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Vol 13, Fasc. 2., 1932:
H. Holzmeister —
"Wheo was P. Pilate Procurator?"

She also translated
"Neuere Arbeiten über das Datum der Kreuzigung Christi" in same volume, pp 93-103

When was Pilate Procurator of Judea?

Since Philo[1] places before us (indeed) a rich list of sins of Pilate but does not add any chronological facts or proofs, we are dependent upon the report of Josephus. [[1] Note 1, p. 228: Legatio ad Gaium 38, 299-304, Cohn-Reiter § 210.]

He reports of a ten-year period in office[2] and of the removal of the Lord's judge by Vitellius, the legate of Syria, in such a minute way that the general opinion was formed that Pilate had been in office until into the year 36, thus resulting in the conclusion, that his administration began in the year 26.[3]

[[2] Note 2, p. 228: A 18, 4, 2 n 89: δέκα ἔτεσιν διατρίψας ἐπὶ Ἰουδαίας.]

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[③ Note 3, p. 228: Schürer, 1, 487 f.; J. Felten, Neut. Zeitgeschichte 1, 172, Note 4.]

Against such reckoning in recent years there arose strong opposition: Pilate, it is asserted, was not deposed until 37, so at the earliest he has entered Judea 27. To that effect expressed themselves E. Dobschütz ④ [④ Note 4, p. 228: Prot. Realenzyclopädie³ 15 (1904) 398.], Friedr. Westberg ⑤ [⑤ Note 5, p. 228: Biblische Chronologie 64 f.] b. Bedeus von Scharberg ⑥ [Note 6, p. 228: Chronologie des Lebens Jesu, p. 35-38. 187.] and at last R. Hennig ⑦ [Note 7, p. 228: "To the Question About Christ's day of death" in Astronom. Nachrichten (Kiel) No. 5789, 242 (1931 II) 190-4.].

However, Josephus' report on the two journeys of the legate Vitellius - who had the ~~right~~ supervision over Palestine -

3/// from Syria to Jerusalem absolutely demands (assumes definitely?) that he had deposed Pilate as early as 36; in accordance with this plain report is to be explained the short note on Pilate's journey to Rome, not in the reverse. //[Note 8, p. 228: A 18, 4, 2 n. 89.]

The order of events before the first Jerusalem trip of the legate and during the same is according to Josephus as follows: [Note 9, p. 228: A, 18, 4, 2 s. n. 88-95.] Accusations (or legal proceedings?) are brought against Pilate to Vitellius in Syria; the latter removes him of his office for it, appoints a delegate or successor (ἐπιτρέπτης), his "friend", i. e. the subaltern Marcellus, and sends him to Rome. Upon that Vitellius himself

4/// goes to Jerusalem "on the occasion of a feast called Pascha" (n. 90), shows himself gracious (benevolent?) replaces the highpriest Caiphas by Jonathan, the son of Annas, and returns to Antiochia [(1) Note 1, p. 229: n. 95] //

The second journey of the legate into the holy city is brought in connection with the military expedition Vitellius was to undertake upon Tiberius' orders against the Arab king Arethas (IV.) (2) [Note 2, p. 229: A18, 5, 3 n. 120-4.] He leaves his two legions in Ptolomais and goes to Jerusalem just prior to the feast. "He arrived for it and remained for three days of it (εἰς ἣν ἀπαντήσας ... τρεῖς ἡμέρας ταύτην διατρίβην ποιεῖται (3))", during which he again took away from Jonathan the rank of a highpriest.

5 On the fourth day he received a letter with the announcement of Tiberius' death, upon which he ~~took the oath~~ made the people swear allegiance to Gaius (Caligula). Then Vitelius discontinued the ~~barely~~ scarcely started military campaign and sent the soldiers back to their winter quarters. (4) [Note 4, p. 229: n. 124.] //

In any case this second visit took place in the year 37, soon after the death of the emperor on March 16 of same year. If now the Passahfeast ~~before~~ prior to which Pilate was deposed, was the Passah of 37, as stated by Dobschütz and the other ~~explorers~~ (investigators 2/) then the second journey must have been made on Pentecost. Easter we must set on April 20. (5)

[Note 5, p. 229: The conjunction

6 /// according to Ginzel (Chronologie IV 3, 97, 2, 548) took place on " i. e. on April 4, 11 h 03. Greenwich time, with the correction of 9 minutes (Neugebauer, Astronom. Chronologie 1, 81-85; 2, 9) 10 h 54, according to Jerusalem time 13 h 17. Naturally, the new light the next evening was not visible; all the more surely it could be observed the next evening, April 5; thus the 1. Nisan fell on April 6, the 15 on April 20.] Easter in the previous month, March 22, is out on account of climatic conditions, yet still, here ~~in spite of~~ it is to be assumed as though somehow it could come into consideration. Then Pentecost must be assumed to have been on June 9 (for the unlikely other assumption May 13). It is ~~not~~, however, ~~completely out of the~~ quite impossible question, that

Vitellius received the news of Tiberius' death (as late as) only on one of these days, on June 12 or May 16.

The intelligence-service (information service?) for the governors of the Roman empire ~~were~~ was very (not) well organized. From the examples gathered by Friedlander ⑥ [Note 6, p. 229: Sittengeschichte Roms ⁸ 2, 26-33.] it is evident that official communications could come from Rome to Antioch, in about a month [outside the time of the "mare clausum", or about 16 weeks from November 11 to March 5] ① [Note 1, p. 230: Vegetius 4.39.] where the only commander of legions of the Orient had to be informed as early as possible of the change in the empire. For the news of Caligula's death (Jan. 24, 41) sent in winter, it took

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two months, for a message sent prior to it it took about three months due to especially strong gales.② [Note 2, p 230.

A further (reason) argument against the assumption the second festival was Pentecost is the fact that the festivities lasted several days while Pentecost was celebrated but one day, the fiftieth after the Passoversabbat③ [Note 3, p 230: Siphra in Lev. 23: 15-21, 189a; Kortleitner, Archeologia[2] p. 268; J. Benzinger[3] 386; W. Nowack, Archäologie 2, 178.] //

Therefore the second journey of the legate ensued on Easter 37. In that case of necessity his first journey must belong to the previous year, because the Jewish calendar knows of no great feast before Easter; Purim is no religious festival. Very much less can the removal of Pilate be transferred postponed to 37. Then we have, it is true, an insoluble difficulty in Josephus' text: How could

9/ Pilate, ~~if he~~ having been deposed at Easter of the year 36 and sent to Rome, "arrive in the capital only after the death of Tiberius"? For he was sent there to ~~give~~ render account, why this delay? Of course, we do not know, whether the regulation mentioned by Dio Cassius (4) [Note 4, p. 230: 53,16,6] ~~according to which~~ - that the leaving [resigning] removed governors had to be in Rome within three months - existed already at that time. But the difficulty exists, and it is ~~striking~~ strange ~~suspicious~~ that for instance Schürer (5) [Note 5, p. 230: I^3, 492 Note 131; "~~Pilate allowed himself about a year's time~~ It took Pilate about a year for the journey from Judea to Rome".] says not a word to solve it. In my opinion there is but one way out: Josephus seems to have

10 gotten mixed up in designating the first instead of the second as the Passah-festival. Then the first ~~would have to be looked on~~ probably was the feast of Tabernacles ~~By assuming this~~ This would completely explain why Pilate arrived in Rome only after March 16, 37: because at that time (end of September – October) navigation "was no more safe" (Acts 27:9) according to the chapter (27 of Acts) so important to classical nautical science, ①

[Note 1, p. 231: Vegetius l.c.: post hoc tempus (10 Cal. Oct.) "incerta navigatio est."]

Pilate with his guilty conscience could easily find a pretext to postpone the journey which was awkward for to him and go only after March

5. // There is a further argument in favour of the assumption that the first feast was that of the Tabernacles!

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The then appointed and during the second journey removed high priest Jonathan according to his own avowal (confession? word?) has worn but once the holy garment, for he refused the reinstalment to this rank offered him by Herod Agrippa I with the explanation: "it suffices him to have worn once the garment" (2). [Note 2, p. 231: A 19, 6, 1 n. 314: ἅπαξ ἐνδυς στολισμὸν ἱερὸν ἀρχοῦμαι.] This seems to suggest, that Jonathan received his post at that high festival which immediately preceded Pasah 37, i.e. the feast of the Tabernacles ? 36. //

Then in Josephus' statements about the duration of Pilate's and his predecessors Valerius Gratus' ~~term~~ office the difficulty existing in von Dobschütz' chronology is lacking. Pilate "has spent ten years in Judea" (3) [Note 3, p. 231: A 18, 4, 2 n. 89.] and his

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predecessor Valerius Gratus "eleven years" (4) [Note 4, p. 231: A18, 2, 2 n. 35.]
Now we must set the appointment of the latter, which Josephus (5) expressly ascribes to Tiberius in the beginning of his reign because the governors appointed by emperor Augustus had lost their mandate through his death and received a successor by Tiberius. [Note 5, p. 231: A18, 2, 2 n. 33.]
In the autumn of 14 there was no such change because Tiberius took over actual ruling executive power only October 13. Thus Valerius Gratus began his office (~~ascended to the throne~~?) in the year 15, Pilate his eleven years later, 26, and so no gap is ~~to be~~ found, as it would be the case in the other way of reckoning. (16-27; 27-37 or 15-26, 27-37). //

The last reason for Pilate's removal in the year 37 (6) [Note 6, p. 231: Westberg, p. 64; Bedeus p. 36.] is that according to Josephus

13 Tiberius sent "only two governors, Gratus and Pilate, to Judea" (7) [Note 7, p. 231: A 18, 6, 5 n. 177.] Now if Marcellus (8) ~~placed~~ ~~sent~~ installed by Vitellius in the place of Pilate [Note 8, p. 231: A 18, 4, 2 n. 89.] had started in his office as early as 36, then his final appointment by the emperor would have to had come during the reign of Tiberius and consequently he would have had appointed three governors. – ~~Against~~ To this it can only be said that the two successors of Pilate, Marcellus and Marullus, ~~present~~ offer many an unsolved problem to us. Their names in itself are so similar, that the opinion has been ~~stated~~ expressed, both are but one person (1) [Note 1, p. 232: F. Westberg p. 64; J. Felten, Neut. Zeitgeschichte[2] 1, 177 Note 1.] Both are mentioned but once each and have unusual titles: Marcellus is called ἐπιμελητής, Marullus ἵππαρχος (2) [Note 2, p. 232:

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A 18, 4.2; 6, 10 n. 89 237.]. Not the least thing is reported of their administrative work, not a word about their recall (being recalled?).
Has Marcellus, to begin with, administered Palestine as a substitute until he was confirmed by Caligula and then he became known to Josphus as Marcellus? //

Of what importance the date of the deposition of Pilate is for New Testament Chronology has already been pointed out on page 103. According to Luke 3:1, Pilate was already in office when John the Baptist began his sermon on repentance.
Now whoever accepts the year 30 as the year of the Lord's death, — which according to the reasons given p. 97-100 is a very probable if not the most likely assumption — and in addition adheres to

the three-year-system, must place the first Passahfestival of the Lord's public life into the year 27 and the beginning of the Baptists preaching at the latest in the fall of the previous year 26, when Pilate entered his province. Since the change of the governor under Tiberius took place about in June,③ there is no difficulty. [Note 3, p 232: Dio Cassius 57, 14, 5: Claudius was the one who demanded an earlier departure. Ibid. 60, 11, 6; 17, 3 compare A Deissmann, Paulus 172nd ou; 2219 and ou.]. It is different with the widely spread ~~opinion~~ assumption according to which the consular year of the Gemini 29 AD is considered as the year of the Lord's death④ [Note 4, p 232: So still Villoslada,

16 Verbum Domini, (1929) 322-333; 10 (1930) 10-15]. Then the first Passah festival (John 2:13) would have to be set as early as in 26 and the forerunner would have begun his seman as early as in 25. This is directly excluded by the text in Luke 3:1 according to which we must accept the following order of events:

Beginning of Pilate's administration only after that the beginning of Johns' preaching and than the beginning of the Lord's ministry.

H. Holzmeister.

Translation from German 1

Göttingen Announcements
on Learned Matters
under the supervision of the Royal Soc. of Sciences
Nr. 135
Nov. 11, 1758, Leipsig.

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p. 1265 Among the more important books which have come out this year belongs the complete Biblical treatise on the easter lamb + the last easter-lamb's-day of Christ, especially as His day of death, by Mr. Baccalaurei + Deacon at Taucha, Joh., Fridr. Frisch. After so many controversies of the theologians (it is) drawn up in a decisive manner. (Publishers Breitkopf: 3 Alph + 4 folios, besides, 4 folios of preface, octav.) We believe this praise will not suffer but rather gain in dependability in the eyes of not too obedient (docile?) readers if when: with the good ~~things~~ points ~~sides~~ we also announce (indicate?)

the noticeable & frequent mistakes of the book: though we dare not hope that Mr. V. — after the praise he gives to his book, and on the title page at that, & in view of his temperament & expressions ~~towards~~ with regard to other learned men (scientists) as noticed by us in this & other of his writings — will interpret kindly our reproof. Whoever is looking for samples with what consideration he writes of himself, need but read pp. 302, 445, 502, 508, & of supposed or real mistakes of other ~~learned~~ ~~men~~ scholars, which here are called distortions (misrepresentations) or, with otherwise most unkind names, pp 302, 304, 428, 445, 502, 508, 903, 910.

