

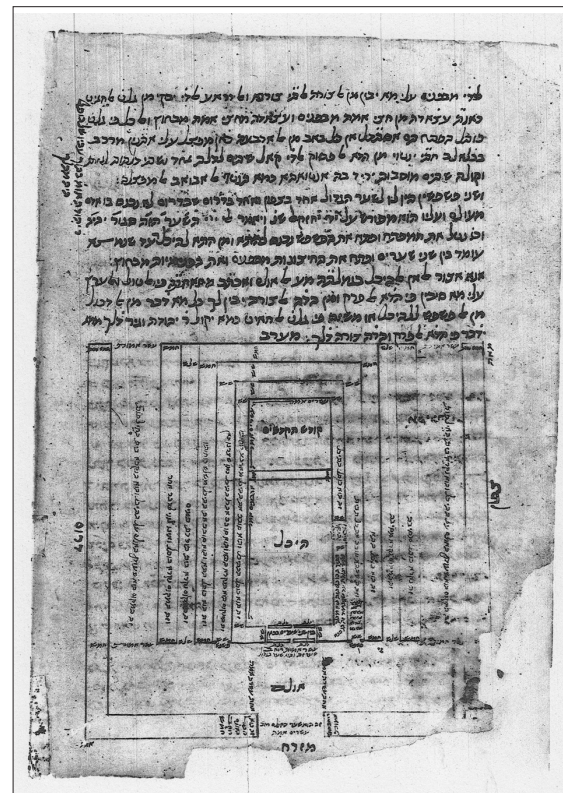
THE MODERN-TIME THEORETICAL RECONSTRUCTIONS OF THE MISHNAIC TEMPLE AS A SOURCE FOR SYNAGOGUE ARCHITECTURE

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The incarnations and intelligible shapes of the Temple of Jerusalem recurrently fascinate believers, scholars, artists, and architects. The history of the Temple's verbal and pictorial representations, which were produced after its destruction in 70 CE, results from the work of an interpretative thought, rather than archaeological evidence. The present article discusses an episode in this history: a remarkable attention of Jewish and Christian scholarship to the shape, which acquired the Temple in the times of King Herod, and an interest to this matter that arose during the seventeenth century. The article displays this essentially religious and theological movement also in architectural terms, putting it side by side with the development in synagogue architecture of Eastern-Central Europe in the late seventeenth and eighteenth centuries.

The shape of the Herodian Temple is known mainly from its description in the Mishnaic tractate Middot (Measurements), redacted about 200–220 CE. It was Maimonides who gave a graphical interpretation of the Temple's shape as

described in this tractate. In his commentary from ca. 1168, Maimonides interpreted the overall shape of the Temple as inscribed within a perfect square measuring one hundred by one hundred cubits (Fig. 1).¹ This graphical reconstruction was not questioned until the seventeenth century: the

