

The Thick and Thin of the History of Matzah

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Introduction

Matzah is one of the most ubiquitous Jewish symbols, known and recognized by all Jews. Throughout history, Jews in every location and circumstance endeavored to bake or otherwise procure matzah for Pesah, for both religious and social reasons. But what did that matzah look like and how was it baked?¹ For most modern Jews, matzah is defined as thin, hard, cracker-like slabs that are baked months in advance of Pesah and can be stored for long periods of time. In recent years though, a limited amount of “soft-matzah,” which is thicker and pita-like (but without a pocket, i.e. like a laffa), has become commercially available. In the opposite direction, there is today also available as a new *humrah*, paper-thin hand matzah that supposedly cannot become *hametz* and is sold at twice the price of regular hand matzah. But are any of these what the matzah of the past looked like?

The Torah (Shemot 12:18) commands all Jews to eat matzah on the first night of Pesah,² yet nowhere does the Torah explain how to make this required product or what it should look like. Unfortunately, in the traditional sources there are few physical descriptions of matzah or the baking process. There was simply never a need to describe it. Everyone was intimately familiar with the process because until close to the modern era every family or small group baked their own matzah. In order to ascertain how matzah changed over the generations, in this article we will

¹ For additional sources on this topic, see the comprehensive article by Yaakov Spiegel, *Matzot Avot ba-Pesah, Yerushatenu*, 5774 (vol. 7, 2014) pp. 193–217, which also references the earlier important articles of Rabbi B. Oberlander in *Ohr Yisroel* #51 and #52.

² It remains a biblical obligation even in the absence of a *Korban Pesah*. See *Pesachim* 28b, 120a.

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review the halakhic and historical literature and utilize old haggadot and their illustrations to garner information on matzah-making techniques.

Definition of Ḥametz and the Leavening Process

There are two, not necessarily interdependent, significant differences between what is today colloquially known as “Ashkenazi” and “Sephardi” matzah: the former is exceedingly thin and hard, while the latter is relatively thick and soft. It is often suggested that in the past, all Jews used soft, thick matzah; is this accurate? And even regarding what Sephardim used, might the old-fashioned process have been different in some way, yielding a matzah unlike the soft matzot of today? Because all matzah has the exact same ingredients, flour and water, the explanation of how they look and feel different must lie elsewhere. While it may seem simple, there is actually a complicated chemical and physical relationship among oven type, temperature, and flour-to-water ratio on the final product. Typical Ashkenazi matzah uses a vastly drier batter than what is used to make soft matzah.

A kernel of wheat is made up of three components: the bran, germ, and endosperm. Bran is the outer layer of the edible kernel. The germ is the embryo with the potential to sprout into a new plant. The endosperm is the germ’s food supply should it grow, and it is composed primarily of carbohydrates and a small amount of protein. Gluten is one of the proteins in wheat, and when flour and water are mixed, the gluten is responsible for making the dough sticky and elastic. In dough, the carbohydrates, or complex sugars, found in the wheat, are broken down into simple sugars. Natural yeasts in the flour begin to use that sugar and break it down into two components, carbon dioxide gas and alcohol. As the gas is produced, it is trapped by the sticky gluten and as gas bubbles develop, the gluten holds them and expands, hence the rising of the dough. The alcohol evaporates out and is thus not found in the final product. Typical bread and soft, laffa-like matzah made by Yemenites has a crust that differs from the inside, known as the crumb. The crust is hardened and brown due to the intense heat that leads to the Maillard reaction in which the amino acids and sugars in the bread combine to form 6-Acetyl-2,3,4,5-tetrahydropyridine. This seals the inside, permitting it to retain some of its moisture. Thin matzah is made with less water and baked uniformly, drying out inside and out such that there is no crust and it is completely dry.

The *Shulḥan Arukh* (OH 459:2) says that from the moment the flour and water touch, if not continuously worked, it takes the time of an average person to walk a *mil* for the dough to become ḥametz, which he says is 18 minutes. The Rema (*ibid*) is concerned that other factors, such as

heat and friction from the hands working it, can cause the process to be accelerated and he therefore says that it should be done as quickly as possible. This makes sense chemically, as heat will cause the fermentation process of the yeast to happen quicker, hence causing leavening.

Indications of what type of matzah was used, soft or hard, when it changed, and why

The Torah (Shemot 12:18) commands all Jews to eat matzah on the first night of Pesah, yet nowhere does the Torah explain how to make this required product or what it should look like. Unfortunately, in the traditional sources there are few physical descriptions of matzah or the baking process. There was simply never a need to describe it. Everyone was intimately familiar with the process because until close to the modern era every family or small community baked their own matzah. While there are few explicit descriptions of matzah or the baking process, deductions can be made based on descriptions of matzah as it appears in various contexts. Here we present a series of such “proofs.”

The Koreh non-Proof

A logical place to start is with activities that take place at the seder. Because of a debate in the gemara (*Pesahim* 115a) as to how best to eat matzah and *marror*, the conclusion is that we should fulfill both opinions. Korekh, the making of a sandwich of matzah and *marror*, was thus included in the *seder*. It has been suggested that the word “korekh” means “roll up,” as in a shwarma sandwich, with soft, laffa-like matzah rolled with the meat of the Korban Pesah³ and the *marror* inside, thus offering incontrovertible proof that Hillel used soft matza. While that may be true, korekh is not a definitive proof.

The contemporary practice (e.g., *Arukh ha-Shulhan* OH 475:7) is to surround the *marror* with matzah. However, not everyone understands korekh that way. Rabbenu Hannel (*Pesahim* 115a) and the Sefer ha-Hinukh (21) describe the *marror* wrapped over and surrounding the matzah. The *Mishnat Ya'akov* (475) points out that this was possible only for those who used leaves for *marror*, as opposed to many Ashkenazim who

³ The Tosefta (*Pesahim* 2:14) implies that meat of the Korban Pesah was included, and that is what Rashi and the Rashbam say. Rambam seems to say otherwise. See Taz (475:9) and Rabbi Menachem Kasher, *Hagadah Shelemah*, p. 169, n. 1.

used horseradish.⁴ Additionally, even the initial linguistic assumption is likely incorrect. While the root *korekh* is often used to mean “wrap,” it can also have the meaning of “surround.” For example, a walled city is called a “*krach*” because it is surrounded by a wall, and the hard binding surrounding a book is a *krikhah*. Thus, *korekh* could involve surrounding the *marror* with hard matzah, much as the city is surrounded by a hard wall. The haggadah section of *korekh* offers no proof one way or the other as to the kind of matzah used. Nonetheless, the following proofs will show that Talmudic-era matzah and bread were indeed soft and thus Talmudic phrases such as “*karikht rifta*” for sitting down to eat a meal did in fact probably mean to wrap a sandwich as is done with a *laffa*.

