MUSICAL INSTRUMENTS IN THE IBERIAN HEBREW ILLUMINATED BIBLES

INSTRUMENTOS MUSICALES EN LAS BIBLIAS HEBREAS IBÉRICAS ILUMINADAS

Guy Shaked¹

Recibido: 01/02/2022 · Aceptado: 19/07/2022 DOI: https://doi.org/10.5944/etfvii.10.2022.32906

Abstract

Some Iberian Hebrew Bibles produced from the thirteenth to the fifteenth century feature depictions of musical instruments within the full-page illustrations of the Temple implements. These instruments have been found to be similar to those in two contemporary Iberian Christian manuscripts: *Cantigas de Santa Maria Codex E* and Peter Comestor's *Historia Scholastica*. The trumpets and ram's horn appear next to one another in the Bibles and their appearance together is a unique feature in Jewish art. Also noteworthy is the fact that most of the trumpets have some gold or are entirely of gold or are gilded whereas the Temple's and Tabernacle's trumpets were specifically said to be made of pure silver. This article suggests that these two features reflect an attempt on the part of Iberian Jews to associate their music with that of the court of King Alfonso X and his heirs, as the illustrations imply that they and the king had shared musical roots.

Keywords

Alfonso X el Sabio; Cantigas de Santa Maria; Iberian Hebrew Bibles; medieval Iberian music; medieval Iberian Jewish art; medieval Iberian Jewish music; paleography

Resumen

Algunas biblias hebreas ibéricas producidas entre los siglos XIII y XV incluyen representaciones de instrumentos musicales en las ilustraciones de página completa sobre los utensilios del Templo. Se ha constatado que estos instrumentos son similares a los de dos manuscritos cristianos ibéricos: *Cantigas de Santa María Codex E e Historia Scholastica* de Pedro Comestor. Las trompetas y el cuerno de carnero aparecen uno al lado del otro en las biblias, y que aparezcan juntos constituye una característica única del arte judío. Cabe mencionar que la mayoría de las trompetas tienen algo de oro, son de oro en su totalidad, o aparecen doradas, mientras que se decía que las trompetas del Templo y del Tabernáculo eran específicamente de

^{1.} Bar-llan University. C. e.: shaked69@gmail.com; ORCID: https://orcid.org/oooo-ooo1-7092-2578

plata pura. Este artículo plantea que estas dos características son el reflejo de un intento por parte de los judíos ibéricos de asociar su música con la de la corte del Rey Alfonso X y sus herederos, ya que las ilustraciones dan a entender que el rey y ellos compartían raíces musicales.

Palabras clave

Alfonso X el Sabio; Cantigas de Santa María; Biblias Hebreas Ibéricas; música ibérica medieval; arte judío ibérico medieval; música judía ibérica medieval; paleografía

In this article, I discuss illustrations in Hebrew Bible manuscripts from Iberia dated from the thirteenth to the fifteenth century that feature depictions of musical instruments within the full-page illustrations of the Temple implements. I deal with such depictions in eleven manuscripts identified as Iberian Hebrew Bibles because they reflect the visual traditions of Jews who lived on the Iberian Peninsula, including what is today southern France but was part of the Kingdom of Aragon in the Middle Ages². The full-page illustrations of the Temple implements in these Bibles are to be found before the text but are not associated with the opening verses, which are relatively close to where they appear³. Joseph Gutmann argued that some of these illustrations were based partially on texts apart from the Bible⁴. For example, the two stone saucers for incense, the three steps near the base of the Temple menorah, and the ramp leading to the altar that appears in the Perpignan Bible (of 1299) are not mentioned in the biblical text (Figure 1)5.

In fact, Gutmann noted that they originated in Maimonides's twelfth-century code of Jewish law, the *Mishneh Torah*, in the eighth book, *Divine*



FIGURE 1. PERPIGNAN BIBLE: TEMPLE IMPLEMENTS, FOL. 12V. Paris, Bibliothèque nationale de France, héb. 7

^{2.} All the Temple implements herein are from Bibles whose illustrations appear in Katrin Kogman-Appel's book and are discussed there: Kogman-Appel, Katrin: Jewish Book Art Between Islam and Christianity: The Decoration of Hebrew Bibles in Medieval Spain. Leiden, Brill, 2004. Owing to their great number, I did not have the opportunity to examine all the Hebrew Bibles from Iberia, so my discussion is limited to eleven manuscripts, all of which were depicted wholly or partially in Kogman-Appel's monumental book. Trumpets and a ram's horn appear in all of these illustrations, so this could indeed be counted as a representative survey of the Iberian Hebrew Bibles.

^{3.} An exception is the First Kennicott Bible, where the Temple implements appear immediately after the end of the Pentateuch, and they, as those that are found at the beginnings of Bibles, are not associated with the nearby text. Temple Implements, First Kennicott Bible, Bodleian Library, 1476, Oxford, MS Kenn. 1, La Coruña, fol. 120v-121r. accessed January 1, 2017: http://digital.bodleian.ox.ac.uk/inquire/Discover/Search/#/?p=c+2,t+kennicott%20bible,rsrs+0,rsps+10,fa+,so+ox%3Asort%5Easc,scids+,pid+8c264b23-f6cc-4f18-98cf-9d75f7175b54,vi+. There are differences in the number of illustrated pages in these Bibles: The King's Bible, e.g., has three such pages: Temple Implements, King's Bible, British Library, 1384, London, MS King's 1, Solsona, accessed January 1, 2017: http://www.bl.uk/catalogues/illuminatedmanuscripts/record.asp?MSID=19193; Temple Implements, Bible, Biblioteca Estense, first quarter of the fourteenth century, Modena, MS M. 8.4, Catalonia or Roussillon; Temple Implements, Bible, Former Sassoon Collection, 1366-82, MS 368, (today's) southern France (?); Temple Implements, Bible, Bibliothèque Nationale, Jan.-Feb. 1404, Paris, Ms. Hebr. 31, Saragossa.

^{4.} Gutmann, Joseph: «When the Kingdom Comes: Messianic Themes in Medieval Jewish Art», Art Journal, 27/2 (1967/1968), p. 171; Gutmann, Joseph: «The Messianic Temple in Spanish Medieval Hebrew Manuscripts», in The Temple of Solomon, Archaeological Fact and Medieval Tradition in Christian, Islamic and Jewish Art, ed. Joseph Gutmann. Missoula, MN, Scholars Press, 1976, pp. 127-128.

^{5.} Temple Implements, Perpignan Bible, Bibliothèque Nationale de France, 1299, Paris, cod. hébr. 7, Perpignan, fol. 13r, accessed January 1, 2017: http://gallica.bnf.fr/ark:/12148/btv1b9002997b.r=Bible.%20A.T.%20%28h%C3%A9breu%29%20Perpignan?rk=42918;4

*Service*⁶. He contended that Maimonides was contemptuous of images that portrayed the End of Days as a time of eating and drinking in heaven. Rather, he noted that according to Maimonides, the End of Days will see the coming of the Messiah, who will rule the Jews in the Land of Israel. The Jews will be united with their land, and he [the Messiah] will rebuild the Temple and renew the religious services therein⁷.

