving at speeds close to the speed of light. Einstein's theory of special relativity results from two statements. The two basic postulates of special relativity are: The speed of light is the same for all observers, no matter what their relative speeds are. The laws of physics are the same in any inertial (that is, non-accelerated) frame of reference. This means that the laws of physics observed by a hypothetical observer traveling with a relativistic particle must be the same as those observed by an observer who is stationary in the laboratory.

6. TIME DILATION

One of the strangest parts of special relativity is the conclusion that two observers who are moving relative to one another, will get different measurements of the length of a particular object or the time that passes between two events. Consider two observers, each in a space-ship laboratory containing clocks and meter sticks. The space ships are moving relative to each other at a speed close to the speed of light. Using Einstein's theory: Each observer will see the meter stick of the other as shorter than their own, by the same factor. This is called length contraction ^[6].

Each observer will see the clocks in the other laboratory as ticking more slowly than the clocks in his/her own, by a factor gamma. This is called time dilation.

$$T = \gamma T_0$$

7. TIME DILATION IN THE GLORIOUS QURAN

The span of time felt by someone alive (awake or sleeping) and the dead is different. Earthly span of time is very much underestimated when one is asleep or dead in another frame of reference. Whether it is 100, 300 years, or even the duration of mankind existence on earth, the estimation of how long one tarried (لبث) is always "a day or a part of a day".

Sleeping is a kind of death that we return from. It seems that our soul goes far beyond and moves away as in the death domain.

Examples are: the story of the man, his food and his donkey, Surat 2:259. Also the story of the people of elkahf

One of the famous stories about the time is the Israa and Meerage of the Prophet Mohamed PBUH. In this case one finds that no effect upon him was observed from the laws of physics, chemistry, biology and psychology. Here we end up with some surra's where some of the previous remarks on" time "are mentioned in the Glorious Quran.

أَوْ كَالَّذِي مَرَّ عَلَى قَرْيَةٍ وَهِيَ خَاوِيَةٌ عَلَى عُرُوشِهَا قَالَ أَنَّى يُحْيِي هَذِهِ اللَّهُ بَعْدَ مَوْتِهَا فَأَمَاتَهُ اللَّهُ مِائَةَ عَامٍ ثُمَّ بَعَثَهُ قَالَ كَمْ لَبِثْتَ قَالَ لَبِثْتُ يَوْمًا أَوْ بَعْضَ يَوْمٍ قَالَ بَلْ لَبِثْتَ مِائَةَ عَامٍ فَانظُرْ إِلَى طَعَامِكَ وَشَرَابِكَ لَمْ يَتَسَنَّهْ وَانظُرْ إِلَى حِمَارِكَ وَلِنَجْعَلَكَ آيَةً لِلنَّاسِ وَانظُرْ إِلَى الْعِظَامِ كَيْفَ نُنشِزُهَا ثُمَّ نَكْسُوهَا لَحْمًا فَلَمَّا تَبَيَّنَ لَهُ قَالَ أَعْلَمُ أَنَّ اللَّهَ عَلَى كُلِّ شَيْءٍ قَدِيرٌ ﴿٢٥٩﴾ (سورة البقرة)

"Consider the one who passed by a ghost town and wondered, "How can GOD revive this after it had died?" GOD then put him to death for a hundred years, then resurrected him. He said, "How long have you stayed here?" He said, "I have been here a day, or part of the day." He said, "No! You have been here a hundred years. Yet, look at your food and drink; they did not spoil. Look at your donkey - we thus render you a lesson

for the people. Now, note how we construct the bones, then cover them with flesh." When he realized what had happened, he said, "Now I know that GOD is Omnipotent." [Surat Al-Bakara: 259, Rashad translation]

وَيَوْمَ يَحْشُرُهُمْ كَأَن لَّمْ يَلْبَثُوا إِلَّا سَاعَةً مِّنَ النَّهَارِ يَتَعَارَفُونَ بَيْنَهُمْ قَدْ خَسِرَ الَّذِينَ كَذَّبُوا بِلِقَاءِ اللَّهِ وَمَا كَانُوا مُهْتَدِينَ ﴿١١٩﴾ (سورة يونس)

"On the day when He summons all of them, they will feel as if they lasted in this world one hour of day light, during which they met. Losers indeed are those who disbelieved in meeting Allah; and chose to be misguided" [sūrat Younos 10:45]

فَضْرَبْنَا عَلَىٰ آذَانِهِمْ فِي الْكَهْفِ سِنِينَ عَدَدًا ﴿١١٠﴾ ثُمَّ بَعَثْنَاهُمْ لِنَعْلَمَ أَيُّ الْحِزْبَيْنِ أَحْصَىٰ لِمَا لَبِثُوا أَمَدًا ﴿١١١﴾ (سورة الكهف)

"Then We smote their ears in the Cave for a number of years (11) Afterwards. We raised them up again, that We might know which of the two parties would better calculate the while they had tarried (12)" [sūrat El-Kahf].