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The book really represents the fruits of much labour + of a careful investigation free from the prejudice to (for) authority: in some regards where, according to our humble opinion, most scholars would choose the wrong way, he is on the right track, for instance, when he asserts, in Exod. 12:11 is is in no wise prohibited to sit down when eating the easter lamb, + in Luke 22:14 there is no contradiction with that text (see p. 107, 109, 592); furthermore, the regulations (laws) Exod. XII are not only for the first but also for all following easter feasts, + p. 118 he ascribes the killing of the first-born not to an imaginary destroying angel but to God Himself: though he goes one step farther than we would dare, when he wants to ascribe it to the

p. 1266.-

Son of God in particular. As to the Hebrew Antiquities he does not have much faith in the, to be sure, all too young & unreliable Talmudic & Rabbinical testimonies which put most of their teachers in exact contradiction to the rules usually otherwise prescribed by the logic of probabilities & observed by careful historians: though he seems to carry this in itself laudable unbelief to the extent that it becomes a mistake, yet he does not shrink from setting up the Talmud as a witness if advantageous to him, for inst., when he asserts that Jesus was crucified before the feast. The main clause (subject + sentence?) of his book, as given by us on p. 1272, is really new & has much in its favour: but whether, after so many controversies of the

theologians, it is expressed (worded?) in a decisive manner thus representing so to speak, a final decision from which no further appeal is allowed on account of the great clarity of truth & obvious agreement with the Holy Scriptures, will have to be left to the slowly incoming voices from the world of scholars. This main subject reveals a laudable care to examine the writings of those who have written earlier on the day of the easter laud; & Mr. F. now & then ~~gives a~~ hints that he endeavored not to leave anything unread & uninvestigated though he did not always find it advisable to name the works ~~from~~ with which he differs. The reasons for his cautiousness are given on pp. 10 & 43 of the preface: where Mr. V. did not forbears from using the strong words, persecution, slander, abuse. On the other hand, as to other matters yet also pertaining to the

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passover, we find his book-reading is somewhat limited & excludes partly the best of the more recent among his acquaintances & instead of their names we rather find the one of Gousset. As to Exod. 12:13 it seems unknown to him, that the meaning of the noun פסח (Pasa) is not made up the way he & others assume, & that Schultens has something on that which at least would have demanded an investigation. We merely mention here Schultens: to quote the mere conjectures of Vitringa on this word, or to controvert naturally we shall expect of him. This is a sample; however, we find several of such dis unpleasant gaps of being well-read which should hardly be expected in a strong book on so specific a matter.

In matters on Egypt – be that on idolatry or geography – no use is made of Jablonski, not even the short notes of the Hallie Hebrew Bibel are looked up when some thing lacking could have been substituted from it. We believe that no student of the Scriptures could afford to do without the only Bible with a number of different manners (ways) of reading (versions ?); but Mr. T. is not concerned with the different versions & even where it is in all Bibles as in the Kri & Ethib, he chooses the carier at random without remembering (referring to ?) the others or even (giving a intimating hint) to the reader that the text has yet another version. 2 Chron. 35:3 may elucidate this. He is an opponent of Spencer who with much that is unfounded has much truth that is true; he is opposed

to the method to trace the
sacred costums of the Israelites
to other older manners & customs
p. 1268 of peoples among whom they
lived, be that imitations as ordered
by God or as contrasts. Most frequently
~~he~~ is used the English Bibleswork
(commentary?) with notes of Teller &
Dietelmaier: its translation of
the Hebrew text is severely (sharply)
criticized, on which occasion Mr. Fr.
is very precise (exact, particular?) in
small things when the translator
has been free using expressions
that do not alter the meaning,
f. inst., saying instead of, they are
to eat the flesh, Exod. 12:8, he
has put; they are to eat the flesh
of it. At times a German does
not understand his improved
translation: p. 144 on this essential
(fundamental? integral? vital?) day
(as it reads in the Hebrew) Israel
went out of Egypt. What is an essential

day? Does [redacted] surely mean being, essence? If we had to translate so literally, somebody else perhaps would write with the same right: on the bone of this day. A certain kind of students of the Scriptures meets with emphasis everywhere: Mr. Frisch is of that kind. (see p. 558, 577.) Especially he never forgets to find fault with the English translation if it differs with the Hebrew accents: making some deductions which would be abolished (cease?) if the ordinary rules are accepted as to the peculiarity & specialty of the Hebrew manner of distinction (p. 29, 105 etc.) We find the man, who wants to take everything from the Bible, not so well versed in Hebrew as we would like to have him for this undertaking.

There is no thought of the indispensable acquaintance with the other (remaining) oriental languages. It would at least made him doubt one thing or other he now asserts without fear: for inst., whether מרורים means bitter herbs at all & that therefore God did not prescribe herbs explicitly (particularly?) for (with?) the easter lamb? For in the Arabic & in the Talmud this is the name of a special kind of herbs: Does קרב in Exod 12:9 mean the bowels including by which name he includes even the fat, which he, being the first to allows it to the Jews, or rather that what the Latins called viscera & Virgil in the well-known text calls viscera tosta ferunt taurorum? Does the emphasis lie in צלי אש (roasted at (on?) the fire) as he looks for it on p. 94 i.e. that it was not allowed to have it roasted in the oven? etc. etc. But the reader would put up with all these deficiencies

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if only they would not concern
main things: as is done with
the two words Sabbath & preparation-
day. For Contrary to the general &, as
~~xxx~~ we still dare to think, well-
founded opinion up to now, Mr. Fr.
contends that all seven days
of the easter feast were celebrated
(kept?) as Sabbaths & work was
prohibited on same: in favour
of which arbitrary point (thesis?)
he wants to apply Exod. 12:16 - no
work is to be done on them - not
only to the two days mentioned in
the verse, the first & last, but
rather to all seven. To confirm this
thesis he frequently points out
that the evangelists call the day
of the easter feast when Christ
rose up from the dead, μίαν
σαββάτων, the first of the Sabbaths,
because the whole week all
days were Sabbaths (see. p. 546, 547.)
Thus he does not know or keeps
silent about it, that Sabbath ~~in~~
~~itself~~ collectively can mean a week
& μία σαββάτων the first day of the week.

Every explanation of the N.T. could teach him, provided he had not taken it as an error (due to exagerated scepticism). This, on his part, no doubt would have been ignorance, for nothing is more common with the Jews & Syrians than to call Sunday, Monday, Tuesday, the first, second, third etc. of the Sabbath. It would not be difficult for us to find several hundred examples; whoever does not know of them probably has not read a Syrian book where week days are named: & if he refers to the plural σαββατων, it is not known to him that Sabbata within & outside of the N.T. repeatedly is used as a "plurale tantum". But according to him Acts 20:7 & 1. Cor. 16:2 even Sunday has this name, not

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because it is the first day of the week but because it was celebrated in memory of the first working day among the Passa-Sabbaths. As to the preparation day (παρασκευή,) he tries to prove from (with?) this name used by the evangelists Jesus was

not crucified on the first easter day or the 15th of Nisan but on the day of the easter-lamb or the 14th which is supposed to have been the preparation day for the feast. At first we thought: If only the man, who boasts of his carefulness (~~conscientiousness~~) in reading the works of others, had read, say, Wetsteinen he would know that παρασκευή, or in Syrian & Chaldean ערובה (the eve of) is the proper name of every Friday. Since he now says himself that Jesus was crucified on Friday he cannot deduct anything else from this name, especially not if ~~it does not~~ the words τὸν πάσχα are not there, this more complete form of speech can mean the Friday of the Passa-week & thus is of no use to prove his thesis. In case he did not want to believe in Wetsteinen, he merely should have read Syrian books aside from the N.T.: he would have been swamped with examples of this meaning.

that is what we thought
until we came to p. 905, 906
when we saw, that the known
explanation (interpelation?)
was not unknown to him, &
that he does not deny the meaning
of the word παρασκευή but that
he merely had withheld it:
Just as we had noticed apart
from this, it is not customary
with him to present the opinion
in its advantageous light
he intends to disprove. There he
merely refers to the fact that the
evening before easter also is
called παρασκευή: after that (then?)
however, this name is neutral
& just as little as it proves against
him, it could be used by him
as a proof. But with this in some
respects nevertheless lucky innovator
does not even have found the general
knowledge of Hebrew as is customary
to acquire aside detached from the
other dialects. Exod 11:4 is supposed not
to refer to the coming midnight but to
a more distant & indefinite one because

Moses does not say, in this midnight (to us it seems he does say so, for הלילה however has the ה of the article) but ~~at~~ in plural, at the times of midnight: as though חצות could not also be the infinitive as commonly explained but necessarily a noun in plural.

On p. 89 he concludes (deduces?) from על Exod. 12:8, that the easter lamb had to be prepared over herbs. Were the other meanings of the preposition so unknown to him. What can be objected to the common translation with bitter herbs? His new explanations are often based on such grammatical blunders, as can be seen also Exod. 12:46. Thus originate very arbitrary innovations. He conveys an idea of Jewish feasts which is more in keeping with the rules of some preachers on the celebrations of Christians than with the old customs. (pp. 138, 139.) According to him the Jews very well could make fire in the

kitchen + prepare food despite the texts in Exod. 16:23.29; 35:23 where merely fire for baking, the smithy + washing (laundry?) is supposed to be forbidden. Morning in Exod. 12:22 is used to serve as hypothesis - as though nothing at all were settled only for the first earth celebration - is the time immediately after midnight, + that in a month when the sun rose only early at 6 o'clock. The golden + silver vessels (utensils?) the Israelites did not borrow from the Egyptians but rather begged them!: + because of this authoritative decision 12:36 השאיל must not read, to borrow (which surely it otherwise means in oriental languages, especially in Syrian) but without referring to an example it is supposed to mean merely ex edicto praetoris to grant a request. The Israelites were not allowed to take a

goat-kid & in Exod. 12:6 it merely reads to take the kid of a sheep out of a mixed flock of sheep & goats, or (according to his language) catch it, which sentence he presents almost all the way through in so many words that for passa it was not allowed to take a he-goat (or ram?). This was not clear to us for a long time for ~~in my~~ homeland where I come from the word is also used for the male sheep. However, his sermon is as queer as the rest of the book. We are still looking for the meaning of his "sinnlich" (perceptible by the senses, physical?) It is used 10-20 times in a meaning (connection?) quite foreign to us. Once he was kind enough to explain it himself by saying a "sinnliche" certainty is as much as a an arithmetical certainty

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p. 606. The easterlamm is kept 4 days, 203 - "schliffige" (?) cakes of ashes, 320 - dear, miserable goods, 521 - to make one more "grämisch", 522 - Jesus bids his host a good evening, not to choose no other day, very likely are common & quite proper expressions at Tancha, but they do not belong into a book! We surely would consider it unfair to mention grammatical ~~errors~~ mistakes if Mr. Fr. were not accusing other scholars of supposed mistakes in German; simultaneously, his all too pronounced respect for himself gives us the right to tell him of his mistakes: though the biggest among these probably are his biassed conception of the commutative reasons, & then certain fencing practices in the art of dialectics. There will be sufficient evidence of these in the following.

We are coming to the main subject of Mr. Frisch. He claims, Jesus ate the easter lamb on the day ordered by God, & simultaneously with the Jews: (which two points he confirms pp. 505, 517, 555 & in the 5th chapter, with reasons which seem to us uncontestable): Despite this, however, he partook of it on the day before prior to the easter feast and spent the first day of easter in the grave. This statement which will appear to our readers, at first very contradictory he makes very probable in the following manner. The first day of easter came on the 15th of Nisan; the easterlamb, however, was eaten on the 14th (Moses makes both statements plainly & repeatedly) As the Jews start the day with sundown, this cannot be the night between the 14th & 15th as is commonly accepted, for this is named already the 15th Nisan, but it must be the starting night of the 14th. To celebrate the day following this Moses nowhere commanded thus it was a working-

day.

Against this also almost uncontestable calculation there are two difficulties which Mr. Fr. has left untouched. One: The killing of the easter lamb, too, was set by Moses on the 14th between the two evenings, which accord. to the explanation means between the beginning of the regular cool wind in Palestine that comes up after 4 in the afternoon, & sunset: which time without contradiction belongs to the previous day. Mr. Fr. helps himself out in an admittedly very natural & way by taking the two evenings as from sunset * to complete darkness, for then the easter lamb was killed in the night which belonged to the following day. Through this he is compelled to set the daily evening sacrifice which also was ordered between the two evenings, ~~to-to~~ to the beginning of the night. This, as it seems to us, becomes probable also because of the fact that then the morning & evening sacrifice have exactly 12 hours interval. The Jews, however, are against the two points: We do not willingly accept them as witnesses as to the meaning of the laws of Moses so many centuries older, the practice of which has been repeatedly interrupted due to the Babylonian captivity, although

p. 1273 - cont.

we do pay more attention to them when it concerns the customs at the time of Christ. The other doubtful point, not so completely solved, is that in Matth 26:17 + Marc. 14:12 the disciples who went on the afternoon before the eve of the easter lamb went to Jerusalem to prepare the easter lamb, had received the command for it on the first day of the unleavened bread: consequently, the preceding afternoon is reckoned with the following night & is considered together with it as One Day; that is what the ordinary (common?) interpreter wants. Mr. Jr. helps himself here somewhat heroically: τῇ πρώτῃ τῶν ἀζύμων is supposed to mean, towards the first day, before the first day. He did not choose, to make it easier for us to agree with him by giving examples of this expression: instead, as proof he refers to the parallel text Luke 22:7 for he thinks it is plain that ἡ δὲ ἡμέρα τῶν ἀζύμων cannot mean, the day of the unleavened bread had come, but rather that it was approaching, was about to come.