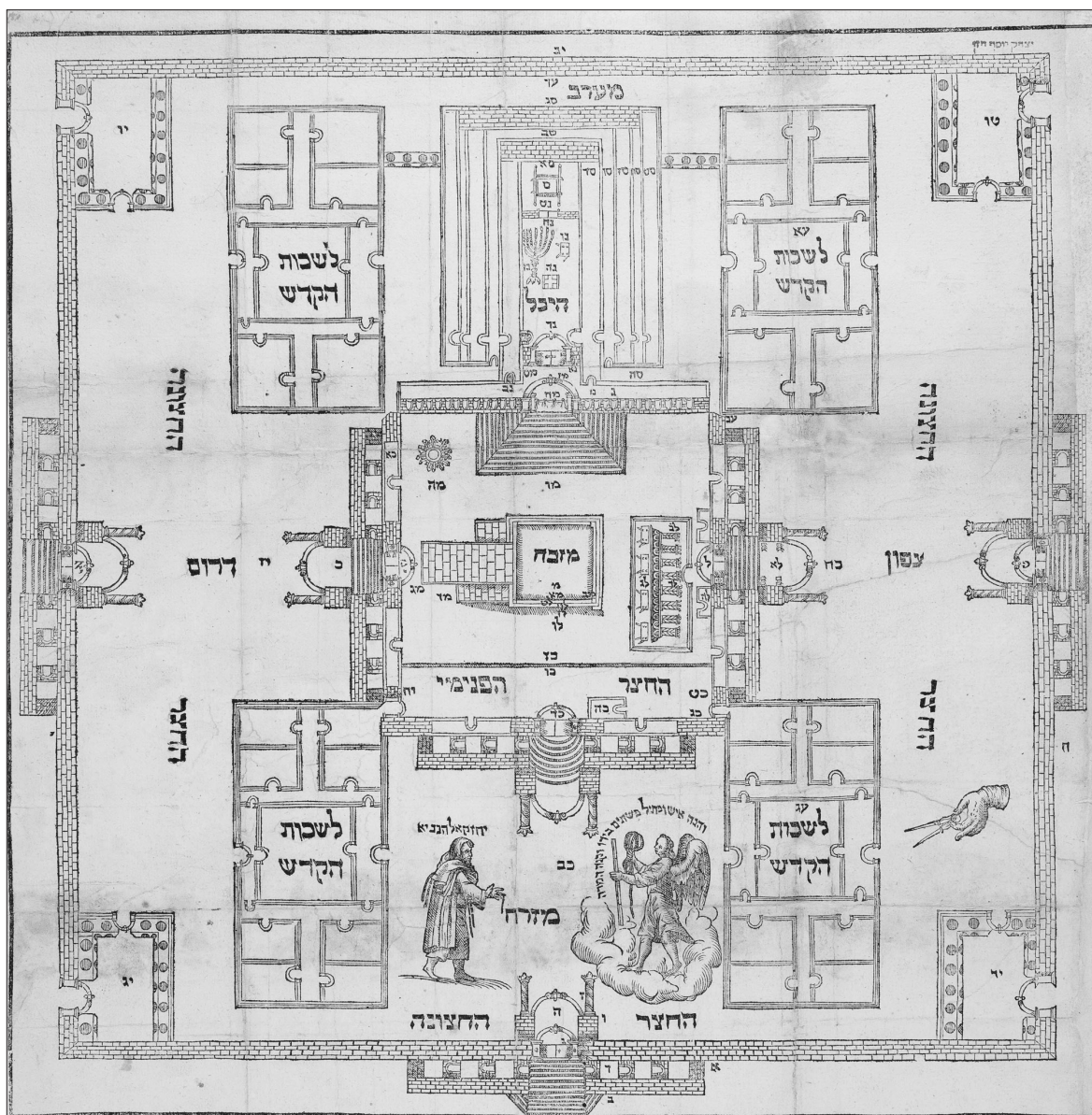


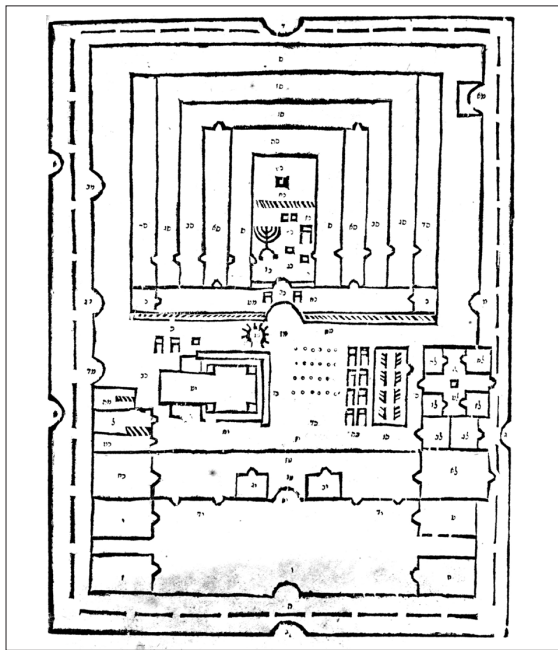
¹ Maimonides, *Commentary on Mishnah: Nezikin and Kodashim*, plan of the Temple, 1167/68. Oxford, Bodleian Library, Pococke 295, fol. 293 verso (Reproduced from *Maimonidis Commentarius in Mischnam*, Solomon D. Sassoon ed., vol. 3 (Hafniae, 1966), p. 766).

known manuscript copies of Maimonides's commentary basically did not deviate from the original.² Neither does a printed plan of the Temple, published by Obadiah of Bertinoro in 1558, diverge from that source.³

A new approach towards the reconstruction of the Herodian Temple appeared in a work by R. Yom-Tov Lipmann Heller (ca. 1579–1654), an outstanding pupil of the Maharal of Prague. Heller's treatise *Tsurat beit ha-mikdash*, published in Prague in 1602,⁴ discussed the shape of the Temple as presented in Ezekiel's vision and in Middot (Fig. 2).

