A Prognostication Based on the Conjunction of Saturn and Jupiter in 1166 [561 AH]

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1 Introduction

The theory of astrological history based on conjunctions of Saturn and Jupiter was already described by Māshā'allāh (d. ca. 815) and its roots lie in the Sasanian period.¹ This theory was applied by a number of Hebrew authors, including Abraham Bar Ḥiyya (d. ca. 1135) and Levi ben Gerson (d. 1344).² In the standard theory, a small conjunction takes place every 20 years indicating a change in the ruler; a middle conjunction takes place every 240 years (when the conjunction moves from one triplicity to another) indicating a change in dynasty; and a great conjunction takes place every 960 years when a cycle is completed, and the conjunction returns to Aries 0°. The conjunction of 1166 discussed in this prognostication is a small conjunction.

Abraham Ibn Ezra (d. 1167) considered the astrological theory of conjunctions in a number of places, notably in his Sefer ha-olam.³ It is therefore of some interest to see if he applied these rules to an actual conjunction. Indeed, a prognostication in Hebrew, based on the conjunction of Saturn and Jupiter in 1166 is ascribed to Ibn Ezra in the modern secondary literature. But it seems unlikely that he was the author, for the terminology in the prognostication is not consistent with Ibn Ezra’s, and the planetary aspects and the astrological houses at the time of the conjunction are ignored, despite the rules given by Ibn Ezra (see

Section 4, below). A personal horoscope for a native born in 1160 is also attributed to Ibn Ezra, but there are reasons to doubt that he was the author, some of which are mentioned by Fleischer. These are the only horoscopes associated with Ibn Ezra.

It will be seen that the author’s computations depend on the zij of al-Khwārizmī for the position of the conjunction in 1166 (see commentary ad § 3), and for the vernal equinox of 1166 (see commentary ad § 6). In the case of the eclipse of May 1, 1166, the planetary positions are given imprecisely, but they are consistent with computations according to the zij of al-Khwārizmī (see commentary ad § 7).

Jewish interest in astrological history was often associated with Messianic speculation; there are various hints of this in our text, although the term ‘Messiah’ does not occur in it (see §§ 5 and 9). However, the conjunction of 1166 is a small conjunction of Saturn and Jupiter and, according to the standard theory, should only mean a change in the ruler, not a major historical change such as the coming of a new prophet or the arrival of the Messiah.

The interpretation of this conjunction alludes to events associated with the Almohad invasion of Spain (1145-1148) that devastated the Jewish community in Muslim Spain (see Section 4, below), and it is likely that the author was a refugee from Muslim Spain residing in Aragon.

2 Translation

‘Lift up your eyes and see: Who creates these? He who send out their host by count, Who calls them each by name: Because of His great might and vast power, Not one fails to appear’ (Isa. 40.26). ‘He reckoned the number of the stars; to each He gave its name’ (Ps. 147.4).

§ 1. May the name of our God be blessed, the creator of the attendants (mesharetim) who serve Him, all standing in the high [place] of the universe and who make their voice heard in the glory of our God with the words of the living God, King of the universe. They are the attendants (shammashim) for the seven days of Creation — S[atur], J[upiter], M[ars], S[un], V[enus], M[ercury], and the M[oon] — that move through the twelve houses [i.e.,

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the zodiacal signs] — A[ries], T[aurs], G[emin], C[ancer], L[eo], V[irgo], L[ibra], S[corpio], S[agittarius], C[apricorn], A[quarius], P[iscis] — and, depending on them [i.e., their relative positions], there is good (tov) and evil (muṭav) in every time and every moment for every event and every mishap; every dispute and every affliction; every pleasure and every honor; and the time of war and the time of peace.

§ 2. The two superior [planets], Saturn and Jupiter, are in conjunction (mithabberim) every 20 years at the same degree (ḥeleq) in one of the houses [i.e., zodiacal signs]; [at the end of] 20 years [they are] in the ninth zodiacal sign with respect to the [first] conjunction (dibbuq), and this is the rule until they complete 12 conjunctions in the 12 houses for each triplicity, and they are: A[ries], L[eo], S[agittarius] for the fiery [triplicity]; T[aurs], V[irgo], C[apricorn] for the earthy [triplicity]; G[emin], L[ibra], A[quarius] for the airy [triplicity]; and C[ancer], S[corpio], P[iscis] for the watery [triplicity]. Then they return to their starting point at the head of Aries, and begin from the head of Aries until the end [of Pisces]; their influence is according to their [own] power and the [power due to] their conjunction (kithhabberam) with the other five [planets, including the Sun and the Moon]. This is how they act, with the help of God, throughout time.

§ 3. The [following] prognostication (ha-davar) was [made] in the year 4914 [AM = 1153-4] concerning a [forthcoming] conjunction: on Monday, 1 Shawwal of the months of the Muslims [lit. Ishmaʾel], in the year 561 [= Sunday, July 31, 1166] of the reign of the Madman [i.e., Muḥammad], may the name of the wicked rot (shem reshaʾim yirqav), the conjunction will take place in Capricorn 12° and a few minutes (ḥalaqim). They [i.e., Saturn and Jupiter] will be retrograde (nezorim), and Mars will enter this house near its end. Since, similarly, the conjunction will be retrograde, it is very strong and powerful. It is known that the house [i.e., zodiacal sign] at the time when the conjunction will take place is Capricorn which is the domicile of Saturn, and the exaltation (kavod) of Mars; hence, they are both strong in it. But this is not the case for Jupiter, for it is weak and infirm.

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because it is located in the house of its dejection (*shiftut*); it has
not strength like its two companions, for Saturn is in its domicile
and Mars is in its exaltation.