According to Gutmann, the illustrations of the Temple implements have an eschatological import⁸. The pages with the inscriptions surrounding the implements associated with some of the portrayals reinforce the notion of an eschatological meaning, such as the one in the Perpignan Bible, which reads, «May it be, that it [the Temple] will be built soon in our times» (from the *Amidah*, a prayer Jews recite three times a day)⁹.

Among these depictions is an image of a mountain, usually with a tree at the top, which Gutmann contended is an allusion to the End of Days in Jerusalem according to the words of the prophet Zechariah (Zech. 14:4): «And His feet shall stand in that day upon the Mount of Olives/ Which is before Jerusalem in the east....,» which the Mishnah (Middot 2:4) interpreted as a reference to the End of Days. This identification is strengthened by an illustration in the King's Bible¹⁰, where a title near the mountain indeed identifies the hill as the Mount of Olives¹¹.

Elisheva Revel-Neher concurs with the suggestion that images of the Temple implements express the national and eschatological aspirations of the Jewish people¹². Katrin Kogman-Appel, suggests that the illustrations in the Iberian Hebrew Bibles continue the tradition of the earlier abstract carpet pages from the Middle Eastern Bibles, which had «flat» backgrounds¹³. The connection between the carpet pages in the Middle Eastern Bibles and the illustrations in the Iberian Hebrew Bibles is evident as early as in the Parma Bible (1277)¹⁴, which is the first-known illustrated Iberian Hebrew Bible that includes a Temple implements array. The Temple implements in that codex are also flat in nature and appear on a white background without any apparent attempt to depict depth.

Kogman-Appel suggests that, most likely, Maimonides's works influenced the artists of the Iberian Hebrew Bibles. For example, she notes that the images of the jar of manna and Aaron's staff were based on his descriptions¹⁵. Further, she suggests

^{6.} Maimonides: Mishneh Torah hu ha-yad ha-hazaqa lerabbenu Moshe ben Maimon. Jerusalem, Mercaz Harav, 1957.

^{7.} Maimonides: Mishneh Torah hu ha-yad ha-hazaqa lerabbenu Moshe ben Maimon, Sefer Hashoftim, Hilkhot melakhim umilhamot. Jerusalem, Mercaz Harav, 1957, p. 1; for an English version, see The Code of Maimonides, xiv: The Book of Judges, trans. by Abraham M. Hershman. New Haven, Yale University Press, 1949, p. 238. Also see Kogman-Appel, Katrin: «The Messianic Sanctuary in Late Fifteenth-Century Sepharad: Isaac de Braga's Bible and the Reception of Traditional Temple Imagery», in Between Jerusalem and Europe. Leiden, Brill, 2015, pp. 242-244.

^{8.} Gutmann, Joseph: «When the Kingdom Comes», 171; Gutmann, «The Messianic Temple», pp. 127-128.

^{9.} The translation of Hebrew texts in this article, except for the Bible texts, which are according to JPS 1917, are by the author.

^{10.} Temple Implements, King's Bible, fol. 3v.

^{11.} Gutmann, Joseph: «When the Kingdom Comes», pp. 171-172.

^{12.} Revel-Neher, Elisabeth: Le témoignage de l'asbsence: les objets du sanctuaire à Byzance et dans l'art juif du XI^e au XV^e siècles. Paris. De Boccard. 1998.

^{13.} Kogman-Appel, Katrin, Jewish Book Art, p. 88.

^{14.} Temple Implements, Parma Bible, Biblioteca Palatina, 1277, Parma, MS Parm 2668, Toledo, fol. 7v-8r.

^{15.} Kogman-Appel, Katrin, Jewish Book Art, p. 157.

that the illustrations in the Iberian Hebrew Bibles reflect the views of the Jewish elite in Iberia, who espoused Maimonides's ideas¹⁶.

Kogman-Appel points out a slight difficulty regarding Gutmann's claim that the Iberian Hebrew Bibles were intended to be eschatological in nature because some of their illustrations are surrounded by eschatological texts. She notes that not all these Bibles feature such texts, for example, Estense M 8.4, Estense T 3.8, and the King's Bible¹⁷, but agrees that the illustrations themselves are eschatological and do represent the future Temple.¹⁸

Eva Frojmovic suggests that the creation of illuminated Iberian Hebrew Bibles was an outcome of the increase in eschatological expectations in Iberia. She ascribes those rising expectations to the writings of Nahmanides and Bahya ben Asher, especially to their hopes for the coming of the Messiah in 1368 and 1403, respectively¹⁹.

Table I lists the Bibles I examined and their eschatological meaning, suggesting that at least nine out of eleven (82%) Bibles do, indeed, include eschatological elements. We can see that the eschatological text surrounding the illustrations is an early phenomenon and that the eschatological element of the Mount of Olives is a later one.

We can see that most of the Iberian Hebrew Bibles surveyed here have clear eschatological import reflected in the presence of such text associated with the illustrations either surrounding them (three Bibles) or within them (one Bible) or have depictions of the Mount of Olives (six Bibles). Moreover, the imaging of two trumpets (*hatzotzra*) with a ram's horn (*shofar*) together in the illustrations might have been intended as a further reference to the ancient Jerusalem Temple as well as an eschatological allusion to the future one. However, we should bear in mind that the eschatological interpretation of the trumpets and ram's horn is only one possible way to account for their appearance in these illuminated manuscripts, and, further on, I suggest two alternative explanations.

^{16.} Kogman-Appel, Katrin, «Hebrew Manuscript Painting in Late Medieval Spain: Signs of a Culture in Transition», *The Art Bulletin*, 84/2 (June 2002), pp. 258-261.

^{17.} Kogman-Appel, Katrin: *Jewish Book Art*, pp. 137-138, 154-155. Temple Implements, Biblioteca Estense, Modena, MS M. 8.4, fol. 10r. Temple Implements, Bible, Biblioteca Estense, first quarter of the fourteenth century, Modena, MS T. 3.8., Catalonia or Roussillon, fol. 26. Temple Implements, King's Bible, fol. 3v.

^{18.} Kogman-Appel, Katrin: «The Messianic Sanctuary in Late Fifteenth Century», p. 233.

^{19.} Frojmovic, Eva: «Messianic Politics in Re-Christianized Spain: Images of the Sanctuary in Hebrew Bible Manuscripts», in *Imagining the Self, Imagining the Other: Visual Representation and Jewish-Christian Dynamics in the Middle Ages and Early Modern Period*, ed. Eva Frojmovic. Leiden, Brill, 2002, pp. 111-117.

