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*DR. JOHANNES LEPSIUS ON THE SYMBOLICAL
LANGUAGE OF THE REVELATION.*

A. INTRODUCTION (*continued*).

As Dr. Lepsius defined his position in the first of his articles on this subject,¹ "I do not assert that I am able to interpret the Revelation of John. . . . Nevertheless I think I may say that in our time the Revelation of John can be read with more understanding than was possible before, for the riddle of the symbolic language of the Apocalypse is in the main solved."

The whole series (of which this is the second last) is really the Prolegomena to a scientific study of the Revelation, and not the completed theory.

The subject of which the articles treat is one which to us at first sight seems to be remote from the range of knowledge of the ordinary educated man, and to demand such careful and elaborate study in a library of recondite books as would be inconsistent with the situation of the seer of the Revelation, a prisoner on a rocky and hardly populated island of the Aegean Sea.

This, however, is only a superficial appearance, due to the conditions of modern life. In ancient times not merely was the ordinary man, and especially the rustic, accustomed to regard the heavens as his time-keeper for the day and the year:² not merely did general opinion look to the heavens for guidance in difficulties and advice about public affairs:³ the more educated man, also, was acquainted with astronomical phenomena and their bearing on chronology and history to an extent that we can understand only by an effort. In modern and mediaeval history we are

¹ *EXPOSITOR*, February 1911, p. 166 f. ² *EXPOSITOR*, May 1911, p. 464 f.

³ *Ibid.* p. 468.

relieved from almost all difficulty in this respect: one single statement by a trustworthy authority is usually sufficient in itself. This we owe to the Julian and Gregorian calendars. In ancient chronology, however, even when several statements occur regarding the date of an event, all probably equally trustworthy, and any one of them sufficient in itself if we possessed the requisite knowledge to comprehend it as fully as the ancient writer had it before his mind, these may and often do prove insufficient to fix the date. They assume much knowledge that is lost to us. Being made from different points of view and expressed according to different chronological systems of reckoning, they often fail to throw light on one another or to elucidate the problem for us. In many cases a single chronological statement demands an elaborate astronomical treatise to make it intelligible: sometimes the required treatise has been already written by some laborious modern scholar: in other cases there are a dozen treatises all coming to different conclusions regarding the fundamental data according to which the statement must be interpreted.

Astronomical chronology is a difficult and important subject, which few now can understand, and for which special training is needed. Yet in ancient times it was quite natural for the orator *Ælius Aristides* to define the year of his birth by the position of the sun in the zodiac, and it was quite easy for others to understand his meaning. Astronomical illustrations were common in conversation and literature, and were understood by all who ranked as truly educated. Even at the table of the vulgar and uneducated who imitated the manners of educated society, a smattering of astronomical knowledge was considered necessary as a proof of good manners.

There is, therefore, nothing remarkable, nothing that should astonish us, in John's ability to employ astronomical

data or numbers in the Apocalypse. His visions were in part moulded by his education, both generally by his past experience from infancy or at school and specially by his familiarity with earlier apocalyptic literature.

After all, the reader must remember that purpose and the result of these papers is to place the reader in a position to study the Apocalyptic symbolism, and not to give a complete explanation of the Apocalypse. That they point the way and tempt him further on in the path of study is among their most useful characteristics.

What are we, in a general view and apart from special details, to take as the chief gain resulting from these studies ? I should venture to regard the following as at least a very noteworthy advantage and a marked step in progress. Just as alchemy was the elementary and unscientific stage of scientific chemistry, and astrology of modern astronomy, so we must recognise in this religious application of astronomical observation the early stage of that method of thinking which has produced in modern times Bishop Butler's *Analogy of Religion, natural and revealed, to the Constitution and Course of Nature*, and in our own time Professor Drummond's *Natural Law in the Spiritual World*. To the ancients the Will of God and the history of mankind were written in the phenomena of the heavens. As Psalm xix. expresses it : "The heavens declare the glory of God . . . day unto day uttereth speech"; and yet "there is no speech nor language: their voice cannot be heard." The first six verses of the Psalm declare the perfection of the natural world as seen in the heavens. Then the perfection of the moral world as seen in "the law of the Lord" is declared in verses 7-10. The last four verses draw the inference, applying it to the life of the ordinary man as exemplified in the writer of this hymn : "by the law and

commandments of God is thy servant warned." To study and know the ordinances of God is wisdom.

