

**Title:** **The Seven-Day Week in the Roman Empire:  
Origins, Standardization, and Diffusion**



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## Chapter 1: The seven-day week in the Roman Empire: origins, standardization, and diffusion

Ilaria Bultrighini and Sacha Stern

The seven-day week is a most familiar way of reckoning days, as it is used nowadays in all parts of the globe, and binds humanity in an almost complete consensus.<sup>1</sup> Beyond its significance in the world religions of Christianity, Islam, and Judaism, the seven-day week functions in most modern societies as a fundamental temporal structure that governs all work and human activity. It is arguably more significant, as a social structure, than the counting of the days of the months, the months, and the years.

But for all its familiarity, the origins of the seven-day week are poorly understood and known. The seven-day week is not derived from any natural phenomenon (e.g. astronomical), nor is it the divider of any natural period such as the lunar months (29 or 30 days) and solar year (365 or 366 days – none of which are multiples of seven). The week is a purely abstract scheme. This entails that its origins must be conventional and cultural. As we shall see, the week as presently known was in fact the result of the convergence of several independent cultural traditions.

In spite of its early origins, the seven-day week as a structure of time reckoning was, as we shall see, the invention of the early Roman imperial period. It was standardized in the course of the first or second centuries CE, with the merger of the traditions of the Jewish, biblical week and the planetary week. The seven-day week was massively diffused in the Roman Empire as a result of its Christianization in the fourth century, but its mixed cultural origins – Judeo-Christian and astrological – persisted as a challenge to pagans and Christians of Late Antiquity and the early Middle Ages.<sup>2</sup>

### 1. The Jewish Sabbath week

#### Early biblical origins

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<sup>1</sup> 'Almost', because of the continually unresolved debates about the location of the international dateline, which defines, inter alia, the global reckoning of the seven-day week: see Bartky (2007), Barrows (2010), Stern (2017a), and Birth (2018).

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<sup>2</sup> The only comprehensive study of the seven-day week in Antiquity is Colson (1926). Zerubavel (1985) has a detailed chapter on the week in Antiquity, but like much of what has been written on the subject, it is largely derived from Colson. Colson's work has become outdated because of the wealth of epigraphic and documentary evidence that has been subsequently discovered: on the Hebrew and Aramaic side, the Dead Sea Scrolls and Judaean ostraca and documents; on the Latin side, a number of Fasti, parapegmata, and inscriptions; on the Greek side, P.Harris I.60, the Tremithus inscription, etc. Colson's analysis of the evidence in his first chapters is cautious and well balanced, but in later chapters he drifts into speculative theories which have now lost their relevance in the light of the newly discovered materials. He should be acknowledged for his general insight, with which we concur in this article, that the Roman Empire was critical to the diffusion of the seven-day week (Colson 1926: 6-9)

Various claims, or rather assumptions, have been casually made about the ancient Egyptian or ancient Mesopotamian origins of the seven-day week.<sup>3</sup> These assumptions are unfounded: there is actually no evidence of any seven-day cycle in all the rich corpora of literary and astronomical sources of ancient Egypt and Mesopotamia. The only possible exception is the term *hamuštum* in early-second-millennium Assyrian documents, which some have identified as a seven-day week; this interpretation, however, is problematic, as the term more likely mean a quarter of the lunar month (thus variably seven or eight days), or even another period such as six or ten days.<sup>4</sup>

The only early source of the seven-day week, which most people know, is the Hebrew Bible. The book of Genesis (1-2:3) builds it into the narrative of the Creation, thus defying in a certain way its abstract identity, and turning it into a fundamental structure of created reality. The seven-day week, conceived of as a cycle of six days of work and one day of Sabbath or rest,<sup>5</sup> then makes many appearances in the Hebrew Bible, not only in the Torah where the law of Sabbath is repeated in narratives (Ex. 16:22-30) and in legal passages (e.g. the Ten Commandments: Ex. 20:8-11, also Lev. 23:1-3, etc.), but also in later biblical books (Ezek. 46:1).<sup>6</sup>

Yet in spite of its importance in Mosaic law, the seven-day week is never used in the Hebrew Bible as a method of time reckoning. Events in the Bible are dated by the day of the month, the number or name of the month, and/or the number of the year, but never by the day of the week.<sup>7</sup> No event in the Bible is said, for example, to have occurred on the Sabbath. The same applies to the Persian-period, Judaeon documents from Elephantine, many of which are precisely dated according to the Babylonian or Egyptian calendars, but never with a mention of the day of the week.<sup>8</sup>

The absence of the seven-day week as a chronological or dating device raises questions about the consistency of its reckoning in the Hebrew Biblical period. Even if the Sabbath was, to a certain degree, observed, and observance of the Sabbath was presumably synchronized within single cities and communities, it may be asked whether the seven-day week was in phase – i.e. beginning on the same day – across all Sabbath observant communities before the Roman period. We shall return to this important question further below.

#### Sabbath as a date: Maccabees and Ptolemaic papyri

The first known events to be dated by a day of the week appear very late, in the first book of Maccabees (the late second century BCE). At this stage, however, the days of the week are still not used as part of standard dating formulae: thus in 1Maccabees, Seleucid calendar datings do not include the day of the week (e.g. 1Macc. 4:52). Moreover, the use of the week for dating events is

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<sup>3</sup> Rüpke (1995) 456-7, (2011) 162, 176-7; also Colson (1926) 55-9. The claim of Egyptian origins was first made, in the third century CE, by Cassius Dio (37:18:1), although he concedes in the same passage that its institution was only recent (see further below).

<sup>4</sup> Six days would be based on the meaning of *hamuštum*, 'one fifth' (of a standard, 30-day month); other interpretations are based on the documentary evidence, which sometimes also attests the usage of the term for a whole month. See in detail Dercksen (2011), against the seven-day period interpretation of Veenhof (1995-6).

<sup>5</sup> On the etymology of Sabbath, see de Blois in this volume.

<sup>6</sup> Many other passages refer to Sabbath (see Doering 1999: 18-22), but the meaning of this term – whether the seventh day, or another holy day – is not always clarified; only Ezek. 46:1 contrasts explicitly the Sabbath day to the 'six days of work'.

<sup>7</sup> The absence of days of the week in biblical dating was already noted in early rabbinic literature, in the Palestinian and Babylonian Talmuds: *yRosh Ha-Shanah* 1:1, *bRosh Ha-Shanah* 3a.

<sup>8</sup> See Porten (1968) 126-7; Doering (1999) 23-42, (2012) 36-7.

limited: 1Maccabees does not make use of the full range of the seven-day week, but only – and significantly – of the Sabbath. The references are to battles that took place on the Sabbath, when the Seleucids sought to take advantage of Jewish reluctance to fight (1Macc. 2:32-8, 9:34,43; also 2Macc. 5:25, 8:26-8, 12:38, 15:1-4). The identification of these days as Sabbath does not serve in these passages a chronological or time-reckoning purpose – indeed, no other information is provided about the dates of the events – but rather to make a point about Jewish religious practices.

The same applies to a small number of papyri from Ptolemaic Egypt which mention the Sabbath. Thus P.Cair.Zen. IV 59762 (= CPJ 10), a third-century BCE document from Philadelphia (in the Arsinoite nome or modern Fayūm), presents a daily account of brick deliveries in a month of Epeiph (the year is not given). The entry for day 7 (of the month, on col.1, line 6) is not a number of bricks but instead the word Σάββατα, which seems to mean that no bricks were delivered as it was the Sabbath. The term *Sabbata* should not be construed as a part of the date (together with the digit ζ, for day 7: ‘Sabbath the 7<sup>th</sup> of Epeiph’), but rather as the text of the entry. It is not a time marker, but only the indication of a certain religious observance on that day. Likewise, PSI Congr. XVII 22, another account from the same region but dating to the late second or early first centuries BCE, enters for day 1 of the month of Hathyr the same term Σάββατα, in contrast to the next entry on day 2 which refers to a delivery of beer (recto col.3, ll.2-3). A rather different document is BGU 20 2847 (first published as BGU 8 1763), from the Herakleopolite nome, a letter about a military incident that occurred in year 3, 27 Epeiph (27 July 49 BCE), ‘which was προσάμβατον’, the day before Sabbath (this date was indeed a Friday). Again, the purpose of mentioning Friday is not to provide a full date, but apparently to make a point about the availability of Jewish fighters before the oncoming Sabbath.<sup>9</sup> All this suggests that even in the Hellenistic period, the Sabbath – let alone the other days of the seven-day week – was not yet conceived as a structure of time reckoning or as method of dating events.

#### The seven-day week as a temporal structure: Dead Sea Scrolls

But the earliest evidence of the week as a temporal structure appears in the same period, and in full force, in the Dead Sea Scrolls. The calendar texts from Qumran Cave 4, which date from the second-first centuries BCE, assume as the basis of their annual calendar a year of 364 days, which is divisible exactly into 52 weeks. This calendar appears earlier on in the Astronomical Book of Enoch, which is thought to date from the third century BCE; but the book of Enoch, in its Ethiopic and other versions, does not refer to weeks or ever remark that its year of 364 days is divisible into a whole number of weeks.<sup>10</sup> The book of Jubilees, usually dated to the second century BCE, does notice in a very short aside that each quarter of its 364-day year consists of 13 weeks (Jub. 6:29-30). But still, the week plays a very minor part in this work. Jubilees does not correlate any of its dates with specific days of the week.

In contrast, Qumran calendar texts make extensive use of the week and days of the week, most visibly by allocating every week of the year in rotation to one of the 24 priestly divisions, also known as ‘watches’ and ‘courses’, that are listed in 1Chron. 24:1-19 (the book of Chronicles does not relate these divisions to weeks, but the allocation of the priestly courses to weeks is well established much later in rabbinic literature). Since the 52 weeks of the year are not a multiple of the 24 courses, a six-

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<sup>9</sup> K. Maresch in Reiter (2014) 67-76, with reference to the related text, BGU 20 2846. We are grateful to Tal Ilan for this reference; these newly discovered papyri will appear in the new CPJ volume edited by Tal Ilan as nos.581-2.

<sup>10</sup> There is only one fleeting reference to weeks in Ethiopic Enoch 79:4, but not in relation to the 364-day year.

year cycle needs to be constructed in Qumran sources, at the end of which whole number of priestly courses is completed. This six-year cycle of weekly, priestly courses constitutes the fundamental structure of most of the Qumran calendars.

Days of the week are also prominently used, in all the Qumran calendar texts, to identify specific dates in the calendar: thus, the New Year is said always to fall on the fourth day of the week, i.e. a Wednesday (4Q319 and 4Q320), and likewise other significant events of the year, liturgical as well as astronomical (lunar).<sup>11</sup> Weeks are also mentioned in various ritual texts, such as 4Q284 frg. 1 and 4Q512 frg. 33, and the liturgy of 4Q504 ('Words of the Heavenly Lights') appears to be allocated to specific days of the week.<sup>12</sup> The Genesis Commentary 4Q252 – in contrast to Jubilees – dates events such as the Flood according to day of the month as well as day of the week; and so does 4Q317, an astronomical, lunisolar text.

The Hebrew terms for 'week' in the Dead Sea Scrolls are, as in later Hebrew, either שבוע (*shavua*, lit. 'period of seven': a term attested already in Deut. 16:9, though not in the sense of a perpetually recurring week; also in Jeremiah 5:24) or שבת ('Sabbath'; perhaps in this sense already in Lev. 23:16-17). The latter is perhaps a synecdoche, but it also expresses the idea that the Sabbath is the focus and, literally, the *telos* or ultimate purpose of the Jewish week. As in later Hebrew, the days of the week are numbered, except for the seventh day which is just called 'Sabbath'; in the Dead Sea Scrolls, numbers are given as numerals (4Q320), as cardinal numbers (4Q321), or as ordinal numbers (4Q326).

#### Days of the week in the Septuagint

Another literary source from this period that mentions days of the week is the Greek, so-called 'Septuagint' translation of Psalms, which has been identified as Judaeian and from the early Hasmonean period, or second half of the second century BCE.<sup>13</sup> A number of Psalms are associated, in their opening verse, with a particular day of the week: Psalm 23 with Sunday, 47 with Monday, 93 with Wednesday, 92 with Friday, and 91 with Sabbath. The association of these Psalms with these days of the week became a tradition that is preserved much later in early rabbinic sources, and suggests a liturgy structured by the seven-day week.<sup>14</sup>

The days of the week, in the Greek Psalms, present themselves as a close translation of the Hebrew usage in the Dead Sea Scrolls: they are numbered, together with the word 'Sabbath' in the genitive (singular or plural) which may be construed literally as 'Sabbath' (e.g. 'first day counted from the

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<sup>11</sup> The main Qumran calendar texts are 4Q319-30, 4Q337, and 4Q394 1-2 (=4Q327), in Talmon *et al.* (2001). Priestly courses are used in nearly all these texts (in 4Q319-30). On Qumran calendars, see generally VanderKam (1998) and Stern (2010a). See also Ben-Dov (2008) esp. 52-66, on the seven-day week.

<sup>12</sup> 4Q504 2:vii:4 (Sabbath) and 3:ii:5 (Wednesday): Baillet (1982) (*DJD* 7) 137-68, with the passages on pp.150 and 152. Baillet dates the manuscript to the Hasmonean period and possibly 150 BCE, but it could be later in the century.

<sup>13</sup> Schaper (2014) 174-5.

<sup>14</sup> The tradition associating these Psalms with the same days of the week is found in the Mishnah (early third century CE), *mTamid* 7:4. This text, at the end of the tractate, is certainly a later addition to the Mishnah, but it is evidently early, and probably still from the third century. One liturgical text from Qumran, 4Q504 frg 3 (Words of the Luminaries), refers perhaps to the 'fourth day', which may mean Wednesday, and which may signify the day on which the liturgy is recited.

Sabbath', or 'first day of the days leading to the Sabbath'), or in a looser sense, perhaps by synecdoche, as meaning 'week'.<sup>15</sup> Friday is called: the 'day before the Sabbath'.<sup>16</sup>

### The significance of the second century BCE

All the evidence converges, therefore, to suggest that the second century BCE marked a critical phase in the origins and development of the seven-day week. Its use as a time-reckoning structure, with the numbering of its seven days, in the Dead Sea Scrolls and (in a much more limited way) in the Greek Psalms, was a complete innovation; it could almost be said that it is at Qumran that the week, as a time-reckoning structure, was invented.

The historical context and significance of this invention are unclear. Qumran calendars have a reputation, in modern scholarship, of being 'sectarian', inasmuch as its 364-day year (also attested in the books of Enoch and Jubilees) was radically different from the lunar calendar that is attributed in this period to the Jewish 'mainstream'.<sup>17</sup> Whilst it is likely that the 364-day calendar, and its subdivision into a whole number of weeks, was only promoted in limited circles in Judean society (of which Qumran was one), whereas the Judean province (and later ethnarchy and kingdom) as a whole used a lunar calendar that was similar or identical to the calendar of the Seleucids, the appropriateness of labels such as 'sectarian' is problematic in general theoretical terms, as well as in the particular context of Qumran and Judean history.<sup>18</sup> The extent to which the use of weeks – not to speak of the 364-day calendar – would have been restricted to insular groups such as the 'Qumran sect', and not shared in fact in broader segments of Judean society, remains a matter of speculation. It may be asked, for example, whether the system of weekly priestly courses – which the Qumran calendars exploit – was actually in use in the Jerusalem Temple in this period.

Another uncertainty is whether Qumran calendars were ever actually used in practice, even by the authors of the Qumran calendar texts. The observance of a 364-day calendar would have led to a gradual deviation from the seasons, as this year length is  $1\frac{1}{4}$  days shorter than the solar year. As a result, Passover (for example) would have fallen eventually in the winter, which would surely have been viewed as a violation of the Mosaic injunction of observing it in the month of *aviv* or spring, and would generally have disrupted the agricultural associations of the major biblical festivals. It has been argued, on that basis, that the Qumran calendars may have been no more than ideal, theoretical schemes, that presented an abstract view of perfected time which could not, however, be used or applied in lived reality. Although this interpretation is contentious – especially as Qumran literature knows no other calendar but the 364-day year – it does raise questions as to whether Qumran sources reflect a real-life use of the seven-day week (and maybe even attest its use in contemporary Judean society), rather than representing a purely abstract, theoretical scheme.<sup>19</sup>

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<sup>15</sup> Ps. 23:1: τῆς μιᾶς σαββάτων; 47:1: δευτέρῃ σαββάτου; 93:1: τετράδι σαββάτων. Pelletier (1972) argues that the form σάββατα was originally not a plural, but a transcription of the Aramaic singular, which was then construed in Greek as a neutral plural.

<sup>16</sup> Ps. 92:1: τὴν ἡμέραν τοῦ προσάββατου. Also slightly later, in the book of Judith 8:6: προσάββατων καὶ σαββάτων. The word προσάββατ(ον) is inscribed on a bronze icosahedron from Egypt (Perdrizet 1931), possibly dating from around 200 BCE, where it is associated with the numeral six (ς'), which confirms its reference to the sixth day of the Biblical week (Friday).

<sup>17</sup> Talmon *et al.* (2001), especially pp. 3, 6.

<sup>18</sup> Stern (2011).

<sup>19</sup> Stern (2010a).

In addition, the Dead Sea Scrolls, like the Greek Psalms where the seven-day week is occasionally used, are no more than literary works. No documents from the second or first centuries BCE, in Judea or (as we have seen) in Ptolemaic Egypt, are dated by the seven-day week. In the absence of documentary evidence, it cannot be proved that the seven-day week reckoning had yet become a social reality in this period.

Nevertheless, it is probably significant that the second century BCE is precisely when the seven-day week makes its first appearance in a number of literary contexts, ranging from events dated to the Sabbath in the books of Maccabees and days of the week in the Greek Psalms, to fully fledged calendar schemes in Qumran sources. The contrast between second-century BCE Jubilees and Qumran calendar texts, that subdivide the 364-day year into whole weeks, and the third-century BCE Enoch, that does not (even in the later and only versions that have been transmitted to us), is particularly telling. The second-century BCE invention of the seven-day week as a time reckoning system – even if only theoretical or literary – may well have been related to the revival and promotion of the observance of the Sabbath, which is credited to a Maccabean rebels of the 160s,<sup>20</sup> but was surely also shared and promoted by other Judean groups at the time, such as the communities described in Qumran literature (and the authors of this literature),<sup>21</sup> and may have percolated further on to the Diaspora in Egypt (as the papyri above mentioned possibly suggest). Promotion of Sabbath observance in this period may have elicited the conceptualization of the week as a recurring sequence of seven numbered days and as a fundamental structure of time reckoning and calendars.

#### The days of the week in dating formulas: first-century CE Judean ostraca

As stated, the Jewish seven-day week as a time reckoning scheme only begins to appear in the second century BCE in literary sources, and in a context that may have been largely theoretical. The first attested, documentary use of days of the week as a dating method is considerably later, and marks a further stage in the development of the seven-day week. It is in the early first century CE that one first finds, in Judean ostraca, the day of the week as part of a date. These ostraca indicate that the day of the week had become, by then, an established element of time reckoning in daily life.

Only a small number of Judean Aramaic ostraca from this period has been discovered and published (Yardeni 1990, and in an augmented and revised edition, 2012). The ostraca are fully dated but their preservation is fragmentary, and moreover, the year numbers are not identified by any reign or era; Yardeni's dating to the first century CE is therefore only palaeographical.

Ostrakon 1 in this series, dated palaeographically to the early first century CE, records a series of deliveries of fig cakes, on 'day of Sabbath 29 Tishri', 'day of Sabbath 13 Marheshwan', and 'day one of the week'.<sup>22</sup> Ostrakon 2, dated less precisely by Yardeni to the 'first century', refers to '4 of the

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<sup>20</sup> In addition to the sources cited above, 1Macc. 1:41-8, 2Macc. 6:6, 6:11. The reluctance of the Maccabees to fight on the Sabbath has a precedent, however, in a narrative relating to the reign of Ptolemy I Soter ('son of Lagus'), probably in the late fourth century BCE, whereby Ptolemy entered Jerusalem on the Sabbath and met no resistance; the narrative is told by Agatharchides (of Cnidus, second century BCE) as quoted by Josephus, *Contra Apionem* 1:209-11. See generally Doering (1999) 539-65.

<sup>21</sup> On Sabbath observance in the Dead Sea Scrolls, see Doering (1999) 119-282; in Jubilees, *ibid.* 43-118.

<sup>22</sup> Yardeni (2012) 210-18: יום שבתא 29 לתשרי ... יום שבתא 13 למרחשון ... יום חד בשבה. The term for 'week' is 'Sabbath', as in the Qumran calendar texts (see above, n.11), and in this text a cardinal number is used ('day one'). Yardeni remarks that the author of this ostrakon must have worked on the Sabbath, as he delivered goods on this day.

week, 24 Iyyar (?) and '5 of the week'.<sup>23</sup> Ostrakon 4, also 'first century', is dated 'day (?) four 20 Marheshwan year 104 (?) ... eve of Sabbath on 9 Kislew'; 'eve of Sabbath' is presumably the technical term for Friday.<sup>24</sup> This ostrakon may be close in time to early first-century CE ostrakon 1, which is similarly dated 'year 102'.

What these ostraca reveal is not only the use of the day of the week, but also its formal incorporation into the dating formula, positioned before the day of the month. The terminology, moreover, appears to be fairly consistent, with the use of either numerals or cardinal numbers (except for Friday and Saturday, both named with reference to the Sabbath) and the term 'Sabbath' for the week.

### Later Aramaic evidence

This Aramaic (and Hebrew) usage is likely to have maintained itself in subsequent centuries, although few documents have survived to be able to confirm this. Close in time to the first-century CE ostraca are two Judaeen desert documents, the earliest of which is P.Yadin 3, a Nabatean document dated to the year 28 of Rab'el (II) (97/8 CE) which refers to the 'first day of the week'. The next is an Aramaic deed of sale dated 120 CE, P.Yadin 7, with several references to the day of the week.<sup>25</sup> In these documents, the week is not used as part of the dating formula, but only as a scheme for the allocation of irrigation rights. The use of the week as a scheme for time distribution, in these documents, possibly marks a new development in the socio-economic uses of the seven-day week. Furthermore, as Guy Stiebel has rightly pointed out, the day and the night are treated here as separate time units, so that the week is effectively divided in seven numbered days and seven numbered nights – a practice still attested, much later, in Jewish texts of the medieval period.<sup>26</sup>

The next extant Aramaic documents dated by the day of the week are the Jewish tombstones from Zoar (south of the Dead Sea), of the late fourth to early sixth centuries. The earliest of these is dated '1 in the Sabbath, 7 days in the month Tammuz (?) ... in the year 300 (?)' (from the destruction of the temple, i.e. 369 CE); '1 in the Sabbath', a literal translation, means first day of the week.<sup>27</sup> In all subsequent tombstones, the day of the week is given as a mere number, without 'in the Sabbath': for example, 'day two ... three Iyyar ... year three hundred and twenty three from the destruction of

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<sup>23</sup> Ibid. 218-20: בשבוע 5 ... לאיר 24 בשבוע 4. Numerals are used for the day numbers, and therefore cannot be determined as cardinal or ordinal. Yardeni does not specify if she means first century BCE or CE.

<sup>24</sup> Ibid. 221-6: יום ארבעה 20 למרחשון שנת 104 ... ערובת שבתא ב 9 לכסלו. Again, a cardinal number is used. The year number could be 14, and thus a regnal year (year 104, the reading favoured by Yardeni, would imply an era which neither Yardeni nor we can identify). The same uncertainty surrounds the dating of ostrakon 1, 'year 102'.

<sup>25</sup> P.Yadin 3.25 and P.Yadin 7.6-7, 12, 43, 46, 47: Yadin *et al.* (2002) 239 and 80-7. Here also, a cardinal number is used with an Aramaic lexeme for 'Sabbath', שבת.