TABLE 1: ESCHATOLOGICAL ELEMENTS IN THE IBERIAN HEBREW BIBLES ILLUSTRATIONS

| No. | Bible | Time | Place | The Illustrated pages relate to the End of Days | Includes an image of the Mount of Olives |
|-------|----------------|-----------|--------------|---|--|
| | | | | | |
| | | | Toledo | | |
| 1 | Parma | 1277 | (Castilia) | V | |
| 2 | Perpignan | 1299 | Perpignan | V | |
| 3 | Copenhagen II | 1301 | Perpignan(?) | V | |
| | | | Catalonia or | | |
| 4 | Estense T 3.8 | 1300-1325 | Roussillon | | |
| | | | Catalonia or | | |
| 5 | Estense M 8.4 | 1300-1325 | Roussillon | | |
| 6 | Harley 1528 | 1300-1350 | Catalonia | | V |
| | Palatina MS | | | | |
| 7 | Parm 2810 | 1300-1350 | Catalonia | | V |
| 8 | Duke of Sussex | 1350-1400 | Catalonia | | V |
| 9 | Foa | 1350-1400 | Catalonia | | V |
| | The King's | | Solsona | | |
| 10 | Bible | 1384 | (Catalonia) | V | V |
| | | | La Coruña | | |
| 11 | Kennicott | 1476 | (Galicia) | | V |
| | | | | | |
| Total | | | | 4 | 6 |

THE IMAGES OF TRUMPETS AND RAMS' HORNS IN THE IBERIAN HEBREW BIBLES

There was a precedent for the depiction of musical instruments among the Temple implements in Iberian Hebrew Bibles in Jewish art up until about the eighth century. Portrayals of musical instruments used in the Temple from this early period can be seen in floor mosaics in ancient synagogues in Israel and on wall paintings from the synagogue in Dura Europos as well as in other contexts. The ram's horn is the instrument that appears most often in these illustrations, but there are images of trumpets on the Arch of Titus, on the Dura Europos wall paintings, and on the Sepphoris synagogue's mosaic floor, along with some of the Bar Kokhba coins²⁰. The trumpets on

^{20.} Grossberg, Asher: «Zecher la-mikdash be-batey kneset kdumim», *Tchumin*, 15 (1994/1995) pp. 461-488; Hüttenmeister, Gil: «Synagogue and Beth Ha-Midrash and Their Relationship» («Beit ha-kneset ve-beit ha-midrash veha-zika benehem»). *Cathedra*, 18 (1981), pp. 37-49; Ovadiah, Asher: *Mosaic Art in Ancient Synagogues in Israel from the 4th to the 7th Centuries* («Omanut ha-psefas be-batey kneset atikim be-eretz-israel meha-me'a ha-revi'it ad ha-me'a ha-shvi'it»). Tel Aviv, Tel Aviv University Press, 1993, 85 pp.; Narkiss, Bezalel: «Pagan, Christian, and Jewish Elements in the Art of Ancient Synagogues», *The Synagogue in Late Antiquity*. Philadelphia: American Schools of Oriental Research, 1987, pp. 183-188.

the Sepphoris synagogue floor resemble large horns, whereas the trumpets are straight in shape in all the other three depictions. The trumpets on some of the Bar Kokhba coins are much shorter than in the other three depictions (Figure 2) but this might be because of the small size and round shape of the coins.

The ram's horn and the trumpets appear together in both medieval and pre-medieval Jewish art but are never seen juxtaposed as in the Iberian Hebrew Bibles.

The temple implements arrays in medieval Jewish illustrations can be categorized into two groups according to the time they were executed. The depictions in the earlier group, that is, those originating in the Middle East in the tenth and



FIGURE 2. BAR KOKHABA SILVER ZUZ/ DENARIUS. Private collection

eleventh centuries, do not include musical instruments, whereas the Bibles in the latter group –those from Iberia dated to the thirteenth to fifteenth centuries do include them. The Temple implements illustrations from Iberia are markedly different from such depictions in Ashkenazi Hebrew Bibles such as Poligny Bible or the Regensburg Pentateuch (Figure 3).



FIGURE 3. REGENSBURG PENTATEUCH: TEMPLE IMPLEMENTS, FOL. 156R. Jerusalem, the Israel Museum, Bo5.0009 (180/052). Photo: Elad Zagman

The principal difference between the Iberian the Ashkenazi Hebrew Bibles is that only the Temple implements illustrations in the latter include Aaron, the priest. It is also interesting to note that the musical instruments that in the Ashkenazi depictions of the Temple implements arrays, the trumpets appear either alone or not at all, unlike in the Iberian Hebrew Bibles, where they are juxtaposed with the ram's horn.

Another difference is that unlike in the Ashkenazi depictions, the Iberian Bibles feature rings that appear along the bodies of the trumpets. Such rings were used to strengthen the long slender bodies of the instruments so that they would not break. Trumpets with rings around their bodies are characteristic of medieval Christian Iberian depictions²¹.

THE COLORS OF THE TRUMPETS IN THE IBERIAN HEBREW BIBLES

The color and decoration of the trumpets in the medieval Iberian Hebrew Bibles, which usually feature silver with gold, are keys to understanding the role and import of the depictions. These illustrations fall into two main categories: images of two silveronly trumpets and images of two silver trumpets with gold or gold-only trumpets.

SILVER-ONLY TRUMPETS

The group that features trumpets made only of silver accords with Maimonides's contention that biblical trumpets were not made out of any other metal (Maimonides, Mishneh Torah, Hilchot Kley Hamikdash Veha'ovdin Bo 3:5). The two Bibles in this group are from the earliest of the Iberian Bibles –the Perpignan Bible (Perpignan, 1299, FIGURE I)²² and the Copenhagen II Bible (Perpignan[?], 1301)²³. The Copenhagen II Bible illustration includes two trumpets of tarnished silver, while the Perpignan Bible shows trumpets of a gray-metallic-like color, which most likely represents the color of untarnished silver. The fact that out of eleven Bible illustrations, only two depict trumpets (18%) made only of silver calls for an explanation. The illustrations in both the Perpignan Bible and the Copenhagen II Bible with silver-only trumpets feature conspicuous eschatological texts surrounding them and, in that, are also different from all the other Bible illustrations I surveyed in this study²⁴.

^{21.} See: Martínez, Jota: Instrumentarium musical alfonsi, Documentación, estudio, reconstrucción y praxis de los instrumentos musicales representados en la obra de Alfonso X. Spain, La Imprenta CG, 2021, pp. 106-107.

^{22.} Temple Implements, Perpignan Bible, fol. 12v-13r.

^{23.} Temple Implements, The Copenhagen II Bible, 1301, Copenhagen, Kongelige Bibliotek, cod. Hebr. II, Roussillon (?), fol. 12r.

^{24.} In the Parma Bible, the text written in large letters that surrounds the illustration is based principally on Proverbs and is not eschatological in nature, but the text in micrography (which is harder to read owing to its tiny size) on the two sides of the main surrounding text does have eschatological import.