The Moldy Bread Proof

The gemara (*Pesahim* 7a) discusses the case of a moldy loaf found in a bread bin about which one is unsure if it is *hametz* or matzah. Clearly, in Talmudic times matzah and bread looked the same. Indeed the *Mishna Berura* (446:12) explains that this case is referring to a period when the custom was to bake thick matzas that resembled *hametz* loaves. The Talmud describes the case as involving fresh matzah being thrown into the bin, causing the older one to become moldy. This makes sense only for soft matzah, for no matter how much “new” fresh, warm matzah is thrown on top of a hard, dry, crackery “old” matzah it will not become very moldy within a week. From this gemara it is clear that in Bavel in the Talmudic-period matzah was soft and resembled the bread of the time.

The Isaron Matzah Proof

There is strong evidence that in the period of the early *rishonim* thick matzah was widely used and that this continued for some time. The Tur (end of OH 475), quoting his father the Rosh (early 14th century), wrote that the custom in France and Germany was to make the three matzos for the *seder* from one isaron (a tenth of an ephah) of flour. This practice is then mentioned by the Rema (475:7) 250 years after the Tur, and the *Mishna Berura* (475:46) observes that in the 19th century this custom had been forgotten in some places, clearly implying that in many places it was still observed. Even using the smallest opinion of the size of an isaron would mean that a thin matzah made from a 1/3 of an isaron would be a matzah

⁴ See Arthur (Ari) Schaffer, “The History of Horseradish as the Bitter Herb of Passover,” *Gesher* 8 (1981): 217–237 and Ari Zivotofsky, Legal-ease: “What’s the Truth about ... Using Horseradish for Maror?” *Jewish Action*, Spring 5766/2006 (Volume 66, no. 3), pp. 74–77.

for the record books many, many feet in diameter, something not realistic as it would not fit in an oven. This custom indicates that their matzah had to be significantly thicker than any modern matzah.

While this proves that they used thick matzah in the past, it does not definitively prove that they used soft matzos. There are individuals today who make three hard, thick matzos from one isaron. Furthermore, the *Lehem ha-Panim* in the *Beit ha-Mikdash* were each made from 2 isarons (Vayikra 24:5), were allowed to be up to a tefah thick, were matzah, and yet according to *lehem ha-panim* expert Prof Zohar Amar, they were most likely not soft and pliable, but rather like thick, edible crackers.

The Wet Batter Proof

Evidence indicates that in the time of Rav Yosef Karo (early 16th century), wet batter was still being used. When discussing how to separate challah from dough, he writes (OC 457:1) that in order to minimize the risk of leavening during matzah making, small quantities, defined as less than the shiur that requires challah be taken, should be used. Therefore, in order to become obligated in challah one should then bring the batters close together such that they stick together, thereby attaining the minimum shiur. The Mishnah Berurah (457:3) explains that they must touch enough so that when pulled apart they take a little from each other. This occurs only with wet batters, and he therefore quotes “aḥaronim” who explain what to do with dry batter like the one used today. While conceptually this likely indicates a soft, thicker matzah was made, one could claim that while the batter was wet, the matzah was rolled thin and baked until it was dry, like our thin cracker matzos.

The Pillow Proof

The *Be'ir Haitev* (OH 473:19) quotes the Maharshal (Lithuania, d. 1573) as suggesting to put the afikoman between the “kar and keset” i.e., under the pillow, until he is ready to eat it. With current hard matzah such action would result in eating matzah meal for the afikoman. Clearly the Maharshal was familiar only with soft matzah. This is actually an undeniable proof that soft matzah was generally used in the past.

The Rema's Move to Thinner Matazah?

The Shulḥan Aruch (OH 460:5) says not to make matzah too thick, while the Rema, in the preceding *seif* (460:4), advises to make the matzah “r'ki-kin,” i.e., thin matzot. He gives as the reason because they are slower to leaven than other bread. It is important to note that this indicates that the

move towards thinner matzah is due to purely halakhic concerns. However, the lack of a specific thickness in the Rema's statement might lead one to believe that the Rema is advocating paper-thin cracker-like matzos similar to what is used today. That is not the case. The Beir Heitiv (460:8) cites the Beit Hillel (YD 97 [page 35a in 5451 edition]; died 1690) that the custom was to make matzah thinner than normal bread and to make them an *etzḥab* (finger) thick, i.e., thicker than even today's soft matzah.

The Pri Megadim (*Eishel Avraham* 460:4; Rav Yosef ben Meir Teomim 1727–1792) says an *etzḥab* is the width of a thumb, and that this was for the matzah that was ground to make matzah meal. Apparently, his matzah was hard and thus the finger-thick matzah could not realistically be eaten so he assumes that such thick matzah was ground, implying that there was thinner matzah that was made to be eaten. As will be seen, having more than one style of matzah was not uncommon. As early as the 14th century the *talmidei ha-Rosh* (cited in *Moriah* 5771, page 11) say that the matzos should not be too thick, rather average, but the matzah *shmura* is customarily made very thin and that is proper. In addition, while *r'kikin* means thin breads, it clearly does not mean exceedingly thin as some might understand it. The Rema may not even have been excluding soft matzah with his use of the word *r'kikin*. When describing one of the menaḥot the Torah (Vayikra 2:4) describes it as “*r'kikei matzot*” and Onkelos translates that as “*espogin paterin*,” i.e., spongy matzah. Even the Beit Yosef (OH 460) explains that their custom is to make matzos like *r'kikin*.

Rambam, who we assume had thicker matzah than is in use today, makes reference to his own matzot as *r'kikin* (*Hilkhot Hametz u-Matzah* 8:6).