2 Yom-Tov Lipmann Heller, *Tsurat beit ha-mikdash* (Prague, 1602), folded plate (Gross Family Collection).





3 Yom-Tov Lipmann Heller, *Mishnayot seder kodashim* (Prague, 1616), plate after page 103.

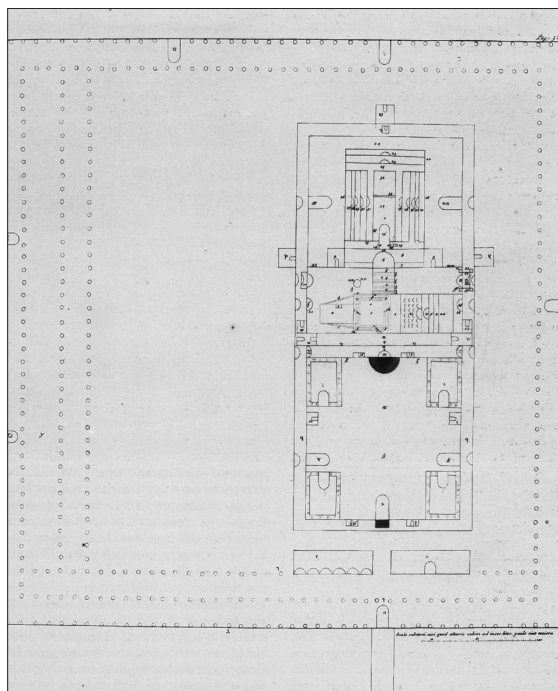
In his preface, Heller argued that the study of the Temple's shape and measurements was a divine order given to the prophet Ezekiel, and that this knowledge would be indispensable in the case of a sudden advent of the Messiah and the lack of a capable builder. In Heller's opinion, those who preserve the model of the Temple in their mind will deserve resurrection in the latter days. Heller explained that the builders of the Second Temple did not deserve eternal redemption, and thus they were not allowed to build the Temple as Ezekiel prophesied. Nevertheless, in his opinion, the Second Temple they built was *a bit* (Heb. *bemiktsat*) similar to Ezekiel's vision. He argued that three parts were similar: the external courtyard with its courts of incense, the internal courtyard including the altar, and the Temple proper with its gates' wickets. Heller argued that there were even more similarities between the Second Temple as described in Middot on one side, and the prophetic, eschatological Temple, on the other.⁵

In the course of his interpretation, Heller endeavored to clarify vague passages in Middot. For instance, he understood the description of the Temple's front in a manner differing from Maimonides's concept, and better fitting the Mishnaic text, which reads:

The porch projected fifteen cubits at the north, and fifteen cubits at the south. It was called the place of the room of the slaughter-knives (*beit halifot*), for there did they put away the knives. The sanctuary was narrow behind and wide in front, and like a lion – since it is said, Ho, Ariel, Ariel, the city where David encamped (Is. 29:1) – just as a lion is narrow behind and broad in front, so the sanctuary is narrow behind and broad in front [Middot 4:7].

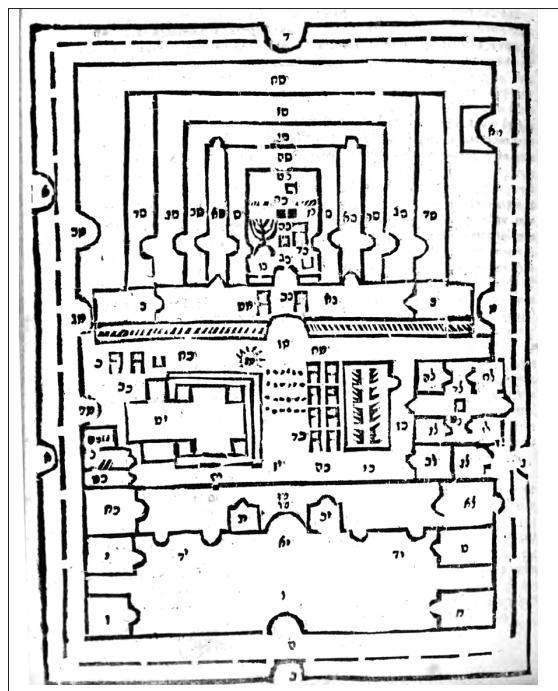
Maimonides's interpretation was not consistent with this text: in his detailed reconstruction the knives rooms were stretched along the sanctuary and the entire Temple was inscribed within a square, without any northern or southern projections (Fig. 1),⁶ while his overall scheme shows a trapeze footprint with a narrower western front and broader eastern one.⁷ Alternatively to Maimonides, Heller supplies the porch with rectangular side projections (Fig. 2), and explains them as being the knives rooms, a textual component of Middot but not of Ezekiel's vision. The resulting reconstruction by Heller represents the "once and future Temple," rather than an accurate reconstruction of either Ezekiel's Temple or the Mishnaic one.

In 1616, as a part of his three-volume *Tsafot Yom Tov*, Heller published his graphical reconstruction of the Mishnaic Temple,⁸ free of references to Ezekiel's vision (Fig. 3). This time he partially followed the scheme proposed by Maimonides, and inscribed the Temple, including the corner rooms of the slaughter-knives, inside a perfect square.



4 Constantine L'Empereur, *Talmudis Babylonici Codex Middoth* (Leiden, 1630), imprint Amsterdam, 1702, p. 323.

In 1629, Heller suffered a great personal misfortune. He was jailed in Vienna, accused of insulting Christianity, sentenced to an enormous monetary fine, and, in 1631, he was exiled from the Holy Roman Empire. He spent years of hardship in the Polish-Lithuanian Commonwealth, serving as a rabbi in Podolian Nemyriv, then in Volhynian Volodymyr, until his inauguration as chief rabbi of Cracow in 1644.⁹ That same year he published a new edition of his commentary to Middot.¹⁰ However, an important event in scholarly interpretation of the Mishnaic Temple, which occurred in the year of Heller's imprisonment, demands a digression. In 1630, the first Latin translation of Middot was published in Leiden by a Dutch Hebraist, Constantine L'Empereur de Oppyck (1591–1648).¹¹ In his graphical reconstruction, L'Empereur shows the knives rooms as symmetrical rectangular southern and northern projections of the Temple's front (Fig. 4).