SILVER AND GOLD TRUMPETS AND GOLD-ONLY TRUMPETS

This group features silver trumpets where some parts are in gold and trumpets that are all gold or gilded. It ignores Maimonides's suggestion that the biblical trumpets did not feature any metals other than silver. As I noted above, the fact that out of the eleven Bible illustrations examined in this study, nine (82%) are not made only of silver, according to Maimonides, demands an explanation.

The nine Bibles in this group are the Duke of Sussex Bible (Catalonia, second half of the fourteenth century)²⁵, the Harley Bible (Catalonia, first half of the fourteenth century)²⁶, the Bible in the Palatine Library (Catalonia, first half of the fourteenth century)²⁷, the Parma Toledo Bible (Toledo, 1277) and the Foa Bible (Catalonia, second half of the fourteenth century), the King's Bible (Solsona, 1384; Figure 4)²⁸, the T 3.8 Bible from the Estense Library in Modena (Catalonia or Roussillon, first quarter of the fourteenth century)²⁹, the M 8.4 Bible, also from the Estense Library (Catalonia or Roussillon, first quarter of the fourteenth century)³⁰, and the First Kennicott Bible (La Coruña, 1476)³¹.

In the Parma Toledo Bible, the earliest of the Iberian Hebrew illuminated Bibles, the trumpets are of tarnished silver but with some gold parts. However, the inscription near them reads, «The two silver trumpets» (based on God's instruction to Moses in Numbers 10:2), and the caption for the ram's horn is, «*shofar teruah*» as it is played together with the trumpets on Rosh HaShanah, a holiday that is called *«yom teruah»* (Leviticus 29:1).

One of the texts surrounding the Parma Toledo Bible, which is in micrography, has eschatological import, yet in the later Foa Bible, the King's Bible, Estense M.8.4, and Estense T.3.8, the texts surrounding the illustrations are not eschatological. An image of the Mount of Olives that has been interpreted as having eschatological import is not included in the early Parma Toledo Bible, but does appear in the later Foa Bible, the Duke of Sussex Bible, the Harley Bible, the Palatine Library Bible, and the First Kennicott Bible.

The Foa Bible features two rams' horns, rather than one. The First Kennicott Bible also shows two rams' horns, one below the other, at about the same height on the page as the adjacent pair of trumpets³². The fact that there are two rams'

^{25.} Temple Implements, Duke of Sussex Bible, British Library, second half of the fourteenth century, London, MS Add. 15250, Catalonia, fol. 4r, accessed January 1, 2017: http://www.bl.uk/catalogues/illuminatedmanuscripts/record.asp?MSID=10216.

^{26.} Temple Implements, Bible, British Library, first half of the fourteenth century, London, MS Harley 1528, Catalonia, fol. 8r, accessed January 1, 2017: http://www.bl.uk/catalogues/illuminatedmanuscripts/record.asp?MSID=18805.

^{27.} Temple Implements, Bible, Biblioteca Palatina, first half of the fourteenth century, Parma, MS Parm 2810, Catalonia, fol. 7v. See: Richler, Benjamin and Beit-Arié, Malachi: *Hebrew Manuscripts in the Biblioteca Palatina in Parma*, Catalogue. Jerusalem, Hebrew University of Jerusalem, Jewish National and University Library, 2001, p. 4.

^{28.} Temple Implements, King's Bible, fol. 4r.

^{29.} Temple Implements, Biblioteca Estense, Modena, MS T. 3.8., fol. 26.

^{30.} Temple Implements, Biblioteca Estense, MS M. 8.4, fol. 10r.

^{31.} Temple Implements, First Kennicott Bible, fol. 121r.

^{32.} Temple Implements, First Kennicott Bible, fol. 121r.

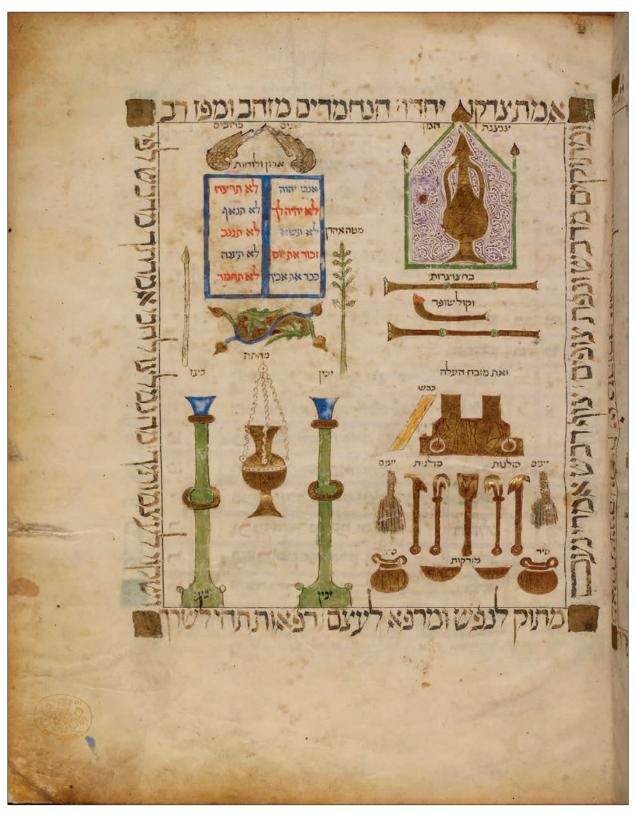


figure 4. The king's bible: temple implements, fol. 4r. London, British Library, Kings MS 1 $\,$

horns here is probably not due to symmetry as in the Foa Bible³³ but rather as the result of a more general recurring characteristic feature of two identical adjacent implements that can be found in this illustration.

The unique inscription adjacent to the trumpet in the King's Bible reads, «With trumpets and the sound of the horn», quoted from Psalm 98:6, which speaks of playing before God the King «With trumpets and the sound of the horn shout ye before the King, the LORD»³⁴. The verse refers to the rejoicing at the End of Days when, according to Psalm 98:7-9, God will judge the nations of the world³⁵. Thus, this inscription associated with the musical instruments has eschatological significance.

A marginal text that refers to musical instruments in the Estense M 8.4 Bible reads, «And this is the altar that is before the Sanctuary and the gold altar to ascend on and the trumpets of *teruah*». The trumpets of *teruah* in Numbers 31:6 are mentioned in the context of revenge on Israel's enemies, in this case, the Midianites.

THE COLORS, SHAPES, AND DECORATION OF THE MUSICAL INSTRUMENTS IN THE IBERIAN HEBREW BIBLES COMPARED WITH THOSE FEATURES IN TWO MEDIEVAL IBERIAN CHRISTIAN ILLUMINATED MANUSCRIPTS

It is well known that Jews used rams' horns in the Middle Ages³⁶, but there are no extant horns from those years³⁷. Regarding trumpets, there is no evidence of them having been used by Jews in medieval Iberia; moreover we have no knowledge about the Jewish use of trumpets anywhere in the medieval period³⁸.

