THE SCHAR INSTITUTE
OF GENETIC GENEALOGY

Investigating a New Crypto-Jewish Group

The Crypto-Jewish ancestry of 25 Romani Groups

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Abstract

The Schar Institute of Genetic Genealogy is a private group of independent researchers that research communities that do not get the research attention they deserve. Using a multi-disciplinarian approach, which includes DNA testing, history, sociology, and genealogy, we aim to develop a better understanding some of the overlooked peoples of the world.

This project explores possible Jewish ancestry and crypto-Jewish connections among 25 Romani and related groups. It asks whether aspects of their histories may be connected to Jewish communities. It is intended to begin a conversation about the ethnogenesis of these groups and to offer findings that other researchers can investigate in greater depth.

Crypto Jews

To begin with, who is a Crypto Jew? is a good question and one that is hard to answer. There are those that feel a Crypto Jew is a person, who was forced to convert and then continued Jewish observance in secrecy. At the Schar Institute of Genetic Genealogy, we believe in a wider definition. Indeed, we are working to widen that definition.

In our opinion, "Crypto-Jew" refers to people of Jewish ancestry whose Jewish origins became "hidden Jewish ancestry" for whatever reason. Their Jewish ancestry could have become secret as they were forced to convert at pain of death. There are those who chose to convert due to relentless persecution. When people arrived from Europe to the colonies, a lot of Crypto Jews came into being. Jewish colonists chose to keep their Jewish ancestry a secret because to reveal it would have come at great social cost. There are as many reasons people hid their Jewish ancestry as there are days in the year. In its widest definition, a Crypto Jew is a person whose family was once Jewish and for a variety of reasons hid that Jewish ancestry.

Some Crypto Jews secretly practiced Judaism, retaining Jewish beliefs, customs, after publicly converting to Islam or Christianity to maintain their Jewish ancestry. Others retained certain Jewish practices because they had always lived "Jewish" and it was the only way they knew how to be. In either case, after a few generations and with the passage of time, some of these practices disappeared. Some did not.

They are called Crypto Jew or hidden Jews because they real ancestry became hidden. What people in the family knew or know varies greatly. Obviously, these people hid their Jewish ancestry from their neighbors and their authorities. They often hid the family's Jewish ancestry from their children. If it was not safe for the neighbors to know, it was not safe for little children with loose lips to know. As a result, in many cases, a few generations later, the descendants do not know they have Jewish ancestry. It was so well-hidden people who had Jewish ancestry, had no clue. Many people are finding out they have Jewish ancestry, for the first time, when they get their ancestry DNA report from a commercial testing company. In some families, people knew and passed that knowledge onto the successive generations. In some families there were whispers about the family having Jewish ancestry. How a family handled the knowledge of their Jewish past varies from family to family.

In the last 20 years, Crypto Jew has become synonymous with the descendants of Jews who were forced to convert in Spain after the Spanish 1492 Edict of Expulsion. Jews had 90 days to leave or convert.

Those that stayed and converted became known as New Christians, Conversos, Marranos (a historically contentious term), or Anusim ("those who were compelled," in Hebrew). Most Crypto Jewish interest, research, writing, and public awareness has been about these Iberian Jewish converts.

However, a pre-occupation with Iberian Conversos results in many Crypto-Jews, from different places and times, who were forced to convert, or chose to convert, being overlooked.

In prior work, we explored the possibility that some European glassmaking families had Jewish origins. Their specialist skill, turning sand into glass, was brought with them on their long journey from their homeland: Israel. Their skills were valued by the church and aristocratic alike. They could take sand and wood, which had no value, and turn it into a commodity both could sell. The glassmakers knew their worth. They made contracts with both the aristocrat and the church that specified that they would not participate in religious, communal, or military activities. Ever. Did they announce their Jewish origin? No, they did not. They just made certain they would never be obliged to participate in church or state. Glass making families married within their occupational. Crypto Jews.

During the plague days in the 1350's, many Jewish communities in northern Europe, France, Switzerland, Germany as examples, were forced to either convert or die at the stake. As a result, in the 14th century, in northern Europe, many Jewish families adopted an outward Christian appearance while maintaining what they could of their Jewish past. Crypto-Jews.

In 1648, the Khmelnytsky Uprising erupted in the Polish Lithuanian Commonwealth. Jewish communities in what is now Ukraine were caught in the violence, and large numbers of Jews were killed, displaced, or captured. The Crimean Tatars were allied with Bohdan Khmelnytsky's Cossacks and participated in the military campaigns. The Crimean Tatars collected captured Jews and sold them at the Crimean slave markets. In turn, many ended up in Istanbul. Some of the Jewish slaves were "redeemed" by the Jewish community. More ended up living as slaves in Turkey and were forced to convert to Islam. Today, some families, whose ancestors were brought as slaves from eastern Europe, have discovered their slave ancestors were originally eastern European Jews. Crypto-Jews.

In 1666, Sabbatai Zevi (1626–1676), the Jewish mystic who had been proclaimed the messiah by followers across the Jewish world, was arrested by the Ottoman authorities and brought before Sultan Mehmed IV. Faced with the choice of execution or conversion to Islam, Zevi converted to Islam in September 1666. He took the name Aziz Mehmed Effendi. Some of his followers converted publicly to Islam while maintaining elements of Jewish belief and practice in secret. They became known as the Dönme ("converts" or "turncoats"). Communities of Dönme developed particularly in Salonika (Thessaloniki). They maintained distinctive religious traditions, communal institutions, and a strong sense of descent from Zevi's movement for generations. Zevi left them certain dictates to maintain the community. One very telling dictate was 'never marry a Muslim". The Dönme emerged from a movement that combined public adherence to Islam with the preservation and reinterpretation of aspects of Jewish tradition. Sabbatai Zevi was forced to convert; his followers chose to follow him into Islam. Crypto-Jews.