It may be that, in the future, opinion will be divided. Some will look back on the method of Butler and of Drummond as no less antiquated than the astronomical comparisons and symbolism of the Jewish Apocalyptic writings, while others will regard the latter as embodying a truth no less profound than the essays of the two moderns.

This seems to be the spirit in which, and the point of view from which, the Revelation can best be studied. "Behold a door opened in heaven, and the first voice . . . as of a trumpet . . . saying, 'Come up hither, and I will show thee the things which must come to pass.'" The things which are seen in the heaven are a symbolic expression of the Will and law and commandments of God; they show the principles, but not the details of history.

In the present paper Dr. Lepsius devotes considerable attention to explaining the three different statements of the number of days in the cosmic half-week, i.e. three and a half years. I referred to the need for an explanation of this matter in the EXPOSITOR, June, 1911, p. 507. The explanation of the cosmic week and half-week seems to me to constitute one of the strongest parts of Dr. Lepsius's theory, together with the exposition of the Apokatastasis (which has played so great a part in thought and literature).

In strictly Apocalyptic writings the half-week of years had only symbolic meaning, and could have no real connexion with any period or interval of three years in history. It is a cosmic, not a historical fact. Even in a book like Daniel, where much history is loosely intermingled with eschatological myth, and where general principles of history are mixed with crude recital of details, it is evident that in the last chapter of the book the half-week of years is a cosmic or astronomical idea and its varying length in

different astronomical relations is stated in a way that could have no mere historical significance.

In the eleventh chapter, on the other hand, a historical period is loosely identified with this astronomical period, though the length does not fit : but the dignity of a cosmic fact is imparted to that historical period by the identification.

Similarly as regards historical principles. Owing to geographical circumstances the foreign relations and policy of Palestine were always and necessarily influenced largely by the intercommunication between the land to the north of it and the land to the south, whereas intercommunication across Palestine from the east to the west exercised only the smallest influence on the development of the country. Palestine lay on a great north and south road. Even Assyrian or Babylonian traffic and war came into Palestine and passed across Palestine, moving on the line from north to south ; for though Babylon lies to the east, yet there was no road for an army from Babylon except up to north Syria, and then south into Palestine. That eternal principle of Palestinian history is adapted to a special period in Palestinian history, when the wars and negotiations between the Seleucid kings of Syria on the north and the Ptolemaic kings of Egypt on the south swept back and forward through the lowlands of Palestine and affected the highlands of Judah and Jerusalem. This adaptation of general principles and cosmic facts to the details of history is carried out with pedantic detail in the Book of Daniel, to the sacrifice of almost all apocalyptic dignity and mystery ; but even this would hardly justify the attempt in chap. xii. to bring the astronomical varieties of the half-week of years into detailed agreement with history. Rather the truth is that in the conclusion the book returns to the apocalyptic and mysterious level.

Even the slightest survey of Daniel's visions suffices to

show on how much higher a level the Revelation stands, where the references to Rome and Roman history never descend into pedantic detail, and are generally pitched on the level of historic generalisations and apocalyptic imagery, so that perfect assurance of victory over the mighty Empire and the continuous triumph of the saints and martyrs are the impression achieved through the vision.

W. M. RAMSAY.

J. THE RESTITUTION OR APOKATASTASIS.

ALL eschatological calculations of "times and seasons" are necessarily founded on the astrological idea of the "Apokatastasis" or restitution of all things. When the disciples asked the Lord (Acts i. 7), "Lord, wilt thou at this time restore again (*ἀποκαθιστάνεις*) the kingdom to Israel ?" they were thinking of the dawning of the day of perfecting. In the same sense Peter speaks (Acts iii. 21) of the times of restitution (*ἀποκαταστάσεως*) of everything that the prophets have spoken of. The mode of expression gives a glimpse of the underlying chronological idea of the Apokatastasis. Let us try first to give an explanation of the idea of the Apokatastasis.

The idea of the Apokatastasis springs from the astrological view of the world taken by the ancients. The old orientals were convinced that the times and destinies of the world could be read in the movements of the heavenly bodies. According to their view everything on earth is subject to the influence of the stars. The mikrokosm of the earth is a reflection and image of the makrokosm of the astral world. Therefore everything that takes place on earth must be ordered according to the "example of heavenly things" (Heb. viii. 5). Thus the progress of the centuries until the completion of the world's course is decided by the cyclical movements of the celestial bodies. The advance

of the hands of the heavenly dial shows which hour of the world has struck. Already in the story of the creation (Gen. i. 14), the sun and moon, the great and little hands of the clock, have their task allotted to decide "the course of times and seasons, days and years."