To determine whether the musical instruments imaged in the Iberian Hebrew Bibles have parallels in medieval Iberian Christian art, I turn to two Christian manuscripts from that period. There is an image of two long trumpets with rings around them in the contemporary Iberian *Cantigas de Santa Maria Codex E*³⁹. The *Cantigas* is a collection of more than 400 songs, some with musical notation, dedicated to the Virgin Mary and dated to the time of King Alfonso X (1221-1284), who ruled over Castile, León, and Galicia. Some scholars ascribe the composition of this collection to Alfonso himself. While that is subject to some debate, the king clearly had some influence on the collection⁴⁰.

^{33.} Ibidem.

^{34.} English translation of the Bible according to JPS 1917 version.

^{35.} Also, according to Maimonides, who suggested that Psalm 98, deals with the End of Days. See Maimonides, Mishneh Torah, Zemanim, Hilchot Shofar ve-Sukkah ve-Lulav, 1:2.

^{36.} Montagu, Jeremy: «Shofar», Grove Music Online. Oxford Music Online, accessed October 8, 2017, http://www.oxfordmusiconline.com/subscriber/article/grove/music/25658.

^{37.} Braun, Joachim: «Biblical Instruments: Shofar», *Grove Music Online. Oxford Music Online*, accessed October 8, 2017, http://www.oxfordmusiconline.com/subscriber/article/grove/music/52983.

^{38.} Montagu, Jeremy: op. cit.

^{39.} Cantigas de Santa Maria (Codex E), Biblioteca de El Escorial, c. 1280-1284, Madrid, B I. 2., Castile and León, https://rbdigital.realbiblioteca.es/s/rbme/item/11338#?c=&m=&s=&cv=&xywh=-1471%2Co%2C6120%2C4425.

^{40.} Sage, Jack: «Alfonso el Sabio»: Grove Music Online. Oxford Music Online, accessed October 10, 2017, http://www.oxfordmusiconline.com/subscriber/article/grove/music/00554.

The writing and illustration of *Cantigas de Santa Maria Codex E* began a few years before 1284 and was completed toward the end of that year⁴¹. All of its forty illustrations, with an additional illustration in the prologue, feature musicians playing various instruments, which is unlike the images in the Iberian Hebrew Bibles, where there are no human figures, so the instruments are obviously not being played.

The illustration for Cantiga 320 has pictures of two men wearing caps sitting together on a golden throne and blowing gold trumpets (Figure 5)⁴². Further, the absence of holes for playing more than one note, as seen in the illustration for Cantiga 320, is typical of the trumpets in the Iberian Hebrew Bibles.



FIGURE 5. CANTIGAS DE SANTA MARIA CODEX E: TRUMPET PLAYERS, CANTIGA 320.El Escorial, MS B.l.2, 286r

There is a small triangular flag showing a rampant lion on a light background and three towers against a dark background on each of the two trumpets in Codex E, which represented Alfonso's kingdom. These flags highlight the difference in function between the trumpets here and those imaged in the Iberian Hebrew Bibles, for in the *Cantigas*, the trumpets are to be played before a king, whereas in the Bibles, they are meant to be played before God.

^{41.} On the dating of this manuscript, see Ferreira, Manuel Pedro: «The Stemma of the Marian Cantigas: Philological and Musical Evidence», *Cantigueiros*, 6 (1994), pp. 71-72.

^{42.} Two Seated Men Blowing Trumpets, Cantigas de Santa Maria (Codex E), Biblioteca de El Escorial, c. 1280-1284, Madrid, MS. I. 2., Castile and León, Poem no. 320.

The shape of the trumpets in the Iberian Hebrew Bibles might have been influenced by Islamic or Christian medieval instruments⁴³. Nevertheless, the fact that the number of trumpets being played in Codex E (i.e., two) is the same as their number in the Bibles is probably coincidental, as two musicians are depicted playing various instruments in nearly all the *Cantigas Codex E* illustrations.

From an organological point of view, the trumpets in the medieval Iberian Hebrew illustrations are similar to contemporary Christian Iberian instruments (such as those in Cantiga 320).

Textual evidence from the time of Alfonso X and later suggests that trumpets like those depicted here were usually played in pairs (or in an even number) of instruments. Recently, a modern reconstruction was created based on medieval trumpets that were discovered in England and France. Their sound has been described as fairly bright and straight, with great impact, without being too loud but with a certain sweetness⁴⁴.



FIGURE 6. CANTIGAS DE SANTA MARIA CODEX E: TRUMPET PLAYERS (DETAIL), CANTIGA 320. El Escorial, MS B.I.2, 286r

Regarding the inscription on the strip surrounding the bells of the instruments in Cantiga 320, I suggest, for the first time ever here, that some of the letters might be Hebrew and that they might actually spell out a word (Figure 6).

On the first trumpet, it is written: [מ]לחמ[ח]

And on the other: [משת[ה]

^{43.} Bowles, Edmund E., «Iconography as a Tool for Examining the Loud Consort in the Fifteenth Century», Journal of the American Musical Instrument Society 3 (1977), p. 104, fn. 11.

^{44.} See the words of Javier Martos (2021) quoted by Martinez, Jota: op. cit., p. 105. It should be kept in mind that the reconstruction of the medieval trumpets was based on instruments that were not found in Iberia.

^{45.} It seems to me that the inscription here was most likely done by someone who was not a native Hebrewspeaker, which might account for the somewhat inexact shapes of some of the letters here. We should also remember that most likely the script here is physically tiny and so it was possibly hard for the illustrator to be exact here. Also, I am less certain as to the identification of the word (משתה) inscribed on the second trumpet. Perhaps this identification of the second inscription and its letters (including one of the mems (ממ)) should be reexamined by future scholars.

I suggest that the letters that are uppermost or lowermost in the inscription include unintelligible letters because in those places the shape of the conical bell is curved, and there, the illustrator could not see reliably or decipher the exact letters, which could explain the strange letters-signs on those parts of the conical bells.

which suggests two of their functions by Alfonso X and other rulers: war and celebrations (feasts)⁴⁶. The idea of using the trumpets in war links the instruments in Codex E, which are adorned with the flags of Alfonso's kingdom, to those that Moses created at God's command: «For the trumpets of Moses were said to serve also in war (Num. 10:9)». Thus, I suggest that the Cantigas feature an ancient Jewish musical tradition described in the Hebrew Bible text.

Further, from the organological perspective, the ram's horn that appears in the Iberian Hebrew Bibles has a parallel in the *Cantigas de Santa Maria Codex E* (FIGURE 7, Cantiga 270). However, it is likely that the two instruments depicted in in Codex E are olifants, which resemble the Jewish ram's horns in shape and color but are significantly larger⁴⁷. Olifants were obviously made of costlier and rarer materials than the medieval Jewish ram's horns and, therefore, were most likely more appropriate to be played for a king. Olifants were used in the Middle Ages for signaling in war, in a way similar to the use of the ancient ram's horn in the Bible (Num. 10:2-10), for example, as described in the *Song of Roland* or in accounts of their use in Fife in modern-day Scotland⁴⁸. There are two olifants in Codex E, which is unlike the usual representations in most of the Iberian Hebrew Bibles, which feature only one ram's horn. This might be because most of the Codex E illustrations image two musicians with their instruments.