5 Yom-Tov Lipmann Heller, *Mishnayot seder kodashim*, 2nd edition, (Cracow, 1644), p. 206.

It is unknown whether Heller saw the Leiden edition before his publication of 1644 (Fig. 5). Despite all attempts, the book by L'Empereur could not be located in Polish libraries.¹² A comparison of two plans demonstrates that Heller's reconstruction was not a slavish copy from his Christian predecessor (cf. Figs. 4 and 5), but rather an outcome of similar understanding of the Mishnaic text. Related or unrelated to the Leiden publication, the new reconstruction of the Mishnaic Temple by Heller included the knives rooms projecting to the south and north, alluding to the lion's shoulders, and finally breaking with the Maimonidian tradition of interpreting the Temple as an edifice of square footprint.

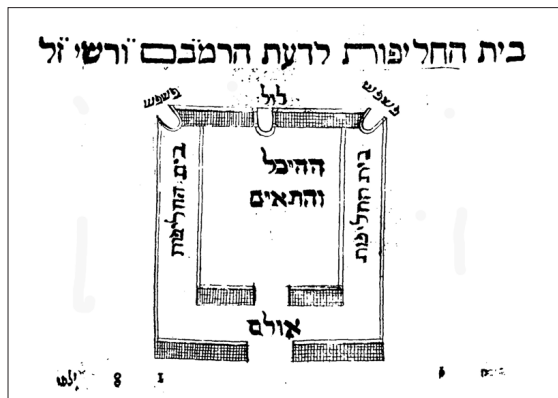
Heller's novel interpretation was accepted in the Jewish world of his day. A compromise version, showing the Temple with a broad front inscribed in a square, was creatively reproduced by the

Dutch Rabbi Jacob Jehuda León Templo in his *Tavnit beichal* in 1650.¹³ In his later, Latin version of 1665, Templo included a reproduction of L'Empereur's drawing, where he only replaced the Latin letters of the legend with Hebrew ones.¹⁴ Towards the end of the seventeenth century, one can trace more interest in Heller's interpretation, particularly in Italy. For instance, it was further developed by Yom-Tov Tzahalon and published in Venice in 1694.¹⁵ That same woodcut was used four years later to illustrate *Darkei Noam* by Mordechai Halevi mi-Mitsraim.¹⁶ In his work of 1696, *Hanukat ha-bayit*, Moses ben Gershom Gentili correctly explained the difference between the earlier, Maimonidian reconstruction of the Mishnaic Temple and the newer one by Heller (Fig. 6): the latter located the knives rooms on either side of the porch, while the former placed them along the sanctuary.¹⁷ In agreement with rabbinical tradition, the new interpretation peacefully coexisted with the previous one: both were contributions to the treasury of Jewish thought and visual experience. However, the novel reconstruction was honored by a folded plate in Gentili's book.¹⁸ In the new edition of *Darkei Noam*, published the next year, Mordechai Halevi mi-Mitsraim followed this novel pattern.¹⁹

Heller's interpretations of the Temple, Messianic and Mishnaic, were disseminated also in the Polish-Lithuanian Commonwealth. The woodcut illustration to the new edition of Heller's *Tsurat beit ha-mikdash* (Fig. 7), published in Hrodna in 1788 and showing the "once and future Temple," loosely followed the copper engraving of Prague edition of 1602.²⁰ However, its clear separation of the knives rooms, which project to the north and south of the porch, reflected a novel approach to the interpretation of Middot. This pattern was followed in other editions in the late eighteenth and early nineteenth centuries.²¹ It was depicted also on ritual objects, like a late eighteenth century Torah shield from Lviv.²² Finally, it appeared as an illustration in the Vilna edition of Babylonian Talmud, in parallel with the older scheme by Maimonides.²³

Meantime, the interpretation of the Temple plan proposed by Constantine L'Empereur became popular in Western Europe; it was adopted and further elaborated there by many Christian scholars. This pattern is traceable through the works of Thomas Fuller,²⁴ Louis Cappel,²⁵ Claude Perrault,²⁶ John Lightfoot,²⁷ Humphrey Prideaux,²⁸ Bernard Lamy,²⁹ Johannes Lund,³⁰ and Johann Lange.³¹ It became available to a broad public, including such practical architects and theoretic-