Jacob Frank (1726–1791) was an 18th-century Jewish religious leader who claimed to be the successor or reincarnation of Sabbatai Zevi. He developed a Jewish movement known as Frankism and his followers were known as Frankists. Drawing heavily on the earlier Sabbatean tradition, Frank taught that conventional religious boundaries could be transcended. He preached that his followers should

follow him into a new religious path. In 1759, after years of conflict with Jewish authorities, Frank and many of his Jewish followers were baptized into the Roman Catholic Church in Lwów (Lviv). Frank himself, when receiving baptism, took the name Józef Frank. Frank subsequently sought recognition and status within Christian society. His followers continued to preserve distinctive beliefs and traditions derived from Jewish, Sabbatean and Frankist teachings. Many remained a distinct social and religious community for generations. Crypto-Jews.

On March 27, 1839, Muslims attacked the Jewish quarter of Mashhad, Iran, where roughly 2,000 Jews lived. Around 35 Jews were killed, many others were wounded. The community was pressured under threat of violence to convert to Islam. The survivors were officially converted and became known as Jadid al-Islam, meaning "New Muslims." A particularly distinctive feature was that many families developed a public Muslim identity and a private Jewish identity. This could involve maintaining two sets of names and carefully separating their religious practices. The Mashhadi Jews became involved in commerce and established trading connections throughout Persia and Central Asia. Their commercial networks eventually helped spread the community beyond Mashhad. As time and history allowed, some returned to Judaism, some remained somewhere between the two religions, and some became sincere Muslims. Crypto-Jews.

It would be nice if this process came to a halt in the modern age. I had a Jewish friend circle in high school. We had friend who was never allowed to attend our Jewish holidays. We thought his parents were just racists. As an adult, I learned his mother was Jewish. This only came to the fore when his mother was diagnosed with breast cancer associated with Jewish women. Only then did she reveal to her children she was born Jewish.

George Allen, born in 1952, former Virginia Senatory, discovered he was Jewish when he was 54. His mother's Jewish ancestry was revealed in August 2006 in article in *The Forward.* Following the article, he questioned his mother and only then discovered she was Jewish. His mother, Henriette "Etty" Lumbroso Allen, came from a Sephardic Jewish family in Tunisia. She said she and her husband concealed her Jewish background from their children because they wanted to protect them from the fear and persecution she had experienced.

Madeleine Albright, United States secretary of state, had a similar experience. In 1997, aged 59, shortly after becoming secretary of state, she said she learned that her parents were Jewish and that three of her grandparents had been murdered in the Holocaust. *Washington Post* reporter Michael Dobbs uncovered the family history. She had been raised Roman Catholic and later became Episcopalian. She maintained that her parents had never told her about their Jewish background or explained what had happened to their relatives. Some commentators questioned whether she could have remained unaware, but she consistently said she had not known.

21st century Crypto Jews.

While Spanish Crypto Jews are a notable group of Crypto-Jews, they are not the only Crypto-Jews in the world. The term applies to many more Jews than those forced to convert in Spain in 1492. At the Schar Institute of Genetic Genealogy, we are looking beyond Iberian Crypto Jewish experience with a view to giving the many previously unrecognized Crypto-Jewish communities the attention they deserve.

Identifying groups with a possible hidden Jewish past can be challenging, particularly because families kept their origins or practices private. To research a potential Crypto Jewish group, researchers can use DNA matches to Jewish people, DNA matches to known Jewish communities, marriage patterns, occupations, lifestyle, language, and other documentary evidence. To unearth a hidden past is a multi-disciplinary effort.

This research project presents evidence some Romani groups can be considered Crypto Jews. The project became too big for one paper. This paper is an introduction to the greater project. Separate papers, examining sections from this introductory paper in greater detail, will be released over the next year.

Introduction

In 2022 I was contacted by an Anglo-Romani gentlemen who was surprised to discover Jewish ancestry in his commercial DNA report. My own family has both Jewish and Romani ancestry, so this combination, Jewish and Gypsy, did not come as a complete surprise. While working on this families Anglo-Romani family tree, and their DNA matches, I became acquainted with their many distant relations living elsewhere in Europe. This included Lisardo Montes Cano. I contacted this DNA match of the Anglo Romani family, and much to my surprise, Cano had been researching the Jewish origins of the Spanish Gitanos for 40 years. In collaboration we tested 100 Spanish Gitanos from all provinces in Spain using the MyHeritage ancestry testing platform.

The result was surprising. The reports identified Sephardic Jewish ancestry among the participants, and the autosomal and haplogroup analyses showed affinities involving Jewish populations across the diaspora, from Cochin and Uzbek Jews to Iraqi, Moroccan, Sephardic, and Ashkenazi Jews. This raised several questions. How might these geographically diverse Jewish-reference affinities have arisen? And would similar patterns appear in other self-identified Gypsy groups?

The next step was to test other Gypsy ethnicities. In this study, 456 people from 25 Romani and related groups were examined to investigate possible Jewish ancestry and determine whether similar affinities to Jewish reference populations across the diaspora appeared beyond the Spanish Gitanos.

Various testing platforms, commercially available, were used to explore this topic. This included MyHeritage, DNA Consultants, and Family Tree DNA. Rather relying on one commercial platform, and their proprietary DNA reference sampling, we chose to use three.

Groups Tested

Anglo Romany (41)
Bulgarian Gypsies Christian(20)
Bulgarian Gypsies Muslim(4)
Finnish Cale (23)
French Corari (19)
French Jenish (19)
French Manouche (19)
French Gitane (17)

German Sinti (13)
Greek Gypsies (21)
Hungarian Gypsies (26)
Piedmont Sinti (9)
Polish Bergitka Carpati (22)
Romanian Kalderash (7)
Romanian Vatrari Gypsies (3)
Scottish Nacken (19)
Serbian Gypsies (19)
Slovakian Carpathian Roma (2)
Slovakian Lovari (13)
Slovakian Romungro (108)
Spanish Gitanos (95)
Swiss Jenish (4)
Turkish Gypsies (4)
Ukrainian Gypsies(15)
Ungro Roma (8)

Results

What is presented here is that which has been found through DNA testing individuals from distinct Gypsy ethnic groups. It does not mean to speak to the "Gypsy" or "Romani" people in general, but rather to those tested thus far. These findings might be found in other communities, or they may be restricted to the groups tested here. Only testing of other groups will reveal if the findings here can be found elsewhere.