Again, from organological considerations, the rams' horns in some of the Iberian Bibles manuscript illustrations shaped differently than those depicted in ancient Jewish art and are as well different from the ram's horns in use today. For example, in some medieval depictions, they seem to have enlarged mouth-pieces. This might be because in the tenth century, a ram's horn, like Christian horns at times, was constructed with an enlarged mouthpiece made of the same material⁴⁹. See, for example, the ram's horn in the Perpignan Bible and in medieval Ashkenaz⁵⁰, which was also the way the olifants in Codex E were depicted.

We cannot know at this time how the enlarged mouthpiece influenced the tone of the Jewish ram's horn as the illustrations do not give us any information as to their shape and what was inside those mouthpieces. As for the tones produced by the rams' horns, as far as we know, they were limited to a fundamental sound and possibly some harmonic notes, depending on the position of the blower's lips and the dexterity of the player⁵¹.

^{46.} For textual sources suggesting that medieval trumpets were used for exactly such purposes, see: Martínez, Jota: op. cit., p. 103. Visual sources on the use of trumpets in war can also be found in Martinez, Jota: op. cit., pp. 106-107.

^{47.} Idem, p. 108.

^{48. «}Musical Horn; Oliphant" British Museum, accessed May 20, 2022, https://www.britishmuseum.org/collection/object/H_1979-0701-1.

^{49.} Martinez, Jota: op. cit., pp. 108-109. The players of the olifants in Codex E have moustaches, but the significance of these is not clear.

^{50.} See Avraham's Ashkenazi Mahzor, Modean, Estense Library, Alpha W.8.5 (Or. 81), fol. 126v.

^{51.} Martinez, Jota: *op. cit.*, p. 110.



FIGURE 7. CANTIGAS DE SANTA MARIA, CODEX E: HORN PLAYERS, CANTIGA 270. El Escorial, MS B.l.2, 243V

Peter Comestor's *Historia Scholastica* is another medieval Christian Iberian manuscript that features an illustration of trumpets with a ram's horn (Figure 8)⁵². It also includes implements similar in shape to those in the Iberian Hebrew Bibles. In the illustration from left to right we see the menorah, the showbread table, the Ark of Covenant, the veil, the trumpets with a ram's horn, and the sacrificial altar (with a ram for sacrifice on top, most likely referring to Jesus as Agnus Dei).

It has been suggested that Comestor used the Temple images but figured them according to St. Paul's Christian interpretation, and might have depicted Jesus as the Agnus Dei, implying that his sacrifice replaced the sacrifices of animals in the Jewish Temple⁵³.

^{52.} Comestor, Peter: *Historia Scholastica*, Madrid, Biblioteca Nacional, Reservado 199 (1300), accessed March 1, 2022, http://bdh-rd.bne.es/viewer.vm?id=0000015395&page=15.

^{53.} Frojmovic, following Nordström, contends that the image here is according to Paul, who suggested the jar of Manna and Aaron's rod were inside the Ark of the Covenant. Frojmovic, Eva: *op. cit.*, pp. 122-124; Nordström, Carl-Otto: «The Temple Miniatures in the Peter Comestor Manuscript in Madrid (Bibl. Nac., Cod. Res. 199)», in *Horea Saederblomianae*, 6 (1964), pp. 54-81.

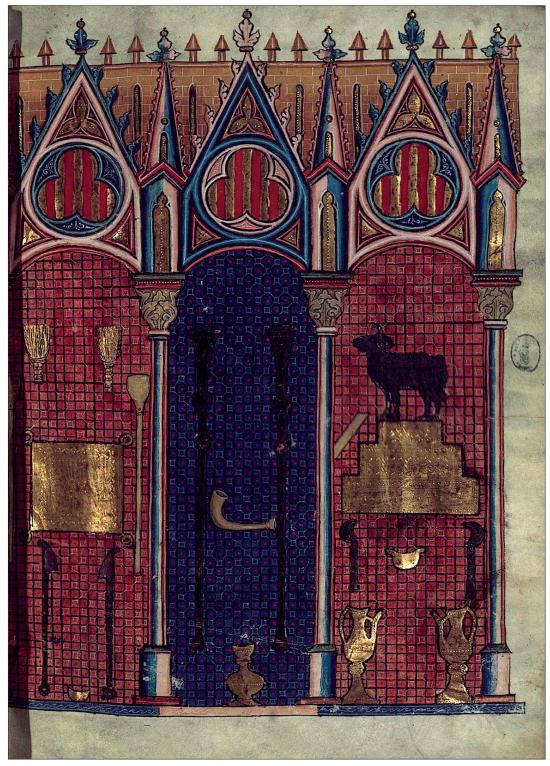


figure 8. peter comestor's *historia scholastica*: temple implements. Madrid, Biblioteca Nacional de España, Reservado 199, 15

TRUMPETS AND RAMS' HORNS TOGETHER IN THE IBERIAN HEBREW BIBLES, ACCORDING TO JEWISH SOURCES

Turning from the issue of colors to the choice of implements, we observe that the relevant illustrations in all eleven Iberian Hebrew Bible surveyed in this study feature two trumpets and a ram's horn (or horns). In the Mishnah (Rosh Hashana 3:3)⁵⁴, trumpets and a ram's horn are said to have been played together in the Temple during Rosh Hashanah, but that is mentioned only once in the Bible in Psalm 98:6 and is quoted directly in only one of the Iberian Hebrew Bible illustration texts. The Talmud notes that when the Temple still stood, trumpets and the shofar were not played together outside its precincts⁵⁵. Further, the Babylonian Talmud notes that after the Temple was destroyed, Jews stopped playing trumpets and used only the ram's horn⁵⁶. The reason that Jews did not play the trumpets in the Middle Ages is explained, or excused, by Maimonides, following the Talmud, which suggests that Jews were not allowed to play the trumpets outside the Temple (Maimonides, Mishneh Torah, Hilchot Shofar Ve-Sukkah Ve-Lulay, 1:2).

The blowing of just ram's horn without the trumpets on Rosh Hashanah, specifically in the Middle Ages, is reflected in Ashkenazi illustrations as having a magical function and force to ward off evil (Satan)⁵⁷ at that time of the year.

There are other medieval exegetical traditions that counter the suggestions of the Talmud and Maimonides, saying that the trumpets and ram's horn were played together on Rosh Hashanah in the Temple. For example, in both *Sifri Zutta Numbers* 10:10 and *Yalkut Shimoni* (Torah, Beha'alotcha), we read that the trumpets alone were played on Rosh Hashanah⁵⁸. Thus, we can assume that the depictions of the ram's horn together with the trumpets among the Temple implements in the Iberian Hebrew Bibles are in accord with the opinion in the Mishnah rather than the later contrary opinions.

