# ORIGIN OF THE WEEK EXPLAINED, BEING A PAPER 

(1)n the © 6 rigin of the Bivision of (atime INTO PERIODS OF SEVEN DAYS,

READ BEFORE THE
LIBERAL SOCIAL UNION,

At the Meeting on July 30, 1874.

BY
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## ON THE ORIGIN OF THE DIVISION OF TIME INTO PERIODS OF SEVEN DAYS.

1. The theory about to be propounded in this paper as to the origin of the division of time into periods of seven days is, that our word week comes fro m the same origin as the words wake and watch, and that the present system of weeks of fixed periods of seven days each, which may fairly be called a system of calendar weeks, arose out of an earlier irregular system of lunar watches, extending from one quarter of the moon to another, very much in the same way that the existing system of twelve calendar months arose out of an earlier irregular system of twelve or thirteen lunar ones.

Before proceeding to criticise the historical evidence on the subject, it will be well to call attention to some elementary points in astronomy which will shew more clearly the meaning of the proposition above laid down.
2. Men in primitive times of course required to know just as much as we do now, the approach of certain periods of the year. They required to know when the rainy season was about to commence, when
the rivers might be expected to rise, when drought was to be provided agaiust, when they ought to sow, and when to reap, when their flocks would breed, and many other similar points, differing according to their habits, and the physical and atmospheric incidents of their country.
3. To teach themselves these matters it became necessary for them to have some means of determining the commencement of each year, and dividing it into periods convenient for ordinary purposes of computation. The commencement of the year, and the recurrence of corresponding periods was best told by observing the sun. The solstices were two epochs which could be observed approximately. For the summer solstice the sun after rising more and more to the North every morning and setting in like manner, turned and began to rise and set more to the South, and for the winter solstice the reverse took place. Many localities would afford natural marks for observing these phenomena, while in all cases artificial marks could be erected.

There can be little doubt that one of the uses of Stonehenge was to enable such observations to be made. A man standing in the centre of the circle could tell approximately the season of the year by noticing behind which stone, or between which two stones the sun rose and set each day. There are moreover two outlying stones beyond the main circle at Stonehenge at about the points where the sun rises on the longest and shortest days respectively. Further evidence of the astro: omical purposes of Stonehenge
is found in the fact that the number of stones in the outer circle appears to have been originally 29 , being the number of whole days in a lunar month.

Another mode of determining the season of the year is by noticing what stars are just rising or just setting at sunrise or sunset, these being the same for the corresponding seasons, subject only to a very slight variation.* And of all the stars, there is probably no set more convenient to select for this purpose than the Pleiades, that being a bright little group of which part might be above and part below the horizon. And this is probably the origin of the peculiar veneration paid to the Pleiades in early times.

A third mode of fixing a point for the commencement of the year would be by observing the equinoxes. These might be ascertained by fixing a thin upright post in the ground, and noticing the direction in which the sun rose and set every day. At the equinoxes the two lines from the post poiuting to the spots where the sun rose and set would form one straight line.
4. These observations of the sun however are evidently matters requiring some nicety of observation, and comparison of the results of one season with another. But in the meantime the moon afforded a measure of time plain enough for all folk to see. And it is no doubt owing to the very palpable nature of the phases of the moon, that it occupies a more prominent

[^0]part in early astronomy than the stars or even the sun.

If the number of revolutions of the moon round the earth had been an exact or nearly exact measure of a revolution of the earth round the sun, there can be little doubt that a lunar year would have been universally adopted. But it happens that the revolutions of the moon are so far from fitting in with the natural year that the inaccuracy of any attempt to make them agree must become at once apparent. The average interval between new moon and new moon will be found to be very nearly $29 \frac{1}{2}$ days, while the average length of the solar year is well known to be about $365 \frac{1}{4}$ days. From this it will be seen that 12 lunar months, which is the number which comes nearest to the solar year is about 11 days short of it, a difference which would become apparent to every one in

| $29 \frac{1}{2}$ |
| ---: |
| 12 |
| 6 |
| 348 |
| 354 | the course of a very few years.

If we may trust to Roman traditions, their year consisted at first of only ten months, which seems to indicate that in early times they only found it necessary to attend to these divisions of time during that portion of the year. Their system would then have been to have made their year commence with a new moon happening about the time that agricultural operations had to commence, and to reckon on thence ten moons, and then leave an interval till it became time to look out for the first moon of the next year.

If the Romans bowever ever did thus leave the winter to take care of itself, they must soon have come to reckon the moons during it to aid them in fixing the proper one for the commencement of the following year, and so been brought to face the problem which almost all nations seemed to have faced, of making lunar years and solar years coincide.*

The first attempt at solving this problem evidently consists in taking 12 lunar months for the year. This however would result, as has been already shown, in throwing the calendar 11 days before the natural year in the second year, 22 days in the third, 33 in the fourth, and so on. In fact, for practical purposes, such a system would soon become most misleading. It would then be found that a thirteenth month would have to be intercalated every now and then in order to correct the error. Such a month might perhaps be at first thrown in whenever it had become perfectly obvious that it was requisite in order to bring back the commencement of the year to its old place in the seasons.

Then as time rolled on more accurate observations would be made, and a rule might come to be adopted that the first new moon after one of the solstices or equinoxes or after the rising or setting of some star, was to be considered the commencement of the year.

The Romans and the Jews appear both to have adopted the plan of making the first new moon after the verual equinox the commencement of the year.

[^1]The first month in the old Roman year was March, which occupied therefore in early times a rather later place in the natural year than was assigned to it by Julius Cæsar on his reformation of the calendar. The marks of March having originally been the commencement of the year are seen in the names of the four last months whose names signify 7 th, 8th, 9 th, and 10th respectively, and also in the fact that the intercalation necessary to correct the calendar still takes place at the end of February.