The Matzot Mitzvah Erev Pesah Proof

The *Arukh ha-Shulhan* (OH 458:4; 1829–1908), while discussing the preference to bake matzah on *erev* Pesah after *hatzot*,⁵ states that pre-baking matzot before Pesah is a relatively new practice. “*It appears to me that it is common knowledge that in earlier times they would not bake all of the matzot before Pesah. Rather they would bake every day of Pesah bread for that day. [So common was this] that the Tur (1270–1340) felt that this was a novelty and he wrote, “And I saw in Barcelona that those who were punctilious would bake all of their holiday needs before the holiday, so that if one bit of hametz should fall into it, it would be annulled before it was forbidden.”*” The *Arukh ha-Shulhan* continues that that is our current practice, but “*Warm bread is much better than cold bread, and they baked thick matzot, unlike ours, and the cold matzah is difficult to eat.*” Clearly, our hard,

⁵ On this long-standing practice see: Ari Z. Zivotofsky and Ari Greenspan, “When Do We Bake the Matzah This Year?” *Jewish Observer*, April 2008, pp. 34–41.

thin matzot are not any more difficult to eat than if they would be warm. Rather a thick piece of bread, left for even a few hours, becomes stale and hard. If they were baked a while before Pesah and left to dry, then eating them would be like eating rocks, not the delightful ultra-thin crackers that ours are. What can be concluded is that until the middle *risbonim* all matzot were thick and baked daily so its eaters could enjoy it warm and soft on the holiday. However, by the 14th century in Spain there were those, probably at that time still a minority, baking matzah that would last for the duration of the *hag*. This *humrah* was adopted not due to practical concerns but due to a halakhic *humrah*. There is no question that until this point it was assumed that matzah would be baked on *erev* Pesah and on each day of Pesah. The gemara, Rambam, and Shulchan Aruch all deal with precautions and halakhot needed for baking matzot on Pesah.

This *humrah* of baking all matzah before Pesah continued to spread, eventually becoming nearly universal, except in Yemen.⁶ The Shulhan Gavo'ah (Salonika, Greece, 1692–1768) reports (end of OC 458; 51b) that for the same halakhic reason, the custom in Salonika was to bake everything a few days before Pesah and nothing was kneaded on Pesah. And should there be a need for more matzah on Pesah, such as for a *brit milah*, they would make only “egg matzah” using wine or oil in lieu of water because (according to the Sepharadic ruling) it cannot become *hametz*. It seems that was viewed as an unusual *humrah* in 14th century Spain but had become standard in early-18th-century Greece, possibly by the migration of expelled Spaniards. Thus, all of their matzah had to be sufficiently dry to last over a week and remain edible.

The *Eiruv* Proof

There may be evidence that hard matzah, or at least “harder” matzah, also existed many centuries ago. Many communities today have an “*eruv*.” Unlike its colloquial meaning, the technical definition of *eiruv* does not refer

⁶ It was in response to the lack of daily matzah baking by other communities that Rav Yosef Kafich (commentary to Rambam, *Hilkhot Shvitat Yom Tov* 1:1 (n. 15) and *Halikhbot Teiman*, 1987 ed. p. 19) quoted his grandfather, Rav Yihye Kapach, as making the following observation: The Torah prohibited work on *yom tov* and then provided (Shemot 12:16) an exemption for food-related work. In the Torah this exemption is explicitly mentioned only regarding Pesah. Why? He suggested that God knew that later generations would keep adding *humrot* on Pesah until they would totally prohibit baking matzah on Pesah and bake it all before the holiday. The Torah therefore was not only permitting, but mandating to bake and eat fresh “bread” each day of Pesah.

to the poles and wires that surround the area. In order to permit carrying on Shabbat (in an area where that is possible), it is necessary to enclose the area with walls and/or a *tzurat ha-pesah* and then to make an *eruv hatzerot*. The *eruv* itself consists of food collected from all of the individuals residing in that area and placed in one location. In the Talmudic period this collection was of various foods and took place on erev Shabbos for that Shabbos. Today it is usually done for a whole year⁷ and made on erev Pesah using matzah. The relevant halakha is that for the *eruv* to be valid the food item must be edible, hence modern matzah serves that purpose very well.

The earliest source we know of that mentions making an *eruv* for an entire year is *Halakhot K'tsuvo*, usually attributed to the 8th-century Rav Yehudai Gaon.⁸ There it is stated⁹ that if one wants to make an *eruv* on erev Pesah for the whole year, the *hakham* should take from each and every household a handful of flour, knead and bake it into a cake or two, making them exceptionally hard so that they will not spoil and can be stored. This bread was then placed in one of the houses. While this source does not call the baked item “matzah,” it was prepared on erev Pesah and thus indicates that already over 1200 years ago the concept of very hard, long-lasting, cracker-like, kosher le-Pesah bread existed. It also seems to indicate that their standard matzah was not this hard cracker-like substance. This instruction is found almost verbatim in the late-11th-century French *Mahzor Vitry* (p. 257, 2004 ed.), indicating that the matzah situation in France was similar to that in Bavel 350 years earlier. The Ravyah (Germany; d. 1225) mentions (*siman* 452; p. 71 in 5724 ed.) what appears to be a popular custom of making a yearly *eruv* on erev Pesah using matzah. Rav Avraham Kloyzner (d. 1408) writes¹⁰ that the *eruv* was made erev Pesah and should be made very hard so it does not spoil, but he also does not call it matzah, indicating that their standard matzah was still not that hard or durable.

In 15th-century Austria the Leket Yoshor (p. 145 in 2000 ed.) wrote that the *eruv* was made from matzah, was made specifically on erev Pesah, and was huge with a hole in the center and hung in the winter residence

⁷ The *Tshuvot Hageonim Kadmonim*, #208 (found in the back of *Nabarot Damesek*) says that the custom in the two [Babylonian] yeshivot was to make the *eruv* on Pesah and keep it for several years!

⁸ M. Margoliot, the editor of the critical edition (1942), suggests that it may instead be of southern Italian origin rather than Babylonian.

⁹ *Beit Navot ha-Halachot o Toratan shel Rishonim*, ed. Chaim M. Horowitz (Frankfurt, 1881), p. 14.

¹⁰ *Minbagei Maharock*, 5738, 101 [p. 95].

of Rabbi Yisrael Isserlein (the Trumat ha-Deshen). He also reports that it once happened that the eiruv broke (*nishbara*) because it got moldy and Rav Isserlin first used bread for one Shabbat and then made matzah to last until the next Pesah. Mahari Veil (15th-century Germany; *Hilkhot Mahari Veil* in *Shu"t Mahari Veil, siman 4*) also calls the eiruv bread (which he insisted be placed in a house and not shul) "matzah." The conclusion seems inescapable that in 15th-century Austria and Germany, standard matzah was dry enough to theoretically remain edible for an entire year if it was hung in the air.