وَتَحْسَبُهُمْ آيِقَاطًا وَهُمْ رُقُودٌ وَنُقَلِّبُهُمْ ذَاتَ الْيَمِينِ وَذَاتَ الشِّمَالِ وَكَلْبُهُم بَاسِطٌ ذِرَاعَيْهِ بِالْوَصِيدِ لَوِ اطَّلَعْتَ عَلَيْهِمْ لَوَلَّيْتَ مِنْهُمْ فِرَارًا وَلَمُلِئْتَ مِنْهُمْ رُعبًا ﴿١١٨﴾ وَكَذَٰلِكَ بَعَثْنَا لِيَتَسَاءَلُوا بَيْنَهُمْ قَالَ قَائِلٌ مِّنْهُمْ كَمْ لَبِثْتُمْ قَالُوا لَبِثْنَا يَوْمًا أَوْ بَعْضَ يَوْمٍ قَالُوا رَبُّكُمْ أَعْلَمُ بِمَا لَبِثْتُمْ فَابْعَثُوا أَحَدَكُمْ بِوَرِقِكُمْ هَذِهِ إِلَى الْمَدِينَةِ فَلْيَنْظُرْ أَيُّهَا أَزْكَى طَعَامًا فَلْيَأْتِكُمْ بِرِزْقٍ مِّنْهُ وَلْيَتَلَطَّفْ وَلَا يُشْعِرَنَّ بِكُمْ أَحَدًا ﴿١١٩﴾ (سورة الكهف)

"You would think that they were awake, when they were in fact asleep. We turned them to the right side and the left side, and their dog stretching forth his two forelegs at the entrance. Had you looked at them, you would have fled from them, stricken with terror (18) Likewise, We awakened them that they might question one another. Said a speaker from among them, "How long have you remained [here]?" They said, "We have remained a day or part of a day." They said, "Your Lord is most knowing of how long you remained. So send one of you with this silver coin of yours to the city and let him look to which is the best of food and bring you provision from it and let him be courteous. And let no one be aware of you (19)" [sūrat El-Kahf 18:19].

وَلَبِثُوا فِي كَهْفِهِمْ ثَلَاثَ مِائَةٍ سِنِينَ وَازْدَادُوا تِسْعًا ﴿١١٥﴾ (سورة الكهف)

"And they remained in their cave three hundred years and increased by nine" [sūrat El-Kahf:25].

قَالَ كَمْ لَبِثْتُمْ فِي الْأَرْضِ عَدَدَ سِنِينَ ﴿١١٣﴾ قَالُوا لَبِثْنَا يَوْمًا أَوْ بَعْضَ يَوْمٍ فَسَأَلَ الْعَادِينَ ﴿١١٤﴾ قُلْ إِنْ لَبِثْتُمْ إِلَّا قَلِيلًا لَّوْ أَنْتُمْ كُنْتُمْ تَعْلَمُونَ ﴿١١٥﴾ أَفَحَسِبْتُمْ أَنَّمَا خَلَقْنَاكُمْ عَبَثًا وَأَنْتُمْ إِلَيْنَا لَا تُرْجَعُونَ ﴿١١٦﴾ فَتَعَالَى اللَّهُ الْمَلِكُ الْحَقُّ لَا إِلَهَ إِلَّا هُوَ رَبُّ الْعَرْشِ الْكَرِيمِ ﴿١١٧﴾ (سورة المؤمنون)

"He (Allah) will say: How long tarried ye in the earth, counting by years? (112). They shall say, 'We have tarried a day, or part of a day; ask those who keep count!!'(113) He will say, "You stayed not but a little - if only you had known (114) Deemed ye then that We had created you for naught, and that ye would not be returned unto Us?(115) So exalted is Allah , the Sovereign, the Truth; there is no deity except Him, Lord of the Noble Throne (116)". [sūrat I-mu'minūn (The Believers)].