Further observations might show that a system giving twelve months each to 5 years out of 8 and 13 months each to the other three would make the Calendar agree very nearly with the seasons. And still further observations would show that a cycle of 19 lunar years containing 12 short years and 7 long ones would almost exactly coincide with 19 solar years. This system is called the Metonic cycle, and is said to have been discovered and introduced at Athens about the year 432 в.c. by an Astronomer named Meton, and according to the better reading of a passage in livy (I. 19) a similar system was instituted at Rome by Numa.
"Intercalaris mensibus interponendis ita disposuit ut vicesimo anno ad metam eandem solis unde orsi sunt, plenis annorum omnium spatiis, dies congruerent."
"By inserting intercalary months he so arranged matters that in the twentieth year the days came round to the same point in the sun's course from which they had started, the intervening years being all complete."

Reasons will however appear presently for doubting whetber the Romans could have known of this cycle even at a much later period. The Jews became acquainted with the Metonic cycle in the course of time, and use it still in regulating the length of their years. Among the advantages to be derived from the knowledge of a cycle over a mere empirical system of fixing the end of each year by observation at the moment, we may mention that it enabled every one to know before-hand the times for payment of taxes and for magistrates entering and leaving office, and for contracts in many cases to commence and expire, and payments of money to be made.
5. Before, however, any cycle was discovered, and while men were making merely empirical attempts at adjusting the lunar year, it would be found that the majority of years contained 12 months each, and the minority being something more than every third year contained 13. There would therefore often be two years containing 12 months together, but never two containing 13. And it is possible that a popular rule stating that when there were 13 one year there would only be 12 the next, may have something to do with the popular superstition that if 13 people sit down to dinner together at the end of the year, one of them will die before the end of the next. The superstition is of course generally considered to have originated from the circumstances of the Last Supper, but that origin bardly accounts for the idea of one person dying within a year.
6. Now it is evident that even the best arranged
lunar system that could be devised is open to the serious objection of placing the corresponding periods of the natural year in different positions in the artificial year, and for practical purposes it must have become necessary to note that the first day of the first month, and of course all other days, would be so much earlier one year than another. The place of the sun amongst the stars, in fact, would be found to be more important than the phase of the moon;* the number 12 derived from the moon's revolutions would be taken to be the number of periods into which to divide the year; and the belt of stars through which the sun apparently passed would be mapped out into 12 portions-the 12 signs of the Zodiac, in fact-and give rise to a system of 12 calendar months underlying, and eventually superseding the system of 12 or 13 lunar months.
7. Up to about b.c. 448 the Romans had lunar months, but they then endeavoured to introduce a system of fixed months, not coinciding at all with the lunar ones, but having fixed numbers of days; and they left it to the Pontiffs every year to fix the number of extra days to be added to make the year complete.

[^2]
## into Periods of Seven Days.

The Pontiffs, however, partly through ignorance, and partly through wilful attempts to shorten the years of unpopular magistrates, managed the intercalation so incorrectly, that in Julius Cæsar's time the months came some 90 days earlier than their traditional proper places. Julius Cæsar then assigned to them the places they hold now, and ordained for the future the observance of the system which, with a slight modification, we still use.

The fact that the Romans were unsuccessful in their earlier attempts to settle the calendar on a definite basis, throws considerable doubt on the statement of Livy that they were acquainted with the Metonic cycle at the time of Numa.
8. The lunar system has, however, some practical advantages over a solar or stellar system. The latter being more complex would be difficult to teach to the mass of a primitive people, though it might be well understood by a few initiated persons at head-quarters, and a command issued through the land calling all men to assemble under arms on the first of the next calendar month would not be so easy to obey in primitive times as a summons to meet at the next full moon.* In the latter case the heavenly body itself would act as a monitor, showing by its form each

[^3]evening how many days were to elapse before the appointed meeting.
9. Moreover, owing to the lunar division of tine being the earlier in point of date, all sacred festivals would come to be regulated by it, and that being so it would be preserved for their sake long after it had been superseded by a calendar system for all other purposes. Indeed at the present day Easter and the other so-called moveable festivals are nothing more than feasts derived by the early Christians from the Jews and regulated according to a lunar system also derived from them. But probably many good people in this country would look upon it as the height of impiety to propose to give these festivals fixed places in the calendar, even though it were possible to ascertain the days on which the events commemorated on them occurred, so far as they are the commemoration of events, and it was proposed to fix them on those days.
10. But to go back to primitive times and make one more remark. It is evident that the general phenomena of the phases of the moon, the place of the sun, and the rising and setting of the stars, must bave been matters far more familiar to people in ancient times than to us at the present day. The heavens were their calendar, their crier of public meetings, their notifier of sacred festivals, holidays and market days, their compass for journeys by land and sea. Every evening the inhabitants of each village must have gazed on the stars for directions buth on sacred and secular affairs. And every tribe
must have had some one sacred spot for constant observations to be made to regulate the national calendar.

A little further reflection on this matter will furnish explanations of two curious points in ancient modes of speaking on these subjects. Firstly, the important matters for which divisions of time were required were to know beforehand when the various gatherings were to take place. Hence we find that they frequently reckoned the days not from the commencement of the current month as we do, but towards the beginning of the next month, or towards the next feast day. Thus in the Roman calendar the first day of each month was called the Calends, but the next day was not called the second, but so many days before the nones, a festival which fell on the 5th or 7 th, and after the nones, the days were called by their number before the Ides a festival which fell eight days after the nones, and after the Ides the days were called by their number before the Calends of the next month. Secondly, the evening being naturally the most convenient time for making observations, the phenomena then observed would in many cases determine the character of the following day, and on that account the evening would be considered as belonging to it rather than to the day past, and the division of day from day would be reckoned at sunset, and not as we reckon it at midnight.*

[^4]11. It may be well here to introduce a few passages illustrating the foregoing remarks.