<sup>26</sup> Stiebel (2011) 297, n.77. Stiebel argues that the phrase לילא חמשא בשבוע (P.Yadin 7.6-7), for example, does not mean 'at night, on Thursday' (as translated by Yadin *et al.* *ibid.*) but 'the fifth night of the week'; similarly, יום ארבעה בשבוע (P.Yadin 7.46) means 'the fourth day of the week' ('day' in the sense of daytime). For similar tenth-century Hebrew examples, see Stern (2019). It is also interesting to find, in the context of irrigation practices in P.Yadin 7, that the night is considered to follow the day (thus the fourth night of the week, P.Yadin 7.47, comes after the fourth day of the week in the previous line), which is not what one would normally expect in a Jewish calendar.

<sup>27</sup> Meimaris *et al.* (2016) no.7: א בשבוע (Sunday), but readings of the month's name and the year are uncertain (Stern 2017b: 165). On the era of Destruction at Zoar, see Stern (2001) 88-91. On the days of the week, see Meimaris *et al.* (2016) 34.



the Temple' (c. Monday 12 April 392).<sup>28</sup> The omission of this clause, from the end of the fourth century onwards, suggests perhaps a normalisation of the seven-day week, whereby it becomes no longer necessary to explain that these day numbers are 'in the Sabbath' or the week. The day of the week is given in the first example above as an alpha-numeral,<sup>29</sup> and in the second, as a cardinal number;<sup>30</sup> elsewhere in the Zoar tombstones, ordinal numbers can also be used.<sup>31</sup> Friday is now called 'day of eve' (יום ערובתה),<sup>32</sup> and in one instance numbered 6.<sup>33</sup> Saturday is 'day of Sabbath'.<sup>34</sup> Also from this period, but in Egypt, the date of the Jewish Aramaic marriage contract of Antinoopolis (417 CE) includes the weekday of 'four in the Sabbath' (Wednesday).<sup>35</sup> This inconsistent use of cardinals and ordinals shows perhaps that even in this period, the nomenclature of the seven-day week was not yet fully standardized.<sup>36</sup> Alternatively, this may be seen as a transitional period from cardinal numbers (which seem to dominate in the first and early second centuries) to ordinal numbers (which became standard in the Middle Ages and until today).

By this late period, however, the seven-day week and its numbered and Sabbath-related days are already well attested in Aramaic and Hebrew sources. They are also well attested in Syriac, the earliest example of which might be the Peshitta version of the New Testament, where days of the week occasionally appear: Friday is thus 'the eve', and Sunday 'one of the Sabbath'<sup>37</sup> (on the original Greek version, see below). In early rabbinic sources, the full range of the days of the week appears, in Hebrew, already in the Mishnah (early third century), often just as an ordinal number. The days of the week are fully embedded in Mishnaic time reckoning: for example, witnesses in court are expected to know the day of the week when an event was witnessed.<sup>38</sup>

#### The days of the week for dating purposes: early Greek sources

The days of the Jewish week also appear for dating purposes, in the first century CE, in Greek sources, but the sources are mainly literary and, not surprisingly, nearly all Jewish or Jewish-related.

As in the earlier Greek sources (the books of Maccabees), Josephus' references to days of the week – mostly Sabbath, which he often calls 'the seventh' (ἑβδομάς: e.g. Jewish War 2.517) – are generally not for the purpose of dating events, but rather to highlight Sabbath observance. Thus in Antiquities

<sup>28</sup> Meimaris *et al.* (2016) no.12 (= Naveh 1995 no.7): ביום [ת]ריה ... בתלתה יומין בירח אייר.

<sup>29</sup> Alpha-numerals: Meimaris *et al.* (2016) no.7, no.16 (= Naveh 2000 no.20, on which see Stern 2017b: 166), no.20, no.37 (= Stern 1999 no.15), no.40 (= Stern 1999 no.16).

<sup>30</sup> Cardinal numbers: Meimaris *et al.* (2016) no.12, no.39 (= Bitton, Dweck, and Fine 2012), no.59.

<sup>31</sup> Ordinal numbers: Meimaris *et al.* (2016) no.21 (= Naveh 1995 no.10), no.25 (= Stern and Misgav 2005 no.28), no.28, no.34 (= Stern 1999 no.14, on which see Stern 2017b: 167), no.29 (= Naveh 2000 no.22), no.36, no.45 (= Naveh 1995 no.3), no.47, no.61. Ordinal numbers are more numerous, but the corpus is too small for this to be considered significant. Alpha-numerals, cardinal and ordinal numbers seem to be distributed fairly evenly among all weekdays (Sunday to Thursday).

<sup>32</sup> Meimaris *et al.* (2016) no.30 (= Naveh 1995 no.4 as corrected in id. 1999: 585, n.9), no.35 (= Naveh 1995 no.11), no.38 (= Naveh 2000 no.24).

<sup>33</sup> Meimaris *et al.* (2016) no.20: יום ו (day 6).

<sup>34</sup> Meimaris *et al.* (2016) no.23 (= Misgav 2006 no.30), no.50: יום שובתה.

<sup>35</sup> With a cardinal number: בארבעה בשן[בתה]: Sirat *et al.* (1986).

<sup>36</sup> As we shall later see, terminological inconsistency is even more pronounced in Greek inscriptions from this period, not least from the same site of Zoar, where planetary and Christian designations of the days of the week are freely mixed.

<sup>37</sup> Matthew 27:62 ⲭⲃⲟⲩⲛⲁ and 28:1 ⲛⲟⲩⲁⲛⲁ

<sup>38</sup> Full range of weekdays: e.g. *mTaanit* 2:7, 2:9; *mMegillah* 1:2. Witnesses: *mSanhedrin* 5:1.

12.4, he explains that Pompey entered Jerusalem unopposed because that day was Sabbath. In Antiquities 13.250-2, he quotes a passage of Nicolaus of Damascus whereby in 130 BCE, during his campaign against the Parthians, Antiochus VII remained stationed for two days by the river Lycus at the request of his ally John Hyrcanus, because of some ancestral festival during which it was forbidden for the Jews to march out; Josephus explains that Pentecost occurred in that year after the Sabbath, and that it would have been forbidden to travel on these consecutive holy days.<sup>39</sup> In Antiquities 16.163, Josephus quotes a decree of Augustus exempting Jews from court attendance on the Sabbath and 'on the preparation before it, from the ninth hour' (έν σάββασιν ἢ τῆ πρό αὐτῆς παρασκευῆ ἀπό ὡρας ἐνάτης). This is perhaps the earliest attestation of Friday as παρασκευή ('Preparation'), a term reflecting Jewish preparatory activity before the Sabbath; this term is specific to Greek language, and was soon to become standard for 'Friday'.

The same designation of Friday is famously used in the Gospels, in the context of the Passion. Here, mention of the days of the week comes much closer than in Josephus to the function of dating events within the narrative. Thus the Crucifixion thus took place on 'Preparation, which is the day before Sabbath' (παρασκευή, ὃ ἐστίν προσάββατον) (Mk 15:42); the Resurrection was on the 'first of the week' (τῆ μιᾷ τῶν σαββάτων) (Mk 16:2).<sup>40</sup> Similarly, a meeting of Paul and his companions to break bread is said, in Acts 20:7, to have been on 'the first of the week'; and in 1Cor. 16:2, Paul instructs a collection to be made every 'first of the week'.

A unique first-century CE Greek inscription provides further evidence of the use of the Sabbath week for dating purposes. It is a birth record from Tremithus (eastern Cyprus), dated 'year 7 of Domitian Caesar, birth of twins (?) ... month of Tybi 25, 1st hour of the day, *sambat* 6'. The latter means day 6 of the Sabbath, i.e. Friday. The reference to Sabbath suggests, in the context of the first century, that the author of the inscription was Jewish, although this cannot be proved.<sup>41</sup>

All these are indications that in Greek too, the days of the Jewish week were used for dating, at least by Jews, from the first century CE.

### The significance of the early first century CE

The evidence that happens to have survived is insufficient to prove that the early first century CE marked the beginning of a new usage of the Jewish seven-day week, as events were now being dated according to the day of the week. The dating of the Aramaic ostraca, in particular, remains somewhat conjectural, and nothing precludes the existence of similarly dated ostraca from an earlier period that may be waiting to be discovered. Nevertheless, it is striking that the first appearance of the day of the week in Judean dating formulas coincides with the emergence of a seven-day week, at about the same time, in a very different part of the Roman empire. The relationship between these two phenomena needs to be carefully explored.

## 2. The Roman planetary week

<sup>39</sup> On this passage see Stern (2001) 113-15.

<sup>40</sup> Parallels in Mt 27:62, 28:1; Lk 23:54, 24:1; Jn 20:1. In John 19:31, mention of the Sabbath is given more explicit relevance: the Jews did not want crucified bodies to remain on the cross on Sabbath.

<sup>41</sup> For detailed analysis of the full date, which is given in the eastern Cypriot calendar and corresponds to 28 December 87 CE, see Stern 2010b.

### The origins of the planetary week

The planetary week makes its first appearance in Rome and other parts of central Italy in the late first century BCE. This is also the first appearance, in Rome, of a seven-day week. As a planetary week, it presents itself very differently from the Jewish week. It is not structured around the Sabbath or on any specific day of the seven days, and it does not assume its seventh day to be a day of rest – a practice which was always associated specifically with the Jews, and from which Greeks and Romans until then always dissociated themselves.<sup>42</sup> The Roman planetary week seems to have served a mainly astrological function, by indicating which planets ruled over which days in rotation. Unlike the Jewish week, it did not determine work patterns or structure religious life. At first sight, the Roman planetary week was a separate tradition, that was formed independently of the Jewish week. However, as we shall see, the traditions are likely to have always been linked.

‘Planets’, in this context, are defined as the celestial bodies visible to the naked eye (and hence, to the ancient sky watchers) that, unlike the stars, have a course of their own and therefore appear not to be fixed to the firmament. This includes the five planets Mercury, Venus, Mars, Jupiter, and Saturn, as well as the Sun and Moon. The reason why the planetary week counts seven days is simply that these bodies are seven. The planetary names of the days of the week have survived in many modern languages, especially the romance languages, and are therefore not unfamiliar to the modern reader. As we shall see, in the Roman tradition the week starts on Saturday, the day of Saturn, followed by the days of the Sun (Sunday), Moon, Mars, Mercury, Jupiter, and Venus.

The planetary week should be regarded as specifically ‘Roman’ – alternatively ‘Latin’, or at the very most ‘Italian’ – with good reason. It is well attested in the city of Rome and other parts of central-southern Italy in the Augustan period and first century CE, but it did not spread to the eastern Mediterranean and other regions until much later; and even then, it remained a limited phenomenon. Contrary to what has often been asserted, there is no evidence of a planetary week in ancient Egypt, Mesopotamia, the Hellenistic world, or anywhere further east, before the second century CE (as we shall see below). The evidence suggests, therefore, that the tradition could only have originated in Rome or Italy.<sup>43</sup>

This is all the more plausible in that the planetary week is very different from the astrological traditions that are known to have existed in the East. The Egyptian and Mesopotamian astrological traditions (which were eventually absorbed, in various degrees, in the Hellenistic tradition) were based on empirical observation of the stars and planets and on the construction of theoretical models accounting for their celestial motions; in other words, the science of astronomy. On the basis of rigorous astronomical inquiry, the position of stars and planets could be accurately known and predicted, and their putative influence on the sub-lunar world could be determined. The planetary week, in contrast, was not founded on any scientific astronomy of this kind. The seven celestial

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<sup>42</sup> To pick just one example, Agatharchides of Cnidus in the passage mentioned above, n.20.

<sup>43</sup> This conclusion differs radically from earlier scholarship (see, however, Bultrighini 2018, 62-5, and forthcoming), which conjectured, but without any evidence, that the planetary week originated from Babylonian and/or Egyptian, and hence Hellenistic, astrology: see, with references to earlier scholarship, Rüpke (1995) 456-7, (2011) 162, 176-7 (and see also Smith 1971: 239-40; Salzman, 2004: 188). Colson (1926: 55-9) is rightly sceptical about the ancient origins of the planetary week, but still falls back on the assumption that it ‘spread from east to west’ and not the reverse (ibid. 59). Similarly, Rüpke writes about the ‘Greek/Hellenistic planetary week’; yet as Brind’Amour (1983: 263) convincingly argues, there is no evidence of such a concept in any source of the Hellenistic period.

bodies that it refers to do not correspond, in reality, to any seven-day cycle; the correspondence of days of the week with each of these bodies is abstract and bears no relationship to astronomical reality. It is reasonable to assume that the planetary week was designed for astrological purposes, but this astrology was popular rather than scientific, and very different from what had been the astrological tradition in Babylonia, Egypt, and the Hellenistic world.<sup>44</sup> It is not surprising, therefore, that the planetary week cannot be found in the East, until it spread eastwards during the Roman imperial period. A western provenance, such as Rome or Italy, is for that reason quite plausible.

Nevertheless, if the provenance of the planetary week was Rome, an explanation is still needed as to why it emerged specifically in or around the late first century BCE, whereas there is no evidence of it at all in earlier Roman tradition. Several factors converged towards the creation of the planetary week at the end of the Republic and the early Augustan period. This was a period of heightened interest in astrology in Rome,<sup>45</sup> as well as one of intense calendrical activity, most importantly with the institution of the Julian calendar, its correction under Augustus, and its rapid diffusion, adoption, and adaptation in the Roman provinces,<sup>46</sup> alongside the promotion and diffusion of monumental *Fasti* (Roman calendar tables) at least throughout the Italian peninsula.<sup>47</sup> Astrology and calendar naturally converged in the creation of a new, seven-day planetary week.

In addition, the late Republican period seems to have been one of growth for the Diaspora Jewish community in Rome, perhaps as a result of Pompey's activities in Judaea in the 60s BCE.<sup>48</sup> The prominent presence of Jews in Rome heightened the awareness, among Romans, of the Jewish Sabbath and probably also of the seven-day week, as is attested in several passages of Augustan-period Latin poetry. As will be argued below, the Jewish seven-day week may have played a critical part in the creation, in Rome, of a planetary week. Whatever role the Jewish week exactly played in the formation of the planetary week, it seems likely that the two traditions were never completely separate or independent of one another.

The creation of the seven-day planetary week fitted well a Roman context for further reasons. The planetary week shares much in common with another cycle, the eight-day *nundinae*, which constituted a fundamental structure of the Roman calendar long before the introduction of the seven-day week. The eight nundinal days were named after the main market towns around Rome, and regulated the rotation of markets in the region; but they also regulated many other aspects of legal, political, social, and religious life.<sup>49</sup> Although this cycle of eight days ran independently from the rest of the calendar, it was inscribed in a column of its own in the *Fasti*, where the nundinal days were represented with the letters A to H in a recurring sequence; this can be found in the earliest surviving *Fasti*, the *Fasti Antiates Miores* (from between 67 and 55 BCE), and in all subsequent *Fasti*.<sup>50</sup> The planetary week, a similarly short cycle of days running independently of the rest of the calendar, was thus a concept that fitted well the calendrical culture of Rome. In the early stages of its introduction, in the Augustan period, the planetary week did not take long to get inscribed in at least some of the *Fasti*, alongside the nundinal column and similar to it, but with the letters A to G

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<sup>44</sup> See very partial discussion in Colson (1926) 68-74.

<sup>45</sup> Domenicucci (1996), Green (2014), Bultrighini (2018) 64, Bultrighini (forthcoming). Manilius' *Astronomica* (on which see Hübner 2010) exemplifies Roman interest in astrology under Augustus, although Manilius chooses for some reason to pass the planets in silence (Green 2014: 128, 191). See also Horace, *Odes* 2:17.

<sup>46</sup> Feeney (2007), Stern (2012) 211-27, 259-94, and Chapter 2 in this volume.

<sup>47</sup> Rüpke (1995).

<sup>48</sup> This explanation has been generally assumed by historians: Leon (1960) 4-16, Schürer (1973-87) iii.1.75, Rutgers (1994), Williams (2013: 34, 49), the latter also referring to Herod's capture of Jerusalem in 37 BCE.

<sup>49</sup> Rüpke (1995) 225-8, 453-5; (2011) 32-4, 41-2, 160-2; Ker (2010).

<sup>50</sup> Rüpke (1995) esp. 39-44, (2011) 6-8.

(see further below); this demonstrates how easily it could be integrated in the existing structures of the Roman calendar.

### The day of Saturn: early Augustan period

The earliest evidence of a planetary day in Augustan Rome appears in an elegy of Tibullus, which may have been written as early as 30 BCE, and certainly no later than when the author died in 19 BCE. In this passage, he uses the day of Saturn as a pretext for remaining longer with his mistress Delia:

Aut ego sum causatus aves aut omina dira | Saturni sacram me tenuisse diem (1.3.17-18)

I pretended that either the birds, or bad omens, | or Saturn's sacred day were detaining me

The association of the 'sacred day of Saturn' with 'birds' and 'bad omens' suggests that it carries astrological significance, rather than representing some calendar day with religious, cultic significance. However, the passage only proves the concept of a day dedicated to Saturn; it does not necessarily infer that the day of Saturn belonged to a seven-day week populated by the other planets, or even that this day of Saturn was reiterated every seven days. The concept of a day of Saturn could have been the first step towards the formation of a full planetary week, perhaps a few decades later.<sup>51</sup> But it is equally possible that the day of Saturn that Tibullus refers to belonged already, in his mind, to a fully-formed planetary week.

Another interpretation, however, is equally possible. A number of scholars have assumed, or even completely taken it for granted, that 'day of Saturn' in this passage is simply Tibullus' way of referring to the Jewish Sabbath.<sup>52</sup> This interpretation finds support from a contemporary parallel in a line of poetry of Horace, who describes how a friend excused himself from helping out on the grounds that it was the Sabbath (*sabbata*) – thus, similarly using this day, the Jewish Sabbath, as a pretext for inaction.<sup>53</sup> Accordingly, the naming of the Jewish Sabbath as 'day of Saturn', in Tibullus' poem, could thus be no more than an *interpretatio romana* of the Sabbath, in which the planetary or astrological element is present but only as a supplementary, perhaps explanatory, component. Indeed, the traditional, 'orientalist' assumption that the Near East was the cradle of astrology could easily have led Romans to believe that the Jewish scruples about the Sabbath were related to astrological concerns. But primarily, Tibullus would be referring in this passage to the Jewish Sabbath.<sup>54</sup>

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<sup>51</sup> Colson (1926) 35.

<sup>52</sup> So Colson (1926) 16-17 and 35, Leon (1960) 13, Stern (1974-84: i.318-20), and Brind'Amour (1983: 258-60). See further Rüpke (1995) 458, and in much detail, Smith (1971) 238-40.

<sup>53</sup> Horace, *Satires* 1:9:68-70. Further, contemporary references to the Jewish Sabbath as an unlucky day for travel or for business can be found in Ovid, *Remedia Amoris* 219-20 and *Ars Amatoria* 1:415-6.

<sup>54</sup> The *interpretatio romana* of the Jewish Sabbath as the day of Saturn is explicit, over a century later, in Tacitus' account of the Jewish religion (*Histories* 5.4), where he writes that some people thought that the sabbatical rest was in honour of Saturn, 'because, of the seven planets that rule the mortals, the planet of Saturn moves in the highest orbit and with the greatest potency, and many of the celestial bodies traverse their paths and courses in multiples of seven'. Not only do we find here the Jewish week linked to its planetary counterpart, but also a clear statement of belief in the planetary control of human affairs (quod de septem sideribus, quis mortales reguntur). Other Latin sources, in this later period, call the Jewish Sabbath the 'day of Saturn': Frontinus, *Stratagemata* 2.1.17 (late first-century CE Rome, on Vespasian's assault on the Jews on the Sabbath). Later still, in Greek sources, it is rendered similarly as the 'day of Kronos': Cassius Dio (early third century) 37.16.2-4, 37.17.3, 66:7:2.

These alternative interpretations depend possibly on the exact meaning of Tibullus' phrase. We have translated *sacram diem*, above, as 'sacred day', but others have translated it as 'accursed day'. The difference between these translations is critical. 'Accursed day' agrees well with the astrological interpretation, since Saturn appears in other, contemporary Latin sources as astrologically unfavourable.<sup>55</sup> It does not agree with the Jewish or biblical Sabbath, which is holy but certainly not accursed, although Romans may still have regarded this foreign practice as accursed. Less ambiguous is 'sacred day', which agrees well with the Jewish Sabbath, and far better than with a day believed to be under the influence of a pernicious planet.<sup>56</sup>

If the Jewish interpretation is correct, whereby Tibullus is primarily referring to the Jewish Sabbath, this short passage could have much to inform us about the origins of the Roman planetary week. It could suggest that the planetary week did not originate from some independent, home-grown Roman astrological tradition, but rather from the Jewish seven-day week, or at least from the Jewish Sabbath, and as an *interpretatio romana* of it. It may have been restricted, initially, to an interpretation of Sabbath as a day of Saturn; but in the course of Augustus' reign, the rest of the Jewish week would have been associated with the other planets – which conveniently was of the same number – and the planetary week would have been accordingly constructed.<sup>57</sup> Whether or not this scenario is correct, there is certainly room to argue that the Roman tradition of the planetary week was not independent from the Jewish week, even if it originated in Rome and not anywhere in the east.

#### The planetary week: development and diffusion under Augustus and in the first century CE

The first explicit evidence of a fully constituted, Roman seven-day week appears a little later than Tibullus, although the sources are difficult to date precisely.

Two of the monumental Fasti that have been fragmentarily preserved from the Augustan period include a column dedicated to a seven-day cycle, with days numbered from A to G: the Fasti Sabini and the Fasti Nolani.<sup>58</sup> In both cases, the seven-day column is located immediately to the left of the eight-day nundinal column (where days succeed each other in cycles running from A to H). An additional, very fragmentary example, are the Fasti Foronovani which preserve traces of the same columns.<sup>59</sup> These Fasti are not from Rome itself, and not from regions that are known to have been significantly populated by Jews, which suggests that already in this early period, the diffusion of the seven-day week was not necessarily dependent on direct Jewish influence. As their modern scholarly names indicate, the Fasti Sabini are from the territory of the Sabines, north of Latium, as are the Fasti Foronovani, whilst the Fasti Nolani are from Nola in Campania, at quite some distance to the

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<sup>55</sup> Horace, *Odes* 2:17:22-3 (impio ... Saturno, 'impious Saturn'); Propertius, *Elegies* 4:1:84 (grave Saturni sidus in omne caput, 'planet Saturn heavy on every head').

<sup>56</sup> Brind'Amour (ibid.), who favours the Jewish Sabbath interpretation, translates appropriately 'le jour consacré à Saturne'. Stern (ibid.) translates 'accursed day', which might work better with the astrological interpretation than with his own Jewish Sabbath interpretation, but this is consistent with his general policy, in *Greek and Latin Authors on Jews and Judaism*, of using existing translations rather than his own.

<sup>57</sup> Colson (1926: 39-42) is doubtful that the planetary week was constructed around the day of Saturn, but his argument is intuitive and weak.

<sup>58</sup> Fasti Sabini: CIL IX 4769 = Inscr.It. XIII.2, no.5 = AE 1953, 236; Rüpke (1995) 95-7, also Brind'Amour (1983) 267-8. Fasti Nolani: CIL X 1233 = Inscr.It. XIII.2, no.37 = AE 1959, 253; Rüpke (1995) 100-4.

<sup>59</sup> CIL IX 4770 = Inscr.It. XIII.2, no. 21, from Montebuono Sabino (Rieti) (ancient Forum Novum), which has also been dated to the Augustan period. The extant fragment suggests two parallel columns with a sequence A-G on the left and A-H on the right.

south of Rome. Their date is Augustan; according to Rüpke and others, the *Fasti Sabini* are dated after 19 BCE but not much beyond the end of the century.