So much on the two difficulties. We again come to the main subject (point!) According to him it should be distinguished between the day of the easter lamb which fell on the 14th & the easter feast which lasted through the following 7 days from the 15th to the 21st & with it amounted to 8 full days. The day of the easterlamb was merely a preparation for it: Therefore Christ's day of death is called the day of preparation by the evangelists & the pre-Sabbath, (παρασκευή & πρόσαββατον) & the first day of easter on which Jesus was in the grave, they call a Sabbath. (The explanation may? might be correct, however, these texts provide no proof for Jesus surely was crucified on a Friday, properly called παρασκευή and lay in the grave on the week-Sabbath.) Now Joh. XIII:1 also is clear. Before the passa-feast is a circumscription of the day of the easter lamb: John describes the eastermeal of Christ, whose

p. 1274 – cont.

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speeches continue uninterruptedly also from the 13th chapter until his arrest so that one cannot think of a day in between. (If this ~~development~~ unravelling of a ~~so~~ knot up to now inextricable (insoluble?) will stand the investigation of the scholars, then is that the greatest merit of the book. We could give no other that would completely satisfy us; & we wish this might be the right one. But having read it only once we have not been able to examine this completely new opinion view not carefully enough in order to dare to decide in favor of it & against all interpreters up to now especially since the one above mentioned difficulty is not yet sufficiently removed philologically.)

The day of Christ's crucifixion cannot have been the first easter day, for this was a Sabbath: How could the Jews crucify on the Sabbath? Even Herod, the half-Jew, in Acts 12:4 had scruples to kick Peter on the easter feast.

p. 1275

p. 650, 657.

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(This does not convince us. It does not say in the cited text that Herod had scruples about it. Read it. Besides, accord. to Josephi's description, this Herod was a very zealous Jew; at least he pretended to be one in order to become popular with the people. ~~Romans crucified~~ Christ was crucified by Romans who never were ordered to keep easter: in the contrary Herod would have had to use his own soldiers for the execution of Peter.) It was unlawful to leave a man hanging (over) on the Sabbath John 19:31: still less he could be hung on that day. p. 913. (This probably is an overhaste. Accord. to Deuter. 22:23 no hanged man could remain on the wood/tree over night: had Jesus not been taken down before sun-down, he would have had to remain there over night because of the approaching week-Sabbath. The night, not the sanctity of the Sabbath ~~was~~ stood against the prolonged hanging on the wood/tree.)

Joseph of Arimathia could not have
~~Nor could~~ embalmed Jesus on
the first feast day, nor could any-
one else have bought spices.
(This doubt is important + up to
now not yet completely removed
by the interpreters (~~ges~~ exegists?)
who think differently.) Furthermore,
it would ~~not~~ have been indecent
(not proper?) ~~for~~ by God to have His
high feast day desecrated by the
crucifixion of Christ. According
to the preface p. 12, it seems as though
this proof meant much to Mr. Fr.;
with us it counts less because we
are not in a position to judge
what sins are proper for God to allow
or not; on p. 924 Mr. Fr. admits that
God allows much evil ~~to happen~~;
but he answers: in that case
God has His known or unknown
reasons which is not so here
because one does know any reasons
to point out. Likewise he believes
the easter-Sabbath is so befitting?
for Christ's rest in the grave that
it could serve as a proof for
his opinion; furthermore, the easter-
lamb was slain on the 14th.

consequently the antitype of the easter lamb had to die on the 14th and not on the 15th. These by us abbreviated new opinions are presented by Mr. Fr. with exceedingly frequent repetitions & we cannot count how often we read the same proof for the 14th day. We do not condemn this: for with many readers repetitions accomplish more than proof. It is not fair to our interpreters p. 57.58 where it is stated that they set the slaying of the easter lamb on the 15th: they do not do ~~it~~ that, but rather they set it on the afternoon of the 14th although accord. to them the eating of it, contrary to the words of Moses, comes on the 15th. His work, however, deserves the most sincere investigation: When almost the whole controversy will be condensed to the question whether Moses, always, thus also in Pesa rules counted the night, Jewish fashion, with the following day or whether he makes an exception? With the daily sacrifice Moses, contrary to the Jewish manner, has the morning sacrifice precede the one [illegible] reserved to Mr. Fr.

p 1276 cont.

would be the night sacrifice; so he seems to take the day together with the following night — a possible objection that deserves Mr Fr's elucidation.

We shall have opportunity to refer to some more differing opinions when discussing the parts of the book. The first & second chapters give an explanation of all texts in the Old & New Test. where mention is made of the Easter lamb. It is by far the most important & contains almost all matters explained later ~~in detail~~ separately. Accord. to pp. 76 & 781 the sprinkling of the doors is not only in Egypt for all times. (commanded by God) It applied, however only to wooden doors as a prototype that a tree would be ~~by~~ stained with Christs blood: the Israelites did not have stone-doors in Egypt, ~~therefore~~ hence, Moses did not have to ~~make~~ add this restriction.

p. 1277 (Where, then, did Mr. Frisch get it?)

The gods of Egypt, which ~~were slain~~ ~~by~~ slew with the firstborn, according to pp. 113-115 are not sacred animals, but rather the nobles (nobility) because Mr. Fr. doubts that the animal-worship

is as old as that. (We do not want accept his mere doubt as a proof. But with his opinion he could almost have ~~better~~ rather used the place of Diodori Siculi V. I. C. 90 than the one cited from the Bible.) Contrary to the common opinion he denies that the slaves of the Jews were compelled to have circumcision without answering the text in Gen. 17:13. He very much opposes the view that the easterlamb is a sacrifice Exod. 23:18 therefore is not supposed to refer to the Easter lamb but rather forbids to add a leavened (sour?) food-sacrifice (to the bloody sacrifice) Exod. 34:25; Num. 9:7; 2 Chron. 30:16 he explains as of the freewill thanks offerings which were brought on the easter feast. P. 270 he asserts - contrary to most - that the Easter feast was celeberated every year even in the desert. Deuter. 16:7 he uses as proof that the day of the Easter lamb was a working day. 2 Chron. 30:28 is supposed to read בעד, this time, ¶ verse 22, דבר על לב, to have a discussions acc. to the extirpation of the Levites

Both is contrary to usage & is not proved by him by an example.
Esra 6:20 is supposed to deal with freewill offerings on the Easter feast The sixth day before Easter John 12:2 a Sunday & is the 9th Nisan. The first seems certain to us; the second rests on the correctness or uncorrectness of Mr. Fr. main hypothesis. John 18:28 he tries to prove that the entry into the heathen house of the judge defiles for 7 days, & thus would have excluded the pharisees who had already partaken of the Easter lamb from eating of all further sarifices of the feast during all the seven days. The 3rd chapter asserts the Easter lamb was no sacrifice which does not agree with the conception of a sacrament. That it was a sacrament he proves (by pointing out) that no gift was presented to God, consequently it was no sacrifice. (Thus the definition of a sacrament will be: a holy (sacred) performance

2.

p. 1278

when no offering gift is brought to God.) From the definition of a sacrament he comes to the conclusion p. 697, that it was ordained by God. Since he also believes, a sacrament cannot be a prototype he assumes p. 738 the Easterlamb was a sacrament but not insofar as it is a prototype & a prototype insofar it is no sacrament. To grasp this definition was a little difficult for us. The only main objection against the theis that the O.T. really did have so called sacraments is not touched &, as it seems, not known to Mr. Fr. The 4th chapter explains the prefiqurative (type, typical) of the Easterlamb. Mr. Fr. did not let loose the bridle of his wit to the extent as some do in theology; however, much here still seems to us rather arbitrary & playing; so that we would rather completely refrain from typical theology if it were not possible to deal with it in sentences which though poorer, yet are more convincing. The 77 Easter

sacrifices picture Christ's seven wounds.
The Easter lamb had to be roasted
for a crucified one is supposed to look
as brown as roasted meat. (Our pictures
of the crucified Jesus at least do
not look like that, yet they are
supposed to be imitations of
the picture which Giotto painted
according to life.) About the
time when the Easter lamb was
killed between the 2 evenings
God slew the true Easter Lamb,
Jesus, in the garden by his
soul anguish: p. 767. Yet the 2
evenings preceded the Easter meal
while the soul anguish of Jesus
followed it! Mr. Fr. himself
sets it after midnight & again,
when convenient to him, he
asserts this time is called the morning
in the Passah laws. Even the con-
demnation (verdict?) of Jesus
before the high priest which took
place still more towards morning,
is supposed to be given representing the time in the prototype

~~in the~~ ~~proto~~ ~~antitype~~ by the slaying between the two evenings. On occasion he gives p. 763, a peculiar translation of Ps. 118:27 bind Him (Jehova of v. 26.) like a feast sacrifice with ~~cords~~ ropes; yes, up to the corners of the altar.

The 5th chapter, on the last Easter-lambs day of Christ, as his day of death, we have made excerpts when presenting the main points of the book. However, he confirms the correct common thesis that Jesus died on a Friday. It is peculiar that he points out on p. 943 that Jesus lay in the grave on Sabbath. So Now in the very same place ~~then~~ Sabbath is to mean the 7th day of the week while earlier when it was convenient for him to prove another thesis, he took it for Easter-Sabbath. Another proof again is based on the teaching (tenet!) on the prototype: Though without proof, ~~still~~ yet he assumes that God chose the

working day for the first Easter lamb in Egypt which was to be
V day of death of (Christ's) & then
he shows from Seder Olam - not
without using violence (straining the
meaning?) since it (Seder Olam?) were
not even in the position to plausibly
to witness of times that so far back -
that the 14th Nisan on the first
Easter feast of Moses came on
a Friday. The sixth chapter deals
with the Easter sacrifices. He denies
it was allowed to bring them on
the first or seventh days of the feast,
for, says he, these days were Sabbaths
& the Sab. (was would have been) broken & by offering,
Matth. 12:5 for which the Jews had
no command; besides, the many
sacrifices would have hindered
the priest to preach (for he assumes
the priests had always preached
on Sabbaths.) There remain thus the
five di middle days, as from the 2nd
to the 6th, for these freewill thanks
offerings. The seventh chapter lists
the texts of Joseph. He reproofs him

for calling the morning which follows the Passah night, the following day (τὴν ἐπιοῦσαν) & the Passa an offering, yet he wants to conclude from the expression used but once καὶ τὴν πάσχα προσαγορευομένην θυσίαν ἐπιτελέσαιτες, "they slew the sacrifice, named Passa", (Ant. XI. c. 4. § 8.) that Josephus did not consider it a proper sacrifice. The question will be raised: How is such a conclusion possible? Answer, he halfway supplies the words: τὴν προσαγορευομένην θυσίαν – The most noble note is on the text de Bello Jud. I. VI. c. 9. § 3. where the people, are estimated at 2700000 according to the ~~number of~~ 256,500 Passa-sacrifices slain between 9 & 11, which according to our time is between 3 & 5 P.M ~~= 256,500~~, figuring not more than 10 persons to one Passa meal. Everybody understood this to be of the Passa lambs which is against Mr. Dr. hypothesis on account of the time of the slaying & applies to the main thing (chief point!) He wants here to ~~understand~~ to have it

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applied ~~to~~ to thanks offerings of the 2nd to 6th days, making 57000 to each day. How to arrive at 2700000 by multiplying 57000 by 10? or did each Israelite eat but once during those five days? We do not know. Mr. Fr. proofs, ^generally^ are based on his previous explanations of the texts by Moses which cause the controversy. One can agree to it & still believe, in Josephus' time these texts, ^already^ were understood the same way as today, consequently Josephus cannot be explained by them but rather he was mistaken together with the Jews of his time. However, we are not so foolish as ~~that~~ to express an opinion as our own after Mr. Fr. pp. 1056, 1057 made this statement: Either one does not know Josephus at all, nor understand his style of writing, if one ~~asks~~ looks for the Easter lamb here, yea, one would have to invent something purposely & forcibly & whoever is not willing to accept it, there would be no use to discuss with such a one the text of Josephus. We willingly keep silent & know our duty. The last chapter is set ^yes^ against

p. 1280 - cont

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the works of the late
Oken, Schöttgen, Schäffer,
Bengel, Harenberg & Clemens
We cannot give excepts
from it.

Translation

Bentwich, N. Biography
Philo, Judaeus
13689.Z 9134

David Hoffmann
Mar Samuel
Leipzig, 1873

p. 16

II.

While in Palestine the oppressed situation of the Jews—who often barely could wrench a scanty existence from the unfavorable conditions—imposed upon the disciples of the sages (scholars? wise men?) the duty to contract a marriage union upon full completion of their studies at an advanced age, in order not to be ~~hindered~~ impeded in their mental activity by cares about sustenance, with the Babylonians

Jews living in wealth and comfortable position, it was the general custom to enter the state matrimony before reaching the twentieth year [1]

[1] Rapoport, Erech Millin, p. 226.]

and the case, was not a rare one where a Babylonian studying law leaving his home-land as a husband and father of a family going to Palestine there to complete his studies. [2]

[2] Gittin 66 and many other places.]