Tacitus, writing of the Germans in the first century of our era, speaks as follows :-
(Tacitus, Germania, 11.)
" Coeunt, nisi quid fortuitum et subitum incidit, certis diebus, cum aut inchoatur luna aut impletur : nam agendis rebus hoc anspicatissimum initium credunt. Nec dierum numerum, at nos, sed noctium computant. Sic constituunt, sic condicunt: nox ducere diem videtur."
"They meet, unless any thing accidental and sudden happens, on certain days when it is either new or full moon: for they think that the most auspicious commencement for business. Nor do they reckon the number of days as we do, but the number of nights. They so express themselves both officially and colloquially-night is considered to precede day."

And Herodotus, who visited Egypt about 450 years before our era writes as follows:-

## (Herod. ii. 4.)

"The Egyptians said they were the first to discover the length of the year, setting out twelve divisions to make it up. And they said that they discovered this from the stars. And they manage it much more cleverly than the Greeks, as it seems to me, inasmuch as the Greeks put in an intercalary month every third year, for the sake of the seasons, but the Egyptians giving the twelve months 30 days each, add every year 5 days beyond the number and the
cycle of seasons as it rolls on comes to them at the same place."

And in another place (Herod. ii. 47) he gives an account of an Egyptian feast at a full moon, resembling in several points the Jewish passover. "To Selene and Dionysus alone at the same time, at the same full moon, they sacrifice swine and eat the flesh. And the sacrifice of swine to Selene is done in this way. When they sacrifice, putting the tip of the tail and the spleen and the caul together they wrap them up in all the fat of the beast about the stomach and burn it in the fire-and the rest of the flesh they eat at the full moon at which they make the sacrifice, and they will not touch it on another day. And the poor amongst them through want of means mould swine of dough, and cook them and sacrifice them. And to Dionysus on the eve of the feast each man slays a pig before his door and gives it to be taken away by the swineherd who brought it."
12. To come now to a point nearer the subject of this paper, there would necessarily be various public duties to be performed in every state. The national observations of the heavens would be kept up, various sacred rites would be performed, and the sanctuary would be guarded. Such duties might in some cases be performed by special persons set apart for the purpose, and in other cases by all the members of the community in rotation. In the case of the Israelites we find it stated that originally the first born of all the tribes filled the priestly offices. May we not
infer then that the twelve tribes performed the duties of these offices in rotation according to the twelve months of the normal year?
13. And when we find one of the reputed original tribes, namely, that of Joseph, represented by the two tribes of Ephraim and Manasseh, may it not be that that tribe officiated on the last month of the year and became divided into two portions for the purpose of supplying the intercalary month whenever it occurred? The word Manasseh is said to mean etymologically, "divided," and so favours this view.

The change from a priesthood shared by all the tribes to that of a single tribe appears to be indicated in the 32 nd chapter of Exodus, the substance of which may be shortly stated to be that at a time at which two members of the tribe of Levi were at the head of affairs an oracle was pronounced declaring that the people bad given offence to the Deity and calling for volunteers to avenge it; that the tribe of Levi responded to the call and flew to arms, and after some bloodshed the anger of the Lord was considered to be appeased, and we find the priesthood given to the tribe of Levi in place of the first born of all the tribes, (see Numbers, chap. iii.)
14. This change however may not have entirely put an end to the practice of service by rotation. We know that at Rome and Athens after the abolition of the kingly power there were certain sacred offices which only a person with the title of king was thought worthy to perform, and special subordinate officers were accordingly instituted with that title to provide
for their due performance. And conversely, when the ministry of the sanctuary was turned into an hereditary office among the Israelites, it may well have happened that there were some secular offices such as that of forming a military guard about the holy place, which came to be thought only fit to be performed by persons not invested with the priestly dignity. For these then the other tribes would be summoned as before, and would naturally follow in the old order merely leaving out the tribe of Levi. In an ordinary year the twelve tribes would be sufficient for the service, but when the intercalary month occurred some further subdivision would be necessary, and what is more the strain would be felt at the very same point in the circle at which the strain bad been felt on the original system of 12 tribes. And curiously enough it does happen that the tribe of Manasseh, the second half of the original tribe of Joseph, appears in history itself divided into two halves which have separate portions of the conquered territory alloted to them, and are in fact in everything except in name, two independent tribes.

The idea of the tribes performing military service by rotation appears as late as the 1st chapter of the Book of Judges, after the conquest of Canaan, but when the various tribes became settled in distinct territories, and each had its own affairs to attend to, any custom of service by tribes must have fallen into disuse.
15. At all times however, and in all places, as long as lunar epochs were adopted for market days, festivals and military duties, some system of rotation of guards
and watchmen must have been observed. The new moon and full moon of course formed the two most natural points for a change to take place, and the first and last quarter the next most eligible days, and the theory here advocated is that amongst the Jews and Romans, and the Teutonic tribes, and other primitive nations, the guards were changed at these epochs. Now when we recollect that the number of days in a lunar month is about $29 \frac{1}{2}$, it is evident that seven days would be the most usual length of the period from one quarter to another. Two lunar months would comprise eight watches, of which five would consist of seven days each, and three of eight days each.
16. In the course of time the inconvenience of the uncertainty of the length of a watch would be felt, and a fixed system of seven day weeks would come to supersede the irregular system of observing the actual quarters of the moon.
17. Let us look now at the evidence for or against this supposition which can be found in any quarter.
18. First of all the idea of rest connected with the Sabbath is consistent with this origin of it. The change of guards is called in modern military language "the relief," and there can be no doubt that in ancient times also the word denoting it would be one which looked on it from the point of view of the men going off guard, and not from the point of view of those going on. When any coming event is likely to give pleasure to one party, and pain to another, the party to whom it will give pleasure are sure to talk most about it. It is observable also that the Hebrew word
sabbath was used to express a whole week, as well as the last day, just as the modern word "relief" is used to indicate the whole period, during which a man continues on guard, as well as the hour at which he is taken off.
19. Secondly, there is one distinct passage in the Old Testament, mentioning quite incidentally the change of guard on the Sabbath as a matter wellknown at the time. The passage (2 Kings xi. 4-9), which will call again for comment on another point, contains the account of the restoration of King Jehoash to the throne of his ancestors, and is in the following words.
4. "And the seventh year Jehoiada sent and fetched the rulers over hundreds with the captains and the guard, and brought them to him into the house of the Lord, and made a covenant with them, and took an oath of them in the house of the Lord, and shewed them the king's son.
5. "And he commanded them, saying, this is the thing that ye shall do ; a third part of you that enter in on the sabbath shall even be keepers of the watch of the king's house.
6. "And a third part shall be at the gate of Sur, and a third part at the gate behind the guard: so that ye keep the watch of the house that it be not broken down.
7. "And two parts of all you that go forth on the sabbath, even they shall keep the watch of the house of the Lord about the king.
8. "And ye shall compass the king round about,
every man with his weapons in his hand: and he that cometh within the ranges, let him be slain : and be ye with the king as he cometh out, and as he goeth in.
9. "And the captains over the hundreds did according to all things that Jehoiada the priest commanded: and they took every man his men that were to come in on the sabbath, with them that should go out on the sabbath, and came to Jehoiada the priest."