§ 4. This [conjunction] indicates a consolidation (*tiqqun*) of
the affairs of kings who have inherited their kingdom from their
fathers and their fathers' fathers as a consequence of this con-
junction. [By way of contrast,] every conspirator and traitor,
not of royal seed, who rebels against them, will be weak and
abased. This is a major indication concerning the Christian (*lit.*
Edom) kingdom: their regency will be strengthened, whereas the
strength of the conspirators of al-Masmūd\(^7\) will diminish, their
kingdom will fall and perish, and their alliance will be scattered.
God will fall upon them with plague and sword, [with] panic [all]
around, one man against another, one city against another, one
kingdom against another; and they will [disappear] as if they had
never existed. Also, strife (*qeṭaṭa*) will break out between *Kush*
and *Qedar* — [in the land] which in Hebrew is called *Sefarad*
[i.e., Spain] — [and will spread] in the east and in the west, and
across the sea. And warfare (*ḥerum*)\(^8\) will increase due to the
influence (*‘edut*)\(^9\) of Mars in the house of the conjunction. And
power, might, rule, and glory will be bestowed upon the knights
(*parashim*), officials (*partemim*), warriors, and mighty men, by
the kings and the rulers (*shalı̂tim*) who will give them gifts to
make them great and to exalt them everywhere. However, those
who are educated in their [false] religion, who cling to their error,
and who engage in hypocrisy with their smooth talk — they will
be brought low, and will become a mockery and a disgrace.

§ 5. There is hope for our nation in these years of the conjunc-
tion: with the help of God, kings will honor them [our nation],
elevate them, make them great, and join with them; perhaps,
God will wish to give us hope for a destiny (*aḥarit*) better than
this [i.e., our present situation]. For He knows future events and
happenings as no one else, ‘foretelling the end (*aḥarit*) from the

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\(^7\) For the term, al-Masmūd (or, more precisely, Maṣmūda), see Section 4,
below.

\(^8\) On this meaning of *ḥerum*, see Ben-Yehuda, *Hebrew Dictionary*, vol. III,
p. 1749.

\(^9\) The term *‘edut* (evidence) is used by Bar Ḥiyya for astrological ‘indi-
cation’ or ‘influence’: cf. Bar Ḥiyya, *Megillat ha-megalleh*, eds. Poznanski and
beginning’ (Isa 46.10).

§ 6. As for what is seen of the ascendant in the first year of the conjunction: the Sun will enter the beginning of Aries in the middle of the 9th hour on Wednesday, the 20th day of Jumādā I, according to the reckoning of the Muslims [lit. Ishma’el], in the year 568 [sic; read: 561],10 or in the evening of March 23.11 The ascendant then is Leo 18°, and the ruler of the house is the Sun, and the Sun is in the house of its exaltation.

§ 7. All this indicates the unfolding of the success of the king of Aragon12 in that year, and the increase of his greatness. Since the Sun is eclipsed in Taurus, the domicile of Venus and the exaltation of the Moon, after noon when Saturn, Jupiter, and Mars are in the [same] triplicity as this house, the greatest among the princes of his kingdom will fall, and countries will make him tremble by means of a strong man who will rise by means of [the great man’s] death and perishing, and by means of other men who will mock him both secretly and openly. Also, intense discord (riḥuq ha-de'ot) will take place between one another, and conflicts in the Christian lands will become very numerous, as will warfare and the sword in many places. And events and happenings will come about in the world because of the strength of this conjunction and the eclipse in its triplicity, for plague will break out in the West and the people will feel a headache due to an increase in phlegm and black bile (leха umerera shehoro), and many babies will die suddenly. Signs (otot) will be seen in the sky and comets in the air, and brightness will come forth from their paths and from behind shooting stars (ziqot). And there will be much trembling [i.e., earthquakes], winds and storms, and many houses will fall down. Some of the rulers will be lifted up, and some will be made low, according to the will of our God. And there will come about destruction of horses, cattle, and camels; birds, animals of the field, and some people will lose their progeny. Warfare and

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10 Both manuscripts read 568, but the astronomical data require that the year be emended to 561: see commentary ad § 6.
11 This is the reading in both manuscripts: Q has 23 in alphabetic numerals; and OX has twenty-three in words (despite Neubauer who transcribed 'twenty thirty' instead of 'twenty-three').
12 Q: 'of the king of' (followed by a blank space); OX: 'of the council of the king of Aragon' (but the syntax is faulty). Hence, I propose: 'of the king of Aragon.'
disruption of the roads will increase, and many ships will sink at sea. This king [will reappraise]¹³ his servants, banishing some of them, while relying [more heavily] on others. Even the beasts will not rest from fighting them and each other. Pregnant women will abort the fruit of their wombs.

§ 8. In the first years of the conjunction crops will increase. But in the fourth year there will be dearth and great famine in the lands of Qedar — they are the Berbers — and in the land of the West [i.e., the Maghrib]. Many will flee because of the sword, the famine, and the pestilence. Nevertheless, (re)construction (‘isqei) of buildings will succeed, and the farmers will work the wildernesses and the desolate lands; they will rebuild the ruins, and will be very occupied with these matters.

§ 9. The people [of Israel?] will move from their place to other lands, and many will be occupied with other lands that they previously did not know. Many warriors will rest from war. The mighty ones will be made low, and the lowly will be raised up. Wonders will be seen in the East, and in the Land of Israel¹⁴ new things will happen, as also in other lands. The summer will be made temperate, and the heat of the Sun will be milder. [On the other hand,] there will be intense cold in the winter. The king will muster his soldiers and marshal his armies to cross the sea to fight. This will bring about great sorrow for the people [of Israel?], and the tumult will increase; and the people will become mad¹⁵ in many places for a limited time period. Thereafter, the hearts of the kings will return to the people, and the heart of the people to their lords. God will improve the lands, and the merchants will return with their merchandise; [holy] spirit will increase in the world, the faithful will return with deeds of righteousness for mankind, and there will be peace in the land.