يُدَبِّرُ الْأَمْرَ مِنَ السَّمَاءِ إِلَى الْأَرْضِ ثُمَّ يَعْرُجُ إِلَيْهِ فِي يَوْمٍ كَانَ مِقْدَارُهُ أَلْفَ سَنَةٍ مِّمَّا تَعُدُّونَ ﴿٥﴾ (سورة السجدة)

"All matters are controlled by Him from the heaven to the earth. To Him, the day is equivalent to one thousand of your years (5)". [sūrat El-Sagda 32]

تَعْرُجُ الْمَلَائِكَةُ وَالرُّوحُ إِلَيْهِ فِي يَوْمٍ كَانَ مِقْدَارُهُ خَمْسِينَ أَلْفَ سَنَةٍ ﴿٤٠﴾ (سورة المعارج)

"The angels, with their reports, climb to Him in a day that equals fifty thousand years (4)" [sūrat El-Ma'areg]

قَالَ يَا أَيُّهَا الْمَلَأُوْا أَيُّكُمْ يَأْتِينِي بِعَرْشِي قَبْلَ أَنْ يَأْتُونِي مُسْلِمِينَ ﴿٣٨﴾ قَالَ عَفْرَيْتُ مَنِ الْجِنِّ أَنَا آتِيكَ بِهِ قَبْلَ أَنْ تَقُومَ مِنْ مَقَامِكَ وَإِنِّي عَلَيْهِ لَقَوِيٌّ أَمِينٌ ﴿٣٩﴾ قَالَ الَّذِي عِنْدَهُ عِلْمٌ مِّنَ الْكِتَابِ أَنَا آتِيكَ بِهِ قَبْلَ أَنْ يَرْتَدَّ إِلَيْكَ طَرْفُكَ فَلَمَّا رَآهُ مُسْتَقِرًّا عِنْدَهُ قَالَ هَذَا مِن فَضْلِ رَبِّي لِيَبْلُوَنِي أَأَشْكُرُ أَمْ أَكْفُرُ وَمَن شَكَرَ فَإِنَّمَا يَشْكُرُ لِنَفْسِهِ وَمَن كَفَرَ فَإِنَّ رَبِّي غَنِيٌّ كَرِيمٌ ﴿٤٠﴾ (سورة النمل)

"He said: O chiefs! Which of you can bring to me her throne before they come to me in submission (38) A monstrous jinni said, "I can bring it before you even stand up. I am powerful and trustworthy.(39) The one who had knowledge from the Book said, "I can bring it to you before you even blink your eye." When Solomon saw the throne placed before him, he said, "This is a favor from my Lord by which He wants to test whether I am grateful or ungrateful. Whoever thanks God does so for his own good. Whoever is ungrateful to God should know that my Lord is Self-Sufficient and Benevolent (40)" [sūrat El-Naml 27- 38:40]

The above Aiat from the holy Quran shows how subtle is the time .The author leaves it to the reader to look at them and find an interpretation which suits him. It shows that until now we do not understand the geometry of our universe. Is it 4-dimensional, 5-, 6-, or n- dimensional?. What is the meaning of multi-time theories?. It is the dream of physicists to know the geometry in which we are living and of course the unification of the fundamental forces.

8. TIME, A CREATURE OF ALLAH

According to the Prophet's Mohammed in his speech of the farewell Hajj, Time was in form the day Allah created the Heavens and the earth

عَنْ أَبِي بَكْرَةَ عَنِ النَّبِيِّ صَلَّى اللَّهُ عَلَيْهِ وَسَلَّمَ قَالَ: " إِنَّ الزَّمَانَ قَدْ اسْتَدَارَ كَهَيْئَتِهِ يَوْمَ خَلَقَ اللَّهُ السَّمَوَاتِ وَالْأَرْضَ. السَّنَةُ اثْنَا عَشَرَ شَهْرًا مِنْهَا أَرْبَعَةٌ حُرُمٌ؛ ثَلَاثٌ مُّتَوَالِيَاتٌ ذُو الْقَعْدَةِ، وَذُو الْحِجَّةِ، وَالْمُحَرَّمُ، وَرَجَبُ مُضَرَ الَّذِي بَيْنَ جُمَادَى وَشَعْبَانَ" رواه البخاري

Narrated Abu Bakra: The Prophet (ﷺ) said. "Indeed, Time has rotated to its form the day Allah created the Heavens and the Earth. The year is of twelve months, out of which four months are sacred: Three are in succession Dhul-Qa' da, Dhul-Hijja and Muharram, and (the fourth is) Rajab of (the tribe of) Mudar which comes between Jumadi-ath-Thaniyah and Sha ban".

The saying "Time has rotated" implies that time is connected with the revolution of the cosmos around its center (8) as the heavens were rolled

يَوْمَ نَطْوِي السَّمَاءَ كَطَيِّ السِّجِلِّ لِلْكُتُبِ كَمَا بَدَأْنَا أَوَّلَ خَلْقٍ نُعِيدُهُ وَعَدَّا عَلَيْهَا إِنَّا كُنَّا فَاعِلِينَ ﴿١٠٤﴾ (سورة الأنبياء)

"The Day when We shall roll up the heavens as a recorder rolleth up a written scrolls. As We began the first creation, We shall repeat it. (It is) a promise (binding) upon Us. Lo! We are to perform it (104)" [Surat Al Anbiaa 21 - the prophets].