Soon after his return from Palestine, Samuel, too, had a faithful life partner (helpmate) placed at his side [3], [3] Above note 17.] but he was not willing to leave her and go abroad, rather he intended to continue his scientific studies in his homeland. Aside from practicing medicine and law,

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he applied himself mainly to astronomy - the science that which is able to generate the most stimulating impression of the sublime upon the human imagination striking the power of dust-born earthling with admiration for the grandeur and omnipotence of the creator of the universe.

Babylon already in most ancient time was the home of astronomy. No other land like this allowed the observing investigator a wide, unhindered view over extended plains and into a clear sky obscured by no cloud thus favoring so exceedingly the cultivation of this science. The inhabitants

p. 17. in these regions have indeed occupied themselves more

than other peoples with astronomical observations and stood in high regard because of their knowledge in this sphere (domain). Of the city Nehardea, Samuel's place of residence Plinius reports expressly that it was the seat of the Hipparenes, a famous sect of the Chaldaic wise sages.[1] [Note 1: Plinius, Historia naturalis 6,30: Sunt etiamnum in Mesopotamia oppidum Hipparenum Chaldeorum doctrina clarum e.c. This Hipparenum is rightly identified by Mannert with Nehardea (Geogr. d. Griechen & Römer II, 2. p. 286)] In these regions the Jews, too, may have become friendly with the astronomical science and acquired manifold knowledge in the same which seems to be very remarkable especially with the house of the patriarchs in Palestine which came (originated in)

from this country [2] and here, too, Samuel with usual zeal cultivated this prominent (lofty) science.

But while with the Chaldees, as generally with most peoples in ancient times, astronomy was closely tied to astrology that delusory science which pretends to be able to predict man's fate from the position of stars -- in fact, astronomy's importance is due to astrology -- with the Jews, the former was given much more devotion. The study of this science was declared a religious duty because it leads to the knowledge of God's omnipotence & omniscience. Bar Kappara, one of the most excellent students R. Juda ha-Nasi's taught: Who knows the calculation of the course of the stars and fails to practice it, to him the saying of the

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prophet applies: "The works of God they do not see and the creations of His omnipotence they do not behold (Isa. 5:12[3]). [Note 3: Sabbath 75a] In the same spirit other teachers of the law taught that it was meritorious to make astronomical observations[4]. [Note 4: R Johanan (l.c.) and Rab (Jerusch. das.] Taking to heart the words of these teachers, Samuel too, occupied himself merely because of its lofty purpose with astronomy and cultivated [attended to] only its scientific side [angle]. To be sure, in order to increase his knowledge, he associated with heathen astrologers - one astrologer, p. 18 named Abbat, even was his intimate friend" [Sabbath 129a, Aboda zara 30a. cf. Rapoport, Erech Millin p. 3. This Abbat associated also with Levi, the teacher of Samuel, cf. Jerusch. Sabbath III, 4.]

however, he spoke (referred to) reprovingly of those of his fellow-believers who applied themselves to the would-be science of astrology, saying: With the astrologers who constantly look to the sky you one will not find nomology (Knowledge of the law?) 2) [Note 2: Deuteron. rabbah VIII alluding to the vers: (Deuteron. 30, 12. "She is not in heaven." comp. about this R. Iewa of Prague in Nethiboth Olam, ... cap. XIV.]

He contradicted also categorically the opinion of the astrologers that the fate of all humans is determined unalterably by the position of the stars, he taught on the contrary that it is in man's power to elude (withdraw from) the misfortune decreed against him - which the astrologers pretended to be able to read from the constellations - by good deeds pleasing to God, and he sought to convice also his friend Ablat of this his Jewish view by demonstrated facts.

3) [Note 3: Sabbath 156. An older Babylonian teacher, the earlier (p. 8)

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mentioned R. Joseph ha-Babli, had already taught that in the words of Scripture: (Deuteron. 18, 13) Thou shalt walk uprightly with the Eternal, Thy God, is contained the prohibition never to let the Chaldeans tell one's fortune (cast a horoscope) for this testifies of lack of faith in God. (Pesachim 113b.)]

It cannot be exactly determined how highly Samuel's knowledge of the astronomical science rates, for aside from the numerous teachings and sayings in both Talmuds of which but a few fall into the sphere (domain) of astronomy, no written works by him have come down to us; not even a dependable information has been preserved that he has been active literary in astronomy. However, although two works are ascribed to him, but in the Baraïtha-de-Samuel, to which access was made possible

to us since a few years 4) it has
p. 19 been found that it is of much
later origine, and it can be
assumed with certainty that
with the other works carrying
Samuel's name we are dealing
with a pseudoepigraphy too. 1)

[Note 4, p. 18: The ברייתא דשמואל repeatedly
quoted (cited) by authors of the
middle ages (by Nachmanides with
Job 26, 13, Baraïtha schel Sod ha-Ibbur);
of which (named) nine paragraphs appeared
in print 1861 at Salonichi under
the title הקטן ברייתא דשמואל, speaks
of the year 4536 mundi (776
according to ... time) and
was written at about this time.
cf. Zunz in Steinschneiders
hebräische Bibliographie V,
p. 15.]

[Note 1, p. 19. It is supposed to
have been written by Samuel.

Seder ha-Tekuphoth is in manuscript form in the Vatican (Cod. 387 no. 17); cf. Zunz, gottesdienstl. Vorträge, p. 93 and Bartolocci, Bibliotheca rabbinica IV p. 388.)

But that he especially distinguished himself in the knowledge of the celestial bodies is evident from the following words spoken by him: "The celestial spaces are so well known to me as the streets of Nehardea; yet I am not able to fathom the nature of the comets and their movements; only this much is certain with me that a comet never crosses the Orion for should that happen the world would be destroyed. Though we sometimes see that it is crossed, this is merely an optical illusion because the light

streaming from the comet appears to us to be the star itself.[3]"

[Note 2, p. 19: Berachath 58 b (3 lines in Hebrew)]

Many other teachings and sayings of his testify that he sought to explain the phenomena of the sky in a scientific spirit[3],

[Note 3, p. 19: cf. Synhedrin 12 b, Erubin 56 a, Berachoth 58 b ff. + Sabbath 129 b.]

and herefrom follows with certainty that he kept pace with his time (in astronomy) or even was ahead of it.

Samuel's ~~deserved especially well~~ special merit was that he especially cultivated that branch of practical astronomy which deals with ~~the~~ calendar computation spreading this knowledge in Babylonia. This so important branch of knowledge for the religious

p. 19 - cont'd (4)

as well as civil life at that time could find practical application only in Palestine where alone the fixation of the beginnings of the months and inserting of intercalary years was admissible (valid?) 4);

[Note 4, p. 19: Sanhedrin 11b Jerusch. Nedarim VII, 8. Only in an emergency could calendar computations be made abroad by those qualified herfor. The method of Chanania, the nephew of R. Josua who determined in Babylon the beginnings of the months and intercalary years was strongly denounced from all sides. (See earlier above? Note 10.)]

p. 20 yet thanks to the stimulation by Samuel it soon became a matter of eager studies with the Babylonian teachers of the law

p. 20 - cont'd (2)

The determination of the beginning of the month (Rosch Chodesch), on which also depended the feast days, at that time (in those days?) - when the Sanhedrin, headed by the patriarch, had its seat in Palestine - took place always on the day when the new moon became visible as a narrow sickle in the sky for the first time after the new moon. This had to be announced by witnesses before the Patriarch & his college (had to be well versed - who) on the one hand (partly?) in order to examine the testimony of the witnesses, on the other hand in order not to let disorder enter the calender even in case the moon were not seen by witnesses at the proper time, in the calculation

of each new moon (i.e. the time when the moon enters conjunction with the sun) as well as in the knowledge of the time when after each new moon the becoming visible (visibility?) of the moon is first possible.")

[Note] p. 20: cf. Maimonides, Jad ha-Chasakah h. Kiddusch ha-Chodesh cap. 1 § 18. Though in this calculation of the time when the new moon begins to become visible the witnesses were completely superfluous, the traditional command demanded the application of the statements of witnesses, if possible, and only in an emergency it allowed the determination of the beginning of the month by mere calculation. This calculation, however, differs from the one"

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later by Hillel II introduced calendar order, which figured the distance from one new moon to the next by the average duration of the synodic month.]

As soon as the beginning of a new month was ordered (~~determined~~?) this was announced by messengers to all Jewish communities. But those communities which were so far away from Palestine that no messenger could get to them before the beginning of the feast day remained in doubt about the true time of the feast and had to celebrate two days instead of one.[2]

[Note 2, p 20: Bezah 4b and many others.]. The rules followed by the Sanhedrin in all

p. 20 - cont'd (4)

calendar fixations/calculations as well as the astronomical calculations which go with it were entrusted under the name Sod ha-Ibbur (calendar secret) only to ordained teachers of the law[1]

p. 21 [Note 1, p. 21: Kethuboth 112a. The reason for keeping these teachings secret is given by R. Serachjah ha-Levi, Maor, Rosch ha Schanah paragraph I and by R Mordechai Jafah, Lebusch ha-Chur, paragraph 427.]

Besides, they were written in short and obscure hints in a Baraïtha[2]. [Note 2, p. 21: Rosch ha-Schanah 20b.]

Samuel now had obtained thru his astronomical studies about the movements of the moon

p. 21. - cont'd (2)

the necessary knowledge and could express before his colleagues the allegation that he could announce to the Jews in the diaspora each time the beginning of the month as it is being established (fixed?) in Palestine and thus save the double feast days[3]. [Note 3. p. 21. That is according to the explanation of Raschi; R. Abraham ha-Nasi in Sefer ha-Ibbur Th. II porta 5 says differently; cf. Isarjah de Rossi, Meor Enajim, Supplement.] Although he was not able to decipher the sentences (points? principles?) thereupon presented to him from the Baraitha de Sod ha-Ibbur (and had to hear

from him the remark that
like this
he does not understand
many other things from the
Sod ha-Ibbur 5); yet he knew
how to prepare a calendar
for 60 years, and later he
sent it to the head of the
Palestine teachers, R. Jochanan,
in order to show him his
superiority 6). [Note 5, p. 21 The
obscure sentences asked by
Abba later were explained
by the Babylonian R Seïra
who went to Palestine. However,
this explanation found in
the Talmud (Rosh ha-Schanah
20b) is still so obscure that
the commentaries about it
vary in many different
explanations. Cf. Raschi and
Maor das. Korari II, 20, Ibn Ezra,

Iggereth ha-Schabbath posta II; especially R. Isaac Israëli in the Jesod Olam IV, 8.]

[Note 6, p. 21: Cholin 95b. This calendar probably contained the order of the feast as it then usually was fixed by the Palestine Sanhedrin which, was guided (as is known) in its determination of the beginnings of the month by the visibility (becoming visible) of the new moon. Therefore, it was not so arranged as the later one instituted by Hillel II. However, this still needs a close investigation, for many an objection can be raised against it. cf. Maimonides Jad ha-Chasakah h. Kiddusch ha-Chodesch cap. 18.]

However, he never thought of

p. 22 - (1)

publishing this calendar, because as long as there still existed a religious authority in Palestine he did not want to tear the only bond which still tied the Jews to their former homeland!) [Note 1, p. 22: That he never did have the intention as Krochmal and Jost erroneously believe, to publish his calendar and that his saying ..... (Hebrew) -- - - - - was not connected with the intention to eliminate the second feast day with (by?) a fixed calendar, is evident from the fact that Samuel wanted the second feast day held as sacred as the first and that he severely avenged

its desecration (Pesachim 52a). (cf. Israëli l. c.)] Yet he did not fail to teach colleagues and students in the knowledge of the calendar and the Babylonian Jews received their first knowledge in this science from him. 2).

[Note 2 p. 22: Because of the excellent knowledge which Samuel possessed in the Calendar science which revealed to him the secret of the determination of the beginnings of the months (..... Hebrew) he was given the name Jarchina'ah (.....) cf. Baba mezia 85 b.)] Among other things they also learned from him, to determine the length of the solar year as equaling 365 days

p 22 - cont'd (3)

and 6 hours.[3] that is why this determination of the length of the year, tho always in use by the Sahedrin in Palestine[4], with the Babylonian Jews - as well as later with the Jews of the Occident - carried the name Tekufah de Mar Samuel[5].

[Note 3, p. 22: Erubin 56a.]

[Note 4, p 22: cf. Asarjah De Rossi, Maor Enajim III, 40 and Scaliger, Isagogicorum chronol. canonum p. 282 ff.]

[Note 5, p. 22: Tho this Tekufah is not calculated exactly even according to the Jewish calendar since accord. to it 19 solar years which were to correspond to 235 months of Hillel's calendar, exceed them by 1485/1080 hours, but this by no means was unknown to Samuel, he merely wanted to have a more con=

venient figure, for in his time it still was usable (cf. Abraham Ibn Esra, Commentar zu Exod. 12, 2 and Iggereth haschabbath porta I.) Later a certain Rab Adda divided this ~~excess~~ surplus in 19 parts and subtracted one such part of from 365 days and 6 hours and thus reduced the length of the solar year to 365 days 5 hours 55 145/342 minutes, so that 19 solar years amount to exactly the same as 235 months at 29 days 12 hours 44/18 minutes and this year-length is called Tekufah de Rab Adda. But however the Tekufah de Mar Samuel was not wholly set aside ~~by this~~; many a regulation with regard to the liturgy still have it as its basis. (cf. Tur and Schulchan aruch, Orach Chajim paragr. 417 & 229.)