The narrative then proceeds to relate how Jehoash was proclaimed king and Athaliah slain.
20. Thirdly. This origin of the sabbath affords an explanation of the curious ceremony of the weekly exbibition of the sbewbread. Such an institution has every appearance of being what is called in Darwinian language a rudimentary organ. It consisted in later times of the placing a few cakes on a table in the sanctuary every sabbath and leaving them there for a week. May this not have originated from a process of storing up provisions for a week for the men on guard, and may not the officer have required that one meal should always be ready set out in order that he might see at a glance that there were sufficient provisions for the day?
21. Fourthly. The double sacrifice on the sabbath is explained if originally on that day food had to be provided for twice the usual number of men, the old guard as well as the new.
22. Turning again to the Roman Calendar, we find the tendency to mark the quarters of the moon. The month began with the new moon, the first day being celebrated as the Calends, a name which
signifies "call or calling," and is no doubt derived from a practice of publicly announcing the commencement of the new month. One of the objects of the announcement may well have been to summon a new set of officers to their monthly duties. The other noticeable days of the month were the ides, which fell at the full moon, and the nones, which fell at the first quarter. The third quarter was not marked, but this omission is a variety which we might expect to find when we remember that the evening was the time for observation, and at the new moon, the first quarter, and the full moon, the moon is visible in the evening ; while, when it bas got to its third quarter, it does not rise till midnight. It is quite intelligible therefore that when it was in that quarter no feast was held in its honour.

Furthermore, we find among the Romans that a fixed week of eight days came to be adopted, every eighth day being a market day, on which the country people flocked into the city, and the law courts were closed, in order that the market goers might not be harassed by having legal proceedings brought against them. Some evidence that this system of eight-day markets arose out of an earlier system of holding market-days at the quarters of the moon is found in the fact that the same or a similar word (none or nundinæ) was used to denote both the market days and the feast at the first quarter of the moon.

Then our finding an eight day week in one nation and seven day weeks in several others, strongly tends to show that they both arose out of some cause capable
of giving rise to either. And such we see the quarters of the moon to be, constituting as it did originally an irregular system of 5 periods of 7 days to 3 of 8 days. Such a system was of course more likely to give rise to a fixed system of 7 day weeks; still on the mere doctrine of mathematical probabilities it might be expected that in some cases it would give rise to an eight day system.
23. To this we may add that the ancient Persians appear to have observed a system of weeks containing alternately seven and eight days; and the Buddists are stated at the present time to make their offerings at the temples on the actual four quarters of the moon. (Priaulx's Questiones Mosaicæ, pp. 33, 38.)

Also when we find that the English and Germans have native words for a week, and native names for several of the days of the week, we are surely justified in concluding that a week of seven days with recurring names was known to the ancient Teutonic nations; and the inference appears to be just that the English word 'week' and the German word 'woch' are derived from the same root as the words' wake' and 'watch,' and thus point to the same origin for the Teutonic week as the Hebrew week appears to have had.*

[^5]24. Turning again to the Jerss, if we compare the version of the Ten Commandments which is giren in Exodus, with that which is contained in Deuteronomy, we shall find that they differ in one important particular. The clause at the end of the Fourth Commandment, "For in six days the Lord made the heavens and the earth, the sea, and all that in them is, and rested the seventh day" is omitted in Deuteronomy, and in its place we find substituted, " And remember that thou wast a servant in the land of Egypt, and that the Lord thy God brought thee out thence through a mighty hand and by a stretched out arm, therefore the Lord thy God commanded the to keep the sabbath day." Deut. v. 15.
\[

$$
\begin{aligned}
& \text { 25. Exodus xx. 2-17. } \\
& \text { "I am the Lord thy God, } \\
& \text { which have brought thee out of } \\
& \text { the land of Egypt, out of the } \\
& \text { house of bondage. }
\end{aligned}
$$
\]

Deut. v. 6-21, 22.
"I am the Lord thy God, which brought thee out of the land of Egypt, from the house of bondage.
closed the law courts upon it, for fear that the market goers might be molested, if actions could be brought against them." (Sextus Pompeius Festus, a.d. 500, p. 173, ed. Müll; cf. Macrobius, s. 1, 16, A.D. 395.)
"Annum ita diviserunt, ut nonis modo diebus urbanas res usurparent, reliquis septem ut rura colerent." (Varro, de re rustica 2 Præf. I. Varro died b.c. 26.)
"They so divided the year that they attended to city affairs every eighth day, and cultivated the fields on the other seven."

Macrob. Sat. i, 9, 15, says that some people thought the word Ides was derived from the Greek word "eidos" signifying "form," because on " that day the moon displayed its full form."

Dionysius Antiq. x. 59, says that the Romans had lunar months in в.c. 448.