Already in very early times the Babylonians and Egyptians learned from their observation of the heavens that the revolutions of the sun and moon, and their relation to the apparent movement of the firmament of the fixed stars, return to agreement with one another only at long intervals of time. The inharmonious movements of the celestial bodies appeared to be an image of the troubled course of the world. Not till the original harmony of the movements of the stars was restored could eternal peace come to the earth. Therefore "a new heaven" was expected as well as "a new earth," for the two are in such close mutual relation that neither can be made perfect without the other.¹ The hope that, after the expiration of a previously determined period, "a time of refreshing from the presence of the Lord" (Acts iii. 20) would bring perfection to the world, led the priesthood to turn their attention to the course of the stars. The latter appeared, after long cyclical periods, to be returning to their original constellations. The astrological term for this return of the stars to their original constellations is "Apokatastasis." From the Apokatastasis, therefore, they hoped for the rebirth and restitution of all things. A soteriological interest lies ultimately at the root of all astrology. The moment in which the hands of the world-clock returned to the same point on the face of the heavens, was looked forward to also as the day of the appearance of the Redeemer-King or Saviour of the world, from whom the restoration of the original harmony of all things was expected. After the

¹ Revelation xxi. 1.

expiration of the inharmonious time on earth which is decided by the inharmonious course of the stars, the age of paradise, the kingdom of eternal peace, the Messianic time would dawn, and all earthly misery, war, disease, sin and death would come to an end.

Upon the priestly astrologers of the ancient religions devolved the duty of calculating the cyclical course of the stars and the periods of adjustment of their motion from the eschatological point of view. The Yugas of the Indians, the Saroi of the Babylonians, the twelve world-eras of the Bundehesh, the phoenix-period of the Egyptians, the great Platonic world-year, all such systems of world-eras are the chronological expression for the hope of a Palingenesis, a rebirth of the universe, in which the whole creation will celebrate its resurrection. The ideas of Restitution (*ἀποκατάστασις*), Perfecting (*τελείωσις*), New Birth or Palingenesis (*παλιγγένεσία*), Resurrection (*ἀνάστασις*), Refreshing (*ἀνάψυξις*), are only different forms of the same thought.

In reckoning the appointed day of the world's completion, various cyclical periods were taken as a foundation: first the periods of adjustment between the courses of the sun and moon, then the return of the position of the planets to those signs of the Zodiac which they were supposed to have occupied in the original "*thema mundi*," and lastly the advance of the equinoctial points on the Zodiac, the so-called precession. The astrological term for the final point of agreement of all these cyclical periods is Apokatastasis (*ἀποκατάστασις*).¹

The greatest astronomical world-period is measured by the advance of the equinoxes on the zodiac. The longest hand of the dial of the universe is the precession. About

¹ Compare Brandes *Abhandl. z. Gesch. des Orients*, p. 123. The Egyptian Apokatastasis-years.

26,000 years are necessary for this hand to move once round the face of the zodiac. The precession was known already to the Babylonians and Egyptians: whether and how long it was known before is still in dispute. The Babylonians seem to have been unable to discover a more exact mode of reckoning.

The Egyptians required no astronomical calculations founded on observation of the stars to help them to a more or less exact establishment of the precession. They could discover the movement of the precession in a much simpler way, viz., by the shifting of their civil calendar as compared with the fixed calendar of the Sirius-year. In the Sirius-period of 4×365 or 1,460 years, in which their civil year of 365 days came round into agreement with the sun-year of $365\frac{1}{4}$ days by repeating itself 1,461 times, they had an astronomically perfectly exact period, for the determining of which only a regular observation of the heliacal rising of Sirius, the brightest of the fixed stars, was necessary. This period of 1,460 years is expressly alluded to by the ancients as the "Apokatastasis of the zodiac." The Apokatastases of the Sirius period fell in the years 2785 and 1325 B.C., and in the year 136 A.D. The name and the appearance of the false Messiah Bar Kochba (Star-son) in 132 A.D. four years before the Apokatastasis of 136 A.D., may be connected with this.