Though Samuel had plunged himself deeply into the study of Astronomy and calendar science yet his eager aspirations and his lively interest was turned (directed!) in a still greater measure to the study of law, for which right at this time in Babylonia a new era began. The most gifted Babylonian students of R. Juda 2) after the completion of the Mischna 1) tried to get to their home country and brought the many hundred year old brain-work of the Jewish people incorporated in this work to Babylonia in order that the tree of life of the law, transplanted into this country, (sh)would ripen & produce new noble fruits. Among these returned students of R. Juda are prominent: R.

Abba b. Chana[1], and especially the excellent disciple of R. Juda, Abba Aricha[2] who returned home later, both authorized by the Patriarch to administer justice and to decide legal religious questions[3].

[Note 1, p. 23: Sanhedrin 5a. Oddly enough, this statement has been ignored by Frankel who forthwith asserts (Introd. in Hieros. p. 57b): R. Abba b. Chanah had not at all moved to Palestine. This R Abba often erroneously was called R. Abba b. b. Chanah, which was the name of his son. (cf. Cholin 86, 44a, Jerusch. Baba mezia IV, 7.) Perhaps it is this R. Abba, of whom Seder Tanaïm relates: . . . . . Hebrew . . . . . (Kerem Chemed IV, p. 186). In any case that whole statement is in contradiction with Scherira's reports. Rapoports (Erech Milin, p. 139) attempt

to smoothe it out cannot be called successful.]

[Note 2, p. 23: cf. Supplement, Note A, VII. Abba Aricha in my opinion returned about five years later than Samuel and very likely had no association with the latter in Palestine because he had R. Chija as a teacher while Samuel had Levy and R. Chanina. If the assumption of Maimonides (Introduction to Jad ha Chasakah) that Rab also was a student of R. Chaninah, is justified, then this must have been later, a few years before his departure where we actually (really?) find him associating with R. Chaninah. (Joma 87b).]

[Note 3, p. 23: Sanhedrin 5a; Jerush. Pea VI, 3; Sotah IX, 2; Nedarim X, 8; Rab received a somewhat restricted authorization as R. Abba b. Chanah, according to Talmud in order to ~~procure~~

bring the latter into favor with his countrymen, which was not necessary with Rab, since he already had a high standing (reputation) with the Babylonians.] The latter, who returned to Babylonia in the year 189 accord. to the time reckoning of tradition (n. ü. Z.) was preceded by his grand reputation, and Samuel was eager to get in closer contact with this famous man, this all the more when he heard his friend Karna — who upon his wish had gone to meet Abba & addressed a few halachian questions to him — to confirm this reputation. Luckily the occasion for this presented itself immediately. For Abba had arrived sick in Nehardea. Samuel had him brought into his house, where he, applying his knowledge of medicine, soon restored his health and concluded an intimate union of friedship[1]. [Note 1, p. 24: Sabbath 108 a. It is reported there,

p. 24 - cont'd (2)

too, that Abba was so aroused against
Samuel because of the violent pain
caused by the medicines that in
his excitement he pronounced a curse
against him; but he ~~soon~~ repented
of his burst of anger and later tried
to again make good his guilt (wrong)
by always meeting Samuel with the
greatest respect. (cf. Megillah 22a Baba
Kam. 80a.)]

These two men, later
joined by Levi, the former teacher
of Samuel, who had come from
Palestine in the year 195 to Nehardea[2],
soon developed a lively activity
for the spreading of the study of
law. [Note 2, p. 24: Sabbath 59b, cf.
Raschi das. and Supplement Note
A VII. Rab in this time, too, had once
more moved to Palestine and
returned from there only after the
death of R. Juda, 193. (cf. Jerusch.
Peah VI, 3; Sotah IX, 2; Nedarim 10,8).]
While Abba, generally called by the
name of honour Rab (Teacher[3]),
[Note 3, p. 24: cf. Aruch, Art. [illegible].]

p.24 - cont'd (3)

~~officiated (acted?) as Emora~~ in the teaching house (school?) at Nehardea - which was presided over by R. Schela[4] as Resch Sidra (head of the teaching house[5]) - as Emora officiated and thus first set up[1] (presented himself) as the interpreter of the Mischna then already used for public lectures,

p.25 Samuel, following Levi's example[2], was busy (occupied) with the collection (collecting?) the teachings of tradition handed down to him by different teachers; and thus originated the Baraïtha, called Tana de Be Samuel, of which we posses still but a few fragments in the Talmud[3].

[Note 4, p.24: This Rabbi Schela must not be identified with the Rab Schela named in Jebamoth 121a, as is done erroneously by First

(p 24, Footnote # 4 - cont'd.)
(Kultur & Literatur-Geschichte der Juden in Asien I, p 91), for the latter was subordinated to Rab and Samuel. But whether this R. Schela is the same who according to Berachoth 58a was nominated as judge by the government, has already been regarded as doubtful by several Chronographers.]

[Note 5, p. 24: Epist. Scher. p. 15. There it is told that R Schela was ירישא ברבנן, according to another version דרבנן רישא) what at that time in Babylonia was called ריש סדרא. must be amended to רישא ברבנן since כי רבנן was the popular רישי רבנן name for the teaching houses (Schools?) (Megillah 28 b). The name Sidra was used more in Palestine and became naturalized (customary?) in Babylonia only thru the teachers of law who had come from

(p. 24 - notes cont'd

(cf. Jerusch. Pesachim I, 1; Kilajim III, 1;). Sometimes the lecture in the teaching house was called Sidra (cf. Leviticus rabba III and Jerusch. Pesachim IV, 1, where, however it is called "order of the prayer" by R. Ascher.)]

[Note 1, p. 25: Joma 20b, cf. Rapoport, Erech Millin p. 117.]

[Note 2, p. 25: cf. above note 38. Baba mezia 48a; Jerusch Baba b. IV, 4.]

[Note 3, p. 25: cf. Bezah 29a, Raschi

Hebrew

In the Jeruschalmi as well as sometimes in the Babli this Baraitha is simply designated as. בני ישמעאל (cf. Jerusch. Kilajim VIII, 2 Berachoth IV, 1. Moëd Katon I, 1 and several others.) But many other statements of Samuel, which are given (quoted?)

with אמר שמואל also seem to be parts of this Baraïtha. Especially those statements of Samuel should be counted with these which are also found in older Baraïthas. (cf. f. inst. Berachoth 12a, Sabbath 15a, 60a, 108b, 150a; Pesachim 45a, 117a; Moëd Katon 12a, [s. Jemsch, Sabbath I.] Rosch ha-Schanah 7a, Jebamoth 116b, Kethuboth 106a, Gittin 57b and others)]

This Baraïtha consisted, as is evident from the places quoted in the Talmud and Midrasch[4], partly of explanatory additions to the Misclina (Tosiphtoth), partly from old Halachoth, sometimes together with their derivation from the Scripture (Midrasch), partly also from older Haggas and historical reports. However, this Baraïtha in spite of its correctness

p. 25 - cont'd (7)

and dependability, did not attain such prestige as the Baraïtha of R. Chija and R. Oschija 5).

[Note 4, p. 25: The Tana de Be Samuel is expressly mentioned in the Talmudic literature: Sabbath 54a, Erubin 70b, 86a, 89b, Pesachim 3a, (7b must be amended), 39a, 39b, Bezah 29a, Rosch ha-Schanah 29b, Joma 70a, Megillah 30a, Sebachim 22a, Genesis rabbah XII (here ... Hebrew ... must be amended to ....., cf. ibid. XI.)]

[Note 5, p. 25: Epist. Scher. p. 9: ... Hebrew 3 times ...]

As for the rest, Samuel, however, never intended to set up this collection as a standard (canon?) for general use since he himself was not always guided by it when he taught the exercise of religion (Halacha le m'ase)!

p. 26.

p. 26 – cont'd (2)

[Note 1, p 26: Sabbath 54a, Bezah 29a: — — Hebrew.]

In this activity to collect old traditions, did not lie the chief point of Samuel's work for the teaching of law; this rather should be looked for in another sphere, where to the giant mind of Samuel presented itself a far more productive field for the deployment of his activity.

III

Translation from German.

"The Jewish Calendar"

Historically & Astronomically Examined

A paper crowned by the Jewish Theological Seminary,

by Dr. Adolf Schwarz

Breslau, Schletter's Bookstore (H. Skutsch)

1872 (136 pages)

Preface.

The abundant literature on the Jewish chronology is comparatively meager as to strictly scientific presentations of the ~~constant~~ fixed calendar. The few works of the Gaon epoch were lost to us in the course of time & the most part as well of the old as well as of the more recent Calendar papers writings on the calendar have no other aim (goal) than to popularise the Molad & Tekupha calculations in manifold variations. The Jewish calendar enjoys a

a deeper understanding & a more or less systematic treatment solely from those chronologists who duely appreciate also its astronomical side. That is why the works of Abraham Hanasi, Maimuessi (Maimonides), and Israeli, though they are based on the Ptolemaean system, will continue to remain writings worthy to be read. But as these are less concerned about the Jewish chronology in general and rather about the now existing calendar, even they have not taken into consideration the genetic development of our time reckoning. De Rossi is the first to make the history of the Jewish calendar a matter of critical investigation. His achievements, however, were mere beginnings (for statements?) and up until now, there the matter rests. Not until Slonimski Senior, Sachs, Piniles, Reggio and Steinschneider the scientific investigations on the genesis of our calendar were again

taken up and considerably ~~furthered~~ advanced. The present work ~~starts out~~ proceeds from the achievements of these men. How far it has exceeded them, how far it has succeeded in ~~reaching~~ approaching the goal of the investigation — to decide this is left to impartial experts.

Breslau, April 1872.

p. 3 "... Though much has been said against it (the fact to be stated) ... yet it remains a certain fact that our law-giver [Moses] began his creative activity with a time reckoning in many ways different from the Egyptian reckoning. This cannot be emphasized sufficiently as against those misstatements our former as well as our present calendar is experiencing from various sides. While contending ~~making~~ but that the time reckoning of our ancestors was arbitrary & without rule, we are told that the so-called new Jews were students of the Chaldeans & Greeks from whom we borrowed if not the whole calendar, at least the chronological principles.(1)

[Note 1, p. 3: Thus Scaliger in his Em. Temp. p. 79: „Judaei (igitur) tunc primum lunarem annum ...." Ideler, however, admits that the Biblical year ~~was~~ is a lunar yr, but the present calendar has too much similarity with the Greek calendar not to make him think the

latter has served as pattern to the former. The intercalation method discovered by Meton, the 19-yr cycle, he says, (l.c. I. 69) is still in use with the Jews, only ~~taken~~ changed (covered?) with rabbinical ~~meditations~~ broodings. Comp. "Zeitschrift der. d. m. Gesellsch II, 344.]

If this were really true we could, in systematically presenting the present permanent calendar, take into consideration the historical development only in a small degree; we would have to abandon from the start the continuity of the old + new calendar and look for the tracks of the latter in untrodden (trackless?) paths. However, we need want to approach our task without preconceived ideas, and in order to properly appreciate the principles underlying our permanent calendar we want to hunt up first of all the sources running - though sparsely - on home soil and also those in foreign countries demanding from them information + explanation. We must place the historical side in the

foreground because in our opinion the system of the calendar is seen in its true light only by entering into the details of its (genesis) origin. Instead of first dealing with the system analytically & then trying to justify the principles thus gained (arrived at), (p. 4.) we prefer, and that for practical reasons, to follow (with the help of history) trace the range of modifications the basic principle of our time computation has experienced in course of time in order to learn whether & in what form it was made the basis of the present calendar. Thus, proceeding from the simple elements to the composite whole we can present the system only synthetically. However, we thought we must not stop here; for what does it profit to know & understand the calendar system how it was perfected genetically if you do not have the guarantee that this calendar agrees most minutely with the sky.[2] This circumstance and the

stimulation we found received from the Jewish chronologists, especially Maimonides, were the causes that we extended the bounds (limits) set us, (also to the other side) and as far as our limited mathematical knowledge allows ~~me~~ of it to consider the astronomical side of the calendar as well. According In accordance with these governing points of view our work is divided into three main parts, which are:

I History of the Jewish Time computation
II The System of the present permanent Calendar
III The astronomical calculation of the Moledoth + Tekuphath.

Page 5

I History of the Jewish ~~time computation~~ Chronology

L 1. In order to be able to carefully follow up (trace) the time ~~computation~~ chronology of any people from its first beginning down through all stages to its completed perfection he one must know the early history of this people at least so far as to recognise (find) its primitive views in the chronological ~~principles~~ rudiments.

L. 6. For nothing affords a better inside view into the intellectual life of a people than its time reckoning provided it is not taken over from outside (other people!).

L. 8. Although it is a mere guess that in ancient times there have been many different ~~time computations~~ chronologies, yet it is more than probable that the peoples separated by their origin have divided their time in special ways.

L 12 We know the time reckoning of but a few nations & even that only in its last (phase) stage so that we cannot gain a clear picture of its development.

L. 15. In this respect the Jewish calendar has the advantage above all others in that our history, our law starts

out with the establishment of an ordered chronology ~~time computation~~; but the source we see begin at the banks of the Nile soon is lost (silted up?) in the sand & ~~not~~ remains invisible not only during the long pilgrimage in the desert but also during the long period until the exil and ~~only we see its track~~ trace? only ~~in~~ in a few ~~solitary~~ (sporadic) isolated places. do we believe to be able to see its track ~~(trace?)~~.