South Asian Ancestry

The South Asian origin of the Romani people is supported by linguistic evidence, population genetics, and the persistence of South Asian ancestry among Roma populations throughout Europe and western Asia. Indeed, across the 25 populations, using Gedmatch Dodecad V3 calculator, the mean South Asian component of the various groups was approximately 17.3% South Asian.

Non-South Asian Ancestry

In the 25 populations examined in this research, South Asian ancestry constituted a persistent but minority component of the present-day genetic profile. The majority ancestry (82.7%) was distributed primarily among Mediterranean, West European, East European, and West Asian, components.

Jewish populations can also show Mediterranean, West European, East European, and West Asian components in admixture models. The tested Romani groups and Jewish reference populations thus show some overlap in their broad modeled components.

In addition to a similar basic genetic footprint ((Mediterranean + West and East European + West Asian) this study found that the Romani groups tested had genetic affinities to Jewish reference populations

from the extremes of the Jewish diaspora. This included Ashkenazi, Sephardic, Moroccan, Iranian, Iraqi, Georgian, Azerbaijani, Uzbek or Bukharan, Cochin, and Bnei Menashe Jewish included. These signals did not occur in only one Romani group (French Manouche) or geographic region (Slovakia). They appeared, in differing combinations and frequencies, among Roma, Sinti, Kale, Gitano, Vlax, Carpathian, Balkan, Turkish, and related Roma populations. All Romani groups tested showed affinities to Jewish populations.

Of the 208 Romani people tested through FTDNA from 15 different ethnic groups, each received an assignment to one or more Ashkenazi, Sephardic, Mizrahi, or Yemenite Jewish categories in their MyOrigins report. This recurring pattern provides a useful starting point for examining possible Jewish-related ancestry within and across the sampled groups.

Genetic connections across countries: relationships among the tested groups

One striking finding was the recurrence of genetic connections among participants across the sampled groups. Although they lived in places extending from Finland to Turkey and from Bulgaria to England, their DNA results suggested a network of shared ancestry.

Participants from geographically separated groups showed DNA connections across community boundaries. Reported shared segments ranged from approximately 50 to 400 centimorgans in the examples discussed, amounts that can correspond to a range of relationships. These results suggest that the sampled groups form part of an interconnected network with shared ancestry, although endogamy complicates the interpretation of particular relationships.

When one goes through the DNA matches provided for individuals on the Gedmatch platform, it becomes clear the same names of individuals from other Romani ethnic groups appear repeatedly. A Slovakian Romungro individual will appear as a DNA match to an Anglo Romani individual and to a Spanish Gitano individual. Going through each tested individual's DNA relatives list, it became clear they had DNA relatives from other Romani groups.

To investigate this observation, we took one person from each of 18 Romani ethnic groups and collected their top 1,000 DNA relatives from the GEDmatch family finder facility.

The process was:

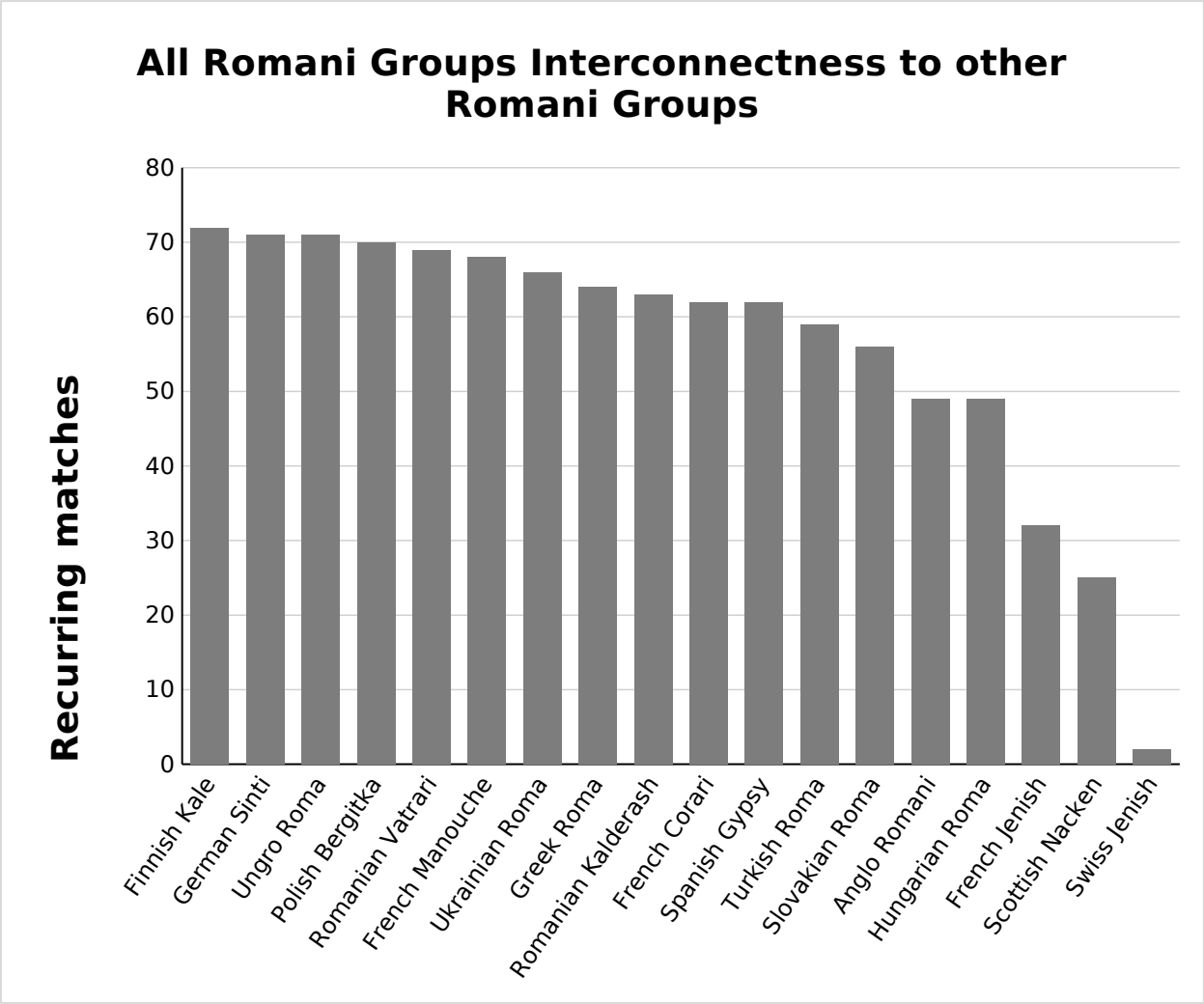
We combined each community's representatives' list of top 1000 DNA matches. This was 1,000 DNA matches per person, or 18,000 DNA matches.