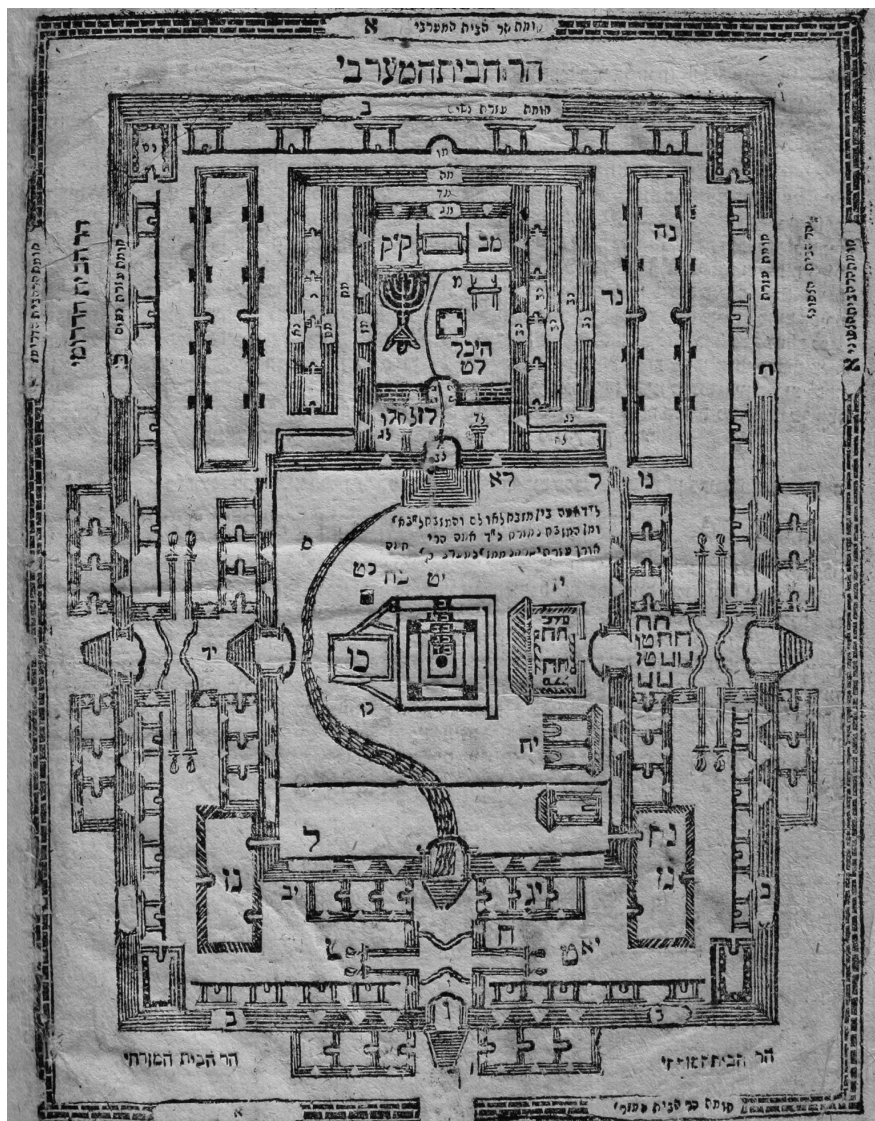
6 Moses ben Gershom Gentili (Hefez), *Hanukat ha-bayit* (Venice, 1696), pp. 29a (left) and 29b (right).



cians as Claude Perrault and Johann Bernhard Fischer von Erlach; the latter in his turn quoted from John Lightfoot.³²

This achievement, traceable through Hebraic studies, theology, and architectural theory throughout the seventeenth and eighteenth centuries, coincided with a manifest development in the synagogue architecture of the Polish-Lithuanian Commonwealth, namely, an upsurge of a novel type of synagogue layout and massing, very

different from that of the previous period. This type departed from the compact mass of the oldest known synagogues, both masonry and wooden. The new synagogues constitute a long series featuring a broadened front flanked by pavilions, built throughout the Polish-Lithuanian Commonwealth, supposedly from the late seventeenth century. These include wooden synagogues in Zabłudów (before 1712, Fig. 8), Gąbin, Pohrebyshe, Voŭpa, Hrodna, Suchowola, Vilkaŭiškis, Nasielsk, Valkininkai, Ovruch, Śniadowo,



7 Yom-Tov Lipmann Heller, *Tsurat beit hamikdash* (Grodno, 1788), drawing by Moshe Ivier, p. 46 (Gross Family Collection).

8 Synagogue in
Zabłudów, before 1712
(Photo: Hermann
Struck, 1916–18, IS
PAN).



Narowla, Pieski, Kosów Podlaski, Aziory, Jurbarakas, Sopoćkinie, Końskie, and Kazhan Haradok, all built or reconstructed during the eighteenth century and mentioned here in a roughly chronological sequence.³³

There is every reason to consider this type of synagogue as an invention originally in wooden construction, and later in its masonry form. Indeed, a later renovation stage of the synagogue in Zabłudów is dated 1712 by an inscription in its interior paintings, while the synagogue in Włodawa (Fig. 9), the oldest known masonry synagogue of that type, was built after 1764.³⁴ The pattern of Włodawa was followed by masonry or partially masonry synagogues in Pavoloch, Krynki, Khmelnyk, Shklov,³⁵ Illintsi, and Volochysk.