L27 Until Esra, we find but a few facts or proofs to justify our assumption that the time computation had been changed ~~to~~ not to say improved and one is compelled to resort to hypotheses which are probable only insofar as they are based on a principle (alluded to) intimated in the

L28. Scriptures. With the appearance of Esra the knowledge gained in the foreign country ~~makes itself felt~~ asserts itself also in the ~~time computation~~

(p.6.) chronology; a new angle (moment) is introduced into the calendar, an angle which at first is considered merely as ~~an~~ a sideline but which

gradually gains in influence and in the end alters in different ways the installation (establishment?) of the new moon (or: accepted) sanctified through many centuries.

L. H. At the time of the second temple in chronology there appears the calculation as a new factor side by side with the observation of the new moon. With the completion of the Mishnah the calculation is on an equality with the

L. 8 old method. Rabbi Juda I conceded still greater influence to the calculation & since that time it became more & more prevalent over the observation until finally with the introduction of the present calendar it is the auto-

L. 11 cratic power. Thus we distinguish three periods (epochs) in the history of our ~~time reckoning~~ Chronology:

L. 12. 1/ From Moses until Esra when the newmoon was established by observation;

2/ From Esra to R. Juda hanasi, when with observation calculation too gradually gains power;

3/ From R. Juda I to Hillel II (359) when observation is more & more lost in the background until it finally has to make place (entirely) for calculation.

Schwarz - #11

Page 6 L. 19. I Epoch (Period)

From Moses to Esra.

L 20 The beginning of the civil day with
sunset is sufficient proof for the assertion
that our months have been lunar
L 22. months since oldest times. From
numerous Bible texts it is unequivocally
plain that the day belongs to the
preceding night which surely would
not have been the case with a ~~if it had been~~ chronology
based on the sun and
naturally proceeding ~~from with~~ sunrise. (1)

[Note 1, p. 6: Instead of quoting here the
many verses of Scriptures, we merely
want to point out that the days of
uncleanness came to an end with
sunset. Compare on this the explanation
of Raschbam to Gen. 1:5 (re-printed
Kerem Chemed 8, 44) & the apologetic dissertation
of Ibn Esra on the Sabbath, Chapt III.
As to the main periods of the day,
it can be assumed that they
were in use very early. Besides, the
night was divided at first into
three vigils as is clearly evident

from Judges 7:19; later the Roman custom was copied dividing the night into four vigils, comp. Berachoth p 3a. In the earlier ancient Times no mention can be made of hours; the word used in Dan. 4:16 (19) does not at all have the meaning given it only later. Likewise it is doubtful, whether the sun dial of Ahaz 2 Kings 20:9-10, Isa. 38:8 was a proper sun clock or a Gnomon with concentric circle to make known the periods of the day through the different lengths of the shadow. Hatterer (Abriss d. Chron. p. 144), it is true, assumes that the conception of noon & midnight presupposes the existence of sun-dials & waterclocks, as though it were not possible to recognize noon by the short shadow & midnight by the phases of the moon.] A further proof for our assertion is (P.7) the week-concept, for nobody will want to doubt that the week is very ancient & likewise everybody will admit that it could be introduced

Ed. Note L.26

Schwarz 1913

merely as a subdivision of either the tropical or the synodic month (1).

Note [Note 1, p. 7]: The week has ~~come~~ reached the Greek and Romans through the medium of our people scattered to all sides; they translate it by ἑβδομάς and septimana. In the beginning the names of the single days of the week were taken from Hebrew language usage, as μία σαββάτων in the N.Test. is a proof that שבת was als taken meaning week. Isidorus relates that in the Catholic church the week days are called Feriae according to the ritus ecclesiasticus. This name has found different explanations. Scaliger thinks it is transferred from the days of the Easter week, which were Feriae according to a decree of Valentinianus II, to all other days since the original (early?) Christians who began the ecclesiastical year at Easter named the days of the remaining weeks after those of the first. Bede (d. c. II 180)

believes to have found a better reason. The first Christians, says he, used to keep aside from Sunday, Wednesday & Friday as days of fasting & prayer. Now in order to distinguish the two days of the week (to tell them apart?), they called one feria quarto, the other feria sexta, & soon followed the feria I, II etc. It is not for us to explain the ritus ecclesiasticus yet we do not believe to be wrong in assuming the name feriae an adaptation to the Hebrew form

Page 7 L. 4. [*ראשון, שני, שלישי, רביעי, חמישי, ששי]. Most plainly, however, ~~are~~ for the real character of the month speak the names the Hebrews had for it. From the word חדש ① Kings 6:38; Ps. 104:19 which unmistakeably comes from חדה as well as from the word חדש ② which fits only to the light phases of the moon, it can be concluded with certainty that the Hebrews knew no solar months.

[Note 2, p 7: The expression שלח חדש בחדשו Numb 28:14 is the best proof for it.]

[Note 3, p 7: Comp. Ibn Ezra to Gen. 8:3 and Des-Vignoles Chron. de l'Histoire Sainte l. VI. c. I., who in verses VII:24 - VIII:20 finds proof for his hypothesis according to which in the earliest time of the world in the Near East and Egypt a year consisting of twelve 30-day months which is a medium between a lunar & a solar yr, was customary.]

L. 10. Yet however plausible & well founded this view is, still it found its opponents ③ who believed themselves to be able to disprove it
L. 12. from the Bible. They assert that from the history of the flood it is unequivocally evident that the original months of the Hebrews like those of the Egyptians and Persians consisted all the way
L. 15. through of 30 days. The flood, it is stated, began on the 17th

day of the 2nd month, the water began to sink after having covered the earth 150 days and on the 17th of the 7th month the arc came to rest on Mt. Ararat. There 150 days were between the 2nd & 7th months, thus then were 30 days to each month. (1) [Note 1, p. 8: Comp. the commentators.]

Page 8 L. 1

But what does this prove? At the most that in the antidiluvian year the months were of this length! But even that is not proved, for one has to strain (twist, force) the exegesis in order to bring the 150 days to end on the 17th of the 7th month making the arc to rest on the same day on the mount Ararat which had just been covered 15 cubits with water. (2) [Note 2, p. 8: Ibn Ezra l. c. and Adereth Elijahu c. 11. p. 82]

Greater appreciation & consideration deserves this appropriate question: Why has Moses not mentioned with one word the form of the year, why does the Bible not give neither the months number of months nor of their days while

dealing with matters far less important than the time computation & the order of the feasts, & how come that the intercalation method, the manner in which to adjust the lunar months with the solar year, is so completely passed by with silence ?③ [Note 3, p.8.

Comp. Ibn Esra Introduction in his commentary to the Pentateuch and Exod. 12:2. In any case finds in the word בימים Esth. 9:22 an indication (allusion?) to the intercalary month.]

It cannot be denied that these questions & objections are justified; considering, however, that the fixation of the beginning of the months & the intercalation is not ~~a matter of~~ everybody's affair & that therefore, since the Bible as a book for everybody, the Bible cannot develop chronological principles,④ he shall and must calm himself with the allusions (indications) given in the Scriptures.

(p. 9.)

[Note 4, p.8: In his Mos. Law John D.

Michaelis has given special attention to this matter, and as we agree with him so completely we must no miss to quote him here. He says. in II, 169: " Assuming the Egyptians knew as early as in the time of Moses of a solar year of 365 days & calculated in the way Diodorus Siculus in Upper Egypt describes it, still this solar year was much too faulty for a law giver to introduce it instead of the old lunar year. It is true, he continues, that God who sent Moses as lawgiver to the Israelites & deigned (designed) him worthy of direct revelation, already at that time knew the length of the solar year much more exactly than a mortal being shall ever calculate it, thus he could have revealed to Moses the solar year as exact as we never shall find it. But it is not God's way to act, he leaves it to the diligence of man to discover philosophical & mathematica

truths, & He would not be Kind, not like a father who wishes to educate His children & teach them to think if He would make known to them through a prophet the real length of the solar year or similar truths which they could find themselves & which would not be necessary to them right away.... So here the greatest wisdom was to note & to know that the solar year known up to then was faulty, indeed very faulty, & not to introduce a solar year but leave His people with the lunar year which is sufficiently marked in the sky, to let them correct it if possible & bring it nearer to the solar year. This is what Moses did. He could not take as a measure a proper solar year in order to correct by it the irregularities of the lunar year, but he made use of an economical solar year which never allowed a mistake of whole month without correcting it, & with which any farmer could understand get acquainted."

To be sure, the form of the year is not given anywhere expressly), yet in spite of this it is an established fact that Moses introduced the bound (?) lunar year. The circumstance (fact?) that the feasts of the Israelites had to agree with the seasons of the year makes this an unshakable evidence. With a free lunar year the Passah feast which comes in the month of the ears (of corn) as well as the harvest feast which comes in the autumn month would make the round through all seasons of the year within a period of about 34 yrs & would thus have to lose its real character. If you only admit that חדש means the lunar month & שנה as a repetition, rotation means the solar year, you cannot but understand the words ראשון הוא לכם לחדשי השנה (Exod. 12:2) in such a way that the yr must not begin neither with the 12th nor with the 2nd month & that accordingly as often

as spring begins towards the end of the first month, as month① is to be intercalated. [Note 1, p.9: That not 10 or 11 days were inserted after each year can be concluded for the simple reason because by it the character of the lunar month (is annulled) as a matter of fact ~~would be~~ We cannot possibly ~~imagine~~ picture a bound (?) lunar year with an appendix of several days as imagined by Revisohn (History and System of the Cal. p.6.)] Only by such a procedure could the ~~עצרת~~ be celebrated on חדש האביב and the feast of tabernacles בצאת השנה at the end of the summer – as the expression is correctly understood by the Jer. Talmud② [Note 2, p.9: Rosch hashanah I, 2] And that this method really was followed is proven by the circumstance that the months ~~were~~ had names, which referred to the seasons of the year. It is true, we find but three such names of the month: ירח זיו month of splendour (זיו) 1 K. 6:1,37, ירח איתנים, month of the flowing

rivers (streams?) (תשרי), or according to Joh. Isohn month of autumn 1. Kings 8:2 and ירח בול rain month (מרחשון) 1 Kings 6:38; surely all the others had similar names, only being less important they were not preserved (retained? perpetuated?) From 1 Chron. 27 where the captains of the (p. 10.) Kings' bodyguard for all twelve months of the year are named it is just as difficult to prove that the intercalary month was not known than to prove from the Talmud① the existence of such a month with 1. Kings 4:7. It goes without saying and needs no prove that the months of this epoch period began with the crescent becoming visible since this was the case with all ancient peoples who had lunar months. It appears, however, from 1. Sam. 20:27 that already in the most ancient time as often as on the evening of the 30th day no moon was visible, two days were celebrated as newmoonsfeast so that as with us between two newmoons there always were 28 days.②

[Note 1, p. 10: Synhedrin 12.a]
[" 2, " : Gatterer in his zeal goes too
far (l.c. 145) when he asserts that the
Jewish months at all times had 29
and 30 days alternately for since the
visibility of the new moon depends
on the position of the ecliptic as against
the horizon, it cannot be determined
in advance that one or the other
month will shall be full or deficient.
It is just as possible to have two
full months follow each other
as for two insufficient.]

Later chronologists who do
not like to miss a regulated (adjusted?)
intercalary cycle (in the Bible) have
found such a one after long searching
in the Jubilee period. Without going
into the details of the different hypotheses (3)
set up (?) on this subject we merely
want to state here that the Jubilee
period consists either of 49 or 50 yrs.
according to whether the 50th year is
counted as the first of the second

or as the last of the first Jubilee period, i.e. according to whether the 56th or 57th is a Sabbath year. [Note 3, p. 10: We refer here to Zuckermann's essay "Ueber Sabbatjahrcyclus & Jobelperiode" where the different opinions & hypotheses are lightly (?) presented.] Those who have found in the Jubilee period (astronomical moments features) like (or as well as?) in Sabbath year cycle all adhere to a 49 year period. Frank (4) who acquired merits with (by?) his investigations made in chronological as well as astronomical regards on this period set up a hypothesis which culminates in the following sentence: Cyclum jobelcum esse astronomicum et totius chronologiae fundamentum. He assumes that in each Jubilee period 18 months were intercalated i.e. every two or three years one 30-day month. He proceeds as follows:

One civil lunar year = 354 days

One Julian solar year = 365 days 6 hours.

(p. 11.)

48 such lunar years =	16,992 days
18 months at 30 days	540 "
48 Julian solar years	= 17 532 days
10 intercalary days of the 7th mo ⊙	= 10 "
Total	17 542 days
The Jubilee year	= 354 "
49 natural (ordinary?) solar yrs	= 17896 d. 20 hrs
50,5 " " lunar "	17895 d 12 "
Epacta of the 49th year =	1 d 8 hrs.

[Note 4, p. 10: In his "Novum systema chronologiae fundamentalis cyclo jobeleo biblico detectae; he is followed by Gatterer in his "Abriss d. Chron." (Compendium on Chronology)]

Frank considers the 49th year as the Jubilee year and he explains the coinciding of the Jubilee year with the Sabbath year by connecting the expression שנה found in the Jubilee law with the beginnings of the year as customary with the Israelitic (Jewish) people. In his opinion the inter-

calary & Jubilee years were not ecclesiastical years beginning with the month of Nisan at the harvest time but rather civil years beginning with Tishri, in the seed time. Thus the years of the Sabbath year cycle & the Jubilee period began in the middle of the ecclesiastical year (2)

[Note 1, p. 11: Accord to Levit. 25:9, the Jubilee year begins with the Day of Atonement. Comp. Alfrah. hanasi Sefer haibbur 3; 1.]