We identified 75 individuals who appeared across the representatives' DNA match lists. These recurring matches came from 25 different Romani ethnic groups.

We counted how many times those 75 people appeared in each individual's DNA relative list. Those counts became the bars you see below.

For example, the Finnish Kale bar of 72 means the following. Of the 75 people, who appeared in most of the 18 selected individuals from 18 different ethnic groups, 72 of them appeared in the Finnish Kale individuals DNA relative list.

The chart therefore shows how connected the 18 individuals from 18 ethnic groups are to the list of 75 people who appear in most of the 18 individuals DNA relatives list.



This analysis suggests that members of the sampled Romani groups share genetic connections across communities. In this broad sense, they are genetic “cousins.”

Geneticists have a formula that says, if you share X amount of DNA (measured in centiMorgans) with another person, you are a cousin or a third cousin to that person. The formula used by most companies looks something like this.

Relationship	Average Shared cM	Typical Range
Parent/Child	3,487 cM	3,300–3,720
Full Sibling	2,613 cM	1,613–3,488

Relationship	Average Shared cM	Typical Range
Grandparent/Grandchild	1,754 cM	1,300–2,300
Aunt/Uncle–Niece/Nephew	1,746 cM	1,200–2,300
Half Sibling	1,759 cM	1,160–2,436
First Cousin	874 cM	396–1,397
First Cousin Once Removed	433 cM	141–851
Half First Cousin	449 cM	156–979
Second Cousin	233 cM	46–515
Second Cousin Once Removed	123 cM	30–339
Third Cousin	74 cM	0–234
Fourth Cousin	35 cM	0–139
Fifth Cousin	17 cM	0–80

These conventional estimates can be difficult to apply to Romani populations with a history of endogamy. When comparing DNA matches from MyHeritage, FTDNA, and GEDmatch, we found German Sinti sharing amounts of DNA with Bulgarian Romani, and Spanish Gitanos with Finnish Kale, that standard estimates might associate with relatively close relationships.

Where families have long histories in different countries, the relationship predicted by a standard shared-DNA estimate may not capture the full history of their connection. Repeated shared ancestry and endogamy can influence the amount of DNA two people share, so relationship estimates require careful genealogical interpretation.

To make it plain, two people sharing 233 cM may fall within a range of possible relationships. If a German Sinti participant and a Turkish Romani participant share that amount, the result indicates shared DNA; family history and endogamy must also be considered when interpreting the relationship.

These genetic connections across communities living in different countries are consistent with shared ancestry and raise the possibility of common founders. They also invite further investigation into later contact between communities and the effects of endogamy.

Endogamy

When one is trying to determine if a group of people are Crypto Jews, one of the telltale signs is endogamous marriage. That is marrying within the family. While the practice is not exclusive to Crypto Jews, in the presence of other evidence, it adds to the list of confirming evidence.

In the recent news, Susan Collins, the disgraced American Senator, was trying to discredit her political opponent by announcing he had been married to his second cousin. The news reporters were having quite a time laughing at the fact he had married a second cousin. It reminds one that endogamous

marriage, marrying within the family, while normal to many of us, is not common in the general population. It is either something a community does or something a community does not do. Crypto Jews marry in an endogamous pattern. This news story revealed, in a very demeaning manner, the attitude of communities that do not practice endogamy towards those that do. In the year 2026.

This is prejudice is very old. Indeed, for a very long time it was a crime. From an early age the Roman Church prohibited endogamous marriage. Marriages closer than 7th cousins were not permitted.

Restrictions on cousin marriage developed gradually with the Roman Church, through Roman legislation and church practice. Writing in the early fifth century, Augustine observed that cousin marriage had once been lawful but praised its prohibition as a way to form family ties beyond one's existing kin.

In a response preserved by Bede, Pope Gregory I told Augustine of Canterbury that the children of siblings, first cousins, must not marry, while more distant generations could. This illustrates an early rule much narrower than the later seven-degree boundary.

The Roman Church's restrictions on close in family marriage expanded over centuries. By the eleventh and twelfth centuries, canonists maintained a statutory prohibition marrying anyone closer than the seventh degree, that is marriage between anything closer than a 7th cousin. Historians caution that its application was uneven and specify that distant-kin marriages could occur after receiving dispensations from the church.

In 1215, Canon 50 cut the boundary back to relatives within the fourth degree. You could marry a 4th cousin or anyone further out but not closer in. The council said the more distant prohibition (7th cousins) could not generally be observed without serious difficulty. Canon 52 also recognized how hard it had been to prove family connections reaching seven degrees back. So, they settled on the acceptable relationship distance, between bride and groom, being fourth cousins.

However, from the earliest day, Jews in Europe, always flouted this law. They always married within the family and within the community. When Jews were persecuted, and went underground as Crypto-Jews, they continued the practice of marrying within the family and within the group. They married cousins when they were openly Jewish and they married cousins when they were covertly Jewish.