§ 10. Blessed be God who knows future events, for there is none like Him. Blessed be the name of His glorious kingdom for

¹³ The translation is based on emending the text to read: yimmalekh ha-melekh (instead of: ha-melekh). For this meaning of yimmalekh (reconsider, reappraise), see Ben-Yehuda, Hebrew Dictionary, 4:3048f; cf. Neh. 5:7.
¹⁴ The Land of Israel is often called ‘the beautiful land’ (ereṣ ha-ṣevi), as it is here: see Cohen, Abraham Ibn Da’ud, p. 134 n 4; cf. Dan. 11:16.
¹⁵ Both manuscripts read we-yitholelu, but emending the text to we-yitholelu makes better sense; cf. Jer. 25:16 and 51:7. Kahana (Qoves Ḥokhmat ha-RAbE, p. 118) introduced this emendation silently in his edition of the text.
ever and ever. Amen.

3 Astronomical and Astrological Commentary

Ad § 1. The prognostication begins with a general introduction on astrology, and alludes to Ps. 103:20-21 which has the term mesharetim (traditionally understood to refer to ‘angels’). Ibn Ezra uses this term for ‘planets’ but, in the absence of any other occurrence in our text, it is not a sufficient reason to ascribe the text to Ibn Ezra. The term shammashim for ‘planets’ is used by Bar Ḥiyya, as well as in the earlier treatises, Baraita de-mazzalot, chap. 7, and Baraita di-Shmuel, chap. 5.

Ad § 2. In this section we are given some definitions of conjunctions of Saturn and Jupiter, and the association of the triplicities with the four elements. The reference to conjunctions with the five other planets is probably to the 120 possible conjunctions of the seven planets (taken two, three, four, five, six, or seven at a time). This number of possible planetary conjunctions goes back to the Centiloquium, § 50, attributed to Ptolemy in the Middle Ages.

Ad § 3. Kahana and, following him Barkai, assumed that the year 4914 AM [1153-4] was intended to be the same as 561 AH [1165-6], and corrected the Hijra date to 548 AH to conform with the Jewish date, without paying attention to the fact that throughout 1153-4 Saturn and Jupiter were at least 100° apart! Since the date 561 AH for a conjunction of Saturn and Jupiter is secure astronomically (see below), a better solution is to take the date in the Jewish calendar as the time of composition of the

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18 For a list of the triplicities, see al-Birūnī, Astrology, ed. and trans. Wright, § 445.
19 See, e.g., Ibn Ezra, Sefer ha-'olam, ed. Fleischer, p. 8; and Millás, Las Tablas Astronómicas, p. 87.
20 See Sela, Astrology in Ibn Ezra’s Thought, p. 81, for a discussion of the variants ‘119’ and ‘120’.
21 Kahana, Qoveš Ḥokhmat ha-RAbE, p. 139.
prognostication, in advance of the event, and this interpretation is consistent with the use of past and future tenses in the passage.\textsuperscript{23} Calling the Hijra era 'years of the reign of the Madman' is highly polemical here, and not at all in the style of Ibn Ezra. But Muḥammad was often called the 'Madman' in medieval Hebrew literature.\textsuperscript{24} On Sunday, July 31, 1166, the mean positions of Saturn and Jupiter, according to the zīj of al-Khwārizmī, were Cap 12;51° and Cap 12;54°, respectively, and their true positions were Cap 4;46° and Cap 2;3°, respectively. So, there was a mean conjunction of Saturn and Jupiter at about Cap 12° (ignoring the minutes) on that day, and both planets were retrograde. The corresponding date in the Jewish calendar is Elul 1, 4926 AM and, in an anonymous Geniza fragment (C.U.L., T.-S. Ar. 29.45), there is a description of a conjunction of Saturn and Jupiter where the year is specified as 4926 AM and as 561 AH. But it is based on a different computation, for the date of the conjunction is given as Tuesday, Nisan 11, 4926, that corresponds to March 15, 1166. In another Geniza fragment in Arabic (C.U.L., T.-S. Ar. 51.55), ascribed to Abraham Ben Ezra on the first line of the text, a conjunction of Saturn and Jupiter is said to take place in 561 AH (with no further specification) in the last third of Capricorn (rather than in Cap 12°, as in our text). This location of the conjunction is based on a different computation, possibly that of al-Battānī whose zīj yields a mean conjunction of these planets on August 23, 1166 at about Cap 24° which is in the last third of this zodiacal sign. Note that Ibn Ezra mentions the tables of al-Battānī in his Sefer ha-\textsuperscript{25} olam.\textsuperscript{25} To be sure, Ibn Ezra also knew the zīj of al-Khwārizmī, for he translated a commentary on it.\textsuperscript{26} One would expect a complete horoscope with the cusps of the twelve houses and the positions of all the planets, but they are not given in this prognostication. The domicile of Saturn is Capricorn, as stated in the text.\textsuperscript{27} The term kavod corresponds to the Arabic sharaf ('exaltation'), and the exaltation of Mars