[Note 2, p. 11: Accordingly Frank translates Lev. 25:10 + 11: sanctum habeatis annum anni hujus quinquagesimi and: annum quinquagesimi hujus anni sit vobis jobelens. Comp. Zuckermann l.c. 16.]

Now at the end of the first Jubilee period the astronomical lunar year (as against the solar year) is 32 hours behind, however by computing these epacts for 152 Jubilee periods you really (3) balance the two forms of years.

[Note 3, p. 11: Consequently, in 152 Jubillee years 2743 months must be inserted. Even so, this does not exactly balances it, for at the end of the 152 Jubilee period the lunar year is gotten ahead of the solar year by 7 days, and this difference can be balanced only in the following periods by intercalating instead of 30-day months (29-day months).]

Ruckermann who also assumes a 49-year Jubilee period though with R. Jehuda (4) he does not make the Jubilee year begin with the 7th Sabbath year but rather (with the 1st year of the 8th (lets its coincide) Sabbath year cycle in his well known work (5) has made still more exact investigations as to the relationship of the Jubilee period with the astronomical balancing of the different forms of year & has made the newest latest data the basis of his hypothesis. According to the latest

[Note 4, p. 11: Nedarim 16a. & parallel texts]

[Note 5, p. 11: l.c. p. 15.]

solar tables of Hansen + Olufsen
(p.12) the length of the tropical year amounts to. 365d 5h 48' 46,15"
The length of the synod. lunar yr = 354 d 8h 48' 32" 26,94" ①
thus 49 trop. solar yrs = 17896 d 20h 49' 41" 21'''
49 synod. lunar " = 17363. d 23h 38' 30" 3'''
The epact of these 49 solar
+ lunar yrs = 532 d 21h. 11' 11" 18'''
If you deduct 18 synodic months of this difference there remains the epact of 1d. 7h. 58' 22" 38''' which is almost completely lost after 133 periods which have 6 intercalary months more than usually ②.
[Note 1, p. 12: Zuckermann has overlooked here one thing, i.e. that the tropical solar year as well as the synodic month are not stable (?) but changeable quantities. With regard to the solar yr we would here say but briefly that the precession ~~m~~ according to which the ~~last~~ spring point goes back annually by 50", 2113 ~~m~~ consists really of two parts. Due to the disturbances the earth suffers from the planets the

ecliptic approaches the equator in each every century by 48",37 while the spring point advances by 16",44. Thus the precession proper amounts to 50", 3757 + becomes smaller by 0",1644 solely through (thanks to) the influence of the planets on the earth. This latter is no constant quantity + therefore (for this reason) the tropical year is changeable. As the theory shows, the tropical year 3040 B.C. was the greatest, i.e. by 38" greater, and in the time of Hipparch, 140 B.C. only ~~about~~ by 14" greater than the mean. If you figure in this way the length of the tropical year in Moses' time, it amounted to 365d. 5h. 48' 59",51. As to the length of the synodic month it must be emphasized here that the movement of the moon is accelerated by ~~dimin~~ reduction of the eccentricity of the course of the earth, thus ~~making~~ the month becomes shorter. Laplace has expressed most minutely this decrease (waning?) by his famous formula. If t

represents the centuries elapsed since 1800 then the way the moon covers in the synodic month becomes smaller by $10''.7232\ t^2 + 0''.01936\ t^3$, or the length of the synodic month will be shorter than the epoc year 1800 by $21''.1113\ t^2 + 0''.038114\ t^3$. With the help of this formula we now can calculate (figure out) the mean length of a synodic month out of any century by inserting (using?) for t $t + \frac{1}{1237} - t$ ($\frac{1}{1237}$ = synodic month). Moses led the Israelites out of Egypt 1495 B.C. consequently we can take $t = 33$; naturally here it is – being prior to the epoc year, + the formula would take the following aspect:

$$21''.1113\left(\left(33\tfrac{1}{1237}\right)^2 - 33^2\right) - 0''.038114\left(\left(33\tfrac{1}{1237}\right)^3 - 33^3\right) = 21''.1113\left(\frac{2.33}{1237}\right) - 0''.038114\left(\frac{3.33^2}{1237}\right) = \frac{1393''.3458 - 200''.7464}{1237} = \frac{1192''.5994}{1237} =$$

$$0''.964106 = 57'''.846360.$$

That much the mean length of the synodic month was greater in Moses' time than in the year 1800. So it was 29d 12h 44' 2"50'''.188+ 57",85 = 29 d 12 h 44' 3" 48'''.038.]

[Note 2, p. 12: A peculiar hypothesis we find in the orient 1850 p. 536, i.e. Zipser

" would have found a brand new form of the year for the Biblical time - if only tradition were not against it." Add to the regular lunar year of 354 days the ten days until the day of Atonement & the lunar year is balanced with the solar year. As 364 days amount to exactly 52 weeks, is has the combined advantage that, like the Sabbath, all other feast days too, have a definite week day. The solar year, however, has 365 d. & consequently to seven years it is one whole week: Therefore the intercalary year of one week (sic!) But the solar year has yet a few more hours etc. and that, as accepted by the ancients was 6h 12' 30".....]

Continuation in ring note book.

P. 13.

p. 14. L.3. . . Neither one nor the other hypothesis is probable, not Franks because it is still very doubtful whether in Moses time ~~they had~~ a fixed year was customary in Egypt, to say nothing of a Julian solar year; not

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p 14 cont'd

Zuckermanns because you cannot make the astronomical data (dates?) of today a basis for the mosaic institutions. In those days when the month began with the visibility of the moon & the consequently the time reckoning depended absolutely on observation there could be no talk of a definite length of the synodic month. And because everything was based on observation there was no need for an intercalary cycle ruled by formulas. Moses did not want to introduce neither an astronomical lunar year nor a solar tropical solar year as basis for timereckoning but rather an economical year combined of both & with such a one there was no need for astronomical calculat computations. Every farmer at could know at the end of the 12th month whether

the barley would be sufficiently ripe in 14 days in order to have a sheaf for the Omer, & according to this measuring rod of the season of the year the coming month became was either the 13th of the last or the first of the next year. It is evident that here ~~is~~ no deception was possible, as for inst. Kerres in Sicily once performed it. ~~The seasons of the year themselves would have become witnesses~~ Against the priest who would have dared such a deed, the seasons of the yr themselves would have become witnesses ~~in order~~ to accuse him of transgressing ~~of~~ the most holy law. In the first epoch of our time reckoning ~~in reality~~ a balance of the different forms of the year could not really take place; the Traditic lunar yr had to remain fluctuating as compared with the tropical solar year; for in the ordinary

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p. 14 cont'd year it was 10 or 11 days shorter & in the intercalary year again it was 18 or 19 days longer; however, 365 economic years agreed with 365 tropical solar years (but for a trifle).

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(p. 37 - lower part) 2.28.

There is hardly another point in our history on which opinions differ so widely than on our calendar. The reason for it is in the regrettable fact that the Talmud passes over the Fr Hillel's reform with silence and do not mention with one word the great difference between our present & the former calendar. (p. 38) This silence has also been differently interpreted & utilized so that some ~~ascribed~~ claimed a biblical age for the calendar while the others consider it an innovation originating in ~~an after~~ a posttalmudic epoch. Saadjah Gaon (1) & after him Chananel ben Chuschiel (2), men, whose merits for Jewry cannot be impaired by anything, in their zeal in defending the rabbinical institutions went so far as to assert: the constant calendar is a creation of Moses, the determining of the newmoon

All notes /

with the help of the testimony of witnesses was not introduced until the frictions between the phariseés & Sadducees had increased & & even since that time the mean reckoning (computation) used today remained the preponderant & decisive one. We can fitly pass over (by?) the refutation of this assertion; Maimonides[2], Ibn Esra[4], & Israeli[5] have evaluated it accord. to its merits & proved from the Mischnah & the Talmud how untenable this assumption is; likewise has it been proven by the Karaite Eliah hadassi[6] & by Azarjah de Rossi[7] that in the biblical epoch the Dechijoth was not known. Maimuni[8] & Ibn Esra[9] advocate a second opinion; they assume that the theory of a constant calendar is a sinaitic tradition in case the determining of the newmoon by observation should no more be possible[10]. In Maimuni's opinion the

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p. 39-cont'd

the calendar was introduced[1] in the time of Abaji & Raba.

[Note 1, p. 39: De Rossi contends the traditional interpretation of the words of Maimuni's l. c.

ראיבא סנהדרין קושין על פי הראיה ובומן שאין שאנו מהשבין בו היום. דלבה למימ היא שבימן סנהדרין קובעין מפ ההשבון.

In his opinion the words "ר"ל ג" refer merely to the first part of the sentence. Maimuni only meant to say that in the time of the Sanhedrin it was the rule to make the true conjunction the starting point for the computation, but today we may go by the average movement of the sun & the moon, yet in no wise is this procedure to be traced back to a sinaitic tradition. (Mazref lekeref p. 59.)]

Nachmanides[2] meets this assertion with the remark that the constant calendar ~~could~~ can

not possibly be a הלכה למ"מ, for it is nowhere mentioned in the Talmud. Of the same opinion are Serachjah halevi ③ & Israeli ④, only with regard to the time of the introduction of the calendar they differ widely. According to Nachmanides Hillel II was a son of Rabbi, according to Serachjah halevi of R Juda II. With Israeli we find two contradictory statements as to the introduction of the constant calendar. Once (One time) he gives for it the year 4260 + again another time, though not expressly but indicating it, the year 359 d.g.Z. (~~Greek timereckoning~~?) Azarjah de Rossi accepts the latter statement as the right one because it agrees with those of older authors, otherwise he would have given preference to the former because then the not mentioning of the calendar would have been

based (proven?) by the Talmud (6).
So the opinions on the calendar
differed widely from earliest
time; when later the chronologists
noticed the difference between our
Molad & the astronomical mean
conjunction, they became in doubt
also as to the meridian on which
the whole calendar is made
(built up?); it was more & more
pushed back to the east (1), until
finally in our time, attention being
drawn to the great differences of
our calendar, the conclusion
(result) was reached based on
astronomical investigations
that the Tekupha of R Adda on
which the calendar is based,
dates back from the 10th century.
The representative (advocate?) of
this bold idea is Mr. Ch. S. Slonimski.
In a chain of original & spirited
(ingenious?) works (2) Slonimski has
set up a hypothesis, the essential

Note 2. Compare Toldoth hoschom. p59-64. Kerem chemed V. his correspondence with Reggio, ibid. IX his correspondence with Pinles, hanjonah. p 1-17, his Desode haib=bur. Hamagid of 1863-1864 and

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p.39 - cont'd

features of which we shall compile as follows. -

[Note 1, p.40: Already Maimonides seems to have been of the opinion that our calendar is not ~~regulated~~ established on the Jerus. Merid. For if you compute the astronomical conjunction with the help of the epoch stated in Kid. hach. c. 11. ff. you find that already in Maim. time it was 1h 17' before the Molad. This difference not mentioned with one word by Maimonides, he could explain to himself only with the transfer of the meridian. Comp. Jes. Olam 4,7; furthermore different views ~~with~~ of (given by) De Rossi. Mazref lekesef p.49-54.]

L. 14. The length of the synodical month was found by transforming the sexistimals as given by Ptolomäus into ordinary fractions, and this is the real reason for

L. 17. The Molad Bharad was found to be 29 days 12h 793ch based on computation of the lunar months between the era of Ptolomäus, Molad Nisan 747 B.C. and the beginning of our era, and likewise the first Tekuphe of Samuel was found by starting with the average length of the sun at the time of Ptolomäus and figuring the years backwards at 365 days 6 hrs.

L. 23. But when Samuel did not accept the length of the ~~year~~ tropical year to be 365 d 5 hrs 55' 12" as did Ptolomäus, then this was solely because, dividing the year into four equal parts, he was so much less concerned about the shifting

of the Tekuphoth, since he could see that the Tekuphoth would coincide alternately and progressively with the solstices and the equinoxes.

Page 41. L. 1. But if Guchadeat's admitted order of intercalation remains unexplained; & for though we might disregard the deviation of the Tekuphath Tischri from the rule of intercalation as given in the Talmud (Note 1), since this supposedly is not valid for our era, still it is not possible to reconcile the Tekupha which in the 18. year of the cyclus falls on the 18. Nissan with the principles of the Talmud:

Note 1. Synhedrin 12

L. 8. In spite of all this Slominski rejects the view of all later

Chronologists, that the Addaean Tekupha is the basis of our calendar, because according to his impression the so called Tekupha of R. Adda bar Ahaba dates from the X/o. century (A.D.)
(first half of the)

L. 12. Neither in the Talmuds and Midroshim, nor among the old chronologists is there any trace of this Tekupha, nor is its bearer mentioned anywhere in connection with the calendar system, ~~furthermore the [illegible] (Note 2) and [illegible] (Note 3) cannot be reconciled to~~ custom (or use) of (Note 2) and (Note 3) dating from the Talmudian period, cannot be reconciled with this view, and, most important of all, finally it is opposed by the fact that the Addaean Tekupha at the time of the calendar-reform was three days away from the equinoxes and solstices.

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L. 21. First, the chronologists of the 10. century found, that the Molad Nisan ~~occured~~ at the onset of the cycle according to the albotanian accurate observation occured ~~at~~ 9 hours 642 ch before the Molad and that the order of intercalation because of the complete adjustment of the different types of years within the cycles did not contradict the talmudian principle, as previously supposed but rather agreed fully with it.