Converted Sephardic Jews in Spain and converted Jews in Northern Europe continued the practice of cousin marriage despite the Church's opposition to the practice.

There were two sides to this story. While converted Jews did not want to marry outside their family or the community of converted Jews, non-Jews did not want to marry converted Jews. Marrying a converted Jew was a social liability. In the plague days of the 14th century, during the plague persecutions, Jews and converted Jews alike were accused of intentionally spreading the plague and were killed for their "crimes". Conversion did not erase the social stigma or liability of a Jewish origin.

The endogamous marriage of Crypto-Jews can be seen throughout Crypto Jewish communities. A well-documented example would be the Chuetas, the Crypto Jews of Mallorca. 15 Jewish families of Mallorca, after forced conversion became 15 Crypto Jewish families, and they only married within those 15 families.

The 15 surnames traditionally associated with Mallorca's Chuetas**,** known in Catalan as Xuetes**,** are:

1. Aguiló
2. Bonnín - also written Bonnin
3. Cortès -also Cortés
4. Fortesa -also Forteza
5. Fuster
6. Martí
7. Miró
8. Picó
9. Pinya - also Piña
10. Pomar
11. Segura
12. Tarongí
13. Valentí
14. Valleriola
15. Valls

The family trees of these family's criss cross, between these 15 names, repeatedly. In 2011, Rabbi Nissim Karelitz, head of the rabbinical court in Bnei Brak, recognized qualifying Chuetas as already Jewish under Jewish law, meaning they could return to Judaism and would not need to convert. This was a ruling by a prominent Israeli rabbinical authority.

The reasoning was that generations of endogamous marriage within the Chueta community had preserved Jewish maternal descent, despite the ancestors' forced conversion to Christianity. The ruling concerned families whose ancestry supported that continuity. Shavei Israel, which helped obtain the ruling, later described the criterion as being able to demonstrate that one's maternal grandmother, before the Second World War, bore one of the 15 Chueta surnames.

Not only is the practice of endogamy a clue that a community may be a Crypto-Jewish community, in one case, the Israeli rabbinate acknowledged a Crypto Jewish community as Jewish because of their strict adherence to monogamy.

In the Muslim world, converted Jews also practiced strict endogamy.

The Dönme, followers of Sabbatai Zevi who outwardly converted to Islam, also maintained a distinct community through marriage within their group. Sabbatai Zevi, a charismatic messiah figure, left his followers with 18 commandments which he said his followers must follow. Number 17, of the Dönme's Eighteen Precepts, traditionally attributed to Sabbatai Zevi translates to "we shall not marry them (Muslims). This might be the only time a converso community had a written directive, "never marry an outsider". Generally, it was just what they did. In this case, never marrying out was a guiding commandment.

Here, "Muslims" means Muslims outside the community of Jewish followers of Sabbatai Zevi who had converted to Islam. Because the Dönme themselves had formally embraced Islam. The rule required marriage within the community. Historian Marc David Baer confirms that the commandments

instructed them to marry among themselves and that they maintained detailed genealogies to preserve this endogamy.

The Mashhadi Jews, forcibly converted to Islam in the 19th century, carefully arranged marriages within their community. They betrothed children very young to avoid marriages outside the community.

*Historically, early marriage was common in parts of Eastern European, Sephardic, and Mizrahi Jewish societies. Marriages were often arranged with substantial family involvement, and teenage marriage was widespread. In some cases, children were betrothed or married younger, though practices differed by place and social position. Today, marriage in some Haredi or Hasidic communities commonly takes place in the late teens or early twenties, with families and matchmakers often playing an important role.

In some traditional Romani communities, families likewise have played a significant role in arranging marriages and maintaining ties between families. Marriage in the teenage years, including before age 18, has been documented in some communities, although it varies greatly by group, country, and generation. Research in Serbia associates early marriage with several interacting factors, including community expectations, economic circumstances, access to education, and discrimination.

There is a strong parallel in the social role of marriage in orthodox Jewish and traditional Romani communities. It can join families, reinforce relationships within a community, and help transmit customs and identity to the next generation. In some settings, expectations concerning modesty and sexual conduct have also influenced the timing of marriage.

For some crypto-Jewish communities, marrying within the group helped preserve a shared identity. It also acted as a safeguard when secret religious practice was dangerous. Sephardic converso families in Spain and the Americas used endogamous marriage to sustain networks of trust and, in some cases, hidden Jewish observance.

Endogamy among the sampled families is one of several patterns that can be considered when investigating possible connections with crypto-Jewish communities.

The tested Groups Practice Endogamy

Endogamy was and is practiced in the Romani world. The family trees of Anglo-Romani, which go back to the 1700's, reveal generation after generation of endogamous marriage. In Swiss Jenish family trees, endogamy can be found in the 17th century right the way through to present day in American descendants.

Using GEDmatch's "Are Your Parents Related" facility, the 456 individuals across the 25 communities were assessed for signs of parental relatedness. The results were as follows.

Distribution of parental relatedness

Probably related 32.22%

Distantly related 36.40%

Not related 31.38%

Overall finding:

68.2 % of the participants showed evidence of parental relatedness, either close or distant.

Interviewing the participants in the study, all reported their parents were first cousins, second, third cousins or at least distantly related. This was true across all Romani ethnic groups across all countries. All groups maintain a high degree of marriage within the family and within the community.

Endogamy among the Romani families tested is consistent with patterns also found in some crypto-Jewish communities and adds another dimension to the historical comparison.

Lurking within the endogamous marriage practice amongst the Anglo Romani groups are several interesting points.

One point concerns marriage practices and church rules. The available Anglo-Romani and Swiss Jenish family trees indicate that close-kin marriage occurred in some families over the periods documented. This invites further investigation into how such marriages were conducted and recorded.

The reported relatedness among the sampled participants suggests longstanding endogamy in some of the communities. The history and timing of these marriage patterns remain subjects for further research.

The family histories raise the possibility that some close-kin marriages occurred outside formal church arrangements or under circumstances not captured in the records examined. How church rules were applied and how individual marriages were conducted deserves closer study.