In the early twentieth century, the wooden synagogues with corner pavilions on its main front were interpreted by Polish architect and theoretician Kazimierz Mokłowski (1869–1905) as modeled on a Polish wooden manor house, which commonly features pavilions on its four corners.³⁶ This opinion was supported by many scholars.³⁷ However, it was criticized by historian

Ignacy Schiper, who saw only a superficial resemblance between the synagogue and the landlord's manor house.³⁸

At this point, it is reasonable to put forward a suggestion of correlation between the novel graphical reconstructions of the Temple and the novel type of synagogue, and to propose ways to test this hypothesis. To the best of my knowledge, no proved earliest example of a wooden synagogue with a broadened and accentuated front can be pointed out, no author of this architectural concept is known, and no recorded architectural programs are available. Personal attributions are limited to the name of a certain Simcha Weiss, son of Shlomo, named in an oral tradition of the nineteenth century as a Jewish builder from Volhynian Lutsk who “made a plan” for the wooden synagogue with front pavilions in the Masovian town of Nasielsk.³⁹ Beyond this note, the professional background of Simcha Weiss is arcane. The first masonry synagogue of that type, built in Włodawa, was supposedly designed by Paolo Antonio Fontana (1696–1765), an Italian architect working at the court of Prince Sanguszko.⁴⁰ It is known that a Jewish carpenter,



9 Synagogue in Włodawa, 1764–74, believably designed by Paolo Fontana (Photo by Michał Piechotka, 1996).

Berek Josewicz (Dov Ber son of Joseph), worked on a number of edifices, including the roofs of a masonry church of St. Joseph constructed in Iziaslav in 1748–49 and an entire wooden Catholic church in nearby Bilohorodka (1750–51), both designed by Fontana.⁴¹ However, we do not know about Fontana's and Berek's communication on the level of architectural theory, neither about any synagogues built by Berek. The relationship between the series of graphical reconstructions of the Temple and the series of similarly shaped synagogues cannot be traced through professional records because of the scarcity of archival sources.

From the viewpoint of edifices' function, the upper floors of the corner pavilions were convenient for secluded groups of worshipers within the Jewish community: the pavilions' eastern walls, facing towards virtual Jerusalem, were free of any annexes and thus allowed interior placement of the Torah ark. Indeed, the northern pavilion in Zabłudów became a prayer room for the community elders.⁴² The eighteenth-century *pinkas* of the Włodawa community testifies about the northern pavilion as a synagogue of craftsmen and tailors, while the southern pavilion was allotted to the shoemak-

ers.⁴³ Similar rooms were added to the existing synagogues or built from the outset in the eighteenth and nineteenth centuries. For instance, the northwestern annex of the Great Maharsa Synagogue of Ostroh was occupied by the butchers' guild, *Zivhei Tsedek*.⁴⁴ In the Great Synagogue of Vyshnivets, symmetrical side rooms were used by tailors and "various handworkers" respectively.⁴⁵ Using the imagination, one may suggest that the Jewish guilds of butchers and tailors could have poeticized their professions, their instruments and production, and hence allegorized their prayer rooms, by interpreting the Mishnaic word *halifot* as meaning "knives" and "suits." Nevertheless, the number of such guilds occupying lateral rooms of synagogues is too scarce to show statistical correlation between the hypothetically poeticized modern and ancient sacred function.

The post-Holocaust memoirs of the synagogues featuring side pavilions provide limited evidence for signification of this architectural shape in the eyes of survivors. For instance, the pavilions of the wooden synagogue in Pieski were interpreted by the memoirist Rachel Stilerman as Jachin and Boaz, the two bronze pillars standing in



10 Synagogue in Voŭpa,
eighteenth century
(Photo: Szymon Zajczyk,
1930s, IS PAN).

the porch of Solomon's Temple.⁴⁶ Alternatively, the synagogue of Sopoćkinie was compared in 1964 to a pagoda in poetic memoirs by Yitzhak Yehezkeili.⁴⁷ Both interpretations, though genuine documents of living memory, are far removed in time and space from the discussed phenomenon, and can hardly elucidate the meaning of the eighteenth-century shape.

A clue to the meaning of the discussed synagogues is provided by their architectural vocabulary. The two purely decorative pilasters in the gable of the synagogue of Voŭpa (Fig. 10) are conventional representations of Jachin and Boaz;⁴⁸ this interpretation is supported by inscriptions on columns flanking Torah arks in the synagogues of Izabelin and Zelva.⁴⁹ Though Jachin and Boaz are elements of the Temple of Solomon, and are mentioned in 1 Kings 7:21 and in 2 Chronicles 3:17, but not in Ezekiel and Middot, they were shown as parts of the eschatological Temple by Heller.⁵⁰ In Voŭpa, the two pilasters may be read as Jachin and Boaz, as a synecdoche of the Temple, as a part standing for the whole. In this context, the side pavilions may allude to the knives rooms of the Mishnaic Temple, and the "once and future Temple," in

which diverse descriptions were merged by the powerful imagination of R. Yom-Tov Heller.