The early-16th-century Beit Yosef (OC 395) quotes the Ran who says that the *eiruv* must be made every *erev* Shabbos, and not once for the whole year. He explained the reason as being a concern lest the food rot and the people not be aware of and yet continue to rely upon it. The Beit Yosef then adds that in his day the custom was to make the eruv for an entire year and there is no concern of it getting moldy. The reason was the use of a special decorated matzah that was hung¹¹ in the air and thus not likely to rot. The Beit Yosef opines that this is preferable, and the Rema (OH 368:5; 394:2) concurs because it avoids the risk of one forgetting to collect the food for the *eiruv* and because the matzah doesn't spoil so it can last for the year. Nonetheless, the 19th-century *Mishna Berura* (368:21) notes that many *aharonim* preferred a weekly *eiruv* because most of the time the matzah spoils and gets moldy and often wormy. From this discussion and the fact that both the Beit Yosef and Rema call the *eiruv* bread matzah it is clear that in the 16th century there were matzot amongst both Ashkenazim and Sefaradim that could be counted on to last for an entire year. However, it seems that they were not as dry and hard as today's hard matzos, for which there can be absolutely no concern of it getting moldy during the year. From the fact that the Beit Yosef had to justify not worrying about the matzah rotting, it is clear that his matzah was not like our hard matzah, for which no such concern exists. And the comment of the *Mishna Berura* indicates that in many locales in the 17th-19th century the matzah was such that it had little chance of surviving the year.

The Meam Loetz (circa 1730; on Shemot 16:29) says that many people make the eruv on *erev Shabbos ha-Gadol*¹² for the whole year and use matzah

¹¹ Many of the sources discuss hanging it. The Kaf ha-Hayyim (368:32) and others note that hanging bread is inappropriate (based on Pesahim 111b) and it should be resting on something. However *Shu"t Siab Yitzyak* (189) suggests that matzah is different.

¹² Note that while most sources discuss making the *eiruv* on *erev* Pesah, a few mention making it on *erev Shabbos ha-gadol*. For example, in 17th-century Germany

because, he says, matzah normally lasts that long without spoiling. Clearly, in 18th-century Istanbul standard matzah was able to last a year.

Rav Shneur Zalman of Liady (1745–1812; White Russia; *Shulhan Arukh ha-Rav* 368:4) notes that the local custom was to make the *eiruv* on *erev* Pesah with matzah because it does not spoil rapidly. Nonetheless, he thinks it would be better to do it every *erev* Shabbos because most of the time the *eiruv* does spoil and becomes unfit to eat. Clearly, his matzah was not soft and was different from his usual bread, unlike in the Talmudic period, because it had the potential to last the year. On the other hand, it was certainly not as hard and dry as modern matzah or he would not say that most of the time it rots. Matzah in the early 19th century in the heartland of Ashkenaz was NOT the hard thin crackers that exist today.

Rav Shlomo Zalman Geiger described¹³ how on *erev* Pesah 5579 (1819) the rabbi of Frankfurt am Main ascended the tower(?) in the old shul and established the *eiruv* using thick matzah. The statement that it was thick indicates that there was also thinner matzah, but also shows that thick matzah was still being prepared.

The most surprising evidence comes from Yemen. Rav Yosef Kafich wrote¹⁴ that in Yemen the city rabbi would make an *eruv* on *hol ha-moed Pesah* for the whole city for the year. He would bake several small loaves [הליות קטנות] of matzah and put them in a high window in the shul. And he testifies that such was the practice of his grandfather in the late 19th century.

This called for an experiment because Yemenite Jews to this day all bake soft matzah. Using a thread we hung a standard pita for three months to see what would become of it. It quickly dried out but never became moldy. It remained completely edible such that upon taking it down we found that it could be eaten as is and was simply like a dried cracker. Alternatively, because in the old days bread was often eaten dipped, we dipped it in thick porridge and it became soft and took on (almost) its original constitution. This is in concordance with the comment of the Ravayah (Germany; d. 1225) who, while discussing (siman 452; p. 71 in 5724 ed) the custom of making an *eiruv* for the year with matzah, observed that when *erev* Pesah was on Shabbat the old *eiruv* would be soaked and then

the *eiruv* that had been hung on the back wall of the shul was taken down and distributed in little pieces to all the residents, and a new bread *eiruv* was made for that Shabbos (*Yuspa Shamash, Minbagim d-Kebilla Kedosha Vermaiza*, 5748, vol. 1, p. 79). See also Taz 368:4.

¹³ Rav Shlomo Zalman Geiger, *Dinrei Kehilot*, 5622, p. 427.

¹⁴ Commentary to Rambam, *Hilkebot Eiruvim* 1:16, n. 35. See also Rav Yitzchak Ratzabi, *Shulhan Arukh ha-Mekutzar*, OḤ vol. 2, 76:11 (p. 277).

fed to children. It seems that by soaking the matzah it become more palatable. This seriously weakens any proof for the use of matzah as the *eiruv*. It demonstrates that indeed a pita can remain non-moldy and even edible after a long period, and thus the fact that matzah was used as a year-long *eiruv* indeed rules out the use of puffed bread such as our challah, but not the use of matzah that looked like pita, and it therefore does not conclusively prove the use of hard matzah. What can be gleaned from the *eiruv* sources is as follows: There are two extremes. Those sources in which there was a serious concern of rotting would seem to imply that relatively soft matzah was being used. If the matzah was not hung and there was little worry of spoilage it seems to be evidence that they were using drier, harder matzah. Thus, strong statements such as that of the *Meam Loez* seem to support the use of hard matzah that cannot spoil. In the middle are those sources that were concerned but acknowledged that it often survived the year. It is harder for us to envision that matzah but it was likely pita-like. Furthermore, climate may play a role. It is plausible that the dry, hot environment of Yemen might prevent the soft bread from getting moldy, and the damp cold weather of northern Europe might be a factor in having even dry matzah turn moldy.

It is interesting to note that in Rome a special decorated matzah was used for the eruv. And even in recent years when there was no *eiruv* they continued baking and storing in shul such matzot to preserve the custom.