These *Fasti* tell us that the practice of counting days in continuous hebdomadal cycles was sufficiently well established, in various parts of Italy, to be formally included in public calendars. They do not specify what these cycles were about: just like the *nundinal* days, the days of the seven-day column are only assigned a letter, whose identity was flexible and could vary from one year to the next (although both columns would have begun, on 1 *Januarius*, with the letter A, the years would not always have started on the same *nundinal* or hebdomadal day; consequently, the letter A, and subsequent letters in the sequence, would have symbolised different days from one year to the next). We can only conjecture that these seven-day cycles were intended as planetary.<sup>60</sup>

More explicitly planetary are graffiti inscriptions from Pompeii. They are particularly difficult to date, and could be said to belong to anytime in the century leading up to the destruction of the city in 79 CE. However, they are undisputable evidence of a planetary week. The first is *CIL IV 6778-6779*, a graffito found on the *triclinium* wall of a private house in *Insula IV, Regio V* of Pompeii, which reads as follows:

V K(alendas) Idu(s) Qui(ntiles)  
Saturni  
Solis  
Lunae  
Martis  
[Mercuri]  
Iovis  
Veneris

The list of planets follows the order of the planetary week, rather than a cosmological or any other order (the order of the planetary week will be discussed further below). This shows that the inscription cannot be a mere list of planets, but specifically a list of the days of the week. This is further confirmed by the genitive ('of Saturn, of Sun, etc. '), which presumably refers to an omitted *dies* ('day': 'day of Saturn', etc.).<sup>61</sup> One of the planets, Mercury, disappeared as a result of damage to the plaster. The top line, which seems to preserve two random calendar dates, is possibly unrelated to the planetary week that follows.<sup>62</sup>

A similar list of planetary days, but this one in Greek, is in *CIL IV 5202*. It is headed explicitly with *Θεῶν ἡμέρας* ('days of the gods'), followed by the names of the planets in the genitive, arranged vertically: *Κρόνου Ἡλίου Σελήνης Ἄρεως Ἑρμοῦ Διός Ἀφροδείτης* ('of Kronos, Helios, Selene, Ares, Hermes, Zeus, Aphrodite', the Greek equivalents of Saturn, Sun, Moon, Mars, Mercury, Jupiter, and Venus).<sup>63</sup> The use of the Greek language – and of the corresponding divine names for each of the planets – is a reflection of bilingualism in this part of Italy, and cannot be treated as evidence that the planetary week originated from the Greek East.

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<sup>60</sup> So Rüpke (1995: 97), who conjectures further that their use must have been astrological. See also Bultrighini (2018) 62 n. 3.

<sup>61</sup> Colson (1926: 32) assumes that this graffito (along with the Greek one discussed next) could be interpreted as an attempt of a schoolboy to memorize the days of the week.

<sup>62</sup> Since the month *Quintilis* was renamed *Julius* in 44 BCE, this graffito should probably be dated not very long thereafter (*pace* Mau 1901: 361). Thus, if *CIL IV 6778* and *6779* are not unrelated, the list of days of the planetary week could possibly be assigned a rather early date, perhaps in the Augustan period.

<sup>63</sup> See Bultrighini (forthcoming).

The integration of the planetary week in the Roman calendar is more evident from CIL IV 8863, an elaborate graffito that was found in a *taberna vasaria*, a shop selling wine and terracotta containers, in via dell'Abbondanza, and that lays out in separate, very uneven columns a set of different calendrical sequences.<sup>64</sup> In the middle of the inscription, the days of the Roman month are laid out on three columns (the days are counted down, in Roman style, and begin from the day after the Ides, which is day XIX before the Kalends). To the right of it, laid out in two columns and a bit, is a continuous sequence from I to XXX, which can be interpreted as the days of the lunar month. To the left, in one column, is a list of the eight nundinal days starting from *Pompeis* ('at Pompeii'), and explicitly headed with the title *Nundinae*. To the far left, finally, is a column headed with the title *Dies*, followed by the sequence of the planetary week (the names are abbreviated): *Sat Sol Lun Mar Mer Iov Ven*.

In addition to the graffiti, there are similarly undated, but early imperial, parapegmata which include the planetary week. A parapegma is a calendar with perforated holes, in which a peg is moved along on a daily basis to keep track of the days. CIL VI 32505, from a village in the Latium, is an elaborate parapegma of which enough has been preserved to show that it originally included the thirty days of the lunar month in a complex geometric design and with the heading, in both top corners, *Dies lunar(es)* (lunar days); along the right, a vertical list of the local *Nundinae*; and along the top, horizontally, the names of planets (written out in full, in the genitive) in the sequence of the planetary week; every entry is accompanied with a peg hole.<sup>65</sup> It is presumed to be of the first century CE. Another parapegma from the same period, Inscr.It. XIII.2, no.52, has two horizontal sequences, of planetary days and of nundinals; it is from Posillipo (Pausilipum, Campania).<sup>66</sup>

A passage of Petronius' *Satyricon* (30.3-4) has been interpreted as a description of a lunar and planetary parapegma. He describes how two tables (*tabulae*) were affixed to the door posts at the entrance of Trimalchio's dining room, one of which displayed images of the moon's phases and the seven planets, as well as lucky and unlucky days marked with distinctive knobs.<sup>67</sup>

Finally, a number of first-century CE inscriptions reveal that the days of the planetary week were often used for dating purposes, as part of the dating formulas. Most of these are graffiti from Pompeii: CIL IV 294, dated 'day of Saturn' (a birth announcement, close in time to Pompeii's destruction in 79 CE);<sup>68</sup> CIL IV 6838, dated 'day of Sun' (mid first-century CE); and CIL IV 8820, dated 'day of Jupiter'.

One first-century CE inscription is the earliest evidence of the planetary week from outside Italy, suggesting its incipient diffusion in other parts of the Roman Empire: AE 1993, 1217, a wall graffito dated 'fourth day before the Nones of April, day of Mars', from Aventicum, Germania Superior

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<sup>64</sup> = Inscr.It. XIII.2, no.53. See Brind'Amour (1983) 269-75; Bennett (2004).

<sup>65</sup> = Inscr.It. XIII.2, no.49 = AE 2010, 117. See Lehoux (2007) 32-34, 171-172. Outside the four corners of the geometric design, the dates and lengths of the seasons are also provided. The marble fragment is from an unknown place in Latium; it was once held by Fulvio Orsini in Rome, and is now in Naples (Museo Archeologico Nazionale, inv.no. 2635).

<sup>66</sup> Lehoux (2007) 12-14, 18, 173-174. Now in the Johns Hopkins University Archaeological Collection, Baltimore, inv. no. 5384 a/b.

<sup>67</sup> *duae tabulae in utroque poste defixae (...) altera lunae cursum stellarumque septem imagines pictas; et qui dies boni quique incommodi essent, distinguente bulla notabantur.* Brind'Amour (1983: 260-2) supports the view that a parapegma is intended. Colson's (1926: 32-3) scepticism reflects the fact that less epigraphic evidence was available to him in his period.

<sup>68</sup> Varone (2002) 168-9.



(Avenches, Switzerland), dating from between 35 and 80 CE, thus approximately coeval with the graffiti from Pompeii.<sup>69</sup>

### The planetary week in the Greek East

In the Greek-speaking, eastern half of the Roman Empire, the diffusion of the planetary week was much slower, far less extensive, and did not begin before the second century CE.<sup>70</sup> The earliest evidence of planetary days in the Greek East is a lost passage of Plutarch, of which all that has survived is the title. In his *Quaestiones Conviviales*, book 4, 672c, question 7 (a number which may be significant?) is listed as follows: ‘Why the days named by the planets are not counted according to their own order, but in a different order’.<sup>71</sup> The meaning of this question will be discussed further on, but it is at least clear from the question that Plutarch, in the early second century, knew the planetary week. His question, moreover, follows two questions about the Jews, which suggests an association of the planetary week with Jewish tradition.

But the sources of Plutarch’s knowledge of the planetary week are more likely to have been astronomical or astrological than Jewish. Indeed, the next attestation of the planetary week in the Greek East is P.Harris I.60, an astronomical ephemeris from Egypt for 140 CE, where every seventh day is marked with the letter κ for (ἡμέρα) Κρόνου, ‘(day) of Kronos’.<sup>72</sup>

In the third quarter of the second century, Vettius Valens, an eminent astrologer in Alexandria, devotes a substantial section of his work to the planetary week and the explanation of its structure (answering, effectively, Plutarch’s question). He also explains how to calculate the day of the week of any given date, using as a paradigm the Alexandrian date of 13 Mechir, year 4 of Hadrian, day of Mercury, which corresponds to Wednesday 8 February 120 CE. This date, which he frequently uses and charts in his work, is widely believed to be his own birthday.<sup>73</sup> We shall return to this important passage below.

Non-astrological references to the planetary week are very rare in Greek sources of the second century. In the mid 150s, Justin Martyr identifies the Christian day of worship, Sunday, as ‘the day of the Sun’, which commemorates the first day of the Creation as well as Jesus Christ’s resurrection, following his crucifixion on the day ‘before that of Kronos’ (τῆ πρό τῆς κρονικῆς).<sup>74</sup> This phrase, for Friday, is odd (it should have been the ‘day of Aphrodite’), and suggests that Justin, a Greek native of Flavia Neapolis (Nablus) in Samaria (the central region of ancient Palestine), was not entirely familiar with the days of the planetary week<sup>75</sup> – even though he resided, at this time, in Rome. He may have been aware of the planetary names for Saturday and Sunday only, as the two most significant days of the seven-day week for Jews and Christians. His decision to use planetary designations, in this passage, can be explained on the basis of the Roman context in which he was writing, as well as of

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<sup>69</sup> Frei-Stolba (1993).

<sup>70</sup> Philo does not ever mention the planetary week, and as Colson (1926: 54, n.1) remarks, this silence is significant, particularly in the context of Philo’s treatise on the number seven (*de septenario*) within his *Special Laws*.

<sup>71</sup> Διὰ τί τὰς ὁμωνύμους τοῖς πλάνησιν ἡμέρας οὐ κατὰ τὴν ἐκείνων τάξιν ἀλλ’ ἐνηλλαγμένως ἀριθμοῦσιν.

<sup>72</sup> Jones (1994) and (1999) i. 40-41, 175-6, 304; also Lehoux (2007) 209. An ephemeris is a table showing the position of heavenly bodies through a sequence of days.

<sup>73</sup> Vettius Valens, *Anthology* 1.10; see Riley (1996). Colson (1926: 47) gives incorrectly 7 February 119, which cannot be year 4 of Hadrian.

<sup>74</sup> Justin Martyr, *First Apology*, 67.3 and 8.

<sup>75</sup> Colson (1926) 28-9: Justin was ‘hazy’ about planetary names.

his explicit appeal, in the *Apology*, to the Roman emperor Antoninus Pius. If anything, therefore, this passage could suggest that in the mid second century CE, the planetary week was still poorly known in the eastern part of the Roman Empire. This is likely if its use was largely restricted to astrology, or to a popular form of astrology.<sup>76</sup>

By the end of the second century, however, the planetary week seems to have become more widespread in the Greek East, at least in Alexandria; for Clement of Alexandria (*Stromata* 7.12.75) has no trouble identifying the Christian fast days on the fourth day and the day of preparation (Wednesday and Friday) with the days of Hermes and Aphrodite respectively. Within his narrative of Pompey's invasion of Judaea, the historian Cassius Dio (early third century) provides an explanation of the meaning and structure of the planetary week, similar to that of Vettius Valens (Dio 37.18-19). In this passage, he claims that the seven-day week originated from the Egyptians, but he concedes nevertheless that its institution was only recent (οὐ πάλαι ... ἀρξάμενον) and that the ancient Greeks had actually never known it. Still, in his narrative of the capture of Jerusalem in 37 BCE, Dio states that the event occurred on what was 'already then' called Saturn's day (ἐν τῇ τοῦ Κρόνου καὶ τότε ἡμέρᾳ ὠνομασμένη: Dio 49.22.4-5).

Except for the astronomical ephemeris, all these sources are literary. Planetary days do not appear in any inscription from the Greek East in the first and second centuries CE.<sup>77</sup> This indicates that the use of the planetary week was still very limited in the Greek East; it may have been still confined largely to Italy and the Roman West.

Further to the east, the Hebrew esoteric work *Sefer Yetzirah* (the Book of Creation), which is most probably of Palestinian origin and dating from between the third and seventh centuries, associates the planets with the days of the week, but not in the normal sequence of the planetary week: it begins with Saturn on the Sabbath, but is followed by Jupiter on the first day of the week (instead of Sun), then Mars (instead of Moon), etc., following the standard cosmological order of the planets (on which see further below). This suggests that the author of this work was actually unaware of the Roman planetary week; he only noted that the planets and the Jewish week were of the same number, and this basis, created a planetary week of his own making.<sup>78</sup>

In sum, all the evidence indicates that after the first appearance of the 'day of Saturn' in a poem of Tibullus of c. 30 BCE, the planetary week was rapidly developed and integrated into the Roman calendar, and was used as a dating method already during the Augustan period and through the first century CE. In this period, however, its diffusion remains largely limited to Italy. The origins of the planetary week were Roman or Italian, and could not have been from the Hellenistic East, where it is only first attested, in literary sources, in the second century CE.

### Planetary hours and the structure of the planetary week

The order of the planets within the week, which appears to have been standard from the outset, appears problematic. In the Hellenistic astronomical and cosmological traditions, the planets were ordered according to their perceived distance from the earth and/or the length of their revolution. Both criteria coalesced into a single sequence which in earlier, Hellenistic sources appears as: Saturn,

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<sup>76</sup> See Bultrighini (forthcoming).

<sup>77</sup> IG XIV 2184 is a late second-century epitaph in Greek of a girl who was born and died on the 'day of Helios', but significantly, its provenance is Rome. On this inscription, see Bultrighini (forthcoming).

<sup>78</sup> *Sefer Yetzirah*, ch.4 (in the short and long recensions): Hayman (2004) 136-45 (paragraphs 41-4 in his edition). This cosmological order of the planets is standard and the same as Ptolemy's (see below).

Jupiter, Mars, Mercury, Venus, Sun, Moon,<sup>79</sup> and in later, Roman sources as Saturn, Jupiter, Mars, Sun, Venus, Mercury, Moon.<sup>80</sup> The order of planets is discussed by Ptolemy in the *Almagest* (9.1); he favours the latter order, which he considers more ancient, and which appears anyway to have been dominant in the Roman period.

The question that Plutarch raised, as we have seen, is why the order of the planetary week differs from this cosmological sequence. The order of the planetary week is indeed very different, but it is certainly not random. The weekly sequence can be described as a reiteration of the cosmological sequence (that of Ptolemy) but skipping each time two planets: thus Saturn is followed by Sun (skipping Jupiter and Mars), then by Moon (skipping Venus and Mercury), then by Mars (skipping Saturn and Jupiter), and so on. This describes the structure of the planetary week, but it does not explain it.

Plutarch's answer, if ever there was one, is not known; but a century later, Cassius Dio suggested two explanations. The first was based on a musical theory of tetrachords, which explained why two planets (of the cosmological sequence) had to be skipped at each step (Dio 37.18-19). The second was already formulated by Vettius Valens a half a century earlier; it is based on an astrological model that gained much credence in Late Antiquity and the Middle Ages, and as an explanation of the structure of the planetary week, it has been widely accepted by scholars right until today.

Vettius Valens argues, in his *Anthology* (1.10), that the planetary week is not structured by its days but rather by its hours (there are 168 hours in the week). Every hour of the week is deemed to be ruled by a planet in succession, following the standard cosmological sequence. Assuming the first hour of the week is ruled by Saturn – the first in the cosmological sequence – followed by Jupiter in the second hour, Mars in the third, etc., then after twenty-four hours, at the beginning of the second day, the ruling planet will be the Sun; twenty-four hours after that, the first hour of the day will be Moon, and so on. Each day of the week is thus named after the planet ruling its first hour.

This theory was almost certainly not Vettius Valens' invention, nor should we assume it originated from Alexandria. It is attested, indeed, in an inscription on a small, fragmentary marble slab from the area of Potenza Picena, ancient Potentia, in central Italy (near the Adriatic coast), which has been dated mainly palaeographically to around 100 CE or possibly even earlier.<sup>81</sup> The fragment preserves part of a reiterative list of planets in the cosmological sequence; each planet is given a number and a letter (B, N, or C) designating it as good (*bona*), harmful (*noxia*), or indifferent (*communis*); Saturn, notably, is 'harmful'. The only fully preserved line reads: *VII Sol(is) C(ommunis)*.<sup>82</sup> There can be little doubt that this inscription presents the sequence of planetary hours as described by Vettius Valens, and even more similarly in the fourth century (or later) by the so-called Chronograph or Calendar

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<sup>79</sup> Ps-Aristotle, *De Mundo*, 2 (392a).

<sup>80</sup> This is the so-called Chaldean order, which according to Cicero was introduced by the Stoic Diogenes of Babylon (second century BCE): Cicero, *De Divinatione* 2.91; also in Pliny, *Natural History* 2.6; Vettius Valens, *Anthology* 1.10. In *De Natura Deorum* 2.52-3, Cicero switches round Mercury and Venus, and likewise Philo (*Quis Rerum Divinarum Heres* 45 (224), *Quaestiones* 2.75) places Mercury before Venus.

<sup>81</sup> *CIL IX 5808 = Suppl.It. XXIII 2007*, 171. For an extensive discussion of the inscription (including its dating – which some would place, on palaeographical grounds, in the Augustan period), together with a first-ever published image of the fragment and inscription, see Heilen (2020) 244-6.

<sup>82</sup> On this basis the fragment could be identified as part of the night hours of Tuesday or the day hours of Friday, assuming a scheme, as in the Calendar Codex of 354, where days of the week are named after the first day hour. In a scheme like that of Vettius Valens, where days of the week are named after the first night hour (with night preceding day), the fragment would belong to the day hours of Monday or the night hours of Friday. Whatever the day or night of the week, it is clear that the original inscription must have included the full listing of hours for all seven days of the week.

Codex of Filocalus (or 'of 354'), where the planetary days are graphically represented and each personified planetary day is flanked with lists of the night-time and day-time planetary hours which are similarly numbered and characterized by the letters B, N, and C.<sup>83</sup> The Potentia inscription is likely to have been on public display, and to have served the purpose of displaying practical astrological guidance on a daily and hourly basis.

The practical, astrological use of the planetary hours is only attested after this in late antique sources from the fourth century and later, and only rather sporadically.<sup>84</sup> If the Potentia inscription has been correctly dated to a much earlier period, which seems very likely, its historical implications are considerable. Besides suggesting that the planetary hours were known much earlier and were already in popular, astrological use in the first century CE, it also demonstrates that the scheme of planetary hours was most likely of Italian origin, and not the invention of, for example, Alexandrian astrologers such as Vettius Valens. This would tie in well with the Italian origins of the week of planetary days which have been discussed above.

Furthermore, the early dating of the Potentia inscription leads to the conclusion that the scheme of planetary hours was not superimposed on the seven-day week at some later stage (e.g. in the late second century, with its first literary reference in Vettius Valens), but was more likely contemporaneous with the institution of the Roman planetary week, and closely intertwined with it.<sup>85</sup> It would only take a small step to proceed to the further conclusion, based again on the early dating of this small marble fragment, that it is the scheme of planetary hours that originally determined the naming of the planetary days within the seven-day week and hence shaped the structure of the Roman planetary week, exactly as Vettius Valens (and later Dio) assumed.<sup>86</sup>

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<sup>83</sup> Text edition and facsimiles with introduction and discussion in Divjak and Wischmeyer (2014) 111-36; also Heilen (2020) 247-8.

<sup>84</sup> Such as in the Chronograph of 354, and in Paul of Alexandria's astrological treatise, dating from the late fourth century (*Eisagogika* 21, in Boer 1958: 42-5 and Greenbaum 2001: 39-40); see further references in Heilen (2020) 248-9. In the Babylonian Talmud (*bShabbat* 156a), the theory of the influence of the planets over the hours is attributed to the early third-century R. Ḥanina, but the notion that the week is structured by the planetary hours is not explicit (besides, the reliability of attributions in the Babylonian Talmud is notoriously problematic). In *bBerakhot* 59b, a statement that the night of Wednesday begins at the hour of Saturn is attributed to the fourth-century sage Abaye (this would work in a planetary week where the days are named after the first hour of daytime); however, ms Oxford Bodl. Heb. d.46.88, a Cairo Genizah fragment of R. Ḥananel's commentary, suggests that this passage may be a later interpolation. Planetary hours are also associated with specific days of the week in *bShabbat* 129b, but in a passage that is part of the editorial layer of the Talmud, thus potentially quite late (c. sixth century?). The *Sefer Yetzirah* (ch.4) makes a fleeting reference to the planetary hours, but it has been argued that this is a later interpolation (Hayman 2004: 36-7, 143-5; the passage is in paragraph 42 of Hayman's edition, pp.139-40, and appears in all the recensions).

<sup>85</sup> It is important to note, in this context, that the 24-hour division of the day, which the scheme of planetary hours assumes, was known in Rome at the time when the planetary week was instituted, and reasonably well used. The 24 hours are first mentioned in Varro, *Lingua Latina* 9.26 (referring however to twenty-four 'lunar hours'); and a little later, in the mid first century CE, in Seneca, *Epistles* 12.7: *dies est tempus viginti et quattuor horarum*. The twelve hours of the day are used much earlier, for example in Caesar, *Bellum Gallicum* 1.26.2; Livy, 23.44.6, 27.2.7, 28.15.4, 42.57.6. Although the night was usually divided into four watches (*vigilae*: Caesar, *Bellum Gallicum* 7.3.3; Livy, 25.38.16; Pliny, *Historia Naturalis* 10.46), twelve hours are also attested: e.g. Cicero, *Letters to Atticus* 4.3.5 (*haec ego scribebam hora noctis nona*), *Pro Sexto Roscio* 19; and *AE* 1920, 83. See Wolkenhauer (2011).

<sup>86</sup> This is what most modern scholars have assumed (e.g. Rüpke 1995: 456-7, 2011: 162), but solely on the strength on the reports of Dio.

### The significance of the first century CE

The creation and diffusion of the planetary week in Rome and in other parts of Italy, in the late first century BCE and first century CE, must be evaluated in the context of the major changes that Roman time-reckoning underwent under Julius Caesar and Augustus – not least, the institution of the Julian calendar – which itself reflected, in a variety of ways, the institution of a new political order in the Roman state. Although the seven-day week did not become, in this period, an official part of the Roman calendar (in the same as was the Julian calendar did), it was still sufficiently important in public life to be included as an additional column in some of the monumental *Fasti*. The institution of the Principate cannot serve as an explanation, on its own, for the creation of the planetary week, but it certainly provides a significant context to it.

This period coincides with the earliest evidence we have of the seven-day week coming into practical use, for purposes of dating, in Judaea. It is tempting to regard this coincidence as significant, but much caution needs to be exercised. Although Judaea was under direct Roman rule through most of the first century CE, it seems unlikely that direct lines of influence, in one direction or the other, or some other direct relationship, existed between the incipient Judaeian, Aramaic-language use of the seven-day week and the parallel rise of the Roman planetary week in the Italian peninsula (for which there is hardly any evidence, in this period, elsewhere in the Roman Empire). Moreover, the apparent coincidence of these developments in Judaea and in the Italian peninsula should be treated with caution, because although the origins of the Roman planetary week can be confidently dated to the Augustan period, for the beginnings of the use of the seven-day week in Judaea we rely on a handful of recently discovered, first-century BCE ostraca that only happen to have survived. The discovery of similar ostraca but from an earlier, e.g. Hasmonean period – which could easily be made in the near future – would be sufficient to disrupt this apparent coincidence.

Nevertheless, the relationship between the rise of these two seven-day week traditions, Judaeian and Roman, needs to be further explored, partly because – as has been suggested above – the Roman planetary week may have begun as an *interpretatio romana* of the Jewish week, and more importantly, because in the following centuries both weeks became increasingly identified and confused.