To conclude, the image of the Herodian Temple, which Jewish and Christian authors innovatively reconstructed throughout the seventeenth and eighteenth centuries, served as a component of the Jewish iconography of the Messianic Temple. This imagery was used for religious study and contemplation, and for decoration of ritual objects. It probably influenced borrowing the shape of a manor house in numerous synagogues featuring broad fronts flanked with pavilions, first wooden and then masonry, built throughout the Commonwealth from the late seventeenth century onward.

- 1 Maimonides, *Commentary on Mishnah: Nezikin and Kodashim*, plan of the Temple. Oxford, Bodleian Library, Pococke 295, fol. 293v. See reproduction in *Maimonides Commentarius in Mishnam, e codicibus Hunt. 117, et Pococke 295 in Bibliotheca Bodleiana Oxoniensi servatis et 72–73 Bibliothecae Sassooniensis Letchworth*, Solomon D. Sassoon ed., vol. 3 (Hafniae, 1966), p. 766.
- 2 See manuscript copies of Maimonides's Commentary on Mishnah in Preussischer Kulturbesitz (1386), Bibliothèque Nationale de France, Hébreu 579, fol. 218 (1460), and National Library in Stockholm, Cod. Or. 1. On these copies see Rachel Wischnitzer, "Maimonides' Drawings of the Temple," in *From Dura to Rembrandt: Studies in the History of Jewish Art* (Jerusalem, 1990), pp. 150–51.
- 3 *Mishnayot mi-seder kodashim* (Mantua, 1558), plate after p. 120.
- 4 Yom-Tov Lipmann Heller, *Tsurat beit ha-mikdash* (Prague, 1602).
- 5 I am grateful to Reuven Kiperwasser for his translation of and commentaries on the preface to *Tsurat beit ha-mikdash*.
- 6 Oxford, Bodleian Library, Pococke 295, fol. 293v.
- 7 Oxford, Bodleian Library, Pococke 295, fol. 294r.
- 8 Yom-Tov Lipmann Heller, *Mishnayot seder kodashim* (Prague, 1616), plate after page 103.
- 9 On Heller's life and work see Joseph Davis, *Yom-Tov Lipman Heller: Portrait of a Seventeenth-Century Rabbi* (Oxford, 2004).
- 10 Yom-Tov Lipmann Heller, *Mishnayot seder kodashim*, 2nd ed. (Kraków, 1644).
- 11 Constantine L'Empereur, *Talmudis Babylonici Codex Middoth* (Leiden, 1630).
- 12 I am profoundly grateful to Dr. Tadeusz Zadronzy for his invaluable help in the search for copies of L'Empereur's book.
- 13 Jacob Jehuda León, *Tavnit heikhal* (Amsterdam, 1650), p. 18a.
- 14 Jacob Jehuda León, *De Templo Hierosolymitano tam priori, quod aedificavit Salomo rex, quam posteriori quod devastavit Vespasianus* (Hemaestad, 1665), an unpaginated broadsheet.
- 15 Yom-Tov Tzahalon, *Sheilot ve-tshuvot Maharitz* (Venice, 1694), reverse of the title page. Imprint in Gross Family Collection, B.822A.
- 16 Mordechai Halevi mi-Mitsraim, *Darkei Noam* (Venice, 1698). Imprint in Gross Family Collection, B.826A.
- 17 Moses ben Gershom Gentili (Hefez), *Ḥanukat ha-bayit* (Venice, 1696), pages 29a and 29b.
- 18 Gentili, *Ḥanukat ha-bayit*, a folded plate, Gross Family Collection, B.799A.
- 19 Mordechai Halevi mi-Mitsraim, *Darkei Noam* (Venice, 1697). Imprint in Gross Family Collection, B.827A.
- 20 Yom-Tov Lipmann Heller, *Tsurat beit ha-mikdash* (Grodno, 1788), drawing by Moshe Ivier, plate after p. 22. Imprint in Gross Family Collection, B.872B.
- 21 See, for instance: Zeev Wolf Altschul, *Zeved tov, perush al ha-binyan Yehezkel* (Shklov, 1793), imprint in Gross Family Collection, B.703A, reworked in the Warsaw edition of 1814.
- 22 *A Collection from the Sassoon Family Estate*, Sotheby's auction catalogue (Tel Aviv, 2000), pp. 28–30.
- 23 *Talmud Bavli: Masekhet Middot* (Vilnius, 1885), 79, 80.