## On the Division of Time

" Thou shalt have no other gods before me.
" Thon shalt not make unto thee any graven image, or any likeness of any thing that is in heaven above, or that is in the earth beneath, or that is in the water under the earth :
"Thou shalt not bow down thyself to them, nor serve them: for I the Lord thy God am a jealous God, visiting the iniquity of the fathers upon the children unto the third and fourth generation of them that hate me;
"And shewing mercy unto thousands of them that love me, and keep my commandments.
"Thou shalt not take the name of the Lord thy God in vain; for the Lord will not hold him guiltless that taketh his name in vain.
"Remember the sabbath day, to keep it holy.
"Six days shalt thou labour, and do all thy work:
" But the seventh day is the sabbath of the Lord thy God: in it thou shalt not do any work, thou nor thy son, nor thy daughter, thy manservant, nor thy maidservant, nor thy cattle, nor thy stranger that is within thy gates:
"For in six days the Lord
" Thou shalt have none other gods before me.
"Thou shalt not make thee any graven image, or any likeness of any thing that is in heaven above, or that is in the waters beneath the earth:
" Thou shalt not bow down thyself unto them, nor serve them: for I the Lord thy God am a jealous God, visiting the iniquity of the fathers upon the children unto the third and fourth generation of them that hate me,
"And shewing mercy unto thousands of them that love me and keep my commandments.
"Thou shalt not take the name of the Lord thy God in vain: for the Lord will not hold him guiltless that taketh his name in vain.
"Keep the sabbath day to sanctify it, as the Lord thy God hath commanded thee.
"Six days shalt thou labour, and do all thy work:
"But the seventh day is the sabbath of the Lord thy God: in it thou shalt not do any work, thou, nor thy son, nor thy daughter, nor thy manservant, nor thy maidservant, nor thine ox, nor thine ass, nor any of thy cattle, nor thy stranger
made heaven and earth, the sea, and all that in them is, and rested the seventh day: wherefore the Lord blessed the sabbath day, and hallowed it.
" Honour thy father and thy mother: that thy days may be long upon the land which the Lord thy God giveth thee.
"Thou shalt not kill.
"Thou shalt not commit adultery.
" Thou shalt not steal.
"Thou shalt not bear false witness against thy neighbour.
" Thou shalt not covet thy neighbour's house, thou shalt not covet thy neighbonr's wife, nor his manservant, nor his maidservant, nor his ox, nor his ass, nor any thing that is thy neighbour's."
that is within thy gates: that thy manservant and thy maidservant may rest as well as thou.
"And remember that thon wast a servant in the land of Egypt and that the Lord thy God brought thee out thence through a mighty hand and by a stretched out arm: therefore the Lord thy God commanded thee to keep the sabbath day.
"Hononr thy father and thy mother, as the Lord thy God hath commanded thee; that thy days may be prolonged, and that it may go well with thee, in the land which the Lord thy God giveth thee.
"Thou shalt not kill.
" Neither shalt thou commit adultery.
" Neither shalt thou steal.
"Neither shalt thou bear false witness against thy neighbour.
" Neither shalt thou desire thy neighbour's wife, neither shalt thou covet thy neighbour's house, his field, or his manservant, or his maidservant, his ox, or his ass, or any thing that is thy neighbour's.
" These words the Lord spake . : . and he added no more. And he wrote them in two tables of stone, and delivered them unto me."

This difference of theory as to the origin of the sabbath involves it may be observed an important practical consequence. According to the Exodus theory the sabbath would have been binding upon the Gentiles, while according to the Deuteronomy theory it would be a peculiar institution of the Jews. We know that these two opinions were held by learned Jews in later times, and it is exceedingly probable that the question was mooted in early times also. The most reasonable inference then to draw from these conflicting versions would seem to be, that there was a time when the Ten Commandments existed without either of these final clauses of the Fourth Commandment, and that they were added by two subsequent editors belonging to the two schools of Jewish thought holding the two conflicting opinions as to the obligation of the Gentiles to observe the sabbath.

Of course this necessarily implies that the observance of the sabbath as a fact, and also the codification of the law of its observance in the stringent terms of the beginning of the fourth commandment, were earlier in date than either of the theories of its origin propounded in the Bible.
26. It is also very easy to show that the strict observance of the sabbath, and notably the abstinence from fighting, did not exist before the captivity. Thus in the time of the Maccabees, which was the first serious war in which the Jews were engaged after the captivity, we find the slaughter of the Jews without resistance on the Sabbath day arising as a new case, and for that new case a rule is made for the
future to the effect that defensive fighting is permissible, but aggressive fighting is forbidden. ( 1 Macc. ii. 41 ; Josephus Ant. xii. ri. 2.) The fact that the case was new shows that the law under which it arose was new also.

It is no doubt a curious instance of the tendency of the human mind to attribute a greater sanctity to artificial rules of morality than to natural ones, that the Jews felt no scruple whatever in holding that a war for the existence of their nation and religion formed an exception to the rule "Thou shalt not kill," but they could not bring themselves to regard it as forming an exception to the rule "Thou shalt do no work on the seventh day."

Then in later history, and notably in the two sieges of Jerusalem by Pompey and Titus, the unwillingness of the Jews to fight on the Sabbath plays a prominent part, and the historians attribute the capture of the city on both occasions to that cause (Jos. Aut. xiv. iv. 2 ; Dion Cassius, xxxvii. 16).

But in earlier times we kear norhing of this, neither in the Bible itself, nor in any of the records of the nations, which came in contact with the Juss, do we find a trace of any unwillinguess to fight on any dav. We have accounts of sieges of Jerusalem by the Assyrians and Babylonians, and accounts of wars of the Jews with the Philistines, Syrians, Egyptians, and with each other, but never a word about refusing to fight on the sabbath. Indeed when we go back far in history and read the account of the siege of Jericho, we find a period of seven days observed indeed in
war, but the seventh day is the very day for assaulting the enemy's town, and expecting a divine interposition in aid of aggressive warfare.