Endogamy can preserve genetic connections within communities over generations. The patterns observed today may therefore retain information about earlier shared ancestry, alongside the effects of later marriages and population movements.

Indian Ancestry

This research project examined South Asian components in 25 Romani and related groups. The average reported Indian ancestry across the groups was 17.2%. While an origin in northwestern South Asia is supported by research, the calculator also showed affinities to reference populations from southern and western India. These findings invite closer examination of the diversity represented by the modeled South Asian component.

Rank	Gypsy Group	Indian Ancestry
1	Slovakian Lovari	24.0%
2	Polish Bergitka Carpati	23.4%
3	Romanian Vatrari Gypsies	23.4%
4	Romanian Kalderash	22.7%
5	Slovakian Romungro	22.4%
6	Slovakian Carpathian Roma	22.2%
7	Serbian Gypsies	21.6%
8	Hungarian Gypsies	21.4%
9	Ukrainian Gypsies	20.3%

Rank	Gypsy Group	Indian Ancestry
10	Finnish Cale	20.2%
11	Bulgarian Gypsies Christian	19.9%
12	Ungro Roma	19.2%
13	Bulgarian Gypsies Muslim	19.0%
14	Greek Gypsies	18.2%
15	Turkish Gypsies	17.2%
16	German Sinti	16.9%
17	French Gitane	15.4%
18	Spanish Gitanos	15.1%
19	French Corari	14.3%
20	French Manouche	13.8%
21	French Piedmont Sinti	10.3%
22	Anglo Romany	8.7%
22	Scottish Nacken	8.7%
24	French Jenish	8.4%
25	Swiss Jenish	3.5%

The research revealed repeated genetic similarities between the 25 Romani groups and Indian Jewish communities, especially Cochin Jews. This is an interesting finding all on its own. In addition to this, the results consistently reported Mizrahi and in particular Yemenite Jewish affinities (FTDNA and Gedmatch DodcadV3). The participants, across all Romani groups, had between 2%-10% Mizrahi/Yemenite Jewish ancestry as per FTDNA testing. The Mizrahi/Yemenite Jewish traders are thought to have been the founders of the of the Jewish communities in India. Historical records show that Jewish merchants traveled back and forth between India, Yemen, and the Mediterranean and formed families along those routes.

These groups genetic affinities to both the Jewish communities of India and to Mizrahi/Yemenite Jews is complicated. It may indicate they have genetic connections to the Mizrahi/Yemenite Jewish communities and the Indian Jewish communities separately or may have Mizrahi/Yemenite Jewish ancestry by way of Indian Jewish ancestry. In other words, the groups may have inherited their Mizrahi/Yemenite Jewish ancestry through Jewish Indian ancestry.

FTDNA and MyHeritage raw-data analyses through GEDmatch produced recurring Mizrahi Jewish reference affinities. Jewish merchants were active on routes connecting the Middle East and Central Asia, and Jewish communities also became established in China. The 25 groups showed recurring affinities to Bukharan Jewish references; 47.8% of participants were reported to show an Uzbek Jewish affinity.

In a small sample of 10 Bukharan Jews, the calculator reported South Asian components of 10%–20%. Some South Asian reference populations appeared in modeling results for both the Bukharan Jewish and Romani samples. These included Cochin Jews, Balochi, Pathan, Pakistani, Sindhi and Kashmiri Pandit, Vaish, Meghawal, Tamil Nadu Brahmin, Andhra Pradesh Brahmin, Indian and Srivastava, Velama, INS and Lodi, GIH, Naidu and Hallaki, North Kannadi, and Irula.

Some of the group's South Asian ancestry may have come from direct migration from South Asiaor e ntered the community's gene pool through the migration of Uzbek Jews into the community.

The research also found that the tested Romani groups had persistent affinities to Indian Jewish reference populations. Bnei Menashe, Cochin, and Bene Israel Jewish references appeared over and over again amongst participants.

Support for this finding can be found in the male haplogroup patterns of Indian Jews and the Romani groups tested. The most common Y-DNA haplogroups amongst Indian Jews include:

- **J2** (especially J2a) — common
- **J1** — present
- **E1b1b** — present
- **G** — present
- **R1a** — present (some likely reflecting local Indian admixture and some broader West Eurasian lineages)
- **R2** — occasional
- **H** — occasional

The most common Y-DNA groups of the various Romani ethnic groups tested were:

- **J2** (especially J2a) — common
- **J1** — present
- **E1b1b** — present
- **G** — present
- **R1a** — present (some likely reflecting local Indian admixture and some broader West Eurasian lineages)
- **R2** — occasional
- **H** — common

The broad male haplogroup categories reported for Indian Jewish populations and the sampled Romani groups show some overlap. This comparison raises questions about possible connections and warrants investigation at the level of more specific branches. We hope to make direct DNA comparisons between members of these communities in future work.

Two observations emerge from the South Asian analysis. First, the average reported Indian component represented a minority share of the modeled ancestry of the 25 groups, approximately 17%. Second, the calculator identified affinities to several South Asian reference populations, including Indian Jewish references, suggesting a complex pattern for further study.

This does have some far-reaching consequences. Many people are under the impression Romani people began migrating towards Europe, from Northwestern India, due to warfare and displacement around the eleventh century, particularly the Ghaznavid campaigns in northern India. Different versions suggest that their ancestors fled conflict, were taken west as captives, or travelled with armies as soldiers, craftspeople, and other service providers. These remain hypotheses; no surviving record conclusively identifies a particular departing population as the ancestors of European Roma.

The fact that so many of the Romani groups tested here had genetic affinities to India Jewish groups, from the south of India, adds another question to the ethno-genesis story of the Romani groups participating in this study. Indian Jews were part of the international Jewish trade routes and as such, could have made their way to the west for reasons of commerce.

Non-Indian Ancestry

As the Romani groups examined in this study, were on average 80% non-Indian in ancestry, this ancestry cannot be considered trivial. These groups have more non-Indian ancestry than Indian. Basic math skills make this clear. The the largely overlooked or minimalized 80% non-Indian ancestry was a central feature of this study.