In light of the above conclusion, it seems that displaying the Temple's trumpets and ram's horn together here, which is a unique feature of the Iberian Hebrew Bibles, at least those dated to the Middle Ages, demands an explanation. Also demanding an explanation is the golden, or partially golden, color of the trumpets since this contradicts the Mishnah (Rosh Hashanah 3:3) and Maimonides, where we read that the trumpets had to be made only in silver (Maimonides, Mishneh Torah, Hilchot Kley Hamikdash Veha'ovdin Bo 3:5). Strangely enough, these two unique features have not been dealt with in the scholarly literature.

^{54.} And later in the Babylonian Talmud, Rosh HaShanah, 27:1f.

^{55.} Babylonian Talmud, Rosh HaShanah, 27:1f

^{56.} Babylonian Talmud, Arakhin, 3:2.

^{57.} Rodov, Ilia: «Dragons: A Symbol of Evil in Synagogue Decoration?» Ars Judaica, 1 (2005), pp. 70-71.

^{58.} Weiss, Zeev and Netzer, Ehud: *Promise and Redemption: A Synagogue Mosaic from Sepphoris (Havtahah ve-geulah: psefas beit-ha-kneset me-tzipori)*. Jerusalem, Israel Museum, 1996, p. 22 (in Hebrew).

EXPLANATION OF THE IBERIAN TEMPLE ILLUSTRATIONS' UNIQUE FEATURES

The above-mentioned unique features of the musical instruments in the Iberian Hebrew Bible illustrations might be explained in connection to Jewish medieval eschatological perceptions.

Most likely, the main reason for depicting the trumpets in gold was the notion of a *hiddur mitzvah*, the beautification of a mitzvah. Such beautification could have been a way to suggest that although the Bible says the Temple implements were made from cheaper metals, those for the future Temple at the End of Days will be made of gold or will, at least, be gilded. For example, such a beautification of a mitzvah is described by Maimonides in connection with the building of the future Temple. In Maimonides's *Mishneh Torah*, it is written: «And it is a mitzvah, of the best, to fortify the building... and it is glorified and beautified according to its capability: if possible, they cover it all with gold, and to make more in doing is a mitzvah»⁵⁹. Similarly, in the King's Bible, for example, the fire pans (*mizrakot*) are of gold, as suggested by Maimonides as beautification of a mitzvah in gold.

Further, it seems that the explanation for the unique features of the musical instruments in the Iberian Hebrew Bible illustrations can also be found in the dialogue between the Jews and their Christian kings in medieval Christian Iberia. Looking at the text of the *Cantigas de Santa Maria Codex E*, which includes music, we find stories about evil Jews who attacked the Christian religion⁶⁰. Specifically in Cantiga 6, a Jews kills a Christian boy who sings beautifully «Gáüde Virgo María», perhaps because he objects to the content of his songs, or he is jealousy of the beautiful music being sung, a relevant theme since the cantigas contain a lot of musical notated pieces. The reason for such jealousy is perhaps in accordance with the medieval Christian accusation of Jews as possessing no music but rather noise⁶¹.

The depiction of the trumpets and horn together in the Iberian Hebrew Bible illustrations could conceivably be perceived as a response to such harsh allegations ⁶², since the trumpets and the ram's horn together suggest that medieval Jews continued one custom of the ancient Jewish Temple (i.e., the playing of the ram's horn) while the Christian kings continued another (the playing of trumpets). Furthermore, as the appearance of the trumpets and horn together in the Temple is based on Psalm 98, which suggests playing before God as one plays before a king, it might have been appropriate in light of this psalm for medieval kings to have two trumpets played before them as it was said that the Jews played before God.

^{59.} Maimonides, Mishneh Torah, Avodah, Hilchot Beit Ha-Bechira 1:11 (the author's translation).

^{60.} Offenberg, Sara: «Isaac Ibn Sahula and King Alfonso X: Possible Connections between the book *Meshal Haqadmoni* and the *Cántigas de Santa Maria*», *Arts and Social Sciences Journal*, 5:2 (2014), pp. 1-7. Patton, Pamela A.: *Art of Estrangement: Redefining Jews in Reconquest Spain*. University Park, PA, Penn State University Press, 2012, pp. 143-145.

^{61.} Patton, Pamela A.: Art of Estrangement, pp. 155-157. HaCohen, Ruth: The Music Libel Against the Jews. New Haven, Yale University Press, 2013, 532 pp.

^{62.} It has been suggested that also the Jewish Iberian book *Meshal Haqadmoni* (Proverbs of the Ancients) was written to counter similar allegations about Jews in the Cantigas. See Offenberg, Sara: *op. cit.*, pp. 1-7.

Indeed, in Codex E, we find an illustration of two golden trumpets being played before Alfonso X; we can be certain of that as both have his flag attached. I suggest that it is conceivable that the trumpets depicted in the Iberian Hebrew Bible illustrations are in gold, or at least gilded, because Alfonso X owned two such golden or gilded horns and had them played before him and most likely before his descendants and other Iberian medieval kings. There are several possible reasons for the fact that we find no such depictions of golden or gilded trumpets alongside ram's horns in Ashkenazi manuscript illustrations. For example, Jews in Ashkenaz might have had a less positive attitude toward musical instruments⁶³; perhaps they did not think that pointing to shared musical roots with their rulers had any chance of ameliorating their attitude toward Jews; maybe they wanted an artistic style that would be different from that of the Iberian Jews; among others. The reasons for this difference between Iberian medieval Jewish art and Ashkenazi Jewish art of that time should perhaps be analyzed in future studies.

CONCLUSIONS

I have suggested that the depictions of trumpets in the Iberian Hebrew Bibles can be divided into two general groups based on their colors, one characterized by the illustrations with only silver trumpets and the other of trumpets with some, or all, gold color.

I have further demonstrated that as far as their shape, color, and decoration are concerned, the musical instruments portrayed in the Iberian Hebrew Bibles are like those in the *Cantigas de Santa Maria Codex E*, a major Christian manuscript from the same time and place as well as those in the contemporaneous Iberian manuscript of Peter Comestor's *Historia Scholastica*.

Regarding the import of both the musical and nonmusical implements depicted in the illustrations; it has been suggested that the trumpets and rams' horns have a possible eschatological meaning, based on the eschatological texts surrounding some of the illustrations, as well as the depictions of the Mount of Olives in others.

The trumpets and ram's horn appear in proximity in the Iberian Hebrew bibles. I suggest that their appearance together is a unique feature in Jewish art. Also noteworthy is the fact that most of the trumpets have some gold or are entirely of gold or are gilded whereas the Temple's and Tabernacle's trumpets were specifically said to be made of silver.