In the reckoning of the Sirius-period the fixed sun-year, like the Julian, is given 365 days and exactly 6 hours. But in reality the tropical sun-year has only 365 days 5 hours 48 minutes and 48 seconds. In the Egyptian calendar this difference grew in the course of a Sirius-period to about 11 days, and whilst the Sirius-year agreed with the civil year in 1460 sun-years, the tropical year required, with a small deviation from our present mode of reckoning, exactly 1500 years.¹

¹ R. Lepsius, *Chron. der Aegypter*, p. 187.

It appears to be on this observation, which must of itself have been apparent to the Egyptians, that the phœnix-period is based. In every 500 years the civil year of 365 days was shifted in comparison with the tropical year, in such a way that the first of Thoth, the New Year's day, moved forward 4 months each time, so that after 1,500 years the first day of Thoth had returned exactly to the original point. According to the ancients the phoenix period was reckoned as 500 years by the priests in Heliopolis. This number is found already in Herodotus, who states that he heard it from the Heliopolitans themselves.

It is by the ancients too that the astronomical legend which is connected with this period has been handed down to us. Every 500 years, so they tell, the bird phœnix came from Arabia to Egypt and flew into the city of Heliopolis which was consecrated to the Sun-god Ra. According to Herodotus, it brings its dying father into the sanctuary of the sun ; according to the others, the dying phœnix itself comes, burns itself in fragrant incense and arises from the ashes, first as a white worm, which, however, becomes a bird, shows itself on the third day in its full strength, and then flies back to its eastern home." Plainly, the story is only an astronomical allegory. The Egyptian hieroglyph for the phœnix-period represents the stem of a palm tree, cut down, cleft and bound together again with a young sprig let into it. The word phœnix is applied to the palm-tree as well as to the legendary bird. Therefore, the renewal of the world-era was represented by the rejuvenation of the palm-tree. The same sign appears not only singly but also doubled ; then it designates the double phœnix-period of 1,000 years.

The phœnix-period, like the Sirius-period, was regarded as a world-era leading to the "Apokatastasis." The Greek grammarian Horapollon, who was of Egyptian origin,

writes :¹ “ When the phoenix is born, the restitution of things (*ἀποκατάστασις πραγμάτων*) takes place.”

These explanations were necessary to explain first the New Testament idea of the “ Apokatastasis ” (Acts iii. 21) and the kindred idea of the “ Palingenesis ” (Matt. xix. 2) and their origin from the old oriental astrological view of the world, for these ideas lie also at the base of the biblical eschatology. The acceptance of these fundamental notions leads to the supposition that the chronological elements of the biblical eschatology too, belong to a system which is founded on an astrological basis. Let us endeavour, therefore, to ascertain the system by which the computation of time in the Apocalypse may be numerically explained.

K. THE CRITICAL PERIOD OF 3½ YEARS.

We had tried to establish the probability that the contents of the little book (x. 9), which the sun-angel holds in his hand and gives the seer to eat, coincide in the chronological outline of the Apocalypse with the time of the seven trumpets, that is, the last seven years of the apocalyptic jubilee-period. The interpreting-angel of the trumpet-visions (x. 5–7) is also the bearer of the little book which describes the events of this last time in a series of prophetic visions. The assumption that these visions come to pass in the space of seven years,² is confirmed by the fact that here, as in Daniel ix. 27, the middle of the year-week of seven years is regarded as the critical point with which the time of the great affliction, that is, the last 3½ years begin, which precedes the judgment of the world. In the book of Daniel vii. 25 and xii. 7 and 11, this final period is reckoned as “ a

¹ ² R. Lepsius, *Chronologie*, p. 171, where other quotations in elucidation of the Apokatastasis are collected.

² In the Mohammedan eschatology, also, the time from the appearance of the Mahdi to the great battle of the nations on the plain of Dabik is seven years.

time, two times and half a time," or 1,290 days. The time of 1,290 days is extended in xii. 11 to a yet longer space of 1,335 days.

In the Apocalypse xii. 14, Daniel's three and a half years are reckoned as 42 months or 1,260 days (xi. 2 and 3, xii. 6). Plainly, both in Daniel and in the Apocalypse, periods are dealt with which belong to the same chronological system.