West Asian+ Mediterranean Ancestry is the Dominant Ancestry

In most cases, the Gypsy ethnic group in question (French Manouche or Romanian Calderash) had as much or more West Asian ancestry than they did South Asian ancestry. In all cases, each Gypsy ethnic group had more Mediterranean ancestry than either West Asian or South Asian ancestry. If you add West Asian ancestry to Mediterranean ancestry (regions that are geographically, historically, and culturally linked), West Asian + Mediterranean was the dominant ancestry in all the Romani groups.

Broad component	Unweighted mean
Mediterranean	23.13%
West European	21.57%
South Asian	17.34%
West Asian	17.27%
East European	8.59%
Other reported components	12.10%

There are two possibilities as to why the tested Romani groups were primarily of West Asian+ Mediterranean ancestry.

One established model holds that ancestors of Romani populations acquired West Asian and European ancestry during their westward migration from South Asia. The endogamy observed in many communities raises questions about how the timing and extent of interaction with surrounding populations may have varied over the course of that history.

Another possibility is that some of the West Asian and Mediterranean components reflect Jewish contributions. Jewish populations from India to Europe also show these broad components in admixture analyses, and Jewish-reference categories appeared in the commercial results for the groups studied. This model is one possible interpretation of the pattern.

Is it possible that Jewish people who travelled to India and later moved westward contributed to the ancestry of some Romani groups? This possibility can be considered alongside the consistently reported South Asian component. The unweighted mean of South Asian ancestry was approximately 17.3%; Mediterranean ancestry averaged approximately 23.1%, and West Asian ancestry 21.6%, for a combined 44.7% as reported here. This pattern warrants closer scrutiny.

Jewish Ancestry

All 25 groups tested showed reported affinities or other results that may be relevant to the investigation of Jewish ancestry. These included:

- Ancient (Canaanite and Levantine ancestry)
- Medieval (Medieval Jewish ancestry)
- Modern Jewish-related results, including paternal haplogroup comparisons with Jewish individuals and reported autosomal matches to people living in Israel;
- Autosomal genetic affinities for Ashkenazi, Sephardic, Mizrahi, Yemenite, Moroccan, Algerian, Tunisian, Libyan, Iraqi, Iranian, Georgian, Azerbaijani, Uzbeki, and Indian Jewish groups.
- Male haplogroups consistent with Jewish population male haplogroups.

Using raw DNA data from MyHeritage and FTDNA, the study examined a set of indicators relevant to possible Jewish ancestry. These included reported ancient Israelite, medieval Jewish, and medieval Levantine affinities; reported connections to individuals buried in the medieval Jewish cemeteries at Norwich and Erfurt; Indian Jewish references, including Bnei Menashe and Cochin; and reported DNA matches to people living in Israel. These results span ancient, medieval, and modern reference categories.

Across the test group, the analysis recorded results in each of these categories, with frequencies varying by indicator.

Category	%
Ancient Israelite Ancestry	30.5%
Medieval Jewish Ancestry	40.0%
Medieval Levantine Ancestry	19.5%

Category	%
Relatives buried in Medieval Jewish Cemetery (Germany)	67.1%
Relatives buried in Medieval Jewish Cemetery (UK)	59.0%
Bnei Menashe	72.4%
Cochin	50.0%
Jewish DNA matches living in Israel	77.6%

(3^{rd}-4^{th} cousins)

Out of the 456-person dataset:

- 30.5% have a reported Ancient Israelite affinity.
- 40.0% have a reported Medieval European Jewish affinity.
- 19.5% have a reported Medieval Levantine affinity.
- 67.1% have a reported connection to individuals identified in a Medieval Jewish cemetery in Germany.
- 59.0% have a reported connection to individuals identified in a Medieval Jewish cemetery in the UK.
- 72.4% have a reported Bnei Menashe Jewish reference affinity.
- 50.0% have a reported Cochin Jewish reference affinity.
- 77.6% have relatives living in Israel

Specific Jewish Population Match Summary

Within the Gedmatch Dodecad V3 Calculator genetic affinities and FTDNA origins facility, matches to various Jewish groups surfaced. The results are found below.

Ethnic Group	Ashk (Behar)	Ashk (Dodecad)	Bnei Menashe	Cochin Jews	Seph. Jews	Morocco Jews	Uzbek Jews	Iranian Jews	Azerb. Jews	Georgia Jews	Iraq Jews
Anglo Romany	No	No	Yes	Yes	No	No	Yes	Yes	Yes	No	Yes
Bulgarian Gypsies	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No
Bulgarian Gypsies Muslim	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Finnish Kale	Yes	Yes	Yes	Yes	No	Yes	No	Yes	No	No	Yes
French Corari	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No
French Jenish	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	No	No	Yes
French Manouche	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	No	No
Piedmont Sinti	Yes	Yes	Yes	No	Yes	Yes	No	No	No	No	No
French Gitanos	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
German Sinti	Yes	Yes	Yes	Yes	No	No	No	No	No	No	No
Greek Gypsies	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No
Hungarian Gypsies	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No
Swiss Jenish	Yes	No	Yes	No	Yes	Yes	Yes	Yes	No	No	No
Romanian Kalderash	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No
Romanian Vatrari Gypsies	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No
Scottish Nacken	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No
Serbian Gypsies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No
Slovakian Carpathian Roma	Yes	Yes	Yes	Yes	No	Yes	No	No	No	No	No
Romungro	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No
Slovakian Lovari	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No
Spanish Gitanos	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No
Turkish Gypsies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes
Ungro Roma	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No
AVERAGE (% Yes)	**95.7%**	**91.3%**	**100.0%**	**87.0%**	**78.3%**	**87.0%**	**47.8%**	**43.5%**	**21.7%**	**8.7%**	**21.7%**

The averages for the groups are found below.

Bnei Menashe Jews appear in 23/23 (100%) of the populations.

Cochin Jews appear in 20/23 (87%).