\textsuperscript{23} I am grateful to G. Freudenthal for this suggestion.
\textsuperscript{24} See, e.g., Maimonides, Epistle to Yemen, in Halkin and Hartman, Epistles of Maimonides, pp. 99 and 134 n. 48; cf. Steinschneider, Polemische und apologetische Literatur, pp. 302f.
\textsuperscript{25} Ibn Ezra, Sefer ha-\textsuperscript{26} olam, ed. Fleischer, p. 18.
\textsuperscript{26} Ibn Ezra, Ibn al-Muthanna's Commentary, ed. B. R. Goldstein.
\textsuperscript{27} See al-Bīrūnī, Astrology, ed. and trans. Wright, § 440.
is in the sign of Capricorn. The term *shiflut* corresponds to the Arabic *hubūt* (dejection), and the dejection of Jupiter is in the sign of Capricorn.\(^{28}\)

*Ad § 4.* The strife between Kush and Qedar, mentioned in the text, is difficult to identify with a historical episode (see Section 4, below). Since Kush in the Bible is the name for Ethiopia and the text identifies Qedar with the Berbers (§ 8), it may be relevant to consider the following passage in *The Book of Religions and Dynasties* by Abū Ma’shar (d. 886): 'If [a conjunction of Saturn and Jupiter] happens in Capricorn, it indicates wars occurring between Ethiopia, Zanj, India, the Berbers, and the people of those regions. If the Sun and Mercury aspect them, this indicates illnesses destructive to kings, and that tumours, cutting, and burning <of the skin> come to them because of them, together with frequent winds, lightning, mists, fire, the lack of planets, and plenty of thieves.'\(^{29}\)

*Ad § 6.* For the importance of the vernal equinox in this context, see, e.g., Ibn Ezra, *Sefer ha-’olam*: 'Doroneus [i.e., Dorotheus] the king said that he found in Enoch's book of secrets that he commanded: always consider the vernal equinox of the year (*tequfat ha-shana*) of the conjunction of Saturn and Jupiter — be it a great conjunction, a middle conjunction, or a small conjunction — and note the positions of the planets when the Sun enters Aries, ...'\(^{30}\) According to modern tables, Jumādā I 20, 561 AH corresponds to Thursday, Mar. 24, 1166, whereas Jumādā I 20, 568 AH corresponds to Jan. 7, 1173. Hence, despite both manuscripts, the text should read 561 AH (The letters *aleph* and *chet* that are used for '1' and '8', respectively, are very similar in appearance in most medieval Hebrew scripts.) Since the two extant manuscripts come from places very distant from one another, it is likely that this corrupt reading entered the text at an early stage in its transmission. March 23, 1166 was a Wednesday and so Jumādā I 20, 561 AH corresponds to that date, as stated in the text. Modern tables of equivalences, based on the *mean* Hijra calendar, often give dates that differ by a day with respect to manuscript readings; in these cases the medieval manuscripts

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are more reliable, particularly when the weekday is given. The middle (lit. half) of the 9th hour here is presumably counted from noon, for when the Sun is in Aries 0° and the ascendant is Leo 18°, the time is about 14:40h after sunrise: according to the table of right ascensions in the zīj of al-Khwārizmī, 31 α(Ari 0°) = 0° and α(Leo 18°) = 140;32°; it follows that the time after sunrise is 360° − 140;32° = 219;28°, corresponding to about 14:40h. On the day of the equinox the time from sunrise to noon is 6 hours, and so 14:40h after sunrise is equal to 8:40h after noon. Recomputation of the time of the equinox according to the zīj of al-Khwārizmī yields March 23, 1166, about 7h after noon (in close agreement with our text); whereas recomputation with the zīj of al-Battānī yields March 13, 1166 (close to the result using modern data: March 14, 1166). The Sun’s domicile is Leo, and the sign of the Sun’s exaltation is Aries.32

Ad § 7. The domicile of Venus is Taurus, and the sign of the Moon’s exaltation is Taurus. There was a solar eclipse on May 1, 1166 (total in central Africa, but not noticeable in Spain), and true conjunction of the Sun and the Moon took place after noon (as stated in text): about 5h after noon according to al-Khwārizmī; about 3h after noon according to al-Battānī; and about 2h after noon according to recomputation with modern data. For the times of true conjunction, the computed true positions of the planets were approximately as follows:

<table>
<thead>
<tr>
<th></th>
<th>al-Khwārizmī</th>
<th>al-Battānī</th>
<th>Modern</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sun</td>
<td>Tau 7°</td>
<td>Tau 17°</td>
<td>Tau 17°</td>
</tr>
<tr>
<td>Saturn</td>
<td>Cap 10°</td>
<td>Cap 21°</td>
<td>Cap 23°</td>
</tr>
<tr>
<td>Jupiter</td>
<td>Cap 10°</td>
<td>Cap 20°</td>
<td>Cap 17°</td>
</tr>
<tr>
<td>Mars</td>
<td>Cap 12°</td>
<td>Cap 29°</td>
<td>Cap 24°</td>
</tr>
</tbody>
</table>

Capricorn and Taurus are both in the earthy triplicity; hence, the three outer planets were in the same triplicity as the Sun, as stated in the text. According to Ibn Ezra, 33 there is a difference of about 9° between ‘tables of the scholars of India and the tables of the scholars of experience,’ and in his introduction to Ibn al-Muthannā, he says that ‘the positions of the planets