The jubilee-period of fifty years, which we have discovered from the chronological use of astrological dates, is not mentioned as such in the Apocalypse. The only computation of time, besides the period of $3\frac{1}{2}$ years, which is found in the Apocalypse is the time of 1,000 years (xii. 4-7), after which the "millennium" has got its name.¹

The period of a thousand years could be connected with the thousand-year periods of the Persian doctrine of the world-eras. According to the Bundehesh the world is to last 12,000 years. In the first period of 3,000 years the reign of evil is still hidden, and it appears first at the beginning of the second period. Then for 9,000 years the struggle is carried on between Ahriman and Ormuzd, and ends with the victory of Ormuzd. During the last 3,000 years a prophet is expected every 1,000 years, who is to renew religion and bring to pass the earlier revelations. By the time the last prophet appears the world will be almost entirely purified of evil, and a happy age will begin which will last for a thousand years. After the expiration of the last thousand years the resurrection takes place; and Ahriman, who has lost the battle, disappears for ever. This sketch of the world-ages stands in relation with a calculation, attested in the later Jewish literature, by which the world-ages are reckoned as periods of a thousand years.² But it cannot be seen either

¹ The ten days in the letter to the Church at Smyrna, ii. 10, offer no occasion for a symbolical interpretation.

² Comp. Weber, *Sys. d. altsyn. palaestin. Theol.*, p. 355, Fourth Ezra xiv. 11; *Geh. des Henoch*, c. 33.

from the Persian or the later Jewish doctrine of the world-eras, on what astronomical calculations they are founded.

Amongst those astronomic periods of the ancients which are known to us, only the double phœnix-period of 2×500 years would come into consideration for the reckoning of a thousand-year era.¹ The phœnix-period of 500 years is ten times the jubilee-period of 50 years, which we thought we could infer from the astrological system of the Apocalypse. So we must investigate whether the period of $3\frac{1}{2}$ years can be explained by this system.

At first it would seem as though such a short period cannot be brought into connexion with a calculation of world-ages. And yet such must be the case. The critical period of $3\frac{1}{2}$ years immediately precedes the dawn of a new world-age, and closes an expiring world-age. As all calculations of world-ages are based on the periods of adjustment of different cyclical reckonings, the differences between the periods which are to be adjusted are significant. Usually they are regarded as critical days or as unlucky days. Thus, amongst the Greeks, the last days of each month (the difference between the solar and the lunar month) were sacred to the Eumenides as powers of Hades. The five epagomenai, the five surplus days of the year (the difference between the year of 360 and the year of 365 days) were regarded by the Babylonians as unlucky days²). If it should appear that the $3\frac{1}{2}$ or $2 \times 3\frac{1}{2}$ years could be explained as the difference between two cyclical periods, it would immediately be clear why this critical period should be looked upon as a time of misfortune, the time of great affliction. We must, therefore, find first the period of adjustment in which $2 \times 3\frac{1}{2}$

¹ The phœnix-period is known also to the Midrash on Genesis; in *Ber. Rab.* s. 19, 19b, it is said of the Phœnix that it lives 1,000 years, and after the expiration of the 1,000 years, fire flares up from its nest and burns it.

² Comp. A. Jeremias, *Im Kampf um d. alten Orient*, part. iii. p. 45.

years can be reckoned as the surplus of one cyclical period over another.

With the Sirius-period, as also with the phœnix-period, the calculation is, as we have seen, based on a difference in the length of the year. The civil year of the Egyptians had 365 days, the Sirius-year $365\frac{1}{4}$ days, the phœnix-year 365 days, 5 hours, 48 minutes, 48 seconds. The apocalyptic period of $3\frac{1}{2}$ years obviously reckons with a year of 360 days and with months of 30 days; for the $3\frac{1}{2}$ years are reckoned in 42 months of 30 days = 1,260 days. To make the 1,290 days of David an intercalary month of 30 days is added, and to make the 1,335 days of Daniel a further period of $1\frac{1}{2}$ months = 45 days is added. Is such a year of 360 days attested elsewhere?