There is also distinct evidence in the Old Testament that the Jews, in later times, were aware that the sabbath had not formerly been observed as it was observed by them. And indeed they frequently attributed the captivity to the Divine wrath for their ancestors' neglect in this respeet. Thus in Nehemiah, xiii. 15-18, we read :
"In those days saw I in Judah some treading winepresses on the sabbath, and bringing in sheaves, and lading asses, as also wine, grapes and figs, and all manner of burdens which they brought into Jerusalem on the sabbath day: and I testified against them in the day wherein they sold victuals.
"There dwelt men of Tyre also therein, which brought fish and all manner of ware, and sold on the sabbath unto the children of Judah and in Jerusalem.
"Then I contended with the nobles of Judah and said unto them, What evil thing is this that ye do, and profane the sabbath day?
"Did not your fathers thus, and did not our God bring all this evil upon us, and upon this city? yet ye bring more wrath upon Israel, by profaning the sabbath."

And again at the end of the book of Chronicles, after the account of the Captivity, we find, ( 2 Cbrouicles xxxvi. 21.)
"To fulfil the word of the Lord by the mouth of Jeremiah, until the land had enjoyed her sabbaths;

> into Periods of Seven Days.
for as long as she lay desolate she kept sabbath, to fulfil threescore and ten years."

And the idea embodied in this verse appears more clearly in Leviticus $x \times v i .34,35$, which it is very difflcult to imagine to have been written before the Captivity.
"Then shall the land enjoy her sabbaths, as long as it lieth desolate, and ye be in your enemies' land ; even then shall the land rest, and enjoy her sabbaths.
"As long as it lieth desolate it shall rest, because it did not rest in your sabbaths when ye dwelt upon it."
27. Now, we may, I think, fairly assume that it would have been impossible for the Jewish legislators suddenly to have promulgated their law of the strict observance of the Sabbath, and to bave declared it to have been divinely delivered to Moses, and to have called on their people to condemn whole generations of their ancestors as sabbath breakers, if the nation had not been gradually educated up to this state of feeling, by the sabbath being constantly regarded with greater feelings of sanctity, and some observance of it being ordained by earlier laws. And both these facts may be said to be established by the evidence we have before us.

Thus in the xixth chapter of Leviticus, which appears to contain an early collection of laws of date anterior to the Ten Commandments, we read in the 3rd verse, "Ye shall fear every man his mother and his father, and keep my sabbaths; I am the Lord your God."

And in the 30th verse,
" Ye shall keep my sabbaths and reverence my sanctuary : I am the Lord."

Here then we have a command to reverence the Sabbath; but the Sabbath is not defined to be every seventh day, nor is work forbidden upon it.

Again, we find in the Ordinances of the Feasts that certain special days were to be celebrated with holy convocations, and abstinence from servile work, and such days are called Sabbaths, though not nccessarily coinciding with the ordinary Sabbaths. The special days thus to be attended to include (1) the Passover on the 14th day of the first month, being at a full moon; (2) the first aud 7th days of the feast of unleavened bread, which lasted for seven days after the Passover, up therefore to the 3rd quarter of the moon; (3) the first day of the 7th month, a new moon, and (4) the first and last days of the Feast of Tabernacles, being the 15th and 22 nd days of the 7th mouth, a full moon, and a last quarter. (Exodus xii. 1-16; Lev. xxiii.)

The fact that we have here five special days held at quarters of the moon, observed like ordinary Sabbaths aud in places called Sabbaths, is surely strongly confirmatory of the theory that the ordinary Sabbaths themselves arose from a similar origin.

Turning now from the Laws to the notices of the Sabbath in the times of the Kings, we may first recur to the passage already quoted of the restoration of Jehoash ( 2 Kings xi. 1-16), from which it is clear that the inhabitants of Jerusalem in the times of Jehoiada entertained no scruple against bringing about a revolu-
tion on the Sabbath day, and slaying a queen who had held the throne more than six years.

We find another notice of the Sabbath in the story of the raising of the Shunamite's son by Elijah (2 Kings iv. 22,23). After the child is dead, we read. " And she called unto her husband and said, Send me I pray thee one of the young men, and one of the asses, that I may run to the man of God, and come again. And he said, Wherefore wilt thou go to him to-day? it is neither new moon nor Sabbath."

Here then the Sabbath is regarded as a day on which a journey may lawfully be taken, and also as a day on which a visit to a man of God would properly be paid. The Sabbath is invested with some sanctity, but the impropriety of work upon it is not established. The association of the new moon with the Sabbath is also noticeable. As this association also occurs in the two next passages about to be quoted, a few words may be said upon it. The mention of the new moon shows that it was not included in the Sabbath, and we may therefore infer that the lunar sabbaths had already been superseded by the calendar system of seven day weeks. At the same time the continuance of the observance of the new moon after the observance of the other quarters, with the exception of the special feasts, had been given up, is easily explained when we remember that the new moon still marked the commencement of the month.

The other passages in which new moons and sabbaths are associated are in Isaiah. In chap.i., ver. 13 , we find " Bring no more vain oblations ; incense is
an abomination unto me, the new moons and sabbaths, the calling of assemblies, I cannot away with; it is iniquity, even the solemn meeting."

Here then is evidence that in Isaiah's time, which was before and during the reign of Hezekiah, the Sabbath was celebrated with solemn meetings, which he regarded however as inconsistent with the true principles of religion and morality.

And in the 23 rd verse of the 66 th chapter of Isaiah, we find "And it shall come to pass from one new moon to another, and from one sabbath to another, shall all flesh come to worship before me, saith the Lord."

So that at the time at which this was written the practice of going to worship on the Sabbath was approved by the writer.