### 3. The standardization of the seven-day week: from Ptolemaic Egypt to the early Roman Empire

#### The equation of the Jewish and the planetary weeks

The equivalence of the Jewish and planetary weeks, whereby Sabbath was equated with the day of Saturn, appears never to have been questioned. Its origin is uncertain, but it is likely to go back to the very institution of the Roman planetary week. As we have seen, Tibullus already might be calling the Jewish Sabbath the ‘day of Saturn’. But the first explicit evidence of equivalence of the Jewish Sabbath with the day of Saturn comes from Frontinus, in the late first century CE, followed closely by Tacitus.<sup>87</sup> It is confirmed in the mid-second century by Justin Martyr, who refers to the first day of the Jewish week, when God created the world and when Jesus was resurrected, as ‘the day of the Sun’;<sup>88</sup> this implies that the seventh day or Sabbath corresponds to the day of Saturn. In around 197

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<sup>87</sup> See above, n.54.

<sup>88</sup> above, near n.74.

CE, Tertullian (in Carthage) similarly writes that Christians rejoice on the day of the Sun, and the Jews on the day of Saturn; whilst his contemporary Clement of Alexandria explicitly identifies the two weekly Christian fast days, the fourth day and the day of preparation, with the days of Hermes and Aphrodite (Wednesday and Friday).<sup>89</sup>

Until the end of the second century, all the evidence is literary and from Rome, whether written in Latin (Frontinus and Tacitus) or in Greek (Justin). This is hardly surprising, given that as we have seen, the planetary week is barely attested in the East before the third century. But what this might indicate is that the identification of the planetary with the Jewish week was not the result of a later merger of two originally distinct traditions, along the lines of 'East meets West', but rather goes back to the very origins the planetary week, in Augustan Rome. It has been argued, indeed, that the equivalence of the Sabbath, focal point of the Jewish week, specifically with Saturn, the first of the planets in cosmological sequences, was not coincidental and demonstrates a deliberate intention, from the outset, to model the new, planetary week on the existing Jewish scheme.<sup>90</sup> Alternatively, as argued above, the planetary week could have been gradually built around an astrological interpretation of, initially, the Jewish Sabbath alone. Either way, the apparently stable equivalence between Sabbath and Saturday suggests an early link between the planetary and the Jewish weeks, even if explicit evidence of this equivalence only emerges in the late first century CE.

#### The standard reckoning of the week

Far less certain, however, is whether the week – planetary or Jewish – was always reckoned in phase with what was later to become its standard reckoning; in other words, whether it always conformed to the seven-day week that has been reckoned continuously since Late Antiquity (when, as we shall see, the week became very widely used) until today. This can be determined when a day of the week is provided together with a full date, either in the Julian calendar or in a calendar that can be reliably converted to the Julian calendar; the correlation makes it possible to determine whether the day of the week is the same as what would be expected according to the standard reckoning.

The little evidence that we have before the third century CE suggests, indeed, that in some places at some times the week was diversely reckoned, with a planetary day or a Jewish weekday occurring on a different date than would be expected. Diversity of practice between different Jewish communities could be explained as due to poor communications in the ancient world, and the difficulty of keeping synchronic time frames across relatively long distances. This explanation, however, will not be satisfactory in the context of Egypt, which boasted throughout Antiquity, from Upper to Lower Egypt, effective communications as well as a unified system of time reckoning (the Egyptian 'civil' calendar), which should have enabled Jewish communities to synchronise their observance of the Sabbath without too much difficulty. Diversity in the reckoning of the week would still be possible, nevertheless, if synchronicity and unity of Sabbath observance was not considered

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<sup>89</sup> Tertullian, *Ad Nationes* 13 and *Apologeticum* 16.11; Clement, *Stromata* 7.12.75. The identification of Saturn with the Sabbath is reciprocated on the Jewish side with the Hebrew naming of the planet as *Shabbetai*, which implies of itself a connection with Sabbath. This name is attested in *Sefer Yetzirah* (see above, near n.78), where, moreover, Saturn is identified with the day of Sabbath. It also appears in the Babylonian Talmud (*bShabbat* 156a), in a saying attributed to the early third-century R. Ḥanina.

<sup>90</sup> Colson (1926) 51-2.

necessary for the fulfilment of the biblical commandment to ‘work six days and rest on the seventh’.<sup>91</sup>

### Ptolemaic Egypt: explicit days of the week

The earliest evidence that correlates a day of the Jewish week with a firm calendar date is, very sporadically, from Ptolemaic Egypt. An account of deliveries from the Arsinoite nome, mentioned above (PSI Congr. XVII 22), equates a day 1 of Hathyr with ‘Sabbath’ (recto col.3, l.2); further on, an entry is listed for ‘year 3, Tybi 1’ (verso col.3, ll.1-2). Although Tybi (month 5) comes after Hathyr (month 3), the proximity of the entries makes it most likely that both belong to the same year, and hence, that Hathyr 1 = Sabbath occurred in year 3 of an unspecified ruler. On palaeographic grounds, the papyrus should be dated to the late second century or early first century BCE, which yields two options for the date of Hathyr 1: year 3 of Ptolemy IX, 20 November 115 BCE, which in our reckoning was not a Saturday/Sabbath but a Wednesday; or year 3 of Ptolemy XII, 11 November 79 BCE, which in our reckoning was a Thursday.<sup>92</sup>

In contrast, BGU 20 2847 (also mentioned above), from the Herakleopolite nome, equates year 3, Epeiph 27 (= 27 July 49 BCE), with the day ‘before Sabbath’; in our reckoning of the week, this date was indeed a Friday. The inconsistency between the two documents, and between the first document and our reckoning of the week, does not have a certain explanation. It could be due to error, or to a discrepancy of how the week was counted – and hence, of when Sabbath was observed by local Jewish communities – between the not-so-far-apart nomes of Arsinoe and Herakleopolis.

### Ptolemaic and Roman Egypt: inference from Sabbath observance

The possibility of diversity of practice, in the reckoning of the week, among Jewish communities of Ptolemaic and early Roman Egypt, can be explored through the analysis of a much wider body of papyrological sources, on the basis of a hypothesis and methodology that will be briefly explained here.

The day of the week never became part of the dating formula in Roman Egypt, and is therefore almost completely absent from Egyptian papyri. However, Egyptian papyri are precisely dated throughout the history of ancient Egypt, with a calendar – the Egyptian calendar, adjusted to become the ‘Alexandrian’ calendar in the early Roman period – which was stable and well known. It is therefore possible to convert Egyptian dates into equivalent Julian dates, and to establish what would have been their days of the week, assuming the standard reckoning of the week.

Our hypothesis is that if the Jews of Egypt observed the Sabbath, a significant reduction (or even a complete cessation) of activity on one day per week should be reflected in the dated documents pertaining to Jews; and on this basis, it should also be possible to determine which day was treated as Sabbath and whether it was compatible to the later, standard week. As stated, Egyptian papyri

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<sup>91</sup> This possibility is not sufficiently taken account of in Bloch (2019), an otherwise excellent survey of Sabbath observance in the neo-Babylonian and Achaemenid Empires.

<sup>92</sup> Further, less likely options are year 3 of Berenice IV, which yields Friday 5 November 57 BCE; or year 3 of Cleopatra VII, Friday 4 November 50 BCE. No reign affords a match with Saturday. For regnal years, see Chris Bennett in <http://www.instonebrewer.com/TyndaleSites/Egypt/ptolemies/chron/chronology.htm> (accessed 26 May 2019).

and ostraca are generally precisely dated, and the conversion of their dates to Julian dates is methodologically non-problematic. But the ability to infer, from the dates of these documents, whether the Jews observed the Sabbath and on what day this Sabbath fell is fraught with methodological difficulties.<sup>93</sup>

The first is the difficulty of identifying a person in a document, e.g. through his name, as Jewish or as having at least sufficient Jewish identity to be expected to be Sabbath observing.<sup>94</sup> The second is the difficulty of determining what kind of activity, reflected in the documents, would have been considered forbidden on the Sabbath, and hence would not have been recorded in a document as having been carried on the Sabbath. It is not even clear whether the activity of writing was considered forbidden; no verse in the Bible explicitly prohibits it.<sup>95</sup> The third is the uncertainty, in many cases, of the regnal year referred to in the date, and hence of the dating of the document. The fourth is the possibility of scribal errors.<sup>96</sup> The fifth is whether the corpus is large enough for results to be significant. It could be argued that the many sources extant are too widely scattered across Egypt, and too thinly over a period spanning the Ptolemaic, Roman, and late Roman periods, for any significant conclusions to be drawn from an analysis of their dates.

Notwithstanding these limitations, two sub-corpora can be subjected to a useful analysis, as they preserve a relatively large sample within restricted geographical areas and chronological periods: the Jewish ostraca of Diospolis Magna (Thebes, Upper Egypt) of the second century BCE, of which 41 fully dated samples are extant, and the Jewish tax receipts from Apollinopolis Magna (Edfu, Upper Egypt) from the reigns of Vespasian to Trajan, of which 57 ostraca are extant (all in CPJ), dated from 72 to 116 CE.

In Diospolis, the dates are distributed as follows (assuming the standard reckoning of the week): Sunday 19.5%, Monday 19.5%, Tuesday 4.9%, Wednesday 9.8%, Thursday 19.5%, Friday 19.5%,

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<sup>93</sup> Our starting point, in sourcing the relevant materials, was the *Corpus Papyrorum Judaicarum (CPJ)* (Tcherikover *et. al.* 1957-64), but this work is now very outdated within the discipline of papyrology, as well as being fraught with many of the methodological problems outlined here. For more recent discoveries, we were helped by Tal Ilan whose team is preparing a supplement to the CPJ. We are also grateful to Nikolaos Gonis for his advice.

<sup>94</sup> The editors of CPJ were well aware of this issue (Tcherikover *et. al.* 1957-64: i. xvii-xix), but they did not satisfactorily resolve it, mainly because they took 'Jew' for granted as a definite category, and only saw the problem as one of identifying this presumed category of 'Jew' in the papyri. For our purposes, the definition of 'Jew' is less important than that of the 'Sabbath-observant', although this is equally difficult to pinpoint. For example, CPJ 453 is a papyrus dated Year 17, Phaoph 22 (= 19 October 132 CE), which was Saturday, and signed by Phibion son of O[n]ias, whom the editors assume to be Jewish on the basis of the father's name; but even if his father identified as Jewish (which a name can hardly tell – even less when it is only a patronym), we still do not know if Phibion was committed to observance of Sabbath.

<sup>95</sup> For example, BGU 14 2381 is a deed relating to a loan between 'Ptolemaios son of Sabbataios, Jew of the Epigone', and other Jews; it is dated year 5, Epeiph 1 = 2 August 176 BCE, which according the standard reckoning was a Saturday. However, it is unclear whether writing up this document (which could have been by a gentile scribe) and the loan itself would have been regarded a desecration of the Sabbath. Philo gives as examples of work forbidden on the Sabbath to 'light fires or till the ground or carry loads or institute proceedings in court or act as jurors or demand the restoration of deposits or recover loans' (*Migration of Abraham* 91); and in the *Legatio ad Gaium* (158), he states more generally 'to receive anything, or to give anything, or in short, to perform any of the ordinary duties of life'. It is unknown to what extent his understanding of the Sabbath was widely shared in Ptolemaic and early Roman Egypt.

<sup>96</sup> In CPJ there are also errors in some of the conversions from Egyptian to Julian dates; all these had to be reviewed and corrected.



Saturday 7.3%. The very low percentage on Tuesday suggests that perhaps this was the day of Sabbath, although Saturday is also quite low.

The analysis of the Edfu ostraca from 72 to 116 CE was already carried out by Clarysse *et al.* (2010).<sup>97</sup> They found that the corpus as a whole did not reflect any pattern of Sabbath observance, as receipts were distributed among all days of the week. However, when restricting the corpus to receipts of the Jewish tax (imposed by Vespasian on all Jews of the Empire after the destruction of Jerusalem in 70 CE), of which 57 are extant from Edfu, nearly no receipts were dated to a Saturday, in contrast to the other days of the week that were well represented. They interpreted this result as evidence that the Jewish tax was not collected on Saturdays, perhaps because in contrast with other taxes, the Jewish tax was collected and administered by Jews who avoided work on the Sabbath.

We can infer from this, additionally, that in late first-century Edfu Saturday was observed as Sabbath, and thus that the seven-day week was in phase with its later, standard reckoning. According to our analysis, the dates of Jewish tax receipt ostraca are distributed as follows: Sunday 10.5%, Monday 17.5%, Tuesday 24.6%, Wednesday 14%, Thursday 19.3%, Friday 8.8%, Saturday 5.3%.<sup>98</sup> Here, the lowest percentage on Saturday, with low percentages on either side (Friday and Sunday), support the view that Sabbath was observed on the standard Saturday.

### The early Roman Empire

Moving over to mid-first-century CE Italy, we find a graffito from Pompeii with the following text (CIL IV.2 4182):

Nerone Caesare Augusto  
Cosso Lentulo Cossi fil(io) co(n)s(ulibus)  
VIII Idus Febr(u)arias  
dies Solis luna XIIIIX nun(dinae) Cumis V (Idus Februarias) nun(dinae) Pompeis

Under the consulship of Nero Caesar Augustus and Cossus Lentulus, son of Cossus, on the 8th day before the ides of February, day of the Sun, 16th lunar day, nundinae at Cumae; 5<sup>th</sup> day before the ides of February, nundinae at Pompeii.

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<sup>97</sup> Their interest was only in establishing whether (or to what extent) Jews in Egypt observed the Sabbath. They did not question which day of the week would have been treated as Sabbath, as they assumed that 'the seven-day cycle of the Roman period can be determined by simply counting back from modern times' (Clarysse *et al.* 2010: 53). Although this assumption, for the late first century CE, should not have been made, in the event this did not matter, as their analysis had the subsidiary result of confirming that in late first-century CE Edfu, the Sabbath was reckoned in phase with its later, standard reckoning.

<sup>98</sup> According to Clarysse *et al.*, no more than two Jewish tax receipts are dated to a Saturday; of these two ostraca, they argue that one, CPJ 200, is actually uncertain, as its fragmentary date of (ἔτους) η [Φα]ῶφ[ι] η could have read originally Phaoph 18 rather than 8; they also point out that they were not able to locate and verify either of the originals, and intimate that it may be in fact that no ostraca are dated on Saturday at all (*ibid.* 54-5). However, they overlooked a third ostrakon, CPJ 183, which is firmly dated year 4 Domitian, Payni 24; the date is wrongly converted by the CPJ editors to 18 May 85 CE (Tcherikover *et al.* 1957-64: ii. 125), but it should be 18 June, which was a Saturday. This pushes up the statistics for Saturday, although Saturday remains significantly under-represented. Our figure of 5.3% assumes all three ostraca, and can be taken as a maximum within the extant corpus.

There are two dates in this inscription, but the second, very partial, does not concern us now.<sup>99</sup> The first date corresponds to 6 February 60 CE, which in our reckoning was a Wednesday; the inscription, however, equates it with Sunday. A much quoted explanation has been that of Brind'Amour (1983: 268-9), who argues that the author of this inscription was basing the planetary week on the same hourly scheme as Vettius Valens, but named the days of the week after the first hour of the day rather than after the first hour of the (preceding) night; consequently, what was for Vettius Valens (and us) a Wednesday was for him a Sunday. This explanation is possible but speculative and, in our view, over-scholarly. Given that the seven-day week is arbitrary and does not correspond to any astronomical (or other) reality, it is just as plausible to explain that the author of this inscription began the week on a different date. On any interpretation, it is evident that the week was reckoned differently.

Later in the century, we have the above-mentioned inscription from Tremithus, eastern Cyprus, which is dated 'year 7 of Domitian Caesar ... month of Tybi 25, 1st hour of the day, *sambat 6*', i.e. the sixth day of the Sabbath week (Friday). As has been demonstrated elsewhere, this date is in the eastern Cypriot calendar and corresponds to 28 December 87 CE, which was indeed, in our reckoning, a Friday.<sup>100</sup>

From this point onwards, the sporadic evidence that is extant remains similarly consistent with the later, standard reckoning. From the second century CE, all we have are P.Harris 1.60 and Vettius Valens, both from mid-second century CE Egypt, and both are compatible to the standard reckoning. Vettius Valens' exposition of a method to calculate the day of the week, for any date in the calendar and in any year, implies in fact the assumption that the planetary week was a standard, fixed scheme, on a par with the Egyptian calendar, which could not be open to any diversity. This announces, better than any other source, the increasing standardization of the seven-day week in the Roman Empire.

Even before the second century CE, evidence of diversity in the reckoning of the week remains sporadic: the papyrus from the Arsinoite nome from 115 or 79 BCE; the inference from the distribution of weekdays in second-century BCE Diospolis; and the Pompeii graffito from 60 CE. But evidence of the standard reckoning is equally sporadic, and perhaps generally later: the Herakleopolite nome papyrus from 49 BCE, the Tremithus inscription of 87 CE, and the inference from the Edfu ostraca from 72 to 116 CE. There is no good evidence, therefore, of any emerging standard before the late first century CE.

### The week in the Christian Roman Empire: politics and ideology

More substantial evidence becomes available in the third century, when the seven-day week became more frequently used for dating inscriptions, and when the first Christian Easter tables were designed. The earliest of these tables, attributed to Hippolytus, was redacted in Rome around 222 CE.<sup>101</sup> The Easter tables, which went on to develop mainly in Rome and in Alexandria in the course of the third-fifth centuries, provide for many years in advance the dates when Easter, always on a Sunday, is to be celebrated; effectively, they also indicate how the week is counted, and on what

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<sup>99</sup> According to the Pompeii calendar graffito, CIL IV 8863 (above mentioned), the nundinal day of Pompeii should come four days after Cumae, thus on IV Idus; this inconsistency is outside our scope. On the various aspects of this inscription, see Deman (1974), Brind'Amour (1983) 268-75.

<sup>100</sup> Stern (2010b).

<sup>101</sup> ICUR VII 19933-19935. See Mosshammer (2008) 116-25, Stern (2012) 388-409.

dates Sunday occurs. For this reason, it is likely that the production of these tables and their diffusion in the Christian world played an important part in the standardization of the seven-day week in the later Roman Empire. Indeed, at this stage in history, the wide diffusion of the seven-day week itself – more specifically, of a Christianized version of the Jewish Sabbath week – must be attributed to the general process of Christianization of the Roman Empire, which was further to gain pace after Constantine’s conversion in the early fourth century.

The standardization of the seven-day week was also, even more generally, the product of the increasing cultural unification of the Roman Empire. This trend was exemplified in the very innovative decrees of the Councils of Arles (314) and Nicaea (325), convened by Constantine, that Easter be observed by all Christians on the same date; this also meant implicitly that Sunday should be reckoned by all on the same day. The promotion of a standard seven-day week furthered the development of an ideology that valorised social cohesion through temporal synchronicity, and that no longer made it possible for Jewish (and Sabbath-observing Christian) communities to work six days and rest on the seventh in their own time. These decrees were as much about setting an orthodox standard in Christianity as about politically unifying the Roman Empire under the sole rule of the Christian emperor.<sup>102</sup> Constantine’s further decree on the observance of Sunday, which will be considered below, fulfilled similar agendas, and had the similar effect of turning the seven-day week, increasingly, into an official and standard component of the Roman calendar.

#### 4. The seven-day week in the later Roman Empire and Late Antiquity (third – sixth century CE): standardization and diffusion

After the merger of the traditions of the Jewish, biblical week and the planetary week, the seven-day week became increasingly widespread from the third century and especially in the fourth century CE, when a variety of literary, papyrological, epigraphic, and further textual and material evidence point to the use of the hebdomadal cycle in a wide geographical area comprising the entire territory of the Roman Empire.<sup>103</sup> During the imperial period, early Christians adopted and adapted the nomenclature of the Jewish week; they made Sunday, the Christian Lord’s Day, the first and most important day of the week instead of the Sabbath. We shall return to the Christian week further below. For now, we note that the gradual Christianization of the Roman Empire resulted in the increasing use of the Christian nomenclature for the days of the seven-day week alongside the planetary names.

The use of the Christian and the planetary designations follows a quite distinct distribution pattern.<sup>104</sup> In the eastern side of the Roman Empire, the seven-day week occurs mostly in the Christian form. It appears in sources originating from Greece (mainly Athens, Corinth, and Crete), Thrace, Macedonia, and Asia Minor, as well as from Egypt and the Roman and Late Antique Near

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<sup>102</sup> Stern (2012) 395-402, 422-4, emphasizing the role of Constantine in forming these decrees, but noting that ‘it would be over-simplistic to attribute this change entirely to the emperor, and not to appreciate the role of leading bishops—especially perhaps at the Council of Arles, where the role of Constantine appears to have been more limited—in seizing the opportunity of Constantine’s conversion to promote the long-standing but somewhat dormant notions of catholicism and orthodoxy’ (p.395).

<sup>103</sup> As part of her work in the ERC project ‘Calendars in Late Antiquity and the Middle Ages: Standardization and Fixation’, Ilaria Bultrighini compiled a comprehensive database of references both to individual days of the week and to the seven-day week as a whole in the entire corpus of epigraphic, papyrological, and literary sources in Greek and Latin from throughout the Roman Empire. This material also includes artefactual evidence and covers a time span approximately from the first century BCE to the sixth century CE.

<sup>104</sup> Bultrighini (2018) 65.

East. By contrast, the planetary week designations are widespread in the West (especially in Italy, Sicily, and Gaul), where the Christian nomenclature is, instead, poorly attested, even in manifestly Christian contexts.

### The planetary week in the later Roman Empire and Late Antiquity: epigraphic and documentary evidence

As we have seen above, during the Augustan period and throughout the first century CE the diffusion of the planetary week remained largely limited to the Italian peninsula, with only one attestation elsewhere in the Roman West. In the eastern Mediterranean, the planetary week is first attested, in literary sources, in the second century CE. The distribution of the evidence from the later imperial and late antique periods confirms that the planetary designations for the days of the week continued to spread mainly in the western part of the Roman Empire, with a limited number of testimonies having been found in its eastern half.

Days of the planetary week occur over 300 times in Greek and Latin epigraphic texts, with Latin testimonies being more than double the Greek ones.<sup>105</sup> Most of the inscriptions that can be more or less precisely dated belong to the fourth and fifth centuries, with a particular concentration from the mid-fourth century onwards. The epigraphic evidence consists predominantly of epitaphs, whose greatest part can be identified as Christian. As a way of example, ICUR I 3978 is a marble plaque inscribed with a Greek epitaph commemorating a little girl who belonged to a Christian family and died sometime in the fourth century in Rome: 'Achillia passed away, having been baptised, at the age of 1 year and 5 months, on the 7th day before the calends of March, on the day of the Moon (Monday)'.<sup>106</sup> A Latin example is the sepulchral inscription of Vitalissima and Benenatus or Benenata, who were seemingly twins as they both 'lived more or less four years', and were 'buried on the day before the ides of August, on the day of Mercury (Wednesday)' in the year 425, in Milan.<sup>107</sup> Two orant figures drawn below the text, alluding to the deceased twins, point unequivocally to a Christian milieu.<sup>108</sup>

The sparser epigraphic evidence of the use of planetary names for the days of the week in the eastern half of the Roman Empire consists of three Christian epitaphs from Egypt,<sup>109</sup> a building inscription found near Heliopolis/Baalbek in Roman Syria,<sup>110</sup> a horoscope and a related text, both

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<sup>105</sup> The total number of occurrences is 312, of which 98 are Greek and 214 are Latin; not unexpectedly, all Latin inscriptions originate from the West; the Greek dossier includes 44 inscriptions from the West and 54 inscriptions from the East. Of these latter, 45 are from a single site, Zoar/Ghor es-Safi (south of the Dead Sea), on which see further below.