- 24 Thomas Fuller, "The Temple as it was in Christe time," 1650, imprint in the National Library of Israel.
- 25 Louis Cappel, "Temple of Herod," in Brian Walton, *Biblia Sacra polyglotta* (London, 1657).
- 26 See Drawings by Claude Perrault in Lous Compiègne de Veil, *Mishnah Torah* (Paris, 1678).
- 27 See *The city of Jerusalem according to Dr. John Lightfoot*, in the National Library of Israel, Laor Collection, no. 1067.
- 28 Humphrey Prideaux, *The Ichnography of the Temple of Jerusalem, 1715*, in the National Library of Israel, Laor Collection, no. 1104.
- 29 Bernard Lamy, *De Tabernaculo Foederis, de Sancta Civitate Jerusalem, et de Templo EJUS* (Paris, 1720).
- 30 Johannes Lund, *Die Alten Jüdischen Heilighümer* (Hamburg, 1732).
- 31 Johann Lange, *Der Hierosolymitanische Tempel nach dem Rittersdorfischen Modell in einer Redeübung erklärt* (Elblag, 1771).
- 32 Johann Fischer von Erlach, *Entwurf einer Historischen Architectur* (Vienna, 1721), explanations to plates 1 and 2.
- 33 For chronology, descriptions and images of these synagogues, beside Owruch, see Maria and Kazimierz Piechotka, *Heaven's Gates: Wooden Synagogues in the Territories of the Former Polish-Lithuanian Commonwealth* (Warsaw, 2004), passim. For a drawing of a dilapidated synagogue in Ovruch (1818), see Jewish Museum in London, AR 2184.
- 34 Maria and Kazimierz Piechotka, *Bramy Nieba: Bóznice murywane na ziemiach dawnej Rzeczypospolitej* (Warsaw, 1999), p. 369.
- 35 *Ibid.*, 316.
- 36 Kazimierz Mokowski, *Sztuka ludowa w Polsce* (Lviv, 1903), pp. 424–43.
- 37 Grigorii Pavluskii, "Starinnye dereviannye sinagogi v Malorossii," in Igor Grabar ed., *Istoriia russkogo iskusstva*, vol. 2 (Moscow, 1911), 377–82; Rachel Wischnitzer-Bernstein, "Sinagogal'naia architektura," in *Evreiskaia entsiklopediia*, vol. 14 (St. Petersburg, 1913), p. 270; Alois Breyer, "Die hölzernen Synagogen in Galizien und Russisch-Polen aus dem 16., 17. und 18. Jahrhundert," Ph. D. thesis, Technical University of Vienna, 1913, p. 77; Alois Breyer, Max Eisler, and Max Grunewald, "Holzsynagogen in Polen," *Menorah* (June, 1932), p. 312; Paulius Galaunė, "Żydų sinagogos," in idem, *Lietuvių liaudies menas. Jo meninių formų plėtojimosi pagrindai* (Kaunas, 1930), reprint Vilnius 1988, pp. 143–54.
- 38 Ignacy Schiper, "Sztuka plastyczna u Żydów w dawnej Rzeczypospolitej," in *Żydzi w Polsce odrodzonej: Działalność społeczna, gospodarcza, oświatowa i kulturalna*, Ignacy Schiper, Aryeh Tarkower, and Aleksander Haffka eds., vol. 1 (Warsaw, 1932), p. 320.
- 39 Mathias Bersohn, *O najdawniejszych bóżnicach drewnianych w Polsce*, part 3 (Warsaw, 1903), p. 18.
- 40 Piechotka and Piechotka, *Bramy Nieba*, p. 369.
- 41 Józef Skrabski, *Paolo Fontana: Nadworny architekt Sanguszków* (Tarnów, 2007), pp. 76–80.
- 42 Piechotka and Piechotka, *Heaven's Gates*, p. 373.
- 43 *Włodawa ve-ha-svivah: sefer zikaron*, ed. Katriel F. Tchórz (Tel Aviv, 1974), p. 55.
- 44 Mikheil Grines, *Ven dos lebn hot geblit* (Buenos Aires, 1954), pp. 146–47.
- 45 Meir Or, "Vegn shuln in vishnivits," in *Vishnivits: sefer-zikaron le-kdoshi vishnivits she-nispu be-sho'at ha-natsim*, ed. Haim Rabin (Tel Aviv, 1971), pp. 429–30.
- 46 Rachel Stilerman, "Ayara shel hol," in *Piesek ve-most: sefer yizkor* (Tel Aviv, 1975), p. 83.
- 47 Yitzhak Yehezkel, *Kol adam ve-zikhrono* (Tel Aviv, 1964), p. 9.
- 48 Piechotka and Piechotka, *Heaven's Gates*, 75.
- 49 Instytut Sztuki PAN, negatives nos. 18698, 18699, and 19214.
- 50 Heller, *Tsurat beit ha-mikdash* (Prague, 1602), no. 48 in drawing legend; id., *Tsurat beit ha-mikdash* (Hrodna, 1788), no. 34 in drawing legend.