Gebrokhts

The *Shulhan Arukh ha-Rav* (d.1812; *shu"t* 6 at the end of the volume) explains why *gebrokhts* is a worthy *humra*. He says that it is plain to all who look that many matzos have dry flour on them after the baking. He says this issue exists only with “hard dough” (עיסה קשה), i.e. dry batter, but not with well-mixed batter, and that in the previous generations they would mix it well, but in the last few decades there is a *humra* to knead fast, but poorly, and this results in poor mixing and flour on the matzah.¹⁵ He mentions two factors that lead to this troublesome phenomenon: that the kneading is done too fast and that this occurs only with hard dough. It

¹⁵ The flour on the surface of the matzah gets roasted in the oven, and many authorities say that such flour cannot become *hametz* and hence there is no need to worry about it. See on the one hand Beit Yosef 463, MA 463:4; and MA end 459 that it might be a concern. But see *shu"t* Rashbash 90 (written to Marranos) and Gra (*Maaseh Rav* 187; *Minhas Yebuda* [Epstein] on Pesahim 39b; *Tshuvot v-Hanhagot* 3: p. 155) that it is not an issue since roasted grains do not become *hametz*.

may be that the issues are related: With the wet batter the kneading took longer but was more thorough. But he does not say that explicitly. The only change in procedure that he acknowledges is the *humra* of kneading for a shorter time. What is crucial is his description that until his time the mixing was slow and deliberate and there seems to have been a wetter batter. In the early 19th century the mixing speed picked up significantly—the *Hasam Sofer*¹⁶ attempted to have an almost unrealistic maximum of 2-3 minutes from the time the water and flour mixed until the matzah was out of the oven. It is worth noting that his description is of Ashkenaz. In Yemen, where the women did all of the work, the art of bread baking was done daily throughout the year. It is hard to imagine that the expertise borne of years of baking would, with all of the *humrot* of Pesah, let partially unbaked matzah to exist.

A relatively early source that mentions dry batter (and *gebrokehts*) is the *Shulhan Gavo'ah* (Rabbi Yosef Molcho, Salonika, Greece, 1692–1768). He discusses (469:16 [53a-b]) the issue of adding flour or water once the kneading has commenced. He says that adding flour is problematic because this new flour might not mix well and can become *hametz* when the matzah is later put into soup. In other words, in 18th-century Greece he was worried about *gebrokehts*. However, although people are hesitant to add water to the batter, he says that is an error and water may certainly be added. He recommends that a God-fearing person be careful not to make dry batter, but only wet batter that will readily mix. He seems to have been bucking the contemporary Ashkenazi trend of making drier and drier batter.

Historical data found in the *poskim*

As seen above, in the 14th century in Spain there were those, probably a minority, baking matzah that would last for the duration of the *bag*. This seems to indicate that there were two types of matza: a standard thick type that was better fresh and might not last many days, and a harder type or a thinner pita type that could be eaten many days after baking. In the time of the Bach (d. 1640) most people were still baking daily, but he advises (OC 453) that a *ba'al nefesh* bake before Pesah, again indicating two types.

Another indication that not all matzah was uniform is that the Kol bo (\approx 14th century; *siman* 48) and later the Levush ([d.1612] OC 475:7) quote the Raavad as saying that for the matzot mitzvah one should make the

¹⁶ *Minbagei Maran ba'al ha-Hasam Sofer* (d. 1839) 5731, 10:8 [p. 50]; 10:13, p. 106 in the 5770 ed.; *Shu"t Hoshen Mishpat* 196.

matzah r'kikin and small, not thick and large, because thick and large is not *lehem oni*. Clearly they made a variety of types of matzah.

By mid-18th century it seems that in Ashkenaz there were both thick and thin matzahs. The Adnei Paz¹⁷ explains that thick matzahs need a hotter oven than do thin ones. Therefore the thick matzah, called “rib matzah” [because it will be grated with a *rib-eizen* (hand grater) into matzah meal], should be baked first. He concludes by noting that unfortunately, new bakers have started baking the thin matzah first and bake the thick one when the oven has already begun to cool. Again, it is clear that they had more than one type of matzah.

The Shiurei Knesset ha-Gedola (OH 158, *Hagabot Beit Yosef* 1) says that matzah gets *hamotzi* because it is not so hard. He is implying that his matzah was neither soft like bread nor hard like crackers and therefore he ruled to say *hamotzi*.

By the late 18th century hard matzos clearly existed, as evidenced by the interesting comments of the *Sha'arei Teshuva* (Rabbi Hayyim Mordechai Margolios; Poland, d. 1818). In a very long discussion (OC 460:10) of the issues surrounding *gebrokhts* (*sberuya*), he explains the history of the disappearance of thick matzah. He implies that at some point before his time there were two types of matzah: relatively thin but not totally hard that was used for eating, and quite thick matzah that was dragged over a *rib-eizen* (hand grater) in order to make matzah meal. And indeed in those latter matzos it was not uncommon to find unbaked inner sections, and hence the concern that led to avoiding *gebrokhts* from matzah meal (although not from dipping the thin matzahs) was logical.¹⁸ However, in his time thick matzos were not made, and the matzah meal was made by further drying the thin matzahs in the oven and then grinding or crushing them. From this description it is clear that in Poland by the late 18th century all that was being used was thin matzos, and that the assumption is that in days of yore, with no idea how far back, thick matzah was produced. What is particularly interesting is that to make matzah meal, the thin matzah was dried and then ground. This implies that his thin cracker-like matzahs were not fully dry, as ours are, and thus had to be further dried before making matzah meal. It is also not clear if the original thick

¹⁷ 459, commenting on MA sk 6; Rav Ephraim Hakesher, rabbi in Altona and Hamburg, died 5513.

¹⁸ In addition to the *Sha'arei Teshuva*, *Mabatzi ha-Shekel* (458:1) and *Mishna Berura* (458) explain that *gebrokhts* was for un-kneaded dough within the matzah. The *Mishna Berura* explains that this was less of a concern in his day with the ultra-thin matzah in use by that time. And today our matzah is much thinner than even in his time.

matzos were soft. It would seem not, because it is difficult to grate a soft item on a *rib eizen*. On the other hand, the need to further dry even the thin matzahs implies that they were not as hard as crackers.

In the early 19th century thick matzah continued to be made in parts of Ashkenaz as attested by Rabbi Avraham Danzig (1748–1820), who wrote in 1819 in what became the authoritative work for Lithuanian Jews, the *Hayei Adam* (128:25): “Matzah should be made *r’kikin* and not a *tefab*. But in any event, in those places that make it somewhat thick, they should be exceedingly careful not to remove it from the oven until it is fully baked and to make sure the oven is very hot so that they do not leaven.” There was a concerted effort by the 19th-century rabbis to cease the baking of thick matzah. When Rav Shlomo Hakohen Rabinowicz (d. 1866), known as the Tiferet Shlomo or the first Rebbe of the Radomsk, became rav in Radomsk in 1834, he saw people still baking thick matzah and banned even giving it to non-Jews on Pesah, declaring it absolute *hametz*. The Hatam Sofer (d. 1840; *shu”t* OH 121 [p. 121, 5768 ed.]) records that most Ashkenazi communities had issued a ban on thick matzah, yet the thick rib-matzah continued to be made despite the stumbling block they presented. The worry of all of these authorities was that of real *hametz*—they were concerned that the thick matzah would not properly bake and that the inside of the loaf would be absolutely *hametz*. This development might have been related to the changing nature of ovens. Rabbi Yosef Eliyahu Henkin (*Lev Ivra*, p. 40) makes a very important point about the oven temperature. He says that if, while baking thick matzah, the oven is too hot the outside will burn and the inside will still be unbaked. And, he suggests, the halakhik indicators related to *himutz* (browned outside and stringy dough) won't help because they are valid only with ovens at lower temperature, as were used in talmudic times. This is less of a problem for the baking of thin matzot, but he cautions that the oven temperature should nonetheless not be too hot. He says that this is all based on experience and it is worth noting that he lived among Georgian Jews for many years.