<sup>106</sup> ἐκοιμήθη Ἀχιλλία/νεοφώτιστος ἐν/αυτοῦ μηνῶν ε' πρ(ὸ) ζ'/καλανδῶν μαρτίων ἡμέρα/Σελήνης.

<sup>107</sup> hic requiescit Vit[a]/lessema qui vixit an(nos)/pl(us) m(inus) IIII et Benenat[us]/qui vixit an(nos) pl(us) m(inus) IIII/d(epositi) pridie idus augustas/die mercuris dd(ominis) nn(ostris)/Teodosio Aug(usto) XI et Valent<ini>a/no puero florentissim/o Caesare. CIL V 6278 = ICUR I 3228 = ILCV 4394B = ICI XVI 194. The consular year is the eleventh of Theodosius II and the first of Valentinian III.

<sup>108</sup> On the motif of the orant or praying figure in Christian funerary contexts, see Jensen (2018) 589-93.

<sup>109</sup> Lefebvre (1978) no. 391 (from Hermonthis, undated; 'day of Aphrodite'); Lefebvre (1978) no. 150 (from Akoris, fifth or sixth century CE; 'day of Aphrodite'); Priesigke (1915) no. 1564 (from Antinoupolis, undated; 'day of Hermes').

<sup>110</sup> IGLSyrie VI 2915 (539 CE; 'day of Selene'). The last line of this inscription apparently preserves the beginning of the formula οἱ θεοὶ ἀθάνατοι, 'immortal gods'; on this basis, the document is generally regarded as originating from a pagan milieu.

wall graffiti, from Dura Europos,<sup>111</sup> an epitaph from Asia Minor,<sup>112</sup> and a Christian epitaph from Macedonia.<sup>113</sup> A special case is the site of ancient Zoar or Zoora, identified with the area of modern Ghor es-Safi at the southeastern end of the Dead Sea in Jordan. In the Roman period, Zoar was part of Provincia Arabia (starting from 106 CE, when the province was established). In the early fourth century the province was reorganised and renamed as Palaestina Tertia. During the fourth to sixth centuries, Zoar is known to have been the seat of a bishop and to have had a vibrant Christian community at least until the seventh century. The site produced an exceptionally large number of Christian tombstones in Greek,<sup>114</sup> mostly from the fourth and fifth century, whose dating formulae include days of the week both in the planetary and in the Christian form. The planetary designations appear in as many as 45 epitaphs from Zoar. It remains unclear how this apparently entirely isolated case should be interpreted in the context of the diffusion of the planetary week in the East.

As for other types of sources, planetary days of the week appear in a rather limited number of papyri, ostraca, and wooden tablets from Egypt, dating from the third, fourth, and later centuries. This material includes various astronomical, astrological, and magical texts. We have previously mentioned P. Harris I.60, an ephemeris for 140 CE in which Saturdays are marked by a recurring K, for Kronos. In four further ephemerides from the fourth and fifth centuries CE, hooks are used to mark every seventh day, i.e. Saturday.<sup>115</sup> The only known instance of a day of the planetary week in a papyrus horoscope is P.Oxy.61.4274, from 503 CE. The text is fragmentary but apparently the dating formula specified that the geniture, which was nocturnal, occurred at the turn of a Saturday and a Sunday, the two days being represented by the symbols for Saturn and the Sun.<sup>116</sup> Days of the planetary week appear in three of the so-called Greek Magical Papyri. These are a body of papyri from Graeco-Roman Egypt (second century BCE to fifth century CE) containing a variety of magical spells, formulae, hymns and rituals. PGM XIII is a third/fourth-century papyrus that, inter alia, describes the proper invocations to appeal to the deities of the weeks, hours, and days.<sup>117</sup> It gives directions, in the form of a table, for discovering which deity ruled any given day of the week; the table includes a column listing the planets in week order. Quite unexpectedly, however, the list begins with Helios (Sunday) instead of Kronos (Saturday). This discrepancy is likely to have resulted from a Christian interpolation detectable in the text, which occurred in the first half of the fourth century CE. It follows that the original text was probably produced in the third century.<sup>118</sup> PGM XXXVI 320-332 is a contraceptive spell which has been dated to the fourth century CE on palaeographical grounds. Among other things, it prescribes to perform certain actions 'during the waning of the moon which is in a female sign of the zodiac on the day of Kronos (Saturday) or Hermes (Wednesday)' (ἐν ἡμέρᾳ Κρόνου ἢ Ἑρμοῦ).<sup>119</sup> Finally, PGM IV 1-25 is a fourth-century

<sup>111</sup> Welles (1933) no. 232 (horoscope, 218 CE; 'day of Kronos'); Welles (1933) no. 220 (inscription concerning a horoscope, variously dated between 219 and 242 CE). See Neugebauer – Van Hoesen (1959) 54 nos. 219 I-Ib, and 167. Both texts, whose context is clearly astrological, were scratched (probably by the same individual) into the plaster of a wall of a house near the centre of Dura known as the House of the Archives.

<sup>112</sup> TAM V.3.1851 (from Philadelphia, Lydia; 342/3 CE; 'day of Aphrodite'). The text was inscribed on a white marble column, which was found in a field near the Christian cemetery of the ancient city. Apart from the provenance, there are no textual or visual elements which suggest that this may be a Christian epitaph.

<sup>113</sup> IG X.2.1 784 = RICHrM 159 = ICG 3180 (Thessaloniki, fifth century CE; 'day of Kronos').

<sup>114</sup> Meimaris and Kritikakou-Nikolaropoulou (2005), (2008). On the Jewish tombstones from Zoar, in Aramaic, see above near nn.27-34.

<sup>115</sup> P.Oxy.61.4179 (348 CE); P.Mich. Inv. 1454 (467 CE); P.Vind. G. 29370b (471 CE); P.Vind. G. 29370 (489 CE). See Jones (1999) i. 40-1, 175-6, 186-90.

<sup>116</sup> Jones (1999) 279-81.

<sup>117</sup> See Smith (1984).

<sup>118</sup> Betz (1986) 180, n.68.

<sup>119</sup> For the astrological implications of these prescriptions, see Barton (1994) 193.

papyrus titled 'The spell for revelation'. Here, a certain action must be performed 'on the day of Zeus (Thursday) in the first hour' (ἡμέρα Διὸς ὥρα α'). Another fourth-century document whose context is clearly astrological/magic is P. Kellis I 82. This is a wooden board, once part of a codex, preserving a calendar of good and bad days which was to be consulted in order to compute the right time to practice magic.<sup>120</sup> With the sole exception of Sunday, which is referred to as the Christian Lord's Day, all days are designated by their planetary names.

A few further papyri, ostraca, and wooden tablets from Egypt preserve texts of different nature involving planetary names for the days of the week. These include four school exercises,<sup>121</sup> a schedule of workdays,<sup>122</sup> a private letter,<sup>123</sup> and a small number of official documents of various types.<sup>124</sup> In these cases the days of the week are either part of dating formulae or otherwise provide temporal indications. Although the relevant epigraphic and documentary sources from the eastern half of the Roman Empire are less numerous and more patchy than in the West, they nevertheless demonstrate that the planetary week was not entirely unknown in the Roman Near East during the imperial and late antique periods.

### The planetary week in the later Roman Empire and Late Antiquity: parapegmata and other material evidence

As mentioned above, parapegmata are instruments of different shapes and materials, which were used to keep track of various temporal and cyclical phenomena by the use of a moveable peg.<sup>125</sup> We have already considered two early imperial parapegmata, one from a village in Latium and the other one from Posillipo (ancient Pausilipum) in Campania, both including the planetary week. We have also discussed a passage from Petronius' *Satyricon* (30.3-4), which has been interpreted as a description of a lunar and planetary parapegma. All other extant parapegmata including the planetary week belong to later periods (roughly, second to fourth century CE). As is the case with the early imperial parapegmata and other types of evidence of the planetary week, the overwhelming majority of these later parapegmata were found in Italy and in the western provinces of the Roman Empire. A noticeable difference between the early imperial and the later imperial parapegmata is the absence in almost all of the latter of the nundinal days. In these later exemplars, the days of the planetary week are consistently associated to the days of the lunar month, and occasionally to the signs of the zodiac or the four seasons.

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<sup>120</sup> See Hoogendijk (1996).

<sup>121</sup> P.Oxy.44.3174v.17 (papyrus; precisely dated to Wednesday, 'day of Hermes', 8 March, 243 CE); Criboire (1996) no. 146 (wooden tablet; 'day of Helios'; variously dated between 294 and 327 CE); Seldeslachts and Wouters 1993 (papyrus; 'day of Helios'; sixth century CE); P.Bagnall p. 15-16 (ostrakon; the text is in Copticising Greek; a list of Christian days and their planetary equivalents, except for the days of Kronos and Helios, i.e. Saturday and Sunday; sixth-eighth century CE).

<sup>122</sup> P.Bagnall 2 (papyrus; 'day of Zeus' and 'day of Selene' along with Christian names of Sunday and Saturday; possibly fourth century CE)

<sup>123</sup> PSI 7.843.13 (papyrus; ἄχρις τῆς Ἑρμοῦ 'until (the day) of Hermes'; fifth/sixth century CE).

<sup>124</sup> P.Oxy.42.3026 (papyrus; 'day of Hermes' is restored; after 166 CE); P.Oxy.54.3741 (papyrus; '(day) of Zeus'; 313 CE); P.Oxy.22.2343 (papyrus; '(day) of Zeus'; 287 CE); P.Oxy.60.4075 (papyrus; '(day) of Zeus'; 318 CE). On the last three see Bultrighini (2018) 72-5 and further below.

<sup>125</sup> See above, near n.65. A catalogue of Greek and Roman parapegmata can be found in Lehoux (2007) 147-491. This, however, does not include a few epigraphic examples that were discovered after 2007: see Stern (2008), and also Bultrighini (2020a) and (2020b).

A remarkable example of such a *parapegma* from the later imperial period was scratched in the wall plaster of a Roman house near the Baths of Trajan on the Oppian Hill in Rome, where it was preserved even after the building was repurposed as a Christian chapel.<sup>126</sup> The graffito was already damaged when it was unearthed in 1812. After its discovery, it was apparently left exposed to the elements, which quickly led to its complete erosion. Nevertheless, its original appearance has been preserved thanks to the illustrations that were produced by Piale in 1812 and de Romanis in 1822. Afterwards, two copies of the graffito emerged: a terracotta copy made from the original, which ended up in the Kunstgeschichtliches Museum of the University of Würzburg, and a plaster cast of this copy, now stored in the Museo della Civiltà Romana in Rome. Variouslly dated between the second and the fourth century CE, the graffito included a top row with the seven days of the week depicted as busts of the planetary gods and goddesses presiding over each of the days, with their typical attributes. The series originally began on the left hand side with an image of Saturn (Saturday), but it had already vanished when the graffito was discovered. Following were the Sun wearing a solar crown (Sunday), Luna with a crescent-shaped crown (Monday), Mars armed with a helmet and spear (Tuesday), Mercury with his winged hat (Wednesday), another blank in place of Jupiter (Thursday), and Venus sporting a tiara on her forehead (Friday). Below each of these images was a peg hole. In the centre of the *parapegma* was a zodiac wheel bearing representations of the twelve zodiac signs, also equipped with peg holes. A sequence of numbers from I to XXX, all with peg holes, was arranged in two columns to the left and right of the zodiac wheel. By manually moving a peg along the holes on its top, centre, and sides, the *parapegma* would have enabled its users to track the days of the planetary week, the zodiac signs, and the days of the lunar month (the sequence I-XXX must refer to the lunar month, as some Julian months have 31 days, and in Roman practice the days of calendar months are not numbered consecutively).<sup>127</sup>

In the eastern Mediterranean, the only *parapegma* tracking the days of the planetary week to have been found is a graffito that was scratched on the wall of a Roman military barrack at Dura-Europos, during the period of Roman occupation of the city (late second – mid third centuries CE).<sup>128</sup> The graffito is known through a drawing that was made after much of it broke apart and was lost during excavation, which is why some caution is required in its interpretation. What is certain is that similarly to the Trajan's Bath *parapegma*, the graffito from Dura displayed the busts of the seven planetary gods and goddesses of the week positioned horizontally across the top and arranged in week order (Saturn to Venus), each provided with a peg hole. The name of the relevant deity/planet was inscribed in Latin above each image (only 'Luna' is preserved). The graffito also included the days of the lunar month as well as, apparently, the *nundinal* days. Although found in Dura-Europos, this Latin-language *parapegma* with *nundinal* days clearly reflects a Roman cultural context; it seems

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<sup>126</sup> *Inscr.It.* XIII 2, 308–9, no. 56. See Lehoux (2007) 16-7, 168-70; Bultrighini (2020*b*).

<sup>127</sup> Further *parapegmata* in which the days of the planetary week appear as images: a marble slab from the ancient town of Veleia near modern Piacenza in northern Italy (*CIL* XI 1194 = *Inscr.It.* XIII 2, 313, no. 59; see Lehoux 2007: 172; undated; with lunar days). A stone fragment of unknown date and provenance now held in Arlon, Belgium (Lehoux 2007: 177). A limestone relief of unknown date and provenance, now held in Soulosse, France (Lehoux *ibid.*; Moitrieux 2010, no. 959). A clay *parapegma* from Rottweil, Germany (Lehoux 2007: 178-9; mid-second century; with zodiac signs and lunar days). A fragmentary sandstone relief from Bad Rappenau, Germany (Lehoux 2007: 179; late second or early third century). A clay fragment and a clay mould from Trier, Germany (Lehoux 2016: 107-9; third/fourth century; with lunar days and personified images of the four seasons).

<sup>128</sup> See Lehoux (2007) 170-1, with previous bibliography. Lehoux could not locate the remaining fragments of the graffito at Yale, where they are supposedly preserved.

reasonable to assume that the military official who scratched it originated from the western part of the Roman Empire.<sup>129</sup>

Although these late imperial *parapegmata* including the planetary week were used for tracking temporal cycles, they also possessed an astrological connotation. The absence of basic calendrical data such as Julian months and days suggests that the main intention behind these *parapegmata* was not calendrical, but rather astrological. This is apparent in the case of the Trajan's Bath *parapegma* (as well as the Rottweil *parapegma*, see n.127), which enabled its users to track the passage of the Sun or Moon through the twelve signs of the zodiac.

In addition to *parapegmata*, a variety of further artefactual evidence bears depictions of the planetary week deities, representing the seven planets in week order – that is, in a sequence starting with Saturn (Saturday) and ending with Venus (Friday). This material includes mosaics, frescoes, stone reliefs, architectural members, bronze and silver statuettes, vessels, and other objects, as well as a homogeneous series of relief images on altars and statue bases from the Germanic and Gallic provinces. Symbolic representations occasionally occur, yet the seven heavenly bodies of the planetary week are most frequently depicted anthropomorphically, in the shape of their associated deities, typically as busts. These images are first attested roughly at the same time as the planetary week emerged, and became increasingly widespread during the imperial period. Although they have been found throughout the Roman Empire, the earliest examples and the majority of these representations originate from Italy and the western provinces. And it is seemingly upon western models that the limited number of depictions of the seven planetary week deities from the eastern Mediterranean is directly dependent.<sup>130</sup>

#### The planetary week in the later Roman Empire and Late Antiquity: patristic sources

A substantial part of the literary evidence for the use of the seven-day week in its planetary form from the third century onwards is provided by patristic and other early Christian sources. The earliest Christian mention of the planetary week is the passage from Justin Martyr's *Apology* (c. 150 CE) discussed earlier, in which the Christian day of worship, Sunday, is identified as 'the day of the Sun', while the day of Jesus's crucifixion (Friday) is called the day 'before that of Kronos'. Slightly later, both Clement of Alexandria and Tertullian make reference to planetary days of the week, as we have already seen.<sup>131</sup>

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<sup>129</sup> Another *parapegma* in the form of a wall graffito was found in a third-century private house in Via dei dipinti at Ostia (CIL XIV 2037 = Inscr.It. XIII 2, 312, no. 58; see Lehoux 2007, 173; now lost). The first line showed the names of the planetary days in the genitive (only 'Lunae' being preserved), followed by numerals indicating the days of the lunar month. The only other *parapegma* which remains to be mentioned is an inscribed marble fragment of uncertain origin and date, currently held in Naples (CIL X 1605 = Inscr.It. XIII 2, 307, no. 55; see Lehoux 2007, 173; with lunar days). Here, each day of the planetary week was indicated by the name of the relevant planet in the genitive, as in the Ostia *parapegma*.

<sup>130</sup> On visual representations of the seven planets as week deities, see de Witte (1877-1879), Haug (1890), Maass (1902), Duval (1953), Gundel (1950), (1973). See also Bultrighini (2017b) 187-9 and (forthcoming). An article exploring the ways in which the planetary week deities were depicted on a wide range of material sources is currently in preparation by the same author. The monuments from Roman Gaul and Germany mentioned above are known as 'Jupiter columns' and were widespread from the second to the mid-third centuries CE. See Picard (1977) for the Gauls, and Bauchhenß–Noelke (1981) for the Germanic provinces. See also Woolf (2001) and Van Andringa (2002) 190-1.

<sup>131</sup> In a passage of his *Protrepticus* dealing with the pagan worship of the Sun, the Moon, and the planets (4.63.1), Clement declares that these 'are not gods, but instruments for measuring time' (τὰ ὄργανα τοῦ



In Tertullian we find an early instance of the Christian reproach for the use of the planetary week, which will later become considerably less veiled: while addressing the pagans about their cult of the Sun, Tertullian mentions 'the day of the Sun' and 'the day of Saturn', and affirms: 'it was certainly you who admitted the Sun within the list of the seven days'.<sup>132</sup> From this point onwards, Church Fathers and early Christian leaders regarded the habit of referring to the days of the week by their planetary designations as a sign of paganism and superstition, as these days were named after pagan deities and were connected to the pervasive belief that the planets influenced people's lives.

The condemnation of the pagan and astrological implications of the seven-day planetary week escalated during the fourth century.<sup>133</sup> Philaster, bishop of Brescia in northern Italy, includes the use of the planetary nomenclature for the days of the week in his catalogue of heresies compiled around 384 CE: *Habenda est et haeresis, quae dicit nomina dierum, Solis, Lunae, Martis, Mercurii, Jovis, Veneris, Saturni*.<sup>134</sup> Other Christian leaders not only criticised the planetary designations, but also recommended the use of a distinctively Christian vocabulary to refer to the days of the week, which by then had been fully developed (see further below). In the late fourth or early fifth century, Augustine urges his fellow Christians to refrain from calling the days of the week by their planetary names, and encourages them to use the Christian nomenclature: 'The first of the week is the Lord's Day; the second of the week is the second day, which people of the world call day of the Moon; the third of the week is the third day, which they term day of Mars. Therefore, the fourth of the week is the fourth day, which is called day of Mercury by pagans, and also by many Christians; but we do not want that; and we wish they would change for the better, and cease to do so; for they have their own language, which they should use'.<sup>135</sup>

In the fifth and sixth century Christian preachers attacked even more vehemently this habit, which was apparently still widespread at the time. Both Caesarius, bishop of Arles in Gallia Narbonensis (south-eastern France), and the Galician Martin, bishop of Bracara Augusta (present Braga in north-western Portugal) are known for their violent opposition to the custom of naming the days of the week after Greek and Roman gods and goddesses. In the first half of the sixth century, Caesarius harshly condemns the deities or 'demons' that gave their names to the seven days, and insists on the need to replace such appellations with the Christian designations of Biblical origin: 'But these unhappy and ignorant men, who worship these most wretched and impious men we mentioned above, by fear of them rather than by love of them, for their sacrilegious cult, almost in their honour, named each day of the week after each of them. (...) We judge no day worthy of the name of demons (...). But also let us disdain to speak those most sordid names and never let us say 'Mars'

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χρόνου). This idea is echoed by the African mathematician Hilarius in the fourth or fifth century CE (*De Solstitiis*, PLS 1.567). In addition to generally hinting at the role of celestial bodies in time reckoning (cf. Gen. 1:14), Clement may also be referring more specifically to the planetary deities as rulers of the seven days of the planetary week (Bultrighini forthcoming).

<sup>132</sup> *Ad nat.* 1.13: vos certe estis, qui etiam in laterculum septem dierum solem recepistis.

<sup>133</sup> Salzman (2004) 192-4.

<sup>134</sup> *Haer.* 113: Haeresis de septem planetis. Cf. Irenaeus of Lyon, *Adversus haereses* 1.30.9 (c. 180 CE): 'They want the sacred Hebdomad to consist of the seven stars called planets' (Sanctam autem hebdomadem septem stellas, quas dicunt planetas, esse volunt). Irenaeus is talking about the Ophite Gnostics, and this passage seems to show that these used to call the planetary week 'sancta Hebdomas'. As part of his attacks against heresies based on the principles of astrology, Philaster also criticises the idea that people's fate depends upon the twelve signs of the zodiac (*Haer.* 123: Alia est heresis quae dicit secundum duodecim zodia nasci homines).

<sup>135</sup> *Commentary on the Psalms* 93.3: Una sabbati, dies dominicus est; secunda sabbati, secunda feria, quem saeculares diem Lunae vocant; tertia sabbati, tertia feria, quem diem illi Martis vocant. Quarta ergo sabbatorum, quarta feria, qui Mercurii dies dicitur a paganis, et a multis christianis; sed nollemus; atque utinam corrigant, et non dicant sic. Habent enim linguam suam, qua utantur.

day', 'Mercury's day', or 'Jupiter's day', but rather 'first day', 'second day', or 'third day'; according to what is written, let us call the days. Warn your families too about these names.'<sup>136</sup> Caesarius also rises up against superstitious and pagan attitudes associated with specific days of the week,<sup>137</sup> and the practice of opting for specific days regarded as auspicious to begin a journey or return home,<sup>138</sup> as well as other 'pagan' observances related to particular times of the seasons and the calendar year, such as the summer solstice,<sup>139</sup> and the calends of January.<sup>140</sup> A few decades later, Martin of Braga, certainly drawing on Caesarius, addresses similar issues in his sermon focused on the issue of rural paganism (*De correctione rusticorum*). In particular, he condemns the practice of observing propitious days of the week to perform specific activities and the habit of naming the days of the week after the planetary gods and goddesses of the Graeco-Roman pantheon. Like his predecessors, Martin recommends, instead, the use of the ecclesiastical designations.<sup>141</sup>

From the fourth century onwards, generations of Christian preachers struggled against the use of the planetary designations for the days of the week, which they considered as a symptom of paganism. While it is doubtful that the habit of referring to the days of the week by pagan names retained much religious significance in Merovingian Gaul,<sup>142</sup> it seems that at least until the fourth century the seven-day week continued to possess an astrological connotation, and people still commonly believed to be constantly subject to the planets throughout their life.<sup>143</sup>

Despite the continued efforts of some Christian preachers to supplant the planetary names with the Christian nomenclature, in Western Europe the vast majority of people, Christians included, persisted in calling the days of the week after the seven planets into Late Antiquity and well beyond, as we are about to consider more in detail in the next section.

### The Christian week

As stated earlier, during the Roman imperial period the early Christians adopted the nomenclature of the Jewish, Biblical week and adapted it to produce what we may refer to as the Christian week. Most importantly from a Christian perspective is that the Jewish Sabbath (Saturday) was replaced by

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<sup>136</sup> *Sermo* 193.4: sed miseri homines et imperiti, qui istos sordidissimos et impiissimos homines, ut supra diximus, timendo potius quam amando colebant, pro illorum sacrilege cultu, quasi in honore ipsorum, totos septimanae dies singulis eorum nominibus consecrarunt. (...) nullum diem daemonum appellation dignus est iudicemus. (...) sed etiam ipsa sordidissima nomina dedignemur et ore proferre, et numquam dicamus diem Martis, diem Mercurii, diem Iovis; sed primam et secundam vel tertiam feriam, secundum quod scriptum est, nominemus. De his etiam nominibus et vestras familias admonete.