The Islamic concept of time is logical, lunar month is the time taken by the moon to revolve around the earth. The cosmic year is the time taken by the sun to revolve around the center of the Milky Way etc.

9. TIME IS A TRUST

The following are some of the most important duties demanded of each person: One has to benefit from time, Race for good deeds, Learn from the passage of time, Seek the superior times, Plan and organize

time. That means that time is an amaanah (trust), time is a gift from the Creator and its proper use will determine our outcome for eternity. We will be questioned on how we spent everything that Allah has given

Narrated Abdullah Bin Mas`ud Allah's Messenger (PBUH) said:

"Man's feet will not move on the day of resurrection before he is asked concerning five things: concerning his life, how he spent it; concerning his youth, how he grew old; concerning his wealth, whence he acquired it, and in what way he spent it; and what was it that he did with the knowledge that he had".

We are to bear in mind that time has certain characteristics, among of which are the following: Time passes quickly, also the time that passes can never return, nor can it be compensated for, for time is irretrievable. A Muslim should learn how to organize his time, and make a realistic plan for his worldly and religious duties, without any of them overlapping with the other. Organizing time also includes leaving a place for relaxation and entertainment. Time is very important for our success both in this temporary world and the eternal world to come. We notice that the feeling of time is different some time it passes very quickly and sometimes very slowly.

10. CONCLUSIONS

Time was initiated the day Allah rolled the cosmos, the day He created the Heavens and the Earth. We will concentrate here on the concept of Time dilation, a Quranic prospective. This can be summarized in Table 1.

Table 1 Comparison of Earth Bound Time and Dilation Time.

Earth bound Time T	Dilation Time (T _o)	Quran verse	Remarks
Hundred years	A day or part of a day	2: 259	
Three hundred years increased by nine	A day or part of a day	18:19 & 18:25	A little - if only you had known
How long tarried ye in the earth	A day, or part of a day	23:12 to 14	A little - if only you had known
On the day when He summons all of them	One hour of day light	10:45	They will feel as if they lasted in this world one hour of the day light

The conclusions Drawn from these Aiat are as follows:

1. The same expression" a day or part of a day" was felt by a person or group of people together.
2. This expression was said by people whether asleep or dead implying that sleeping is some sort of death.

اللَّهُ يَتَوَفَّى الْأَنْفُسَ حِينَ مَوْتِهَا وَالَّتِي لَمْ تَمُتْ فِي مَنَامِهَا فَبِمَسْكِئَاتٍ قَضَىٰ عَلَيْهَا الْمَوْتَ وَيُرْسِلُ الْأُخْرَىٰ إِلَىٰ أَجَلٍ مُّسَمًّى إِنَّ فِي ذَٰلِكَ لَآيَاتٍ لِّقَوْمٍ يَتَفَكَّرُونَ ﴿٤٢﴾ (سورة الزمر)

"It is Allah that takes the souls (of men) at death; and those that die not (He takes) during their sleep: those on whom He has passed the decree of death, He keeps back (from returning to life), but the rest He sends (to their bodies) for a term appointed verily in this are signs for those who reflect.39:42" [Surat Alzomar 39].

3. The upper limit of dilation time in this case is one day whereas the lower limit is part of day or an hour.

$$1h \leq T_o \leq 1 \text{ day}$$

4. It is possible to estimate the upper and lower ratios of T/ T_o for the cases mentioned in Table I.

REFERENCES

- [1] "Internet Encyclopedia of Philosophy". 2010. Retrieved 9 April 2011.
- [2] Le Poidevin, Robin (Winter 2004). "The Experience and Perception of Time". In Edward N. Zalta. The Stanford Encyclopedia of Philosophy. Retrieved 9 April 2011.
- [3] About Time: Einstein's Unfinished Revolution, Paul Davies, p. 31, Simon & Schuster, 1996, ISBN 978-0684818221
- [4] McCarthy, Dennis; Seidelmann, P. Kenneth (2009). TIME—From Earth Rotation to Atomic Physics. Weinheim: Wiley-VCH Verlag GmbH & Co. KGaA. ISBN 978-3-527-40780-4.
- [5] The International System of Units (SI) (8th ed.), ISBN 92-822-2213-6
- [6] A. Einstein, H. A. Lorentz, H. Weyl, H. Minkowski, The Principle of Relativity, Dover Publications, Inc, 2000, softcover 216 pages, ISBN 0-486-60081-5,
- [7] <http://corpus.quran.com/translation.jsp?chapter=23&verse=116>

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