At around that time, two types of matzah were being offered for sale in NY. An 1858 magazine article¹⁹ describes the matzah that was for sale: “some of them are about an eighth of an inch thick and are rather slack-baked, being of a very light color. . . . Another variety is about twice or three times as thick, and is baked much browner.” While not stated explicitly, it seems clear that the thicker matzah was rib-matzah and was used to make matzah meal, while the thinner, less-burnt matzah was eaten.

¹⁹ “The Jewish Passover of 1858,” Frank Leslie’s Illustrated Newspaper (April 10, 1858). We thank Prof Jonathan Sarna for this reference.

The Kaf ha-Hayyim reports (460:44) that in Yerushalayim in his day (early 20th century) the custom was to make all their matzah “*r’kikin mash*,” i.e., truly thin, as do some of the Sepharadim. He then advises that whoever makes it thinner is praiseworthy. And furthermore, he notes that many people make them “*r’kikin dakin*” because the custom is to bake them all before Pesah and store them, and if they were not “*r’kikin dakin*” it would be hard to eat.

Historical Matzah: Images

What would really assist in the hunt for the "real matzah" would be pictures of what was used by our ancestors. While there are obviously no actual photographs, there are images of matzah from as early as the 14th century in handwritten and illustrated haggadot. These old haggadahs have drawings of matzah that can teach us how matzah looked hundreds of years ago. It is fascinating to see how the matzot looked in these drawings because the artist obviously had to represent what the people of the time were used to seeing. Medieval Jewish art is not highly stylized and is raw and unprocessed. It lacks artistic sophistication and that in itself is important. A distinction can be made between matzot in the early Sefaradi illustrated haggadot and the Ashkenazi or Italian ones. In Sefarad, the matzah was artistic, stylistic, and more often than not had the appearance of knots. Some suggest this reflects the difficult position the Jews were in regarding anti-Semitism or due to the inquisition. The matzot drawings look like the design of many signet rings. Some argue that this was a subliminal thought as if to say, “You oppressors think that you rule over us? Well, our matzah *itself* is the signet ring of the King of Kings.” As opposed to those Sefaradi illustrations, the images of early Ashkenazi matzah-baking drawings are realistic and reflect the actuality of matzah production. The clothing is correct for the time. The correctness of the relative sizes of tools and furniture to the people suggests that the matzah is as well.

Many of the manuscript haggadot are named for the place that they are kept. For example the Cincinnati Haggadah, a 15th-century German haggadah, clearly shows a man holding a matzah with thickness to it, although possibly hard. Its size is slightly larger than a man's hand with outstretched fingers. So too, it has recently been argued, two haggadahs from southern Germany from the late 15th century, the Yahuda and Second Nuremberg Haggadahs, show that their matzah was at least as thick as an

etzbah.²⁰ The Copenhagen Haggadah from 1739 clearly shows large, thick solid matzah, similar to those seen in the Moravian Haggadah of 1737. A quite unusual book is the Mohel bukh from late-17th-century Northern Europe that is in the JTS library. On each page on the upper half it provides details concerning a circumcised child, while on the lower half is a colored illustration of a Sabbath or Festival ritual. It shows relatively small thick matzah going into the oven, yet at the seder the head of the house is holding a relatively large, thin matzah. It is possible that they had different types of matzot for different purposes (e.g. grinding for matzah meal), and at the seder used more *mehudar* matzah.²¹ There is also a lovely 18th-century Italian engraving of matzah baking that illustrates small, thick matzah.

Travel Reports

Throughout its existence, the Yemenite Jewish community baked soft matzahs daily throughout the Pesah holiday.²² Until the modern era when Yemenite Jews left their long-term exile for Israel, it was the rare Ashkenazi who visited Yemen and was thereby exposed to their matzah and had a chance to compare it to the matzah back home. One such person was Rabbi Yaakov Sapir, the intrepid traveler and emissary of the Jerusalem community who in 1854 at the age of 32 traveled to Egypt, Yemen, India, Australia, and New Zealand to raise funds for the Yishuv and recorded for posterity in his *Even Sapir* a vivid description of the life and customs of the Jews in those far-flung countries. He wrote (*Even Sapir*, 1866,

²⁰ See Steven Fine, “The Halakhic Motif in Jewish Iconography: The Matzah-Baking Cycle of the Yahuda and Second Nürnberg Haggadahs,” in: *A Crown for a King: Studies in Jewish Art, History, and Archaeology* in memory of Stephen S. Kayser, edited by Shalom Sabar, Steven Fine, William M. Kramer, Gefen Pub. House, 2000, p. 114.

²¹ Note that the Talmidei HaRosh (*Moriah* 5771, page 11) say that the matzot should not be too thick, rather average, but the matzah shmura is customarily made very thin and that is proper.

²² When the first Yemenites made aliyah in the 1881, they were destitute and relied on the “Va’ad ha-Sepharadim” to provide them with the local hard matzah. Some of them continued to also bake daily until Rav Yaakov Shaul Alishar (known as Rav Yisa Berakha; he was the Rishon Le-Tzion) prohibited the daily baking. Some of the Yemenites were concerned that the poor quality, filthy matzah that they were receiving might be actual *ḥametz*, and in 1910 they (it seems using pseudonyms) sent a question to the *beit din* in Sa’ana to ask if they could revert to their old tradition of daily baking, and among the five points used in permitting it was the *pasuk* in Shemot 12:16. (See PhD thesis by Dror Hubara, Bar Ilan, 2012, pp. 106–110.)