31 Suter, al-Khwārizmī, pp. 171-3.
32 See al-Bīrūnī, Astrology, ed. and trans. Wright, § 440 and § 443.
33 Ibn Ezra, Sefer ha-’olam, ed. Fleischer, p. 9.
in the tables of al-Khwārizmī differ from the present positions by $9^{10}_2$.\textsuperscript{34} It would seem that the tables of the scholars of India are represented by the zij of al-Khwārizmī, and the tables of the scholars of experience by the zij of al-Battānī (both zījes are cited by Ibn Ezra). The expression, ‘scholars of experience,’ is usually associated with astrologers,\textsuperscript{35} but it is also possible that by ‘the tables of the scholars of experience’ Ibn Ezra intended to translate the expression, \textit{al-zīj al-mumtaḥan} (‘the zij tested by experience’), which was the title of a work by Yaḥyā ibn Abī Maṣṣūr (ninth century) who is mentioned by Ibn Ezra.\textsuperscript{36} Saturn is associated with black bile and phlegm.\textsuperscript{37} Moreover, Capricorn is associated with black bile (\textit{ha-marra ha-shehora}).\textsuperscript{38} The expression, \textit{otot ba-shamayim} (signs in the sky, or heavens), is very close to the expression, \textit{otot ha-shamayim} (signs of the heavens: cf. Jer. 10.2), in the title of Samuel Ibn Tibbon’s Hebrew translation of Aristotle’s \textit{Meteorology} (completed in 1210). But I am not aware of this usage in Hebrew prior to Samuel Ibn Tibbon and, in his introduction, Samuel seems to emphasize his innovation.\textsuperscript{39} For this reason, I assume that our author is referring to some unspecified, astrologically significant phenomena in the sky (cf. Babylonian Talmud, \textit{Shabbat}, 156a). In the Middle Ages, ‘meteors’ (including comets) were taken to be sublunary. Note that the expression \textit{ayāt samāwīya wa-zalāzil} (heavenly signs and earthquakes) occurs in the Arabic text of Abū Maṣḥar’s \textit{Book of Religions and Dynasties}.\textsuperscript{40}

4 Authorship and Historical Context

This prognostication was first published by A. Neubauer, based on the Oxford copy, and it was reprinted with a few notes by

\textsuperscript{35} Sela, \textit{Astrology in Ibn Ezra’s Thought}, pp. 140-42.
\textsuperscript{37} See al-Bīrūnī, \textit{Astrology}, ed. and trans. Wright, § 420.
\textsuperscript{39} See Fontaine, \textit{Otot ha-Shamayim}, pp. xiii f, 4-9.
\textsuperscript{40} Yamamoto and Burnett, \textit{Historical Astrology}, vol. I, p. 132 (line 802); cf. vol. II, p. 87 (line 803).
D. Kahana. Since Kahana did not consult any manuscripts, I have not noted the divergences of his text from that of Neubauer. Both editors ascribe this prognostication to Abraham Ibn Ezra, mainly because it comes after Ibn Ezra's Sefer ha-me'orot in the Oxford manuscript. Moreover, in the Qafih manuscript — that has not been cited in the previous literature — it comes after Ibn Ezra's Sefer mishpefei 'olam (= Sefer ha-'olam). At the very least, this points to an association of our prognostication with Ibn Ezra by an early copyist. But the text itself does not identify its author and, as Fleischer noted, Ibn Ezra generally begins his treatises with 'Abraham said. Fleischer also offered a number of reasons to doubt the authorship of Ibn Ezra based on technical terminology and style. He noted that the terminology often differed from Ibn Ezra's usage elsewhere (e.g., dibbuq in our text is used for conjunction, but not by Ibn Ezra) and, in some cases, he argued that the grammatical usage was contrary to that of Ibn Ezra. In an earlier article, Fleischer recognized that the Almohad invasion was the subject of the prognostication, but he did not know the identity of al-Masmud (and at that time he accepted the claim that Ibn Ezra was the author). Barkai correctly identified al-Masmud as a slightly corrupt form of Mašmüda (see below); he also took the author to be Ibn Ezra, despite his allusion to Fleischer's doubts. In fact, there is no proper study of Hebrew astronomical and astrological terminology comparable to the account of Hebrew mathematical terminology. But a comparison of a few technical terms in this text with the corresponding terms used by Abraham Bar Ḥiyya and Abraham Ibn Ezra (the most prominent Hebrew authors who wrote on astrology in the twelfth century) casts doubt on the claim that Ibn Ezra is the author of our text. To be sure, Bar Ḥiyya was no longer alive when this prognostication was written, but we need to consider the possibility that the author was a disciple of his, particularly since the author seems to have resided in Aragon (Bar Ḥiyya lived

41 Neubauer, 'Ibn Ezra-Literatur'; Kahana, Qoveṣ Ḥokhmot ha-RAbE, pp. 115-18 and 139.
44 Fleischer, 'Ibn Ezra in France', pp. 291f.
45 Barkai 'L'astrologie juive médiévale', pp. 338 and 341-2.
46 Sarfatti, Mathematical Terminology.
in Barcelona). Ibn Ezra’s expression for ‘indicates’ (astrologically) is yoreh ʿal;\(^{47}\) Bar Ḥiyya’s is le-haʾid ʿal or ʿedut ʿal;\(^{48}\) but here we find yokhiaḥ ʿal. Moreover, for ‘planet’ Ibn Ezra uses mesharet\(^{49}\) or kokhav raḥ,\(^{50}\) whereas Bar Ḥiyya generally uses kokhav navukh, and occasionally shammash (see commentary ad § 1).\(^{51}\) For ‘eclipse’ Ibn Ezra uses qadrut, whereas Bar Ḥiyya uses laqut; here we find laqut. Again, for ‘conjunction’ Ibn Ezra uses mahberet, whereas Bar Ḥiyya uses dibug; here we find both.\(^{52}\) It is surprising that the astrological term ‘aspect’ (mabat) does not occur in our text, whereas it is frequently used by Ibn Ezra and would have been most appropriate here.\(^{53}\) Indeed, aspects play an important role in the interpretation of a horoscope.\(^{54}\) There is, however, one term that points specifically to Ibn Ezra’s influence: shalishut (triplicity) occurs three times in MS Q (§§ 2 and 7) and twice in MS Ox (§ 7), whereas an older term, trigon, taken from the Greek, is used once in MS Ox (§ 2). The term trigon already occurs in the Baraita de-mazzalot,\(^{55}\) whereas it seems that shalishut first appears in Ibn Ezra’s Sefer Mishpeṭei ha-mazzalot in 1146,\(^{56}\) and then frequently in his other astrological treatises. Since it seems unlikely that a copyist would change trigon to shalishut, it is fair to conclude that the author of this prognostication was probably an early reader of Ibn Ezra’s works. On balance, these considerations argue against Ibn Ezra’s authorship, as Fleischer had already suggested. The terminology is also inconsistent with that of Abraham Bar Ḥiyya, and so it seems unlikely that the author was his direct disciple. Moreover, it is difficult to as-