<sup>137</sup> In particular with Thursday (*Sermones* 13.5, 19.4, and 52.2), on which see Bultrighini (2018) 66-7 and further below.

<sup>138</sup> *Sermo* 1.12 (qua die in itinere egrediatur, vel qua die ad domum propriam revertatur). See also *Sermo* 54.1.

<sup>139</sup> Here referred to as St John's Day (*Sermo* 33.4: ne ullus in festivitate sancti Iohannis aut in fontibus aut in paludibus aut in fluminibus nocturnis aut matutinis horis se lavare praesumat).

<sup>140</sup> *Sermones* 192 and 193 (De kalendis Ianuariis).

<sup>141</sup> C. 8: 'They give the names of these demons to each day of the week, calling these days by the names of Mars, Mercury, Jupiter, Venus and Saturn, where these created no days, but were wicked and evil men among the Greeks' (sed sunt dubii in tantum ut nomina ipsa daemoniorum in singulos dies nominent, et appellent diem Martis et Mercurii et Iovis et Veneris et Saturni, qui nullum diem fecerunt, sed fuerunt homines pessimi et scelerati in gente Graecorum). See also c. 9, 16, and 18. See Bultrighini (2018) 67-8, with full bibliography.

<sup>142</sup> Klingshirn (1994) 215-6.

<sup>143</sup> Salzman (2004) 194.

the Christian Lord's Day (Sunday) as the focal day of the week, a day of worship and gatherings, as early as the second century CE.<sup>144</sup>

In accordance with the Jewish week, which has the Sabbath as its seventh day, Sunday was identified as the first day of the Christian week. This differed from the planetary hebdomadal cycle whose day one was Saturday.<sup>145</sup> By the fourth century, Sunday was systematically referred to as the first day of the seven-day week in all types of sources, including non-explicitly Christian ones.<sup>146</sup> In all likelihood, this order of the days of the week emerged as a result of the influence of the Jewish and Christian traditions.<sup>147</sup>

In its purely numbered form, the Greek version of the Jewish, Biblical week in Late Antiquity had its days expressed with adjectives or with alphabetic numerals: *ἡμέρα α'* or *ἡμέρα πρώτη* ('first day') for Sunday, *ἡμέρα β'* or *ἡμέρα δευτέρα* ('second day') for Monday, *ἡμέρα γ'* or *ἡμέρα τρίτη* ('third day') for Tuesday, *ἡμέρα δ'* or *ἡμέρα τετάρτη* ('fourth day') for Wednesday, *ἡμέρα ε'* or *ἡμέρα πέμπτη* ('fifth day') for Thursday, *ἡμέρα ς'* or *ἡμέρα ἕκτη* ('sixth day') for Friday, and *ἡμέρα ζ'* or *ἡμέρα ἑβδόμη* ('seventh day') for Saturday. As noted previously, Friday was also referred to as (*ἡμέρα*) *παρασκευή*, '(day of) preparation', and *προσάββατον*, 'the (day) before Sabbath'.<sup>148</sup> Saturday may also be termed *ἡμέρα σαββάτου* or *σάββατον* (also plural, *σάββατα*), 'day of Sabbath' or simply 'Sabbath'.

The essential Christian modification of the Biblical week pertained to Sunday. Greek-speaking Christians began to call Sunday *ἡμέρα κυριακή* or simply *κυριακή* ('the Lord's Day') presumably after the unique mention of this term in the New Testament (Rev. 1:10).<sup>149</sup> The first day of the week was primarily intended as a weekly commemoration of Christ's resurrection.<sup>150</sup> Because of the importance the Christians attached to that event, Sunday was early on established as a day of worship, apparently in the second century CE.<sup>151</sup>

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<sup>144</sup> *Didache* 14.1; Ignatius, *Ad Magn.* 9; Justin, *Apolog.* 1.67. Bacchiocchi (1977); Llewelyn and Nobbs (2002) 110, 112; Di Berardino (2003) 211; Salzman (2004) 198-9; Bultrighini (2018) 78.

<sup>145</sup> Early evidence of Saturday being the first day of the planetary week includes some of the Pompeii graffiti discussed above (CIL IV 6779; CIL IV 5202; CIL IV 8863) as well as the *parapegmata* and the visual representations of the planetary week dealt with in one of the previous sections.

<sup>146</sup> Ausonius, *Ecl.* 8; Paul of Alexandria, ch. 20; PGM XIII 218-224; P.Kellis I 82.

<sup>147</sup> Llewelyn and Nobbs (2002) 117; Salzman (2004); Bultrighini (2020c) 589-90. *Contra* Di Berardino (2003) 217, who perplexingly posits that this order 'comes from a pagan source'. There is no evidence that the cult of Mithras or Sol Invictus helped in any way to favour *dies Solis* as the beginning of the week; indeed, no religious rite is known to have been regularly performed for any solar deity on *dies Solis*.

<sup>148</sup> For example, a third or fourth-century CE lead curse tablet against an athlete from Corinth, Greece, which proclaims: 'may they not prevail on Friday (*προσάββατον*)' (SEG 44 308; Jordan 2004, 699). On earlier attestations in the Septuagint and other sources, see above near nn.9 and 13.

<sup>149</sup> Kubitschek (1928) 33 suggested that the Christians might have coined the term 'the Lord's Day' on the model of the Egyptian practice of naming the first day of the month or its most important one as *Σεβαστή* (day of the emperor). Early references to the Lord's Day in Christian literature include Ignatius of Antioch (*ad Magn.* 9.1) who around 100 CE urged the Magnesians to 'no longer keep the Sabbath, but live in the observance of the Lord's Day' (*μηκέτι σαββατίζοντες, ἀλλὰ κατὰ κυριακὴν ζῶντες*). Around the same period, the *Didache* (14.1) instructed the Christians to assemble on the Lord's Day to worship (*κατὰ κυριακὴν δὲ κυρίου συναχθέντες...*).

<sup>150</sup> Just. *Apol.* 1.67; Tert. *de Orat.* 23. In Justin's passage, Sunday is referred to by its planetary name: 'On the day of the Sun (*τὴν δὲ τοῦ ἡλίου ἡμέραν*), we assemble, because it is the first day, in which God created the world and because on this day Jesus Christ, our Saviour, came back from the dead'. On Justin's use of the planetary designations, see above, near nn.74 and 88.

<sup>151</sup> See references above, n.144.

As for the Latin vocabulary of the Christian week, Western Christianity rendered the Greek numbered weekdays attested in the East as *feria secunda* (or *feria II*), *feria tertia* (or *feria III*), *feria quarta* (or *feria IV*), *feria quinta* (or *feria V*), *feria sexta* (or *feria VI*), for Monday to Friday.<sup>152</sup> For Saturday, the Greek *σάββατον* was transliterated into the Latin alphabet as *sabbatum*. For Sunday, *ἡμέρα κυριακή* or *κυριακή* was translated as *dies dominica* (also *dies dominicus*) or simply *dominica*, ‘the Lord’s Day’. The term ‘feria’, which is drawn from the Roman calendrical tradition, can be rendered in this context simply as ‘day’. Interestingly, ‘feriae’ were originally holidays, festival days, as opposed to working days.<sup>153</sup> They were distinguished by the cessation of all profane activities and by the performance of religious practices. Patristic sources seem to suggest that the term ‘feriae’ indicating weekdays in the Christian week nomenclature conveyed the idea that every single day of the week belongs to and is a celebration of the Lord. This idea is apparently related to the Christian criticism towards the Jewish Sabbath: according to some Church Fathers, there is no day which is more sacred than the others, every day is ‘a Sabbath day’, every day belongs to and must be consecrated to the Lord.<sup>154</sup> Yet, paradoxically, the notion that ‘all days belong to God’ was explained in relation to the seven days of Creation,<sup>155</sup> and was therefore closely related to the Jewish Sabbath week. On a more practical level, it has been suggested that the use of the term ‘feria’ for weekdays may have originated from the custom of referring to the days of the Holy Week as ‘*secunda feria*’, ‘*tertia feria*’, and so on. This was a week of rest and the first of the ecclesiastical year. Consequently the days of any other week of the year may have begun to be called in the same way.<sup>156</sup> In fact, ancient sources are largely quiet on the origins of the Christian habit of referring to weekdays as ‘feriae’: the only testimony we have is provided by Bede in the early eighth century, who reports that the use of this terminology was enacted by Pope Sylvester in the first half of the fourth century (314-335 CE).<sup>157</sup>

The earliest attestation of the use of the Christian names of the days of the week in Latin is in Tertullian, in the late second or early third century CE. In his *de Ieiunio* (On Fasting), he refers to Wednesday and Friday first as ‘*quarta et sexta feria*’ (2, 3) and subsequently as ‘*quarta et sexta sabbati*’ (14, 2-3); he also mentions *sabbatum* and *dominica* (14, 2-3 and 15, 2), and refers to Friday as *parasceve* (14, 2-3), a transliteration of the Greek *παρασκευή* (Day of Preparation).<sup>158</sup> However,

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<sup>152</sup> These formulae are occasionally preceded by ‘*die*’ (‘on the day’). The ‘feria’ terminology is treated in Bultrighini (2017a) 422-3.

<sup>153</sup> This meaning of the Latin term ‘feriae’ has persisted in Romance languages. For instance, ‘*férias*’ in Portuguese and ‘*ferie*’ in Italian are holidays, vacation from work. At the same time, the ecclesiastical sense of the Latin word ‘feria’ is reflected in the adjectives ‘*ferial*’ in Portuguese and ‘*feriale*’ in Italian, which refer to workdays, weekdays. In this context, it is worth noting that Portuguese is the only major Western European language to preserve traces of the ‘feria’ nomenclature (*segunda-feira* for Monday, *terça-feira* for Tuesday, etc.). The use of ‘*feira*’ in Portugal as well as in Galicia suggests that here the influence of the Church in Late Antiquity was stronger than elsewhere.

<sup>154</sup> A passage from the *Didascalia Apostolorum*, an early third-century treatise addressing Christian communities in Syria (known through a Latin translation), states that *omnes dies domini sunt*, ‘all days belong to the Lord’ (6.18.16). See also *Ad. Diognet.* 4; Origen, *C. Celsum* 8, 21-2; Tert., *de baptismo* 19. See Pietri (1984) 63; Eriksson (1956) 32; Markus (1990) 100.

<sup>155</sup> Martin of Braga, *de corr. rust.* 9.

<sup>156</sup> Du Cange (1883-1887) ‘feriae’.

<sup>157</sup> *de temp. rat.* 8; *de rat. comp.* 5. In the early seventh century CE, Isidore of Seville proposed a singular etymology for ‘feriae’ as weekdays, which related the names of the days to the act of speaking (*etym.* 5.30.12: *a fando autem feriae nuncupatae sunt, quod sit in eis nobis tempus dictionis, id est in divino vel humano officio fari*).

<sup>158</sup> The term is used in the third-century Apostolic Tradition and reappears in the late fourth-century Vulgate. *Parasceve* is also attested as a female personal name in a small number of sepulchral inscriptions: CIL III 8935 (from Dalmatia, third-fourth century CE); CIL XII 5764 = CIL XII 5765 = CAG-13-3, 67 (from Massilia, undated); CIL

these are isolated occurrences, after which one has to wait until the fourth century for the Latin nomenclature to reappear in literary sources.

### The Christian week: epigraphic and documentary evidence

As seen earlier, apart from a number of examples from the early Empire, most of the inscriptions with days of the planetary week date from the fourth and fifth centuries and come primarily from the western area of the Roman Empire. The epigraphic evidence relating to the Christian week, on the other hand, dates predominantly from the fifth and sixth (as well as later) centuries and originates chiefly from the eastern side of the Roman Empire, in particular from Greece, Thrace, Macedonia, Asia Minor, and the Roman Near East.<sup>159</sup> Similarly to the case of the planetary week, the inscriptional evidence for the Christian week consists largely of epitaphs, which – needless to say – originate eminently from Christian milieus.

Much of the epigraphic record in Greek displays essentially the same nomenclature which is attested in the literary sources, as illustrated in the previous section. An interesting example is the sixth-century marble tombstone of Zacharias, son of Erasinos, from the South Church at Avdat in the Negev desert (southern Israel), an area once belonging to the Roman province of Palaestina Tertia (SEG 28, 1396). The epitaph describes in minute details the dates of death and burial of the deceased: 'Zacharias, son of Erasinos, passed away on the tenth of the month Panemos, in the fourteenth indiction, on Sunday, at the third hour of the night; he was buried here on Tuesday, at the eighth hour, on the twelfth of Panemos, in the fourteenth indiction, in the year 476 according to (the era of) Elousa.'<sup>160</sup> The days of the week are expressed as ἡμέρα (for ἡμέρα) κυριακῆ, 'on the Lord's Day' (Sunday) and τρίτη τοῦ σάμβατος, 'on the third of the week' (Tuesday).

A fourth/fifth-century epitaph inscribed on a round marble plaque from Catania, Sicily, mentions παρασκευή, the '(day of) preparation' (date of death), and σάββατον, 'Sabbath' (date of burial): 'Agathe died at the age of sixty years on Friday, the ninth day after the calends of September; she was buried on Saturday.'<sup>161</sup> The latter is expressed as δαὶ Σαββάτοις, 'δαί' apparently being an

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XIV 1449a = IPostie-B, 121 (from Portus, undated); CIL X 1101 (from Nuceria, second-third century CE); CIL VI 16429 (from Rome, undated); CIL VI 19917 (from Rome, undated); CIL VI 38355 (from Rome, 150-250 CE).

<sup>159</sup> Inscriptions dated to later than the sixth century are not taken into consideration in this survey. The total number of occurrences is 495, of which 456 are Greek and 39 are Latin. The Greek dossier comprises a couple dozen inscriptions from the West (mostly from Italy and Sicily) and well over 400 inscriptions from the East. Of these latter, 290 are from the site of Zoar/Ghor es-Safi. With one exception, all Latin inscriptions originate from the West. The unique Latin document from the East is IK Iznik 574, from Nicaea, in the Roman province of Bithynia and Pontus; it is a bilingual (Latin & Greek) Christian epitaph attributed to the fourth or fifth century, whose Latin text commences with a monogrammatic cross followed by the words 'in die dom[inica...]' ('on the Lord's Day...').

<sup>160</sup> Ⳬ ἀνεπάη ὁ μακάριος Ζαχαρίας / Ἐρασίνου ἐν / μηνὶ Πανέμου / δεκάτῃ ἰνδ(ικτιῶνος) ἰδ' ἡμέρα Κυριακῆ ὥραν / τρίτῃ τῆς νυκτὸς κα/τετέθη δὲ ἐνταῦθα / τῆ τρίτῃ τοῦ Σάμβα/τος ὥραν ὀγδόην / Πανέμῳ δωδεκά/τῃ ἰνδ(ικτιῶνος) ἰδ' ἔτους κα/τὰ Ἐλούσ(αν) υος'(...). The dates are expressed according to the so-called calendar of the Province of Arabia, a solar calendar based on the Egypto-Macedonian model, and the era of the Provincia Arabia (here referred to as era of Elusa); the dates correspond to 29 June and 1 July of the year 581. See Meimaris (1992) 149-51, 159, 258 no. 368.

<sup>161</sup> IMC Catania 173: Ἀγάθη / Ϝς ἐτελεύτησεν / ἐτῶν ξ Παρα- Ϝς / <σ>κευῆ τῆς θ ἀπὸ κα/λανδῶν Σεπτεμ/βρίω<ν>· ἐξεκομίσθη/ δαὶ Σαββάτοις; (...) Korhonen observes that the month day expressed as 'ἀπὸ καλανδῶν', 'after the calends', is common in Syracuse and south-eastern Sicily in this period, though the formula is normally μηνί + month name + ἀπὸ καλανδῶν + figure. Agathe's epitaph combines this formula with the traditional Roman one (πρό + figure + καλανδῶν + month name).

attempt to transcribe into Greek the Latin 'die' ('on the day'); Σαββάτοις is the dative of the plural σάββατα, which was widely used alongside the singular σάββατον (see above).

The epigraphic record occasionally attests to the combination of two different designations, such as in the case of a fourth-century (?) epitaph from Nea Anchialos in Thessaly (Greece), whose two final lines refer to ἡμέρα κυριακή πρώτη, which may be rendered as 'the first day (of the week), the Lord's Day'.<sup>162</sup>

As mentioned, the site of Byzantine Zoar/modern Ghor es-Safi (Jordan) produced an exceptionally large number of Christian tombstones inscribed in Greek, mostly dating from the fourth to the sixth century, where the days of the week are expressed according to both the planetary and the Christian nomenclature. However, while the planetary names appear in 45 inscriptions, the Christian designations are mentioned in as many as 290 epitaphs. Interestingly, several of these latter differ from the 'standard' terminology we have thus far considered. About 125 of the 290 inscriptions including Christian days of the week from this site display the formula (ἐν) ἡμέρα Κυρίου + numeral, that is, 'on the X day of the Lord'. As an example, the epitaph of Thopse, daughter of Ellios (I.Pal.Tert.Ia.73), specifies that she passed away on 31 July 395 CE, ἡμέρα Κυρίου πέντη (for πέμπτη), 'on the fifth day of the Lord' (Thursday).

At Zoar are also attested a few 'hybrid' formulae, such as I.Pal.Tert.Ia.93: ἡ<sup>μ</sup>(έρα) Κ(υρίο)υ Κρόνου, 'on the Lord's Day of Kronos', where the Christian and the planetary nomenclature are freely mixed; I.Pal.Tert.Ia.98: ἡμέρα Κυρίου τετάρτη δ', 'on the fourth day of the Lord', the numeral being expressed both as adjective and according to the alphabetic numeral system; I.Pal.Tert.Ia.295: [ἡμέ]ρα Κ(υρίο)υ κυρι[ακῆ], 'on the Lord's Day', essentially with duplication of 'the Lord's';<sup>163</sup> I.Pal.Tert.Ib.49: ἡμ(έρα) Κ(υρίο)υ παρασκ(ευῆ), 'on the Lord's preparation day', where the locution ἡμέρα Κυρίου is associated with the 'Preparation' denomination for Friday instead of a numeral.

Outside the numerous examples from Zoar, only three epitaphs of different origin seem to display the formula ἡμέρα Κυρίου plus a numeral: one from Trier, Germany (Augusta Treverorum, in the province of Gallia Belgica) and two from Sicily.<sup>164</sup> The phrase ἡμέρα Κυρίου seems to express the notion that every single day of the week belongs to and is a celebration of the Lord.<sup>165</sup> In light of this, it may be speculated whether this peculiar and not much diffused formula emerged as an attempt to offer a close translation into Greek of the 'feria' nomenclature, the official Latin terminology of the Christian Church for the days of week.

Whereas the use of the Christian designations is first attested in Latin literary sources in Tertullian and then, after a hiatus, in the fourth century, the earliest epigraphic evidence of the 'feria' designations belongs to as late as the sixth century.<sup>166</sup> However, dominica and sabbatum appear earlier than weekdays in inscriptional sources (in the fifth and fourth century, respectively). The number of late antique inscriptions displaying the Christian nomenclature in Latin is limited (see note 159); the evidence becomes somewhat richer after 600 CE. As one might expect, this is an

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<sup>162</sup> On this inscription see Bultrighini (2017b) 190-3. See 193 note 24 for details about the epigraphic documentation for ἡμέρα κυριακή and ἡμέρα πρώτη.

<sup>163</sup> See also I.Pal.Tert.Ia.225.

<sup>164</sup> See Bultrighini (2017b) 193-5 for details.

<sup>165</sup> Meimaris and Kritikakou-Nikolaropoulou (2005) 50.

<sup>166</sup> On 'feria' inscriptions, see Bultrighini (2017a) 421-4.

entirely western phenomenon: the majority of these inscriptions (27) originate from the Italian peninsula, while fewer were found in North Africa, Gaul, and the Germanic provinces.<sup>167</sup>

Once again, epigraphic evidence of the term 'feria' consists mainly of epitaphs. Let us consider an example from ancient Brundisium (Brindisi, Italy), which has been attributed to the sixth century: 'Pretiosus, the bishop of the Catholic Church of the holy Brundisium, was buried on Friday (sexta feria), on the 15th day before the calends of September (...)'.<sup>168</sup> As few as five further (certain) examples of 'feria inscriptions' dating from no later than the sixth century CE are preserved.<sup>169</sup> It must be observed that at least half of these 'feria inscriptions' belong to ecclesiastical settings, that is, they are Church regulations or epitaphs of priests and other members of the clergy – as in the case of Pretiosus's tombstone.

The epigraphic evidence thus suggests that the Christian nomenclature in Latin –and especially the 'feria' denominations for weekdays– did not take hold in the Latin West beyond ecclesiastical circles. Despite reiterated attempts on the part of Church Fathers and early Christian preachers to eradicate this habit, the lay population (including Christians) continued to refer to the days of the week by their planetary designations well into Late Antiquity. This phenomenon reflects the longer tradition of the planetary week in this area of the Roman Empire.<sup>170</sup> In this context, it should be observed that while in the East the Christian nomenclature has generally persisted to this day (both in modern Greek and in other languages of the Eastern Church) most Romance languages spoken in Western Europe still employ the planetary nomenclature, albeit with some variations; as a general rule, in Romance languages Monday to Friday bear names that refer to the planets, while Saturday and Sunday are derived from sabbatum and dominica, respectively; the only exceptions are Portuguese and Galician, both of which retained the ecclesiastical denominations for weekdays as well (see note 153).

The documentary evidence from Egypt relating to the Christian week is relatively meagre, or rather, unevenly distributed. It comprises about 30 occurrences of κυριακή, the Lord's Day (Sunday), most

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<sup>167</sup> North Africa: CIL VIII 8630 = ILCV 2104 = AE 1967, 640 (from a Church in Setif, Province of Mauretania Sitifensis; precisely dated to Sunday, 'dies dominica', 3 August 452 CE); CIL VIII 16662 (p. 2732) = ILaI 1 3452 = ILCV 3149 (from ancient Tebessa, Province of Africa Proconsularis; 'd(ie) s(an)c(t)a' interpreted as 'Sunday'; possibly fifth century); IRT 839 = AE 2011, 95 (from Leptis Magna, Province of Africa Proconsularis; 'dies dominica', fifth century); CIL VIII 2013 (p. 2731) = ILCV 1385 = CIL VIII 16516 = ILaI 1 3424 = AE 2012, 1905 (from ancient Tebessa, Province of Africa Proconsularis; 'dies sabbatorum', 484-513 CE); CIL VIII 25045 = ILaTun 1008 = ILCV 1003 = IFCCarth 3, 381 (found near ancient Chartago, Province of Africa Proconsularis; 'quarta feria', possibly fifth century). Gaul & Germanic provinces: CIL XII 1045 (p. 821) = ILCV 1689 = CAG-30-3, 743 (from ancient Avennio, Province of Gallia Narbonensis; 'dies dominicus', 586 CE); CIL XIII 5463 = ILCV 3129 = CAG-21-2, 333 (from ancient Dibio, Province of Germania Superior; 'sabbatum', sixth century); CIL XIII 7526 = FIM 108 = Terrien-2007, 38 (from ancient Cambodunum, Province of Germania Superior; 'sabbatum', 580-620 CE); RICGaulle 142A = FITrier 11 = Binsfeld 2015, 44 (from Augusta Treverorum, Province of Gallia Belgica; 'quarta feria', 395-423 CE).

<sup>168</sup> CIL IX 6150 = ILCV 1026 = Rugo 1978 no. 44 = ICI XIII 48: Pretiosus, aepescopus / a[e]cletiae catolicae sanc/te brundisine, depositus / sexta feria, quod est / XV [k]al(endas) septembris, requiebit / in [s]omno pacis.