chapter 39, pp. 88b-89b) that during his stay in Sa'ana he asked Rabbi Yihye Kara about the Yemenite matzah. He records: I asked him about the matzah and the Seder. "Do not be concerned," he said to me, "eat a hot matzah with us, baked daily according to the custom of our ancestors. Do not worry about the kashrut, since they are not stale and thirty days old by Passover. Rabbis from Jerusalem have preceded you in seeing that our women are swift and very quick in making kosher matzah. Daily we eat a hot, fresh matzah, and the pleasure of the holiday is in none other than hot matzah." ... Then he gave me three soft, fresh matzahs that he had made in his own home for the Seder, and said to me: "This is *shemura* matzah, made of the old crop, and you can make the blessing 'to eat matzah' over them." ... Since I had long known the man as a wise and devout person, learned in Torah, I trusted his words and said "fine, we shall speak on the holiday." I accepted the matzah and went off. ... "I also enjoyed eating the matzah hot, soft, and fresh, all through the festival." Rav Sapir herein describes what Yemenite matzah looked like and indicates that it was different from what he was used to, yet he attests to both its halakhik and culinary acceptability.²³

Another description of the Yemenite matzah was given by Yom Tov Tzemah, an emissary on behalf of the Alliance Israélite Universelle, who visited Yemen in 1910. He wrote:²⁴ "What a vast differences between these matzahs and the coarse, heavy, indigestible and tasteless matzah that is made in Turkey. These matzahs are baked in Yemen twice a day, with such great care that there is absolutely no concern of there being *hametz*. However, the preparation of these matzot utterly tires the women. However, what is the life of the women here, if not sadness and work²⁵!" He too compares the Yemenite matzah to his hometown (Turkish) matzah, describes each, and attests to the acceptability for the soul and palate of the Yemenite fare.²⁶

²³ On the acceptability of today's commercially available soft matzah see: Ari Z Zivotofsky and Ari Greenspan, "The Halakhik Acceptability of Soft Matzah," *Journal of Halacha and Contemporary Society*, Spring 2014.

²⁴ "Masa Yom Tov Tzemah le-Teiman," translated into Hebrew by Avraham Almaliah, in Yisrael Yishayahu and Aharon Tzadok, eds., *Shvut Teiman*, Tel Aviv 1945, p. 310.

²⁵ He earlier described the arduous process of making the matzah.

²⁶ This report regarding Turkish matzah and the evidence above regarding hard sepharadic matzah in Yerushalayim indicate that there were Sephardim who were using hard matzah. This should not be taken as an indication that all *eidot hamizrach* were doing so. In addition to the Yemenites, there is no question that the Iraqi and north African communities continued to bake soft matzah until

Conclusions

The data presented above paint a picture of several factors playing a role in yielding the type of matzah used today. It is likely that in the Talmudic period, matzah was thicker and softer and resembled standard bread baked by being smacked on to the side wall of an oven and being baked there. Removing it after it is fully baked yet before it falls off to be burned in the coals below is a skill termed by the gemara *redias hapas*. All of this is impossible with hard matzah. In the period of the rishonim there was a move, for halakhik reasons, to bake longer-lasting matzah, probably resulting in thinner and harder matzah. The process was driven by the halakhik *ḥumra* to bake all matzah before Pesah to take advantage of *bitul*.²⁷ This is because on Pesah itself *ḥametz* is not *batel* (annulled) by a majority of non-*ḥametz* bread but prior to Pesah it is *batel* and thus this approach alleviated the concern of a tiny bit of *ḥametz* in the matzah. Should all the matzah to be used on Pesah be baked before the time that *ḥametz* becomes prohibited on erev Pesah, then even were there to be a tiny bit of unseen *ḥametz* it would be annulled before the holiday therefore allowing the use of the matzah. This led some poskim to suggest baking matzah that would last a week and baking it all before Pesah. At this stage there was no indication that thicker or thinner matzah was more prone to be *ḥametz* and quite thick, presumably soft, matzah was still deemed acceptable.

The march towards every drier and thinner matzah continued unabated. A sociological factor has been suggested as a partial explanation. The social upheavals that were part of the impetus that led to the introduction of machine matzah might have had a role in the thin matzah. As the country population migrated to the huge urban centers in the early 18th century, people no longer baked the small quantities a family needed. Baking became centralized and done in large quantities. In Ashkenazik

their repatriation to the Land of Israel, and even after that some continued to do so. A nice story that we recently heard demonstrates that not only did they continue to use soft matzah, many were unaware of any other alternative. Chaim Machluf, a resident of Petach Tikva, relates that his grandmother, Rachel Machluf, who lived in Tripoli, Libya, saw hard matzah for the first time when British soldiers landed in Tripoli. Having never seen such items before, she assumed they were specially prepared “battle rations” for the soldiers, possibly because they resembled the hard bread the Libyans made when they traveled in the desert.

²⁷ Despite this concern, many people continued to bake matzah on erev Pesah after *ḥatzot*.

lands as this happened, there was supposedly a move to bake “pre-stale” matzah, i.e. very thin, hard, and dry.²⁸ However we have found nothing in the written record to support this claim and as was seen, in early-14th-century Spain they were already baking all their matzah before Pesah and it was lasting throughout the holiday. Not only did the matzah 700 years ago last a week, many places were already using matzah as an *eiruv* and thus they had matzah that was edible after a year. Urbanization in the last 300 years cannot be seen as a significant factor in the introduction of modern, thin, pre-stale matzah if the matzah they had was already lasting a year. Nonetheless, it cannot be argued that in Europe the production of matzah become centralized while in places such as Yemen it remained until today a task done in each home.