\(^{47}\) Ibn Ezra, Sefer ha-ʾolam, ed. Fleischer, p. 15:4.
\(^{48}\) Bar Ḥiyya, Megillat ha-megalleh, eds. Poznanski and Guttmann, pp. 149:9 and 153:29.
\(^{51}\) Bar Ḥiyya, Libro del calculo, ed. Millás, p. 98:1 [Hebrew Text].
\(^{52}\) Cf. Sarfatti, Mathematical Terminology, p. 148.
\(^{54}\) Cf. Ibn Ezra, Sefer ha-ʾolam, ed. Fleischer, p. 12. The astrological aspects are: conjunction, sextile, quartile, trine, and opposition, corresponding to distances between planets (including the Sun and the Moon) of 0°, 60°, 90°, 120°, and 180°, respectively.
\(^{56}\) Paris, Bibliotheque nationale de France, MS Heb. 1058, f. 15a: I am most grateful to Shlomo Sela for this reference.
sess the relationship between our text and the Geniza fragment ascribed to Ibn Ezra (see commentary ad § 3). Although it frequently happened that Ibn Ezra composed several versions of the same text, they are usually closer to each other than is the case here. Therefore, taking both texts at face value, the author of our text is not the same as the author of the text preserved in the Geniza fragment. The historical allusions in the text may help to locate its context. The term al-masmūd (§ 4) would seem to be the best clue, for it is a slightly corrupt form of Mašmūda, one of the principal Berber ethnic groups in North Africa. Other emendations considered by Fleischer are not very convincing.57 Similarly, the allusion to the Berbers (§§ 4 and 8) probably refers to the Almohads, and Barkai suggests that the term ‘conspirators’ applied to the Almohads means that the horoscope was written relatively soon after their invasion of Spain.58 Ibn Tumart, the founder of the Almohads, died in 1130, and North Africa and Spain came under the control of this sect during the reign of his successor, ‘Abd al-Mu’min (d. 1163) whose army consisted of troops of the Mašmūda and Zanāta tribes. A key victory took place in 1147 when the Almoravid capital, Marrakesh, fell to the Almohads. The conquest of al-Andalus (Muslim Spain) by the Almohads began in 1145 and culminated with the surrender of the Almoravid governor of Granada in 1156.59 ‘Abd al-Mu’min unleashed a wave of persecutions against the Jews of al-Andalus in the first phase of his conquests, 1145-1148, offering them a choice of conversion or death. During the reign of his son, Abū Yaʿqūb Yūsuf (d. 1184), the Almohads continued to have a major military involvement in Spain.60 A plausible conjecture is that Kush (§ 4) refers to the Almoravids, and Qedar to the Almohads, for the two groups did fight for control of al-Andalus (as alluded to in our text). The Almoravid sect began about 1040 in what is now southern Mauritania with predominantly Berber, as well as some Black African, adherents; later they ruled North Africa and al-Andalus until displaced by the Almohads.61 Biblical names for tribes and countries were often given new meanings

58 Barkai ‘L’astrologie juive médiévale’, p. 342, n. 73.
59 Huici Miranda, ‘Gharinaṣa’.
60 Shatzmiller, ‘Al-Muwaḥḥidūn’.
by medieval Hebrew authors, but the identification is not always obvious. For example, Judah Halevi uses the terms Philistines, Hittites, and descendants of Hagar in his poem, 'The Poet is urged to Remain in Spain'. Whereas it is argued that Philistines means the Berbers, and descendants of Hagar means the Arabs, it is not clear what is meant by Hittites. The identity of Kush (Biblical Ethiopia) in our text is not specified, whereas Qedar (cf. Gen 25.13) is identified with the Berbers (see § 8). On the other hand, Maimonides, in his Epistle to Yemen, seems to identify Qedar with the Quraysh (the tribe of Muḥammad). Moreover, the reference (§ 4) to 'a consolidation of the affairs of kings who have inherited their kingdom from their fathers and their fathers' fathers' seems to fit best with the Christians, for neither the Almoravids nor the Almohads had been in Spain very long. The next passage indicates that the author anticipated a defeat of the Almohads by the Christians, a plausible response to the relatively benign treatment of Jews by the Christians kings at the time: 'This is a major indication concerning the Christian (lit. Edom) kingdom: their regency will be strengthened, whereas the strength of the conspirators of al-Masmūd [i.e., the Almohads] will diminish, their kingdom will fall and perish, and their alliance will be scattered.' The reference to the King of Aragon (§ 7) suggests that the author probably lived in Aragon. Fleischer tried to find the name of this king in the text (allowing for an emendation), without success. In sum, the author of this text was probably a Jew living in Aragon who may have been a refugee from al-Andalus as a result of the Almohad invasion.