It may be well to notice that the account of the Flood contains several notices of the observance of a period of seven days, but in each case the seventh day is the day of action and not of rest. Thus seven days before the Flood begins Noah is addressed (Gen. xii. 4,) " Yet seven days, and I will cause it to rain upon the earth," and at the end Noah waits seven days after the first return of the dove, and sends it it forth again, when it returns with an olive leaf, and he again waits seven days and sends it forth again when it does not come back. However on looking closely into the story of the Flood there is one very noticeable fact. We are first told (vii. 11) that the rain began on the seventeenth day of the second month, and then we read (viii. 3, 4) " and after the
end of the 150 days the waters were abated, and the ark rested in the seventh month on the seventeenth day of the month."

Therefore five months contained 150 days, and each month contained 30 , or in other words the story indicates a calendar system of months and not a lunar one. Now the whole of the other evidence shows that the Jews always observed a lunar system. From this it has been justly inferred that the story of the Flood coutained in the Bible is not a native Jewish story, but is a translation from the writings of some alien nation which observed a calendar system of months. The Babylonians appear to bave observed such a system. ("Records of the Past," Vol. I.)
28. We ought, moreover, to observe that there is one very material circumstance besides those which we have already noticed which led to the number 7 being regarded as sacred in early times, and no doubt helped to bring about the adoption of a fixed system of seven day weeks, in preference to eight day weeks, and that circumstance is that the exceptional phenomena of the heavens are seven in number.

The Sun and Moon are of course the two chief exceptional phenonena in the heavens, and the other five are the five planets, Mercury, Venus, Mars, Jupiter and Saturn, being the only five known to the ancients, and the only five readily discoverable by the naked eye. It is not surprising that the early stargazers were struck with the fact that these five heavenly bodies wandered about amid the host of heaven, while all the others maintained the same
relative positions, and that they regarded them accordingly with mysterious awe and attached to them a peculiar sanctity.

Thus Berosus, a priest of Belus at Babylon, who shortly after the Greek conquest of Asia, that is about b.c. 300 , wrote a history of his country from the origin of all things down to his own time, of which a few fragments have been preserved, ends his account of the creation by saying, "Likewise Belus made the Stars, the Sun and the Moon and the five Planets."*
29. And the strangest fact on this part of the sub. ject is that the days of the week in modern Europe still bear the names of the Sun and Moon and the five Planets. Thus we in England call three of the days, Saturday, Sunday, and Monday, and our neighbours across the Channel call the other four Mardi, Mercredi, Jeudi, and Vendredi, meaning the days of Mars, Mercury, Jove, and Venus. These names are undoubtedly derived from the Romans, and the introduction of them amongst the Romans is told by Dion Cassius, who in about the year a.d. 200 wrote a history of Rome. (Dion Cassius, xxxvii. 16.) He has just been giving an account of the capture of Jerusalem bs Pompey, which he tells us took place on a day of Kronos or Saturn, and he has been mentioning the fact that the Jews would not fight on that day, and then he proceeds :
30. "And as to the system of referring the days to the seven heavenly bodies called the Planets, it was

* Josephus Ant. III. vi. 7, refers the seven branches of the golden candlestick to the same origin.
instituted by the Egyptians, and is used by all penple, its commencement being, so to speak, not very long ago. The ancient Greeks knew nothing about it, so far as I am aware. But since it is established among all other people, and the Romans themselves, and is already in a sense a national institution of theirs, I wish to say a few words as to how and in what manner the arrangement was made."

He then says there are two theories as to the origin of the arrangement, one being that you arranged the bodies in order, beginning with the furthest from the earth, and then took them as if you were playing on a diatessaron, which consists in skipping over two each time and taking the third, and going over them again and again till you have struck every note ; and the other being that you arranged them in the same order and called the 24 hours by their names successively, and then called each day by the name of its first hour. These theories are evidently fanciful, and on looking into them it will be found that they require the bodies to be arranged thus.

> Saturn.
> Jupiter.
> Mars.
> Sun.
> Venus.
> Mercury.
> Moon.

An arrangement which obviously involves the error of transposing Mercury and Venus.

These theories therefore are valueless, but the state-

## On the Divsion of Time

ment of Dien Cassius that the system had recently spread over the Roman world, may be accepted as correct, being a statement of a recent matter of general notoriety, and one which is moreover borne out by other good evidence. And his statement that it was invented by the Egyptians appears also to have some truth in it. There is a passage in Herodotus in which he says that the Egyptians had discovered to what God each month and each day belonged, and it seems that the names of their days recurred every seven days, and that the Gods denoted by them were identifiable with the Sun and the Moon, and the five Planets.-(Herod. ii. 82. See also note at end.)
31. At the same time, although the names of the days undoubtedly indicate a beathen origin, there can be little doubt that the observance of a Seven day period by both the Jews and Christians, who were spreading over the Roman Empire at the time we are considering, helped to lead their Pagan neighbours to adopt a similar system, and caused it to supersede the various irregular local customs which previously existed.* The utility of a fixed system for holding

[^6]markets, paying domestic bills and school pence, and carrying on matters of municipal administration is obvious, and we cannot be surprised at its introduction. It is, however, a curious coincidence that the first day of the Jewish week, on which the Christians held their solemn meetings, coincided with the day named after the sun, the chief of the seven luminaries. And it is worth noticing, though less remarkable, that the heathen came to attach some sacredness to that day, and gave to the Sun a prominent place in the revived form of Paganism, which they endeavoured to cultivate. Still no legal sanction was attached to the observance of the day until Constantine came to the throne; but he, in A.D. 321 , some time before he embraced Christianity issued an edict, enjoining its observance. This Edict, which was
and bas the mightiest influence, and many of the celestial matters show their power and pursue their course by sevens."
"Septimo die otium placuisse ferunt, quia is finem laborem tulerit, dein, blandiente inertia, septimum quoque annum igaavix datum. Alii honorem eum Saturno haberi, seu principia religionis tradentibus Idxis, quos cum Saturno pulsos et conditores gentis accepimus, sea quod de septem sideribus quîs mortales reguntur altissimo orbe et præcipua potentia stella Saturni feratur, ac pleraque coelestium vim suam et cursum septimos per numeros commeare."-(Tacitus, Hist. ष. 4.)
Amongst other instances of the number seven occurring in celestial matters it may be mentioned that each of the constellations of the Great and Little Bear is denoted by a group of seven stars, whence the north was called in Latin "Septentriones," also the Pleiades seem to have appeared to clear-sighted observers in early times as a group of seven stars.
justly considered as shewing the inclination of Constantine's mind towards Christianity, was in words which may be translated as follows:
32. "Let all the Judges and the common people of the towns and the working of all arts, rest on the sacred day of the sun. But let dwellers in the country freely and lawfully labour at the cultivation of the fields, since it often happens that corn cannot be better committed to the furrows, or vines to the trenches, on any other day; so that the opportunity granted by the providence of heaven may not be lost by occasion of the season."