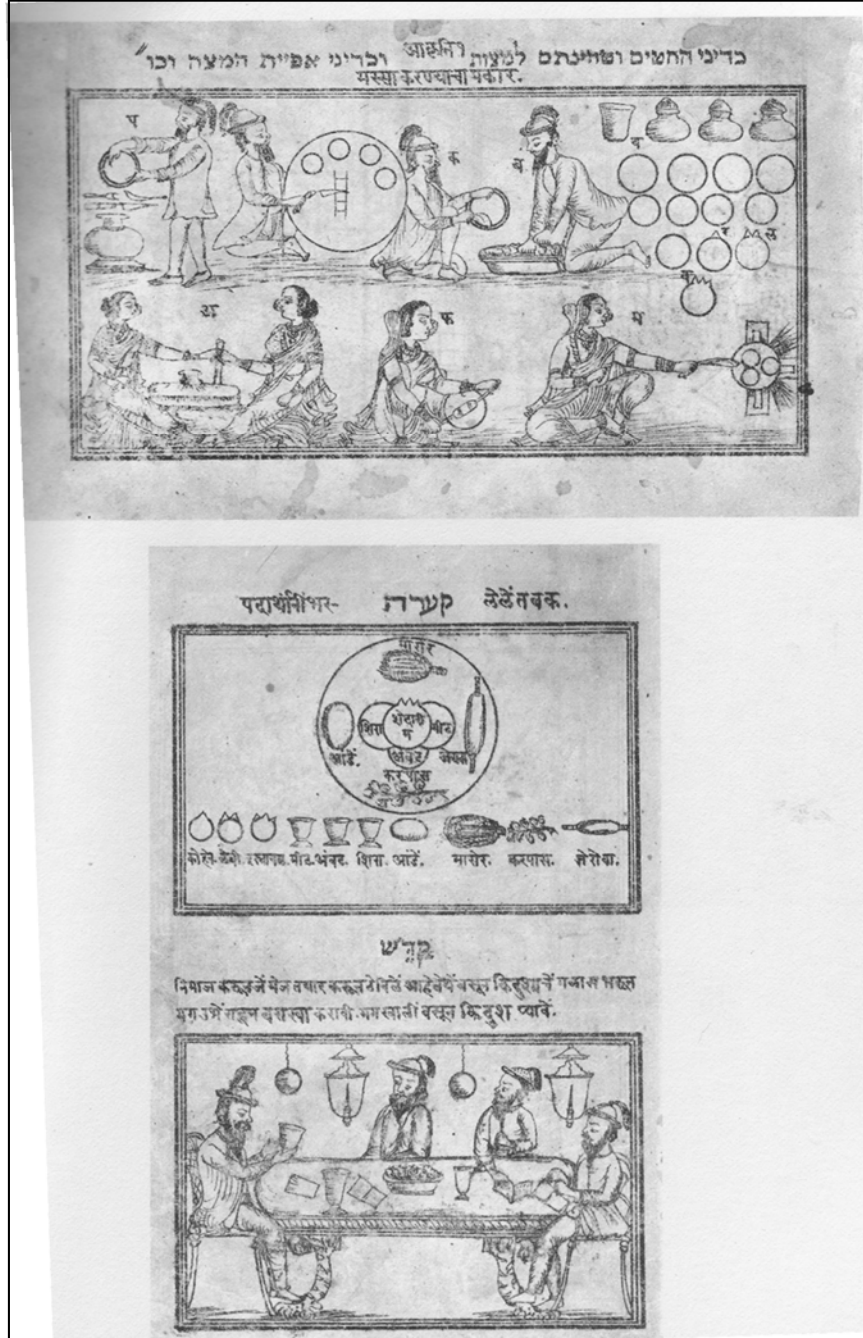
Rather, it seems that the final stage in the evolution of the cracker-thin matzah was because of another halakhik *humra*: the concern that with thick matzah it is more difficult to prevent and to ascertain chimutz. As seen above, the Ashkenazik authorities in the 17th–19th centuries were concerned about thick matzah becoming *hametz* and made a concerted effort to produce thinner and thinner matzah from drier and drier batter. This became easier to do thanks to the powered machines that could knead very dry batter. But the process took time and for centuries, probably the 17th–19th, there were two types of matzah being made: thick to be grated into matzah meal and thin to be eaten. The super hard, thin matzah such as is used today can simply not be rubbed against a grater (*rib-eizen*) the way a potato is ground. Eventually, possibly thanks to commercial production of matzah meal and probably in the early 20th century, the ultra-thin, cracker-like matzahs that are ubiquitous today become the sole matzah.

This historical process seems to have occurred in both Ashkenazik and Sepharadik lands, with the single, significant exception being Yemen where soft matzah continued to be baked daily, and the Yemenite Jews continue this until today. The development of the modern thin, hard matzah thus seems to have been driven solely by halakhik concerns rather than sociological or practical issues. ❧

²⁸ See the article in *Madrich ba-Kashrut* of Badatz *Yoreh De'a*, 5766 (volume 9), pp. 106–110, which cites the *Nahar Mitzrayim* as saying that 150 years ago in Egypt, the need to send matzahs to distant small communities compelled them to bake hard matzah so they would stay fresh. Such a claim would strongly support such an origin for hard matzah. Unfortunately no such quote can be found in the *Nahar Mitzrayim*, and the author of that article admitted to us that he copied it from elsewhere, he is no longer sure from where, and he never saw the original quote.



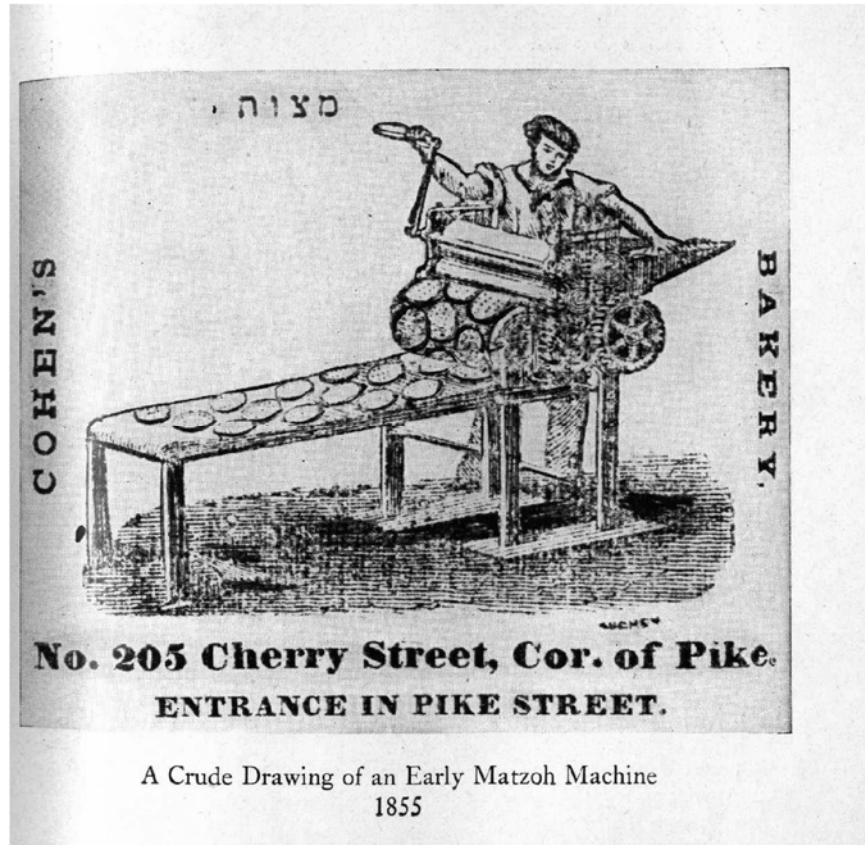
Copenhagen Haggadah from 1739



Poona Haggadah, India 1874



Cincinnati Haggadah in HUC, 15th-Century Germany



Earliest known image of a matzah making machine (1855; note the clearly indicated thickness to the breads.