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62 D. Goldstein, Hebrew Poems from Spain, p. 166.
63 See Halkin and Hartman, Epistles of Maimonides, p. 147, n. 250.
64 Fleischer, 'Ibn Ezra in France', p. 292; and again in 'Two Horoscopes', p. 130, n. 8.
computations of planetary positions (using a program written by P. Huber for positions according to modern theory, and using a program written by E. S. Kennedy and H. Mielgo for positions according to the zijes of al-Khwārizmī and al-Battānī).

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*Appendix: The Hebrew Text*

There are two copies of this prognostication: Oxford, Bodleian Library, MS Opp. add. 4° 160, ff. 126b-128a [Ox]; and Jerusalem, Qafih, MS 36, ff. 164b-165b [Q], corresponding to films 22230 and 47427, respectively, in the Institute for Microfilmed Hebrew Manuscripts at the National Library in Jerusalem. I have depended on photocopies of the films in Jerusalem; the Oxford copy is not entirely clear and, in cases of doubt, I have accepted the readings in Neubauer’s edition. The Qafih manuscript was copied in 5640 AM [= 1880] in Yemen from a manuscript of unstated age. Paragraphs and punctuation have been added for ease in reading the text. Variants in spelling have not been noted.
Note added in proof: I have recently been informed by Renate Smithuis, who is completing her doctoral dissertation at the University of Manchester, that additional copies of this text may be found in MSS Cambridge, UL, Add. 1517, f. 47a-b, and Paris, BnF, Heb. 1057, ff. 94a-95a, and perhaps in other manuscripts as well.
א: ימי קספורה; כ: ימי קפתה.

הושארו שם אלהים יצר משורטת ואשר משחרת כל עם
ברוך אלהים ומשמשים בכבוד אלהינו הקדוש בדברי אלהינו חיות
ומלך עולם. ושם שם כי ימי בר하시 ושישמה חכמים ההולכים
בימי חביב ביתו שלישיו ואומר這是. על פיים התשוב וטעם
כל זה בכל זכו ירצה וכל המקרא לכלי פי כל לייב לכל זכו לכלי
כנל זכו כל זכו מחטור ויחת שבלו.

הושארו ש.makeText שottenham והקדום מתחבר יכ: ששה ליכ
שנה בחלק א: קרבתו וראשי כ: שח בומת החפשי לעבד
הזה וך ממשרסו ד. שישמה חיות בתו לייבཡיב דרקון לכל
שלא ניתן וילוחת ושם טא: קלח שבבי קלח מתימי לחר
שעיר שמשמן. ואריך כ: חורי ותחלות scrollTop של המתחול
מררא מלו לחלק והכלם ופי חם והחיבר עם האחורים
החמשה. כ: חיה מעשהיהם ביזה כל היום.

הdbir אריך על הדבוק בשתי התכניות: בכ: ימי בים
א: שם שארל חשלום וлот ימציא בשמת הקספה ימלכות; 4: שיעור
ויהי הדבוק בעי די במעל 5: ייב ב עד מותקף הלך.
ויהיו יערים ובמה מקדים בימי הזה ועל. ייוהי הדבוק כמ

1: א: בדים.
2: א: טריגון וטריגון.
3: ב: יימי בים א: ששי יימים ובם רחשים.
4: כ: לימוד.
5: א: שמי.
כגון שעיב הזה חק מאמצ מביע את. וידיע כי הוא_EXTENDEDilde תיבת עד
Jeste
הַשִּׁבִּית ובָּדוּךָ. וְלֵיתִי כָּזַה שְׁבִּית כַּבֵּדָה מְאָטִים. עִיָּכְנֵה
הָדְקִיק בַּל. ולָךְ נְצַק כָּזַה חָלִל וְנָחַשׁ כָּזַה לַמָּעָשׁ אֲלֵה
אֲדֻמַּוּ בָּבִית שְׁפָלוֹתֵי אָזַי לָכְזַה כְּשִׁיָּ רוּניָה כָּזַה שָׁבָטִי בָּבִית
וְנָמאֵי בָּבִית.

על כָּזַה יִוכָּחֵי עַל תוּקְהֵי עַנְיִי הַמְלַכִּיָּ שְׁתַחְיוּתוֹ לָכְזַה מִיוֹרָשָׁה
מְלַכְּלוֹת אֲבָטֲוָה אֲבָטֲוָה בָּדוּךָ הָזָה. וּדְלָל רְשֶׁפֶל כָּל
הָדוּשׁ הבָּנָד גַּלְמַלְמֵי הַעַמְּדוֹתֵי מָאָרֶה שֶׁלָּא מְוָרִים הָמְלָכָה. וּחָאַת
רְאָה דְרוֹלְמִה עַל מְלַכְּלוֹת אֲבָטֲוָה שָׁתַחְיוֹת מְלַכְּלוֹת וּיְשֵׁפֵל כָּה
אלֶמֶסָמוֹת הַקְּוֹרְשִׁיִּים הַנְּפָלֵיִים וָחַבְּבָל מְלַכְּלוֹת וָחַתְרְדֵי הַבָּדוֹקָה.
וּפַלְּיָ הַקְּבָּעָה עַלְמָה דֵּבָּר הָדוּרָו מִומְרִים מְסָבֵי אִיצְּ בָאָיָה עַזָּ
בָּיִת מְלַכְּלוֹת בּוֹמָלְכָה וּזְיַיָּ כָּל הָזָה. וּגָמְרְתֶּ הַקְּסָה בַּיָּ כָּל
קָדָר יָבָאָ אֲבָטֲוָה בְּמִשְׁרָפָה וּמְבָרָאָ עַזָּ בָּדָר. וּרְיָזָ הָדוּרָו
מְפִּזְזֵ עַדְּתָ הַמְּדָאָי בּוֹבָ טָבָּדָר. וּנָעָ לָפָרְשִׁיִּים לַמְּרָפְטִים וָאָנָשִׁי
tוֹצָא הָנְגָבָרֵי כָּכְוָ וְמַמְשֵׁלְבָל בְּבָדָר מְלַכְּלוֹת וְחָלָסִים
וּלָחְתֶּ לָכְזַה מַמְשֵׁלְבָל לְגָעַלְבָל כָּלְחָפָה. וּפָרְשִׁיִּים בַּדוֹתָ
возָאָדוֹתָוֹ בְּעַעַלְיַּים בְּחָלָסִים לְגָעַלְבָלָה יִשְּפֵלָו וּזְיַיָּ לָכְזַה