<sup>169</sup> ILCV 3495 = ICUR II 4289 (metrical epitaph of a girl from the catacomb of San Pancrazio, Rome; 'feria III', 542-575 CE); CIL VIII 25045 = ILaTun 1008 = ILCV 1003 = IFCCarth 3, 381 (variously interpreted as the text of a judicial canon of the Montanist church, a Donatist regulation, or a conciliar or episcopal decree; found near ancient Chartago, Province of Africa Proconsularis; 'quarta feria', possibly fifth century); RICGaulle 142A = FITrier 11 = Binsfeld 2015, 44 (epitaph of a priest from Augusta Treverorum, Province of Gallia Belgica; 'quarta feria', 395-423 CE); AE 2012, 389 = Bultrighini (2017a) 421-4 (epitaph of an elite woman; from near Avellino, ancient Hirpinia; 'die IIII f(eria);' 23 January 547 CE); CIL X 4630 = ILCV 218 = IATrebula 110 (epitaph of a woman of high social rank; from a church near Caserta; 'die sexta feria'; 24 October 559 CE).

<sup>170</sup> Bultrighini (2017a) 423; (2018) 65.

of which date from the sixth century,<sup>171</sup> and about 10 documents that refer to *σάββατον*, the Sabbath (Saturday), which are variously dated and also include references to the Sabbath as the Jewish sacred day.<sup>172</sup> Prior to the sixth century, *κυριακή* appears in only three documents from the fourth and fifth century.<sup>173</sup> Both these latter and the more numerous sixth-century documents which mention *κυριακή* do so in the context of the prohibition of working on Sunday,<sup>174</sup> which leads to our next and final section.

### Constantine's law of 321 CE and the rise of Sunday as the focal day of the week

On 3 March 321 CE, the emperor Constantine issued a law by which judges, the urban population, and craftsmen were to abstain from work on 'dies Solis', the day of the Sun (Sunday). The instruction applied to towns and cities; in the countryside, farmers were permitted to work in the fields. To quote: 'all judges and the people in the city shall rest, and the work in all crafts shall cease, on the holy day of the Sun. But the people in the country may freely and lawfully apply themselves to cultivating their fields, so that the benefit conferred by the providence of God may not perish in an instant, since it often happens that grain can be sown in the furrows and vines planted in the trenches on no better day'.<sup>175</sup> Later in the same year (3 July) the emperor issued another regulation that sanctioned further exceptions to the ruling previously issued, by authorising the manumission of slaves and the emancipation of children on Sundays: 'Just as it appears to us most unseemly that the day of the Sun, which is celebrated on account of its own veneration, should be occupied with legal altercations and with noxious controversies of the litigation of contending parties, so it is pleasant and fitting that those acts which are especially desired shall be accomplished on that day. Therefore all men shall have the right to emancipate and to manumit on this festive day, and the legal formalities thereof are not forbidden'.<sup>176</sup> Copies of these two rulings were addressed to the 'governors of every province', first in the West, and after 324 CE, following Constantine's victory over Licinius and his capture of the East, in the East as well.<sup>177</sup>

These are the earliest extant imperial laws to recognise Sunday as a legal holiday and the first evidence of Sunday being regarded as a day of rest. These instructions, defining Sundays as free

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<sup>171</sup> See Ast (2013) 13, n.23 for a list of the sixth-century documents.

<sup>172</sup> *σάββατον* as day of the week appears in the following papyri: P.Genova I 38.6, 9 (private letter; sixth-seventh century); P.Oxy.6.903 = CPJ III 457d (accusation by a wife against her husband; fourth century); SB 14.11541.4 (private letter; sixth-seventh century); SB 5.7872 = Naldini 1968, no. 75 (private letter; 306-337?).

<sup>173</sup> P.Oxy. 48.3407 (private letter; fourth century); SB.20.15134 (contract; 483 CE); P.Oxy. 54.3759 (proceedings before the *logistes*; 2 October 325 CE). This third document represents the earliest papyrological evidence of Sunday as a non-working day in Roman Egypt. See also POxy. 54.3758, 119-20.

<sup>174</sup> The only exception is P.Oxy. 48.3407 (cf. previous note), which on the contrary attests to people working *ἐν τῇ / κυριακῇ(ν) ἡμέρᾳ, τουτ/έστιν αὐριον ια*, 'on the Lord's Day (Sunday), that is tomorrow the 11th' (ll. 15-17). On the documentary evidence of the use of *κυριακή*, see Llewelyn and Nobbs (2002) 106-13; Ast (2013) 12-3.

<sup>175</sup> *Justinian Code* 3.12.2: omnes iudices urbanaeque plebes et artium officia cunctarum venerabili die solis quiescant. Ruri tamen positi agrorum culturae libere licenterque inserviant, quoniam frequenter evenit, ut non alio aptius die frumenta sulcis aut vineae scrobibus commendentur, ne occasione momenti pereat commoditas caelesti provisione concessa.

<sup>176</sup> *Theodosian Code* 2.8.1: Sicut indignissimum videbatur, diem solis, veneratione sui celebrem, altercantibus iurgiis et noxiis partium contentionibus occupari, ita gratum ac iucundum est, eo die, quae sunt maxime votiva, compleri. Atque ideo emancipandi et manumittendi die festo cuncti licentiam habeant, et super his rebus acta non prohibeantur.

<sup>177</sup> Eus. *Vit. Const.* 4.23. A detailed discussion of Constantine's rulings on Sunday can be found in Bultrighini (2020c), with reference to further bibliography.



from court activity and labour but encouraging agricultural labour when needed, were in line with Roman tradition: in the Roman calendar, festival days (*feriae publicae*) were characterised by the interruption of judicial activities and rest from labour (applying to all men, including slaves), except for agricultural work where rest was permitted only at specified times of the seasonal year when its interruption was not likely to hinder produce.<sup>178</sup> In this sense, Constantine's regulations essentially extended to Sunday the rules that applied to traditional Roman holidays, thereby giving 'dies Solis' the legal character of the civic rest day.<sup>179</sup> Nevertheless, Constantine's decree was also the logical development of a Christian tradition that began with Ignatius of Antioch (above-mentioned), whereby Sunday was to become the substitute of the Jewish Sabbath.

Constantine's regulations refer to Sunday by its planetary designation (*dies Solis*). The use of the planetary name for Sunday has led some to assume that these laws refer to a weekly pagan holiday dedicated to the cult of the Sun god.<sup>180</sup> This interpretation, however, is most unlikely. The first law of 321 (JC 3.12.2) bans legal and similar business 'on the venerable day of the Sun' (*venerabili die Solis*). In TC 2.8.1 the day of the Sun is declared a *dies festus* (festive day, holiday) and described as a day 'celebrated on account of its own veneration' (*veneratione sui celebrem*). This manner of referring to Sunday seems to imply that this was a day on which some significant religious rite was regularly performed. Indeed, it was apparently out of respect for this supposed act of worship that the rule of abstention from judicial activity issued in March 321 CE (JC 3.12.2) was reiterated four months later.<sup>181</sup> There is, however, no evidence that during the Roman imperial period *dies Solis* was marked by any cultic observance as part of a solar cult such as of *Sol Invictus* or *Mithra*, nor that *dies Solis* was singled out as the most important and sacred day of the planetary week; nor, finally, that the day was recognised as a pagan feast day.<sup>182</sup>

In fact, was there ever such a thing as a weekly pagan holiday? Two scanty but complex groups of sources suggest that for a relatively limited period of time in the late Empire, Thursday (rather than Sunday) may have been regarded as the focal day of the week. These two groups of sources are, on the one hand, a number of ecclesiastical texts from late antique and early medieval Gaul and Galicia, and on the other, three documentary papyri from Oxyrhynchus (Egypt).<sup>183</sup> The former group implies that an unofficial observance of Jupiter's day (*dies Iovis*) persisted among the populace despite Church opposition to such deviant behaviour. The latter group of sources hints at Thursday (*ἡμέρα Διός*) being a non-working day for official bureaux during the third and early fourth centuries.

Thursday was not only the day dedicated to Zeus/Jupiter, the chief god of the Graeco-Roman pantheon, but also the day associated with the astrologically favourable planet that was named after him. Together, religious and astrological beliefs may have contributed towards Thursday temporarily becoming the most important and sacred day of the week. Although there is no evidence that it ever acquired the status of *dies ferialis* (holiday) in the Roman calendar, Jupiter's day may have been observed in a private or unofficial setting through sacrifices or other rites. Furthermore, astrological

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<sup>178</sup> Cicero, *De legibus* 2.29. Cf. Servius, *Georg.* 1.268.

<sup>179</sup> Dölger (1940) 235-6; Girardet (2008) 348; Bultrighini (2020c) 589.

<sup>180</sup> Pharr (1952) 44, n.3; Moreno Resano (2009).

<sup>181</sup> Cf. TC 2.8.1, '...it appears to us most unseemly that the day of the Sun, which is celebrated on account of its own veneration, should be occupied with legal altercations and with noxious controversies of the litigation of contending parties...'. Agnati (2013) 30-1.

<sup>182</sup> Rordorf (1968) 37; Di Berardino (2003) 217; Salzman (2004) 201; Girardet (2008) 341; Agnati (2013) 24, 42, 45; Bultrighini (2020c) 589.

<sup>183</sup> Caesarius of Arles, *sermons* 13.5, 19.4, 52.2; Martin of Braga, *De correctione rusticorum* 18; Council of Narbonne 13.6; P.Oxy.54.3741; P.Oxy.22.2343; P.Oxy.60.4075. See Bultrighini (2018) for a detailed analysis of the evidence.

beliefs pertaining to the days of the planetary week may have led to the practice of performing certain activities on Thursdays.<sup>184</sup>

Given the Christian origin of Sunday as a day of worship (albeit re-interpreted by Constantine as a day of rest),<sup>185</sup> there remains to explain why in his laws Constantine referred to it as *dies Solis* – the day of the Sun – rather than by the then available Christian alternative *dies dominica* – the Lord’s Day. The use of *dies Solis* in Constantine’s legislative texts of 321 CE along with his promotion of the cult of *Sol Invictus*<sup>186</sup> have led scholars to endlessly debate whether the emperor intended, through his legislation to make Sunday a day of rest, to favour the solar cult or Christianity.<sup>187</sup>

In fact, the use of *dies Solis* in Constantine’s laws attests to the popularity of the planetary designations in the Roman Empire, especially in its western half. In addition to the sources discussed above, imperial legislative texts consistently refer to Sunday as *dies Solis* until the end of the fourth century CE.<sup>188</sup> Occasionally, Church Fathers and Christian preachers themselves refer to Sunday as ‘the day of the Sun’, especially when addressing non-Christian audiences.<sup>189</sup> The surviving evidence makes it clear that the use of the planetary week designations was common not only for pagans, but also for Christians. The expression *dies Solis* in Constantine’s legislative texts may thus be regarded as neutral,<sup>190</sup> and was used to ensure that everyone, not only Christians, would understand which day was being referred to.

Constantine’s legislation on the observance of Sunday as a day of rest is touched upon by Eusebius and Sozomen. Both consider it as indisputably referring to the Christian festivity of Sunday. Eusebius calls Sunday ‘the Lord’s Day’ (κυριακή), ‘which also bears the names of day of light and day of the Sun’ (ἦν καὶ φωτὸς εἶναι καὶ ἡλίου ἐπώνυμον συμβαίνει).<sup>191</sup> Christian theologians deliberately persisted in using the planetary designation to refer to the Christian Sunday in order to emphasise the symbolism of Christ as the Sun of Justice and the Sun of Resurrection who takes away darkness and sin (cf. John 1:4-5).<sup>192</sup> In fact, however, Eusebius’s account remains ambiguous. His description of the emperor’s obligation for non-Christian soldiers to join in a common prayer every Sunday marked by the lifting of the hands to the heavens and the address to a nameless god in terms of victories won (*Vit. Const.* 4.20) may be regarded as a reference to the cult of *Sol Invictus*. The

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<sup>184</sup> Sources from the Roman imperial and late antique periods give instructions on what activities should or should not be carried out on certain days of the week; a complete hemerology of the seven-day week appears in the Calendar Codex of 354 (see above, n.83). Specifically on Thursday, see for example Ausonius, *Ecl.* 23, on the idea that men should shave on Thursdays (*barbam love*); and a number of late antique sources on astrological botany indicate Jupiter’s day as the appropriate time to collect a number of different plants: see CCAG VIII 3, 164, 2-21; CCAG XII, p. 119, l. 12; CCAG XII, p. 126 ff.; Marcellus Empiricus, *De medicamentis* 8.49, 11.32, 12.24, 14.68-9, 15.9, 15.109, 16.101, 23.78, 25.11, 25.13, 25.21, 25.46, 26.94-5, 26.134-135, 29.23-24, 34.67, 34.84.

<sup>185</sup> Rordorf (1968) 220ff.; Di Berardino (2003) 213; Salzman (2004) 187; Agnati (2013) 25; Bultrighini (2018) 78 and (2020c) 589-93.

<sup>186</sup> For the scholarly discussion on Constantine’s devotion towards the solar god and his subsequent support for Christianity, see Drake 2012.

<sup>187</sup> See Agnati (2013) 31, n.32 for the different views on the subject.

<sup>188</sup> The first occurrence of the Christian designation for Sunday in imperial legislation dates from 386 CE: *Solis die, quem dominicum rite dixere maiores*, ‘on the day of the Sun, which our ancestors rightly called the Lord’s Day’ (TC 2.8.18).

<sup>189</sup> See above, near nn. 74 and 88. Further references can be found in Agnati (2013) 36-7.

<sup>190</sup> Dölger (1940) 230; Agnati (2013) 36; Bultrighini (2020c) 590-91.

<sup>191</sup> *Life of Constantine* 14.19. See Girardet (2008) 351 n.57, and 358, n.92 for further instances of Eusebius referring to Sunday as ‘the day of light’.

<sup>192</sup> Girardet (2008) 349; Bultrighini (2020c) 591-92.

ambivalence of the sources relating to Constantine's regulations on Sunday may suggest that in 321 CE the emperor was aiming to appeal at once to pagan worshippers of Sol and Mithras and to the Christian clergy in Rome and Italy.<sup>193</sup>

The rest of the fourth as well as the fifth century were marked by successive imperial legislations on the status of Sunday as a public holiday.<sup>194</sup> These later laws prohibited public entertainments such as circus games, which were deemed incompatible with Sunday's celebration; thus, the Christian notion of Sunday became increasingly apparent.<sup>195</sup> The issuing of a series of laws on the status of Sunday as a day of rest over a long period of time suggests that the legislation and the new rhythm of social life which this enforced were met with some resistance: it appears that people were not generally ready to suspend certain activities on one day out of seven.<sup>196</sup> The gradualness with which the legislation on Sunday as a holiday was implemented implies that in the fourth century CE the seven-day week was not yet generally used to organise people's time across the Empire.<sup>197</sup> It seems that at the time of Constantine's legislation the use of the seven-day cycle was still essentially restricted to the private sphere.<sup>198</sup>

Constantine's edict on Sunday of 321 CE represents the first major step toward the establishment of the seven-day week of Biblical and astrological origins as the standard time unit for the organisation of social activities across the territory of the Roman Empire.<sup>199</sup> The process of standardization of the week and calendar, thus initiated, was conceived to act as a medium for political unity and cultural cohesion.<sup>200</sup>

### Abbreviations

AE	<i>L'Année Épigraphique</i> , Paris 1888–.
BGU	<i>Aegyptische Urkunden aus den Königlichen (later Staatlichen) Museen zu Berlin, Griechische Urkunden</i> , Berlin 1895–2014.
CAG	<i>Carte Archéologique de la Gaule</i> , Paris 1988–.
CCAG	<i>Catalogus Codicum Astrologorum Graecorum</i> , Brussels 1898-1953.
CIL	<i>Corpus Inscriptionum Latinarum</i> , Berlin 1862–.
CPJ	Tcherikover, V.A. (ed.) 1957-1964. <i>Corpus Papyrorum Judaicarum</i> , Cambridge.
FIM	Boppert, W. 1971. <i>Die frühchristlichen Inschriften des Mittelrheingebietes</i> , Mainz am Rhein: P. v. Zabern.

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<sup>193</sup> See further Salzman (2004) 200-1. Also, Bultrighini (2020c) 592.

<sup>194</sup> Pietri (1984) 75-6; Di Berardino (2003) 219-20; Girardet (2008) 368-9; Agnati (2013) 32-5.

<sup>195</sup> Salzman (2004) 201-2.

<sup>196</sup> Llewelyn & Nobbs (2002) 118; Di Berardino (2003) 215, 219.

<sup>197</sup> Salzman (2004) 202-8; Bultrighini (2020c) 592-93.

<sup>198</sup> Salzman (2004) 206; Bultrighini (2020c) 593.

<sup>199</sup> Di Berardino (2003) 215, 218-9; Salzman (2004) 206; Agnati (2013) 50; Bultrighini (2020c) 593.

<sup>200</sup> Agnati (2013) 31; Bultrighini (2020c) 593.

- FITrier Merten, H. 1990. *Katalog der frühchristlichen Inschriften des bischöflichen Dom- und Diözesanmuseums Trier*, Trier: Bischöfliches Dom- und Diözesanmuseum Trier.
- IATrebul Solin, H. 1993. *Le iscrizioni antiche di Trebula, Caiatia e Cubulteria*, Caserta: Associazione Storica del Caiatino.
- ICG Breytenbach, C., Hallof, K., et al. 2016. *Inscriptiones Christianae Graecae (ICG): A Digital Collection of Greek Early Christian Inscriptions from Asia Minor and Greece*. Berlin: Edition Topoi.
- ICI *Inscriptiones Christianae Italiae septimo saeculo antiquiores (nova series)*. Bari: Edipuglia, 1985-<2016>
- ICUR *Inscriptiones Christianae Urbis Romae Septimo Saeculo Antiquiores*, Rome 1857–.
- IFCCarth Ennabli, L. 1991. *Les inscriptions funéraires chrétiennes de Chartage. 3 - Carthage intra et extra muros*, Rome: École Française de Rome.
- IG *Inscriptiones Graecae*, Berlin 1873–.
- IGLSyrie VI Rey-Coquais, J.-P. 1967. *Inscriptions grecques et latines de la Syrie, VI. Baalbek et Beqa'*, Paris: P. Geuthner.
- IK Iznik *Katalog der antiken Inschriften des Museums von Iznik (Nikaia) 1: Stadtgebiet und die nächste Umgebung der Stadt*, Bonn 1979.
- ILAlg 1 Gsell, S. 1922. *Inscriptions latines de l'Algerie, Tome 1*. Paris: E. Champion.
- ILCV Diehl, E. 1925-1931. *Inscriptiones Latinae Christianae veteres*, Berlin: Apud Weidmannos.
- ILTun Merlin, A. 1944. *Inscriptions Latines de la Tunisie*, Paris: P.U.F.
- IMC Catania Korhonen, K. 2004. *Le iscrizioni del Museo Civico di Catania: storia delle collezioni - cultura epigrafica - edizione*. Helsinki: Societas Scientiarum Fennica.
- Inscr.It. *Inscriptiones Italiae*, Rome 1931–.
- I.Pal.Tert.Ia Meimaris, Y.E. and Kritikakou-Nikolaropoulou, K.I. 2005. *Inscriptions from Palaestina Tertia, Ia: The Greek Inscriptions from Ghor Es-Safi (Byzantine Zoora)* (Meletemata 41). Athens: National Hellenic Research Foundation, Research Centre for Greek and Roman Antiquity; Paris: Diffusion de Bocard.
- I.Pal.Tert.Ib Meimaris, Y.E. and Kritikakou-Nikolaropoulou, K.I. 2008. *Inscriptions from Palaestina Tertia. Vol. 1b, The Greek inscriptions from Ghor Es-Safi (Byzantine Zoora) (Supplement), Khirbet Qazone and Feinan* (Meletemata 57). Athens: National Hellenic Research Foundation, Research Centre for Greek and Roman Antiquity; Paris: Diffusion de Bocard.
- IPOstie-B Thylander, H. 1952. *Inscriptions du Port d'Ostie*, Lund: C. W. K. Gleerup.
- IRT *Inscriptions of Roman Tripolitania*, by J. M. Reynolds and J. B. Ward-Perkins (1952), enhanced electronic reissue by Gabriel Bodard and Charlotte Roueché (2009)

- P.Bagnall Ast, R., Cuvigny, H., Hickey, T.M., Lougovaya, J., 2013. *Papyrological Texts in Honor of Roger S. Bagnall* (American Studies in Papyrology 53), Durham, NC: The American Society of Papyrologists.
- P.Cair.Zen. Edgar, C.C. (ed.). 1925-40. *Zenon Papyri, Catalogue général des antiquités égyptiennes du Musée du Caire*, Cairo: impr. de l'Institut Français d'Archéologie Orientale.
- P.Genova Amelotti, M. and Zingale Migliardi, L. (eds). 1974-1980. *Papiri dell'Università di Genova*, Milano: A. Giuffrè.
- PGM Preisendanz, K., Henrichs, A., 1973-74. *Papyri Graecae magicae. Die griechischen Zauberpapyri*, 2 vols, Stuttgart: B.G. Teubner.
- PLS Migne, J.-P. 1958-1974. *Patrologia, series latina. Supplementum* ed. A. Hamman. Paris: Garnier Fratres.
- P.Oxy. *The Oxyrhynchus Papyri. Published by the Egypt Exploration Society in Graeco-Roman Memoirs*, London 1898–.
- P.Palau Rib. Daris, S. (ed.). 1995. *Papiri documentari greci del fondo Palau-Ribes*, Barcelona.
- PSI *Papiri greci e latini* (Pubblicazioni della Società Italiana per la ricerca dei papiri greci e latini in Egitto), Florence 1912–.
- PSI Congr. XVII *Trenta testi greci da papiri letterari e documentari editi in occasione del XVII Congresso Internazionale di Papirologia*, Florence 1983.
- P.Yadin Yadin, Y., Greenfield, J.C., Yardeni, A. and Levine, B.A., 2002. *The Documents of the Bar Kokhba Period in the Cave of Letters. Hebrew, Aramaic and Nabatean-Aramaic Papyri* (Judean Desert Studies), Jerusalem: Israel Exploration Society, Hebrew University, and Israel Museum.
- RICGaule Gauthier, N. 1975. *Recueil des inscriptions chrétiennes de la Gaule I. Première Belgique*, Paris: Centre national de la recherche scientifique.
- RIChrM Feissel, D. 1983. 'Recueil des inscriptions chrétiennes de Macédoine, du IIe au VIe siècle', *Bulletin de correspondance hellénique. Supplément 8*, Athens: Ecole française d'Athènes; Paris: Dépositaire, Diffusion de Boccard Paris.
- SB *Sammelbuch griechischer Urkunden aus Ägypten*, Strassburg 1915–.
- SEG *Supplementum Epigraphicum Graecum*, Leiden 1923–.
- TAM V.3 Petzl, G. 2007. *Tituli Asiae Minoris. Vol. 5, Tituli Lydiae linguis Graeca et Latina conscripti. Fasc. 3, Philadelpheia et Ager Philadelphenus*, Vienna: Verlag der Österreichischen Akademie der Wissenschaften.
- Terrien-2007 Terrien, M.-P. 2007. *La christianisation de la région rhénane du IVe au milieu du VIIIe siècle. Corpus et synthèse*, Besançon: Presses universitaires de Franche-Comté.