Codex Justiniani, Lib. iii. Tit. xii. Lex 3.
Imperator Constantinus A Elpidio. Omnes judices, urbanæque plebes, et cunctarum artium officia vererabili die solis quiescant: ruri tamen positi agrorum culturæ libere licenterque inserviant: quum frequenter convenit ut non aptius alio die frumenta sulcis, aut vinew scrobibus mandentur: ne occasione momenti pereat commoditas ccelesti provisione concessa. Datum monis Martiis Crispo secundo et Constantino secundo consulibus.

See also Cod. Theodos. Lib. ii. T. x. Lex 1.
And the law thus introduced by Constantine was preserved in the same terms by succeeding Christian Emperors.
33. We have now reviewed the main points in the observance of a seven-day week from the earliest times down to a period in history connected with our own day by a well-known chain of events. And it only remains to add that I hope that no one will
imagine that in arguing that the observance of Sunday has a purely human origin, I am any adrocate for abolishing it, and opening the Law Courts and setting the working men of all classes of society to labour upon it. No one, who works at all, will deny the desirability of having some intervals of rest, and if intervals there must be, it is surely most pleasing to keep up a custom handed down from the remotest antiquity and invested with such sentiments of reverence and historical and archæological interest as are not attached to any other institution in the world. Nor need our sentiments of reverence for the day of rest be the least impaired by finding that it does not owe its origin to a capricious whim on tho part of tho Creator, but that its periods have been determined by the Motions of the Hands of the Chronometer of tho Heavens, and its prevalence is due to its beneficent tendency in promoting virtue and happiness amongst mankind.

## NOTE ON THE EGYPTIAN WEEK,

 Kindly communicated by Dr. G. G. Zerff.Judging from the Egyptian mythology wo aro justified in assuming, that they had some correct uotions of the division of time. Their 8 gods of the first; order, point to an incarnation of the cosmical forcer, or the planetary system. The 12 gods of the second order undoubtedly presided over the 12 months of the year; whilst the 7 gods of the third order wore to watch over the 7 days of the week. The severn
gods were-1. Seh or Typhon. 2. Hesiri, Osiris. 3. Hes or Isis. 4. Nebt-hi, the sister of the former. 5. Her-Her, or Aroeris, corresponding to the Venus of the Greeks and Romans, or Freya of the Teutons and Sukras of the Indians. 6. Her or Horus; and 7. Anups or Anubis. The Teutons (especially AngloSaxons and Germans) have inherited the division not only of the week in 7 days, but also the names by which these days are called from the Indians. Suryas, Sunday; Chandras, Monday ; Mangalas, Mars' day, or the day of the god of war; Tuisko's day, Tuesday; Buddhas, Buddha's day, or Woodan's day, our Wednesday; Vrihaspatis, or Divaspitar, the Latin Jupiter or the Teuton Thor's day, our Thursday; Sukras, the day of the goddess of love, the Teuton Freya or Friday; and Sanis, Saturn's day, our Saturday. (Refer to Bohlen, " Das alte Indien;" "Toth," by Dr. Uhlemann, and Bunsen's "Egypt's place in History." Tacitus, Suidas, Pliny, and Amosis.)


[^0]:    * The expression in Judges v. 20, 'The stars in their courses fought against Sisera, the river Kiston swept them away,' no doubt implies that the stars were then rising which ushered in the rainy season.

[^1]:    * A vast amount of information on this point, and on other points treated of in this essay will be found in "Time and Faith," Groombridge and Sons, 1857.

[^2]:    * The moon at the full being always opposite the san, its position among the stars might be used to determine that of the sun, or to tell the commencement of the year or the season directly. Possibly the commencement of the Jewish year was originally fixed by the first full moon which occurred beyond a certain line amongst the stars, and the feast beld at it was called the Passover, to signify that the full moon had passed that line.

[^3]:    * It may be remembered that the Spartans failed to take part in the battle of Marathon because they waited for a full moon to start at. Their superstition was no doubt derived from a custom of assembling at the full moon, the custom being based on the fact that it was the easiest time to summon a gathering.

[^4]:    * The expressions in the first chapter of Genesis " the evening and the morning were the first day," \&c. will no doubt occur to every one.

[^5]:    * The following passages may here be referred to: "Nundinas feriatum diem esse voluerunt antiqui, ut rustici convenirent mercandi vendendique causâ; eumque nefastum, ne, si liceret cam populo agi, interpellarentur nundinatores."
    "The ancients settled that every eighth day should be a market day for the country people to meet to buy and sell; and they

[^6]:    * Tacitus writing a.d. 110, the account of the fall of Jerusalem in A.D. 70 says : "They say that rest pleased them on the seventh day because it brought the end of labours; then as idleness was pleasant, the seventh year also was devoted to sloth. Others say that that honour is paid to Saturn, either because the Idæi delivered the principles of their religion, whom we have settled to have been driven out with Saturn and to have been the founders of the race, or because that of the seven stars by which mortals are governed, that of Saturn is carried in the loftiest orbit