ולָבָזְנָו.

ויִשָּׁ תְוַקְּהֶ בַּעֲלָה שֶׁנָּיָיָ הַדְּבָדָר לְאָמוֹתָוֹ, בְּגָעַלְיַּ הָמְלַכָּי
בֶּבֶדָמָו וַנְּשַׁאָוָו וִינְשֵׁלָו וָיִתְרָבָּוָו עִמָּוָו, וָאָטֵלָי זִרְכָּ הָשַׁל
לָחְתֶּ לָכְזַה אֲבָטֲוָיִים תְּבָרְמָו. כָּזַה הָדוּד הָזָה הַחָסָדוּת
מְאָאוֹ כָּמָוָו מָעָדָיָא אַחָאָי.

ואָלָלוֹ אוֹ יִמְרָאָה שֶׁנִּצְרָשָא מִמָּזְרָאָ שְׁנָה הָרַאֲשִׁיָּ לְבָדָדָכי
יַכְּסָ שֶׁמַּשָּׁ בְּמַיְּלָ שֶׁלָּא בָּדָדָק אֶזָּיָ בָּזָרְיִי הַשְּׁמַשּׁ הָתְשִׁיִּיָּ וְיִמָּ
זָכְּ; וּזָכְּ לָחָדָה נְמָדָאָו. אַוָּלָיָּ 10 חָלָסְבּ יְשַׁמְּעַאָל שֶׁנָּיְתָקָסְיִּי

ויִשָּׁפָל כְּאָלְמָסָמוֹת הַקְּוֹרְשִׁיִּים הַחְזָאָוּת: אָוָיָה וֹאָלָמָסָמוֹת
הַקְּוֹרְשִׁיִּים: אֶזָּיָו כָּלְמַמְדָי הַקְּוֹרְשִׁיִּים [sic] הַחְזָאָוּת
ומְרָבָּ. 7
אָוָיָה 8
נָמָאָ 9
הָרַשָּׁו. 10
כָּדָאָ לָגוֹרָא: תָּכָּסְיִ וְאָ 11
ובנמורא ותשלם מארס כני. והזמנה לא אריה כני. על.
12 העיתון ההשומם בהבית.
13 מלך.
14 הודו.
15 חלון.
16 מט.
17 הרוב.
18 הימים של מצרים.
19 ההולך והולך.
20 הימים של מצרים.
21 הימים של מצרים.
22 הימים של מצרים.
23 הימים של מצרים.
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31 הימים של מצרים.
32 הימים של מצרים.
33 הימים של מצרים.
34 הימים של מצר
בנין.ملك: זה על מוקד עבדיו לחרות י으며 הלומד על אдовים.
זג החיה אל ושכוניה מחלתו ממחצית הזכר. והמעבריתuschכעה
ל fila פי בurations.

8: י珉 ההנהנואת בשני הדובד הדואגון. אולמה בשני
הברויות הימים יאור וגרד בר(Build נזרום קרדה)
מעבר. י blockDim רוכס מפי החורב והרחב הדובד בברק
הנגנזה "א"א128" יצלאו וויבי הדומיה עידוד המבדה
והאיצה החשוף יהב החורב והית斯顿 עידון זה המאמה.

9: יתעשית נמסס נמסס לאיצות אחראות ורב ודוס
בראתון אחראות המחא למסת לא ייעם. רביב משלל משלחת
ינוח משלחתו. ההבורים יישול ושפליס גבות. וירא פלאת
בפתא מרת ארץ הצל יתדות חחושת וכבר את אחראות
וימן CUיון הקים הזה השמשה sustained יחר עצבות חור.
וועמד המלב היילוס לשמה צבאות לשבור את יום הלוחם
68 הייחוש צור. דוד לה על זה והרבח המהוון. גיתוחלול ווס
וימן CUיון הולחן הוא ברבע המכומת. דומק עינים מעט. אחאי ישובי להב המלכים
ברבעה מקומת על זומ עינים מעט. ואחייש ישובי להב המלכים
על יוס לוב עיפות אדווניס. יטיס UCHARי ואやってד
וימן הטורוס בתורתו ורב 하고 ע الطلויים בינת אוגוס
בפתא רוש ברכ13 או מלוח בכר.

10: וברך האל היא ערря העתידות כי אין חולות. ברך שש כבוד
מלכותה עלולות עד. דאמני.

כדאי לקורא: ימקלملك.
פפי קונס לקפל.
יתעשית ברעת אחראות; יוסק במלוחמות.
כדאי לקורא: ימקלملك.
כדאי לקורא: יתוחלול.
כדאי לקורא: יתוחלול.