## Bibliography

- Agnati, U. 2013. 'Costantino e la scansione cristiana del tempo (Cod. Theod. II 8.1 e Cod. Iust. III 12.2)', in F. Raviola (ed.), *L'indagine e la rima. Scritti per Lorenzo Braccesi* (Hesperia, 30), Rome: 'L'Erma' di Bretschneider, 23-61.
- Ast, R. 2013. 'Schedule of Work Days', in Ast, R., Cuvigny, H., Hickey, T.M., Lougovaya, J. (eds), *Papyrological Texts in Honor of Roger S. Bagnall* (American Studies in Papyrology 53), Durham, NC: The American Society of Papyrologists, 9-16.
- Bacchiocchi, S., 1977. *From Sabbath to Sunday*, Rome : Pontifical Gregorian University.
- Baillet, M., 1982. *Qumrân grotte 4 3 (4Q482-4Q520)* (Discoveries in the Judaean Desert 7), Oxford: Clarendon Press.
- Barrows, A., 2010. *The Cosmic Time of Empire: Modern Britain and World Literature*. Berkeley, University of California Press.
- Bartky, I.R., 2007. *One Time Fits All: the Campaigns for Global Uniformity*. Stanford, Stanford University Press.
- Barton, T. 1994. *Ancient Astrology*, London; New York: Routledge.
- Bauchhenß, G. and Noelke, P. 1981. *Die Jupitersäulen in den germanischen Provinzen*. Cologne: Rheinland-Verlag; Bonn: Habelt.
- Bennett, C. 2004. 'The Imperial Nundinal Cycle', *Zeitschrift für Papyrologie und Epigraphik* 147: 175–177.
- Bennett, C. 'The Ptolemaic Dynasty' (website), <http://www.instonebrewer.com/TyndaleSites/Egypt/ptolemies/ptolemies.htm>
- Ben-Dov, J. (2008). *Head of All Years. Astronomy and Calendars at Qumran in their Ancient Context* (STDJ 78). Leiden: Brill.
- Betz, H.D. (ed.). 1986. *The Greek Magical Papyri in Translation*, Chicago and London: University of Chicago Press.
- Binsfeld, A. 2015. 'Kirchliche Würdenträger in Trierer Inschriften', in L. Clemens, H. Merten, C. Schäfer (eds), *Frühchristliche Grabinschriften im Westen des Römischen Reiches*, Trier: Kliomedia, 37-60.
- Birth, K., 2018. 'Standards in the shadows for everyone to see: the supranational regulation of time and the concern over temporal pluralism', in Benyon-Jones, S. and Grabham, E. (eds.). *Law and Time*. London, Routledge, ch. 10.
- Bitton, J., Dweck, N., and Fine, S., 2012. 'Yet another Jewish tombstone from late antique Zoar/Zoora: the funerary marker of Hannah daughter of Levi', in Lundberg, M.J., Fine, S., and Pitard, W.T. (eds.), *Puzzling out the Past*, Leiden: Brill, 7-12.
- Bloch, Y. (2019). 'Judean Identity during the Exile: Concluding Deals on a Sabbath in Babylonia and Egypt under the Neo-Babylonian and the Achaemenid Empires', in Rivlin Katz, D., Hacham, N., Herman, G., and Sagiv, L. (eds.), *A Question of Identity*, Berlin, Boston: De Gruyter, 43-70.
- Boer, A. 1958. *Paulou Alexandreōs eisagōgika = Pauli Alexandrini Elementa apotelesmatica* (with contributions of O. Neugebauer), Leipzig: B.G. Teubner.

Brind'Amour, P. (1983). *Le Calendrier romain. Recherches chronologiques*. Ottawa, Ontario: Editions Universitaires d'Ottawa.

Bultrighini, I. 2017a. 'New light on five Latin inscriptions of the later imperial period, with special reference to their dating formulae', *Epigraphica. Periodico internazionale di epigrafia*, 79: 411-424.

Bultrighini, I. 2017b. 'Notes on days of the week and other date-related aspects in three Greek inscriptions of the late Roman period', *Zeitschrift für Papyrologie und Epigraphik*, 201: 187-196.

Bultrighini, I. 2018. 'Thursday (*dies Iovis*) in the Later Roman Empire', *Papers of the British School at Rome*, 86: 61-84.

Bultrighini, I. 2020a. 'Die griechischen Parapegmata aus Milet', in Färber and Gautschy (2020), 405–418.

Bultrighini, I. 2020b. 'Das Parapegma von den Trajansthermen in Rom', in Färber and Gautschy (2020), 577–584.

Bultrighini, I. 2020c. 'Kaiser Konstantins Edikt von 321 n. Chr. über den Sonntag', in Färber and Gautschy (2020), 585–596.

Bultrighini, I. (forthcoming). 'Theōn hemerai: astrology, the planetary week, and the cult of the seven planets in the Graeco-Roman world', in T. Sheer and I. Salvo (eds.), *Religious Education in the Ancient Greek World*, Tübingen: Mohr Siebeck.

Clarysse, W., Remijsen, S., and Depau, M. (2010), 'Observing the Sabbath in the Roman Empire: a Case Study', *Scripta Classica Israelica* 29: 51-57.

Colson, F.H., 1926. *The Week: An Essay on the Origin and Development of the Seven-Day Cycle*. Cambridge: The University Press.

Cribiore, R. 1996. *Writing, Teachers, and Students in Graeco-Roman Egypt*, Atlanta: Scholars Press.

Deman, A., 1974. 'Notes de chronologie romaine', *Historia* 23: 271-8.

Dercksen, J. G., 2011. 'Weeks, months, and years in Old Assyrian chronology', *Bibliotheca Orientalis* 68: 233-43.

Di Berardino, A. 2003. 'Liturgical celebrations and imperial legislation in the fourth century', in B. Neil, G. D. Dunn, and L. Cross (eds.), *Prayer and Spirituality in the Early Church. Vol. 3, Liturgy and Life*, Strathfield, NSW: St Pauls, 211-232.

Divjak, J., and Wischmeyer, W. 2014. *Das Kalenderhandbuch von 354. Der Chronograph des Filocalus* (2 vols.). Vienna: Holzhausen.

Dölger, F.J. 1940. 'Die Planetenwoche der griechisch-romischen Antike und der christliche Sonntag', *Antike und Christentum*, 6: 202-238.

Doering, L., 1999. *Schabbat. Sabbathalacha und -praxis im antiken Judentum und Urchristentum* (Texts and Studies in Ancient Judaism 78). Tübingen: Mohr Siebeck.

Doering, L. (2012). *Ancient Jewish letters and the Beginnings of Christian Epistolography* (Wissenschaftliche Untersuchungen zum Neuen Testament 298). Tübingen: Mohr Siebeck.

Domenicucci, P. 1996. *Astra Caesarum: astronomia, astrologia e catasterismo da Cesare a Domiziano*. Pisa: ETS.

- Drake, H.A. 2012. 'The impact of Constantine on Christianity', in N. Lenski (ed.), *The Cambridge Companion to the Age of Constantine*, Cambridge: Cambridge University Press, 111-136.
- Du Cange, C. et al. 1883-1887. *Glossarium mediae et infimae latinitatis*, Niort: L. Favre.
- Duval, P.M. 1953. 'Les dieux de la semaine', *Gallia* 11: 282-293.
- Eriksson, S. 1956. *Wochentagsgötter, Mond und Tierkreis, Laienastrologie in der römischen Kaiserzeit*, Stockholm: Almqvist & Wiksell.
- Färber, R., and Gautschy, R. (eds) (2020). *Zeit in den Kulturen des Altertums. Antike Chronologie im Spiegel der Quellen*. Cologne: Böhlau.
- Feeney, D. 2007. *Caesar's Calendar: Ancient Time and the Beginnings of History*, Berkeley, CA and London: University of California Press.
- Frei-Stolba, R., 1993. "'Dienstag, den 2. April ...n. Chr.": zu einem ungewöhnlichen Datum aus Avenicum', *Archäologie der Schweiz: Mitteilungsblatt der Schweizerischen Gesellschaft für Ur- und Frühgeschichte = Archéologie suisse: bulletin de la Société suisse de préhistoire et d'archéologie*, 16: 128-133.
- Girardet, K.M. 2008. 'L'invention du dimanche: du jour du soleil au dimanche. Les dies solis dans la législation et la politique de Constantin le Grand', in J.N. Guinot, F. Richard (eds.), *Empire chrétien et église aux IVe et Ve siècles. Intégration ou concordat? Le témoignage du Code Théodosien. Actes du Colloque international de Lyon 2005*. Paris: Editions du Cerf, 341-370.
- Green, S.J. 2014. *Disclosure and Discretion in Roman Astrology. Manilius and his Augustan Contemporaries*, Oxford: Oxford University Press.
- Greenbaum, D.G. 2001. *Late Classical Astrology: Paulus Alexandrinus and Olympiodorus*. Reston, Va.: Arhat.
- Gundel, H.G. 1950. 'Planeten', *RE* 20: 2017-2185.
- Gundel, H.G. 1973. 'Pianeti', *EAA. Supplemento 1970*, Rome: Istituto della Enciclopedia italiana, 614-623.
- Haug, F. 1890. 'Die Wochengöttersteine', *Westdeutsche Zeitschrift für Geschichte und Kunst*, 9: 17-53.
- Hayman, A.P., 2004. *Sefer Yeşira: Edition, Translation and Text-Critical Commentary*. Tübingen: Mohr Siebeck.
- Heilen, S. (2020). 'Short Time in Greco-Roman Astrology', in K. J. Miller, and S. Symons, S. (eds.), *Down to the Hour: Short Time in the Ancient Mediterranean and Near East*, Leiden: Brill, 239-70.
- Hoogendijk, F.A.J. 1996. 'A note on P.Kellis I 82', *Zeitschrift für Papyrologie und Epigraphik*, 113: 216-8.
- Hübner, W. (2010). *Manilius 'Astronomica', Buch V, 2 vols*. Berlin, New York: De Gruyter.
- Jensen, R.M., 2018. 'Ritual and early Christian art', in R. Uro, J.J. Day, R. Roitto, and R.E. DeMaris (eds.), *The Oxford Handbook of Early Christian Ritual*, Oxford: Oxford University Press, 587-609.



- Jones, A., 1994. 'An astronomical ephemeris for AD 140: P. Harris I.60', *Zeitschrift für Papyrologie und Epigraphik*, 100: 59-63.
- Jones, A., 1999. *Astronomical Papyri from Oxyrhynchus*, 2 vols. Philadelphia: American Philosophical Society.
- Jordan, D.R. 2004. 'Magia nilotica sulle rive del Tevere', *Mediterraneo Antico*, 7: 693-710.
- Ker, J., 2010. 'Nundinae: the culture of the Roman week', *Phoenix* 64.3/4: 360-85.
- Klingshirn, W.E. 1994. *Caesarius of Arles: The Making of a Christian Community in Late Antique Gaul*. Cambridge: Cambridge University Press.
- Kubitschek, W. 1928. *Grundriss der antiken Zeitrechnung*. Handbuch der Altertumswissenschaft I. 7, Munich: Beck.
- Lefebvre, G., 1978. *Inscriptiones Christianae Aegypti: recueil des inscriptions grecques-chrétiennes d'Égypte*, Chicago: Ares.
- Lehoux, D. 2007. *Astronomy, Weather, and Calendars in the Ancient World: Parapegmata and Related Texts in Classical and Near Eastern Societies*, Cambridge: Cambridge University Press.
- Lehoux, D. 2016. 'Days, months, years, and other time cycles', in: A. Jones (ed.), *Time and Cosmos in Greco-Roman Antiquity*, New York; Princeton: Princeton University Press, 95–122.
- Leon, H, 1960. *The Jews of Ancient Rome*, Philadelphia: Jewish Publication Society of America.
- Llewelyn, S.R. and Nobbs, A.M. 2002. 'The earliest dated reference to Sunday in the papyri', in S.R. Llewelyn (ed.), *New Documents Illustrating Early Christianity IX: A Review of the Greek Inscriptions and Papyri Published in 1986–1987*. Grand Rapids (MI): Eerdmans, 106-18.
- Maass, E. 1902. *Die Tagesgötter in Rom und den Provinzen: aus der Kultur des Niederganges der antiken Welt*, Berlin: Weidmann.
- Markus, R. 1990. *The End of Ancient Christianity*, Cambridge: Cambridge University Press.
- Mau, A. 1901. 'Ausgrabungen von Pompeji', *Mitteilungen des Deutschen Archäologischen Instituts, Römische Abteilung*, 16: 333–65.
- Meimaris, Y.E., with K. Kritikakou and P. Bougia, 1992. *Chronological Systems in Roman-Byzantine Palestine and Arabia: The Evidence of Dated Greek Inscriptions*, Athens: National Hellenic Research Foundation.
- Meimaris, Y.E. and Kritikakou-Nikolaropoulou, K.I. 2005. *Inscriptions from Palaestina Tertia, Ia: The Greek Inscriptions from Ghor Es-Safi (Byzantine Zora)* (Meletemata 41). Athens: National Hellenic Research Foundation, Research Centre for Greek and Roman Antiquity; Paris: Diffusion de Bocard.
- Meimaris, Y.E., and Kritikakou-Nikolaropoulou, K.I., in collaboration with Brock, S.P., 2016. *Inscriptions from Palaestina Tertia, Ic: The Jewish Aramaic Inscriptions from Ghor Es-Safi (Byzantine Zora)* (Meletemata 73), Athens: National Hellenic Research Foundation.
- Misgav, H., 2006. 'Two Jewish tombstones from Zoar'. *Israel Museum Studies in Archaeology*, 5: 35–46.

- Moitrioux, G. 2010. *Recueil général des sculptures sur pierre de la Gaule: Toul et la cité des Leuques* (Nouvel Espérandieu III) Paris: Académie des inscriptions et belles-lettres.
- Moreno Resano, E. 2009. 'El dies Solis en la legislaci3n constantiniana', *Antiquité Tardive*, 17: 289-305.
- Mosshammer, A. A. (2008). *The Easter Computus and the Origins of the Christian Era*. Oxford: Oxford University Press.
- Naldini, M. 1968. *Il Cristianesimo in Egitto. Lettere private nei papiri dei secoli II-IV*, Florence: Le Monnier.
- Naveh, J. (1995). 'Aramaic tombstones from Zoar'. *Tarbiz*, 64: 477-97 [Hebrew]
- Naveh, J. (1999). 'More on the tombstones from Zoar'. *Tarbiz*, 68: 581-6. [Hebrew]
- Naveh, J. 2000. 'Seven new epitaphs from Zoar', *Tarbiz*, 69: 619-35. [Hebrew]
- Neugebauer, O. –Van Hoesen, H.B. 1959. *Greek Horoscopes*, Philadelphia: American Philosophical Society.
- Pelletier, A. 1972. 'Σαββατα. Transcription grecque de l'araméen', *Vetus Testamentum*, 22: 436-77.
- Perdrizet, P. 1931. 'Le jeu alexandrin de l'icosaèdre', *Bulletin de l'Institut français d'archéologie orientale du Caire*, 30: 1-16.
- Pharr, C. 1952. *The Theodosian Code and Novels and the Sirmondian Constitutions*, Princeton: Princeton University Press.
- Picard, G.C. 1977. 'Imperator Caelestium', *Gallia*, 35: 89-113.
- Pietri, C. 1984. 'Le temps de la semaine à Rome et dans l'Italie chrétienne (IVe-VIe siècle.)', in J.-M. Leroux (ed.), *Le temps chrétien de la fin de l'Antiquité au Moyen Âge IIIe-XIIIe siècles. Actes du colloque Paris, 9-12 mars 1981*, Paris: Editions du Centre national de la recherche scientifique, 63-97.
- Porten, B., 1968. *Archives from Elephantine*, Berkeley: University of California Press.
- Priesigke, F. (ed.), 1915. *Sammelbuch griechischer Urkunden aus Ägypten*, I, Strassburg.
- Reiter, F. (ed.), (2014). *Dokumentarische Texte der Berliner Papyrussammlung aus ptolemäischer und römischer Zeit: Zur Wiedereröffnung des Neuen Museums* (Berliner Griechische Urkunden 20). Berlin: De Gruyter.
- Riley, M., 1996. 'A Survey of Vettius Valens'.  
[http://www.csus.edu/indiv/r/rileymt/PDF\\_folder/VettiusValens.PDF](http://www.csus.edu/indiv/r/rileymt/PDF_folder/VettiusValens.PDF) (accessed 26 May 2019).
- Rordorf, W. 1968. *Sunday: The History of the Day of Rest and Worship in the Earliest Centuries of the Christian Church* (trans. A. A. K. Graham), London: SCM Press.
- Rugo, P. 1978. *Le iscrizioni dei sec. VI-VII-VIII esistenti in Italia, vol. 4: I ducati di Spoleto e Benevento*. Cittadella: Tip. Bertoncetto.
- Rüpke, J. 1995. *Kalender und Öffentlichkeit: Die Geschichte der Repräsentation und religiösen Qualifikation von Zeit in Rom* (Religionsgeschichtliche Versuche und Vorarbeiten 40), Berlin: de Gruyter.

- Rüpke, J. 2011. *The Roman Calendar from Numa to Constantine* (Richardson, D.M.B. trans.). Wiley-Blackwell.
- Rutgers, L.V., 1994. 'Roman policy towards the Jews: expulsions from the city of Rome during the first century C.E.', *Classical Antiquity*, 13: 56-74.
- Salzman, M.R. 2004. 'Pagan and Christian notions of the week in the 4th century C.E. western Roman empire', in R.M. Rosen (ed.), *Time and Temporality in the Ancient World*, Philadelphia: University of Pennsylvania Museum of Archaeology and Anthropology, 185-211.
- Schaper, J.L.W., 2014. 'The Septuagint Psalter', in W.P. Brown (ed.), *The Oxford Handbook of the Psalms*. Oxford: Oxford University Press, 173-84.
- Schürer, E., 1973–87. *The History of the Jewish People in the Age of Jesus Christ (175 B.C.– A.D. 135)*, rev. and ed. by G. Vermes and F. G. B. Millar (with M. Black (vols. i–ii) and M. Goodman (vol. iii/1–2)), 3 vols. in 4 pts., Edinburgh: T. & T. Clark.
- Seldeslachts, H., and Wouters, A. 1993. 'A Christian word-list on a papyrus of the Bibliothèque Royale at Brussels (MS. Brux. IV 590)', *Zeitschrift für Papyrologie und Epigraphik*, 96: 141-52.
- Sirat, C., Cauderlier, P., Dukan, M, and Friedman, M.A. 1986. *La Ketouba de Cologne. Un contrat de mariage juif à Antinoopolis* (Papyrologica Coloniensia 12), Cologne.
- Smith, K., 1971. *The Elegies of Albius Tibullus: The Corpus Tibullianum, edited with introduction and notes on Books I, II and IV, 2-14*. Darmstadt: Wissenschaftliche Buchgesellschaft.
- Smith, M. 1984. 'The Eighth Book of Moses and how it grew (Pleid. J 395)', in *Atti del XVII Congresso Internazionale di Papirologia*, Napoli: Centro internazionale per lo studio dei papiri ercolanesi, 683-693.
- Stern, M. (1974-84). *Greek and Latin Authors on Jews and Judaism*, 3 vols. Jerusalem: Israel Academy of Sciences.
- Stern, S. 1999. 'New Tombstones from Zoar (Moussaieff Collection)'. *Tarbiz*, 68: 177-185 [Hebrew]
- Stern, S. 2001. *Calendar and Community. A History of the Jewish Calendar, 2<sup>nd</sup> century BCE – 10<sup>th</sup> century CE*. Oxford: Oxford University Press.
- Stern, S. 2008. Review of Lehoux (2007), in *Scripta Classica Israelica* 27: 141.
- Stern, S., 2010a. 'Qumran calendars and Sectarianism', in Lim, T. and Collins, J.J. (eds.), *The Oxford Handbook of the Dead Sea Scrolls*. Oxford: Oxford University Press, 232-253.
- Stern, S. 2010b. A 'Jewish' birth record, *sambat-*, and the calendar of Salamis. *Zeitschrift für Papyrologie und Epigraphik*, 172, 105-114.
- Stern, S. 2011. 'The 'Sectarian' calendar of Qumran', in Stern, S. (ed.), *Sects and Sectarianism in Jewish History*, Leiden: Brill, 39-62.
- Stern, S. 2012. *Calendars in Antiquity: Empires, States, and Societies*, Oxford: Oxford University Press.
- Stern, S., 2017a. 'The problem of the date line in medieval Jewish sources', in Nha. I-S, Orchiston, W., and Stephenson, F.R. (eds.). *The History of World Calendars and Calendar-making. Proceedings of the International Conference in Commemoration of the 600th Anniversary of the Birth of Kim Dam*. Seoul: Yonsei University Press, 113-22.

- Stern, S. 2017b. 'The Jewish Aramaic tombstones from Zoar'. *Journal of Jewish Studies*, 68: 158-179.
- Stern, S. 2019. *The Jewish Calendar Controversy of 921/2 CE*. Leiden: Brill.
- Stern, S., and Misgav, H., 2005. 'Four additional tombstones from Zoar', *Tarbiz*, 74: 137–51 [Hebrew]
- Stiebel, G. D. 2011. 'Meager bread and scant water' – food for thought at Masada, in Baumgarten, A.I., Eshel, H., Katzoff, R., and Tzoref, S. (eds.), *Halakhah in Light of Epigraphy, Journal of Ancient Judaism*, 3: 283-303.
- Talmon, S., Ben-Dov, J. and Glessmer, U. (2001). *Discoveries in the Judaean Desert*, vol.21: *Qumran Cave 4 (XVI). Calendrical Texts*. Oxford: Clarendon Press.
- Tcherikover, V., Fuks, A., and Stern, M., 1957-64. *Corpus Papyrorum Judaicarum (CPJ)*, 3 vols, Cambridge: Harvard University Press.
- Van Andringa, W. 2002. *La religion en Gaule romaine. Piété et politique (I–III. siècle apr. J-C.)*, Paris: Éditions Errance.
- VanderKam, J. (1998). *Calendars in the Dead Sea scrolls: Measuring Time*. London: Routledge.
- Varone, A. 2002. *Erotica Pompeiana. Love Inscriptions on the Walls of Pompeii*. Rome: 'L'Erma' di Bretschneider.
- Veenhof, K. R., 1995–6. 'The Old Assyrian Hamuštum period: a seven-day week', *Jaarbericht 'Ex Oriente Lux'*, 34: 5–26.
- Welles, C.B. 1933. 'Graffiti', in P.V.C. Baur, M.I. Rostovtzeff and Alfred R. Bellinger (eds), *The Excavations at Dura-Europos conducted by Yale university and the French Academy of Inscriptions and Letters: preliminary report of fourth season of work, October 1930 - March 1931*, New Haven, Yale University Press, 79–178.
- Williams, M.H. (2013). *Jews in a Graeco-Roman Environment*. Tübingen, Mohr Siebeck.
- Witte, J. de. 1877-1879. 'Les divinités des sept jours de la semaine', *Gazette archéologique* 3: 50-57, 77-85; 5: 1-6.
- Wolkenhauer, A., 2011. *Sonne und Mond, Kalender und Uhr. Studien zur Darstellung und poetischen Reflexion der Zeitordnung in der römischen Literatur* (Untersuchungen zur antiken Literatur und Geschichte 103). Berlin and New York: De Gruyter.
- Woolf, G. 2001. 'Representation as cult: the case of the Jupiter columns', in H. Cancik, J. Rüpke and W. Spickermann (eds.), *Religion in den germanischen Provinzen Roms*, Tuebingen: Mohr Siebeck, 117-34.
- Yadin, Y., Greenfield, J.C., Yardeni, A. and Levine, B.A., 2002. *The Documents of the Bar Kokhba Period in the Cave of Letters. Hebrew, Aramaic and Nabatean-Aramaic Papyri* (Judean Desert Studies). Jerusalem: Israel Exploration Society, Hebrew University, and Israel Museum.
- Yardeni, A., 1990. 'New Jewish Aramaic ostraka'. *Israel Exploration Journal*, 40: 130-52.
- Yardeni, A. 2012. 'Twelve published and unpublished Jewish Aramaic ostraca written in the "Jewish" cursive script', in Botta, A.F. (ed.), *In the Shadow of Bezalel. Aramaic, Biblical, and Ancient Near Eastern Studies in Honor of Bezalel Porten* (Culture and History of the Ancient Near East 60), Leiden: Brill.

Zerubavel, E. 1985. *The Seven Day Circle: The History and Meaning of the Week*. New York: Free Press; London: Collier Macmillan.