It seems, in fact, that in Babylon as well as in Egypt a year of 360 days was used in reckoning. Berossus uses for counting the duration of his oldest Babylonian dynasties of 86 kings a cyclical period of *Saroi*, *Neroi* and *Sossoi*. The *Saros* has 3,600, the *Neros* 600, and the *Sosso*s 60 years. From the re-calculation of the duration of the dynasties by Syncellus it appears that the years of the cyclical reckoning of Berossus are to be understood as days, so that the *Saros* is to be reckoned as 10 years = 3,600 days, the *Neros* as one year and eight months = 600 days, and the *Sosso*s as 2 months = 60 days. From this we may see at once that the cyclical reckoning of Berossus is founded on a year of 360 days.¹ For the time of Hammurabi, too, a reckoning by years of 6 *Sossoi* (1 šuššu = 60) = 360 days is attested.²

As the Egyptians did not reckon with weeks of seven days but with decades, that is to say, weeks of ten days, they must also have been acquainted with a 30-days month independent of the course of the moon and a sun-year of 360

¹ R. Lepsius, *Chronologie*, p. 7 f.

² Jeremias, *loc. cit.*, p. 41.

days (to which the 5 epagomenai were then added). The French chronologist Des Vignoles supposed that the year of 360 days was in use amongst the Egyptians earlier than the year of 365 days. He cites as his ground for this supposition the statement of Lyncellus, that it was King Aseth, one of the Hyksos kings, who introduced the epagomenai (the five surplus days in the year), and in support of his view refers amongst other things to the fact that the number 360 (corresponding to the 360 degrees into which the heavens are divided) was frequently used as a symbol for the days of the year. "In the earliest times," he says, "there was in Western Asia and Egypt a year consisting of 12 months of 30 days, or 360 days without any intercalation, the duration of which was almost midway between that of the solar and lunar years, and in agreement with which the orbit of the sun was divided into 360 degrees." "It arose from the observation that the lunar month contained about 30 days and the solar year about twelve of these months; and it remained in use because of its simplicity, notwithstanding the fact which very soon became evident that neither did the months agree with the moon nor the years with the sun."¹ He thinks that such a year is attested by the Mosaic account of the flood and the statements of numbers given therein. According to his opinion, also in Cilicia this year must have been in use, for Herodotus relates that the Cilicians paid to Darius Hystaspes a tribute of 360 horses, one for each day of the year. Diodorus relates that there was an island which was situated at the boundary of Egypt and Ethiopia, on which was the grave of Osiris, with 360 cans which had to be filled daily with milk by the priests charged with that duty; and that in the city of the Akanthoi was to be seen a perforated cask with which 360 priests had daily to draw water from the Nile.² These

¹ L. Ideler, *Handbook d. math. u. tech. Chron.* i. p. 69.

² Ideler, *Handbuch*, p. 187 f.

symbolical numbers are construed by Des Vignoles as referring to the days of the year.

A month of 30 days, as presupposed in the Apocalyptic reckoning, is variously attested, as in Hesiod, who divides the month into 3 decades of 10 days each. The riddle of Cleobulus too, which is told by Diogenes Laertius, presupposes a month of 30 days and a year of 360 days. "A father," so says the riddle, "had 12 sons and each of these had 30 daughters of two-fold appearance; on one side they are white and on the other black. Although they are immortal, yet they all die."¹

The assumption of Des Vignoles that before the year of 365 days a year of 360 days had been in use was contested by Ludwig Ideler and Richard Lepsius. The contradiction is certainly so far justified that the year of 360 days can hardly have been in common use anywhere; but this does not preclude the possibility that an astronomical reckoning year of 360 days may have been in use for the calculation of cyclical periods. The Egyptian priests, too, used, besides the civil year, three other reckoning-years. The year of 360 days must have recommended itself specially to the Babylonians for their sexagesimal reckoning. Certainly Daniel and the Apocalypse prove that the year of 360 days was in use for apocalyptic reckonings. This may be connected with the belief that all the stars originally moved in a perfectly arithmetical harmony, and in the end will return to that harmony. On the same belief is based the astronomical myth which Plutarch² relates. According to this myth Hermes had won at dice 5 days from Selene and had made them the 5 surplus days of the year. In consequence of this the lunar year had now 355 and the solar year 365

¹ Other illustrations in Ideler, p. 269 f.

² Plut. *de Iside* 12.

days. Why does he win them from the moon ? Sun and moon also must once have been in harmony.¹

Des Vignoles, therefore, might be in the right with his year of 360 days, leaving out of the question the opinion that this year could ever have been in common use. But what relationship does this year, or a cyclical period reckoned with this year, bear to the critical period of $3\frac{1}{2}$ years ?