A possible explanation of these two features is that Iberian Jews attempted to associate their music with that of the court of King Alfonso X and his heirs (as well as other Iberian medieval kings) and the illustrations suggest that they and the king had shared musical roots. It is also evident from the trumpets depicted in Codex E that Alfonso X had connected himself and his royal linage with the

^{63.} Shaked, Guy: «The Jewish Attitude towards the Playing of Music in the Tripartite Mahzor», Cogent Arts & Humanities, 7:1 (2020), DOI: https://10.1080/23311983.2020.1740539.

Temple (and Tabernacle) trumpets because, on the one hand, they have Alfonso X's flags hanging from them thus connecting them to his court, while, on the other hand, Hebrew inscription(s) connect them to the ancient biblical functions of the trumpets. The fact that Alfonso X's royal trumpets in the Codex E are gold might explain the use of gold for most of the trumpets in the Iberian Bible illustrations. As to why the trumpets and rams' horns appear together only in Iberian Jewish art and not elsewhere although there may have been kings who had trumpets played before them elsewhere in medieval Europe, remains, for now, an open question for further research to try and solve.

REFERENCES

- Bowles, Edmund E.: «Iconography as a Tool for Examining the Loud Consort in the Fifteenth Century», *Journal of the American Musical Instrument Society* 3 (1977), pp. 100-121.
- Braun, Joachim: «Biblical Instruments: Shofar», *Grove Music Online. Oxford Music Online*, accessed October 8, 2017, http://www.oxfordmusiconline.com/subscriber/article/grove/music/52983.
- Ferreira, Manuel Pedro: «The Stemma of the Marian Cantigas: Philological and Musical Evidence», *Cantigueiros*, 6 (1994), pp. 58-98.
- Frojmovic, Eva: «Messianic Politics in Re-Christianized Spain: Images of the Sanctuary in Hebrew Bible Manuscripts», in *Imagining the Self, Imagining the Other: Visual Representation and Jewish-Christian Dynamics in the Middle Ages and Early Modern Period*, ed. Eva Frojmovic. Leiden, Brill, 2002, pp. 111-117.
- Grossberg, Asher: «Zecher la-mikdash be-batey kneset kdumim», *Tchumin*, 15 (1994/1995) pp. 461-488.
- Gutmann, Joseph: «The Messianic Temple in Spanish Medieval Hebrew Manuscripts», in *The Temple of Solomon, Archaeological Fact and Medieval Tradition in Christian, Islamic and Jewish Art*, ed. Joseph Gutmann. Missoula, MN, Scholars Press, 1976, pp. 127-128.
- Gutmann, Joseph: «When the Kingdom Comes: Messianic Themes in Medieval Jewish Art», *Art Journal*, 27/2 (1967/1968), pp. 168-175.
- HaCohen, Ruth: *The Music Libel Against the Jews.* New Haven, Yale University Press, 2013. Hüttenmeister, Gil: «Synagogue and Beth Ha-Midrash and Their Relationship» («Beit ha-kneset ve-beit ha-midrash veha-zika benehem»). *Cathedra*, 18 (1981), pp. 37-49.
- Kogman-Appel, Katrin, «Hebrew Manuscript Painting in Late Medieval Spain: Signs of a Culture in Transition», *The Art Bulletin*, 84/2 (June 2002), pp. 246-272.
- Kogman-Appel, Katrin: Jewish Book Art Between Islam and Christianity: The Decoration of Hebrew Bibles in Medieval Spain. Leiden, Brill, 2004.
- Kogman-Appel, Katrin: «The Messianic Sanctuary in Late Fifteenth-Century Sepharad: Isaac de Braga's Bible and the Reception of Traditional Temple Imagery», *in Between Jerusalem and Europe*. Leiden, Brill, 2015, pp. 233-254.
- Maimonides: Mishneh Torah hu ha-yad ha-hazaqa lerabbenu Moshe ben Maimon: Sefer Hashoftim: Hilkhot melakhim umilhamot. Jerusalem, Mercaz Harav, 1957.
- Martinez, Jota: *Instrumentarium musical alfonsi, Documentación, estudio, reconstrucción y praxis de los instrumentos musicales representados en la obra de Alfonso X.* Spain, La Imprenta CG, 2021.
- Montagu, Jeremy: «Shofar», *Grove Music Online*. *Oxford Music Online*, accessed October 8, 2017, http://www.oxfordmusiconline.com/subscriber/article/grove/music/25658.
- Narkiss, Bezalel: «Pagan, Christian, and Jewish Elements in the Art of Ancient Synagogues», in *The Synagogue in Late Antiquity*. Philadelphia: American Schools of Oriental Research, 1987, pp. 183-188.
- Nordström, Carl-Otto: «The Temple Miniatures in the Peter Comestor Manuscript in Madrid (Bibl. Nac., Cod. Res. 199)», *Horea Saederblomianae*, 6 (1964), pp. 54-81.
- Offenberg, Sara: «Isaac Ibn Sahula and King Alfonso X: Possible Connections between the book *Meshal Haqadmoni* and the *Cántigas de Santa Maria*», *Arts and Social Sciences Journal*, 5:2 (2014), pp. 1-7.

- Ovadiah, Asher: Mosaic Art in Ancient Synagogues in Israel from the 4th to the 7th Centuries («Omanut ha-psefas be-batey kneset atikim be-eretz-israel meha-me'a ha-revi'it ad ha-me'a ha-shvi'it»). Tel Aviv, Tel Aviv University Press, 1993.
- Patton, Pamela A.: *Art of Estrangement: Redefining Jews in Reconquest Spain.* University Park, PA, Penn State University Press, 2012.
- Revel-Neher, Elisabeth: *Le témoignage de l'absence: les objets du sanctuaire à Byzance et dans l'art juif du XI^e au XV^e siècles.* Paris, De Boccard, 1998.
- Richler, Benjamin; Beit-Arié, Malachi: *Hebrew Manuscripts in the Biblioteca Palatina in Parma*, Catalogue. Jerusalem, Hebrew University of Jerusalem, Jewish National and University Library, 2001.
- Rodov, Ilia: «Dragons: A Symbol of Evil in Synagogue Decoration?» *Ars Judaica*, 1 (2005), pp. 63-84.
- Sage, Jack: «Alfonso el Sabio», *Grove Music Online*. *Oxford Music Online*, accessed October 10, 2017, http://www.oxfordmusiconline.com/subscriber/article/grove/music/00554.
- Shaked, Guy: «The Jewish Attitude towards the Playing of Music in the Tripartite Mahzor», Cogent Arts & Humanities, 7:1 (2020), DOI: https://io.io80/23311983.2020.1740539.
- Weiss, Zeev and Netzer, Ehud: *Promise and Redemption: A Synagogue Mosaic from Sepphoris* (*Havtahah ve-geulah: psefas beit-ha-kneset me-tzipori*). Jerusalem, Israel Museum, 1996.