L. 27. This striking agreement lead to the supposition that the calendar had been founded on this length of the year, and thus originated the watchword:

L. 30. The name of this new Tekuphs is derived from an alternate version of the ancients.

L. 32. According to them it was not R Huna but R. Adda bar Abin (Note 4)

who proposed the principle of the 16. Nisans and certainly the Addaean Tekupha originally ment nothing other than the Tekupha corresponding with the principle of Adda; first later the words were added, and thus arose the misunderstanding, that the contemporary of Samuel the famous Amorean, who often is mentioned in the Talmud had invented this Tekupha, while actually R. Hosan hadajon is the real inventor, who, as we see from those of his writings quoted by Israeli (Note 4) for the first time discovers by his own observations as well as by the astronomical tables of Albatani discovers the correlation between the order of intercolation and the principle of the Talmud.

Note 4. Obadjah to Kid. hasch. 10 and in the Sachs's Manuscript of Sesod Olam

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Note 1. Sesod Olam 4; 14.

L. 5. But this hypothesis of Slominski was opposed (or disproven) by S. H. M. Piniles (Note 2)

Note 2. Kerem Chemed VIII and IX hamagid 1863-1864, Kobak's Jeschurun 1857-1858 p 15-22 and p 211-262. Shortly after the publication of the correspondence between Slominski and Reggio, Piniles expressed his doubts, but peculiarly enough his letters were not made public till 4 years later in Kerem Chemed.

L. 7. We shall briefly state the latter's hypothesis in its outline. ~~as follows.~~

L. 8. Piniles agrees with Slominski that neither the Tekupha nor the name of R. Adda appears in connection with the calendar question in the Talmud, but that this is no argument for silence; for the ~~#~~ fact that the calendar and its principles are not mentioned in the Talmud is explained by the circumstance that our ancients

who regulated the calendar 34 years after the Nicean council, saw to it that no stranger and outsider should be initiated into its ~~secrets~~ principles.

l. 15. The founders of the calendar thought that they ought to retain the previous secrecy, in order to protect the declared advantage over Christianity which Judaism had as a result of the regulated order of festivals. (Note 3)

Note 3. p. 211

l. 18. The (constant) fixed calendar is undoubtedly based upon R. Adda's Tekupha, because it cannot be assumed that Samuel's Tekupha with its cyclus-excess of 1 hour 485 ch could be taken as the basis of a permanent chronology.

l. 22. Why should there have been taken less precautions at the institution of a fixed calendar than at a time

when only one intercolation was involved!

l. 25. The Tekupha of R. Adda which does not originate with but with a chronologist by the same name, ~~was~~, as is clearly evidenced by the ✓ words of Isak b. Baruch (bei = in?) Abr. hanasi, was known already long before R. Hasson. (Note 4)

Note 4. Sefer haibbur p. 94

From this it is seen that the at least were known 1-2 years before Hasson; in general, the fact that Saadjah and Hai know nothing of it, does not prove anything, for

l. 28. Saadjah's version might not at all be reliable, for there did not exist an Amoraen by the name Ada bar Abin; only once (Note 1) does this name occur, but from the parallel

passage (Note 2) it is clear that it should read Idi b. A.; but he could not have made the calendar rule because he was not a Palestinian.

Note 1. Keritoth 21a

Note 2 Joma 74b. Jebamoth 25a. Pesachim 101b. Bata batra 33a. Gittin 89a Chulin 97b.

L. 4. The Tekupha of R. Adda were also written in a Boraitha as Chadja (Note 3) and Abr. hanasi (Note 4) relate, and for that reason alone cannot be an invention of the 10. century.

Note 3. Kid. hachod c. 10

Note 4. Sefer haibbur p 87

L. 7. But as regards the astronomical side, there is no difference whatever in the time, assuming that the true Tekupha is the basis of the calendar.

L. 10. Only in regard to the Conjunction was preference given to the average motion, because the moon is exposed to so many disturbances, to allow the true Molad to be computed so easily, while for the Tekuphia, where the season always was of importance, the founders of the calendar could let it be with the true movement of the sun, so much more since according to their supposition the equation (=formula) of the solar orbit is an unchanging value (a constant).

L. 16. In the year 497 the true Tekufath Nisan was exactly 9 hrs 642 ch before the Molad and in the year 364 approximately 5 hours after it; ~~therefore~~, if not too great accuracy is required from the founders of the calendar, the view may therefore be maintained that the fixed calendar was introduced about this time.

L. 22. We have permitted these two

hypotheses to follow each other im=
mediately, in order not to have to repeat
the objections against Slouminski, s as=
sertions.

L. 24. For two reasons his viewpoint
is untenable, for one because it re=
mains unexplained that the founders
took the middle (average) length of
the month from the Ptolemeans but
not that of the tropical year, and
secondly because the order of inter=
colation of our cyclus which deviates
from that of Meton – which is arcaic
– cannot just be accidental.

L. 29. But also Pinile's's hypothesis
rests on ~~on~~ assumptions, which we
cannot accept.

L. 31. Pinile's favors the view that the
Calender was introduced in 497 because
he believes that the bearer of this
Tekupha could not have been R Adda
bar Ahaba but only a later Chro=

nologist, and because the true Te=
kuphoth Nisan 497 appeals more to
him than that of the year 364.

L. 35. But the famous Talmudscholar
as well as the mathematician Pinles
has overlooked two factors.

Page 44. L. 1. The name R. Abba bar
Ahaba does to be sure appear in
connection with the calendar question
namely in Erachin 9b.

L. 3. It is he who expresses the bold
view that the institution need not
absolutly be based upon observation
(Note 1)

Note 1 Compare Kiduschin 72; in
Erachin 9b the correct version is -

L. 5. In regard to the astronomical
problem (or phase) we regret to have
to accuse both Slonnicki and
Pinles of an inaccuracy. (Note 2)

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Note 2. Slouinski is furthermore quite inaccurate in his computations thus, to give an example, he gives the difference between the Tekupha of Adda and the mean astronomical at 4 d 2 hrs. 32' (Toldoth haschaam p 61 b) and 3 years later (V, 106) again 3 d. 23 h 35' when it should be larger. But 4 d 2 h. 32' is not right either for the difference still larger than 4 d 3 h.

l. 7. They both consider the tropical year to be a constant and base their computations upon the present length of the same.

l. 9. But that is not correct; the tropical year was in 359 10" 26"' larger than at the beginning of our century.

l. 10. Consequently we must compare the Tekupha of Adda with the mean of 365 d 5 h 48' 50" 49"' and
365 d 5 h 49' 15"

L. 13. Adda's year is 6'29"24"' longer and if we compute this excess for the time since 359, then we find that the difference between the astronomical Tekupha and that of Adda must ammount to 6 days 19h. 32' 52" 48"'

L. 16. The true Tekuphath Nisan 5632 will be observed in Jerusalem on March 25 at 9 $\frac{46}{37}$ A.M. and the Adda can Tekupha on March 26 at 2 $\frac{32}{24}$ $\frac{44}{44}$ P.M.

L. 19. The difference ammounts to 6 d 4h 45' 47" 44"', in other words 14h 47' 5" 4"' less than it should.

L. 20 But considering that ~~before~~ 1512 years ago the true Tekupha occurred much earlier than the average than is the case today, and that our ancients did not have sufficient means whereby to make accurate observations then it may be admitted that possibly

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our calendar ~~was~~ could have been introduced with the 359.

L. 26. This possibility however becomes a great probability by the traces which point to the existence of the Addaean Tekupha long before the introduction of the calendar (Note 3) and by the accurate correlation of our order of intercalation with the talmudian principle of 16. Nisan.

Note 3. Compare above p. 33, 34 and p 36 note 3.

L. 30. The fact that ~~the~~ Adda's Tekupha is not mentioned in the Talmud can no more be a proof for the later origin thereof, than the non mentioning of the calendar is for its post-talmudian origin.

Page 45. L. 1. The Dechijoth prove irrefutably that the average calculation was introduced by Hillel II.

L. 2. In a chronology which follows the true movements of the sun and

the moon, the weekday of the date of the month can never in any case be fixed once and for all. This proof

L.S. This proof is so strong that even counter-proofs such as they seem to appear in the Talmud (Note 1) cannot refute it.

Note 1 Oppenheim proposes to draw evidence from the Talmud that the later Amoreans did not know the fixed calendar. The principal passages are Bezo 22 b and 6a. In the first place is found a debate between Ammemar and R. Aschi, whether it be permissible to paint (make-up) the eyes on the second day of the new-year's festival. Ammemar allows it, not as Oppenheim thinks, because Elul at the time was incomplete, but because he accepts the view of the Nehardeas who justify their alleviation by claiming that Elul never was complete. Wherever

this view is quoted, it is accompanied by the argument and it is ~~easily~~ quite possible - but not at all necessary - that the words p. 22 b are a later addition! Regarding the Erub Tabschilim, which Rabina had forgotten to make, the passage is given full recognition by J. Landau in his commentary to Beza and it has been made quite clear; ~~that~~ ~~Oppenheim~~. Oppenheim's criticism of Grätz has been silently disproven in the second edition of the 4 volume (Monatsschrift 1856, 1857)

L. 7. The need of a fixed calendar was ~~not~~ as we have seen more than just day-old; in Judea it was seen that the time gradually approached when this means would have to be applied, and preparations were made lest a ruleless, confused order of festivals take the place of the now untenable chronology.

L. 12. Perhaps we shall never discover the reasons that led our ancients to secretiveness of the principles of the fixed calendar, but of that reason we need not think, that there was nothing to be kept secret and that the calendar was introduced after the ~~end~~ completion of the Talmud.

L. 17 The so called silent proofs from the Talmud are just as untenable as the hypothesis of Slominski and Piniles, which, regardless of how intelligent they may be, already must fall because they do not take notice of the change in the tropical solar year.

L. 21. We stay by the tradition of R. Hai, because nothing can convince us that the average duration of the synodian month was accurately known at the end of the last era.

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L. 24. Hereby probably the knowledge of the duration of the tropical year was brought about; for the first eclipse of the sun afforded the opportunity to compute the Molad Bharad, and likewise as era for ~~the~~ Adda's Tekupha was determined by direct observation.

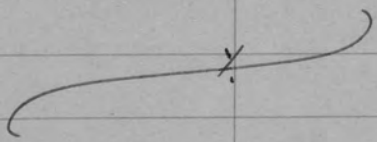
L. 28. The era ~~is~~ has been transferred from the Tekupha of Adda to that of Sommel which at the time of the calendarreform differed approximately 8 days.

Page 46. L. 13. ~~If~~ Guchadsot's order of intercalation were directly derived from the era and from the principle of the 16. Nisan.

L. 4. Then these principles are sufficient to effect a well rounded system; but the Deshijoth were added in order to bring this new system closer to

the old chronology.

L. 7. How now the fixed calendar grew to become a unified complex from these principles, might be shown by the system of the Jewish calendar



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(p. 14) II. Epoch. From Esra until R. Juda I.

As in the first in the 2nd epoch too the month begins with the visibility of the crescent in the evening twilight. Thus here, too, can be no talk of a fixed length of the month, for the calendar goes by the true elliptic course of the sun & the moon, & besides because the time between the true conjunction & the visibility of the moon (p. 15) depends on too many different factors (in order) to be even (uniform?). But the method of observation is much more strict than in earlier time. While in the Biblical epoch new moons & feast were established (set?) however the phases of the moon it demanded, in the 2nd epoch the fixation of the beginning of the month was regarded as a judicial act to be preceded by a hearing of witnesses. In all probability already the great Synagogue hat made the arrangement (instituted?) that the new

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p.15 cont'd - each other were observed in the evening twilight in order to determine precisely the length of one or the other month, & after a ~~row~~ series (chain, number) of such observations to divide the sum total of the recorded days, hours etc. by the number of the months in order

p.16 to learn the length of the month. It must not be forgotten, however, that - so far as its limit (border) was not the conjunction but the visibility of the first strips of the moon - this month was essentially different from our present month & that in order to find the real mean length of the synodic month, new calculations were necessary since the time between the stated limits (borders) is depending on the position of the ecliptic in each special case. However fragmentary (showing gaps), therefore, the recordings ~~not~~ may have been the Sanhedrin made from the ~~not~~ statements of the not always quite dependable witnesses

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p. 15 cont. moons – at least those of the two least months Nisan + Tishri – are to be set by observation + the statement of witnesses worthy of belief;[1] we are all the more justified to make this assumption as we must hold that our ancients had to recognise this method as the most appropriate means to find the length of the month. And for this length they were looking if for no other reason because in times of ~~prevented~~ impeded (hindered) or insufficient observation they were dependent on it. In our opinion it is therefore superfluous, even unjust to send our ancestors to school to Chaldeans + Greeks + get their astronomical knowledge from abroad since they did have an institution at home which had to must was bound to produce almost sure results though after wearisome (lengthy?) complicated calculations. They only had to know (exactly) the distance of the meridians under which two new moons following

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Schwarz

p.16 cont ~~may have been~~ yet ~~still~~ it is not

Note> surprising when R. Gamaliel[1] thought he could pass on (by tradition) the mean length of the synodic month as a fixed result. Besides, we cannot help but find the basis for the ~~secretiveness~~ .....[2]

Note> silence governing the calendar council in the fact that due to appropriate & rightful prudence no final result was to become public & that ~~only~~ for this reason only discrete men were made L 16 →

From l. 16. → Page 37 l. 27

Jewish
Jüdische Kalender
Adolf Schwarz
Breslau, 1892

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