First, let us see in what cyclical period the apocalyptic year of 360 days adjusts itself to the civil year of $365\frac{1}{4}$ days. Des Vignoles had already called attention to the fact that 68 "Julian" years of $365\frac{1}{4}$ days give, with a difference of 3 days, 69 years of 360 days, and that this difference adjusts itself perfectly after about seven repetitions, so that 480 Julian years of $365\frac{1}{4}$ days are equal to 487 years of 360 days. But Des Vignoles did not observe, nor, to my knowledge, has any other chronologist done so, that the difference between

480 "Julian" years of $365\frac{1}{4}$ days = 175,320 days, and

480 apocalyptic years of 360 days = 172,800 days

gives the number we were looking for of $2 \times 1260 = 2520$
days = $2 \times 3\frac{1}{2}$ years.

The critical period of $2 \times 3\frac{1}{2}$ apocalyptic years = 2×1260 days is thus explained as the difference in adjusting a period of 480 Julian and 480 apocalyptic years.

Astonishing as this result is we must not allow ourselves to be satisfied by it ; for it still gives no explanation of Daniel's reckoning of 1,290 and 1,335 days.

Since the period of 1,000 years, i.e. a double phoenix-period of 2×500 years, is also known to the Apocalypse, and since the jubilee-period also, as the tenth part of the phoenix-period, appears to belong to the same chronological system, it is easy to discover the difference between a cyclical reckoning with a year of 360 days and with a year of $365\frac{1}{4}$ days, for the period of 500 years.

¹ R. Lepsius, *Chron.*, p. 92.

500 years of $363\frac{1}{4}$ days are 182,625 days
 500 years of 360 days are 180,000 days

The difference gives 2,625 days

Daniel reckons the half year-week as 1,290 days, that is, he adds to the 1,260 days an intercalary month of 30 days. Besides this, he takes into account a surplus of 45 days ($1,290 + 45 = 1,335$). This gives the following statement:—

$$\begin{aligned} 3\frac{1}{2} \text{ years} &= 1,260 + 30 &= 1,290 \text{ days} \\ 3\frac{1}{2} \text{ years} &= 1,260 + 30 + 45 = 1,335 \text{ days} \end{aligned}$$

Total 2,625 days.

Here we have the same final sum as above.

These 2,625 days, therefore, are the difference between a cycle of 500 years of $363\frac{1}{4}$ days and a cycle of 500 years of 360 days.

From both the reckonings which we have given it would, therefore, appear that the critical period of $2 \times 3\frac{1}{2}$ years rests on an astronomical reckoning of cosmic ages which was known to the ancients.

In fact, we meet with the period of 480 years as well as the era of 500 years in the Hebrew chronology. The time from the departure out of Egypt to the beginning of the building of the temple is reckoned as 480 years, (1 Kings vi. 1); the time to the consecration of the temple (1 Kings ix. 10; 2 Chron. viii. 1) as 500 years. The building of Solomon's temple, 4 Ezra x. 45, is placed in the year 3,000 after the creation, and in xiv. 11 the history of the world is divided into 12 periods of 500 years each, the time of the world's existence thus being reckoned as 6,000 years.

The chronological system which underlies the Apocalypse appears, therefore, to rest on the Jubilee period of 50

years, which in its turn has an astrological-chronological foundation in the enumeration of seven hours, seven days, seven weeks, seven years and seven year-weeks. The Jubilee period when repeated ten times gives a phoenix era. If we should take the Phœnix-period, again, as a unity and regard it as a week of the great cosmic year, 52 cosmic weeks of 500 years make the great cosmic year of the precession consisting of 26,000 common years. We have, however, no support in the sources to justify us in recognising this relation of the Phœnix-period to the great cosmic year as the completion of the chronological system.

JOHANNES LEPSIUS.

Helena Ramsay trans.

PERSONALITY AND GRACE.

III. AUTONOMY.

As certainly as piety insists on absolute dependence, morals insists on absolute independence. The singular, the unique quality of the personality, from the moral point of view, is its autonomy. It differs from all other things in not being driven by forces *a tergo*. If it is, it ceases to be a moral personality. Before any influence can become a motive, it must become part of ourselves. Events outside of that circle have no direct moral significance. Their influence upon us may be great. They may create situations we have to deal with morally. But they are not themselves moral situations.

First, the moral personality must be self-conscious. Only within that self-consciousness can there be moral action. This means that the world I deal with is my world. All the situations and all the motives upon which morality has to act come from it. Till it is my situation, no moral pro-