Ashkenazy Jews (Behar) appear in 21/23 (91%).

Ashkenazi (Dodecad) appear in 21/23 (91%).

Sephardic Jews appear in 16/23 (70%).

Morocco Jews appear in 19/23 (83%).

Uzbekistan Jews appear in 9/23 (39%).

Iranian Jews appear in 8/23 (35%).

Azerbaijan Jews appear in 4/23 (17%).

Iraqi Jews appear in 4/23 (17%).

Georgia Jews appear in 1/23 (4%).

Across the 25 tested groups, the analyses reported affinities to Jewish reference populations from different parts of the diaspora, including Cochin, Uzbek, Georgian, Azerbaijani, Iranian, Iraqi, Ashkenazi, and Sephardic populations. The combinations and frequencies of these references varied among the groups.

One possible explanation for Jewish ancestry in Romani groups is “mixing by virtue of proximity”: Jewish and Romani families living and working near one another may at times have intermarried. One might expect some reference affinities to follow regional patterns, yet the results reported here do not always align neatly with the present locations of the groups. This observation invites further investigation into both local contact and other possible histories of shared ancestry.

A Pan-Diaspora Jewish-Reference Pattern

The most unexpected finding was the geographic breadth of the Jewish-reference affinities appearing across the diverse Romani populations. The following recurrence was observed:

Jewish reference family	Populations in which present	Share of 25 populations
Ashkenazi	25	100%
Uzbek/Bukharan	25	100%
Bnei Menashe	24	96%
Cochin	24	96%
Moroccan	24	96%
Sephardic	23	92%
Iranian	22	88%

Jewish reference family	Populations in which present	Share of 25 populations
Georgian	17	68%
Azerbaijani	16	64%
Iraqi	5	20%

The defensible observation is that diverse Jewish-related reference affinities recur across nearly every geographic branch of the Romani groups examined and are not restricted to one European country, one Romani subgroup, or one Jewish diaspora population.

Ashkenazi and Indian Jewish reference affinities appeared repeatedly across the sampled groups, alongside references to other Jewish communities. Their recurrence provides a basis for further comparative analysis.

How these geographically diverse Jewish-reference affinities arose remains an important question. The reported pattern suggests a complex history that may involve several periods and sources of shared ancestry.

Jewish Haplogroups

At the beginning of this study, we were using MyHeritage Ancestry DNA. We then switched to FTDNA as they provided haplogroups for men, and mtDNA for women at an extra cost. FTDNA provides a basic male (Y) haplogroup for men. As we are looking for men with haplogroups which align with known Jewish haplogroup branches, we have upgraded many men to a higher haplogroup level(Y111) . This will allow us to see if members of the community share known Jewish haplogroup branches. We have also upgraded women's tests so we will have mtDNA results for them as well. The objective is to find shared haplogroup branches between the Romani groups tested here and known Jewish branches. But now, we have 150 male haplogroups from men from all 25 the groups this is a start. The current basic tally looks like this.

Haplogroup	J:	41	entries	(27.9%)
Haplogroup	R:	38	entries	(25.9%)
Haplogroup	H:	34	entries	(23.1%)
Haplogroup	I:	20	entries	(13.6%)
Haplogroup	E:	13	entries	(8.8%)

Haplogroup G: 1 entry (0.7%)

Total: 150 entries (100%)

Specific Haplogroups identified in the men tested through FTDNA

E haplogroups

E-CTS2001:	8
E-CTS201:	1
E-FGC11457:	1
E-FT209004:	1

E-M84: 1
E-PF2546: 1

G haplogroups

G-L830: 1

G-P303:1

H haplogroups

H-M2867: 18
H-Z5875: 11
H-PH124: 4
H-Y6959: 1

I haplogroups

I-P259: 6
I-S20289: 4
I-L22: 2
I-S2077: 2
I-CTS1132: 1
I-FGC10430: 1
I-M507: 1
I-PF4088: 1
I-S200300: 1
I-Z2338: 1

J haplogroups

J-Y3612: 11
J-Y6959: 9
J-M67: 4
J-Z43500: 3
J-3612: 2
J-FT8596: 2
J-Y8344: 2
J-CTS7683: 1
J-CTS7684: 1
J-L816: 1
J-M92: 1
J-PF7263: 1
J-Y2612: 1
J-Z1295: 1
J-Z504: 1

R haplogroups

R-Z201: 5
R-L2: 4
R-Z208: 3
R-CTS7763: 2
R-PH1047: 2
R-BY32077: 1
R-BY50762: 1
R-CT11874: 1
R-CTS11874: 1
R-CTS2509: 1
R-CTS9219: 1
R-FGC21124: 1
R-L151: 1
R-L260: 1
R-L283: 1

R-S1026: 1
R-S1051: 1
R-S11556: 1
R-S1221: 1
R-S4268: 1
R-S5520: 1
R-Y2905: 1
R-Y2906: 1
R-Y6951: 1
R-Z93:1

R-Z156: 1
R-Z214: 1
R-Z326: 1
R-ZZ12_1: 1

Total: 150 haplogroup entries.

A Y-DNA haplogroup traces a man's direct paternal ancestry. The Y chromosome is passed from father to son, with mutations accumulating over time; testing those changes can help place a paternal line on the genetic family tree. The letter (J or E) names a broad branch; the letters and numbers that follow identify narrower branches. People from different ethnic and religious communities can belong to the same broad haplogroup. More specific branches may be associated with particular lineages. Below are the haplogroups of the men tested through FTDNA. The percentages indicate the reported share of the tested men in each group.

J: 41 entries (27.9%). Haplogroup J has a long history in West Asia and is also found around the Mediterranean and in Europe. Many Jewish men carry a number of J branches. Because J is the largest broad group in this sheet, its recurring, more specific branches are useful candidates for further research looking for shared Jewish paternal ancestors. The letter J alone cannot identify an ancestor as Jewish,

further research is needed. Further testing has been commissioned. However, it is interesting to note that the most frequent broad paternal category in this sample has a long history in West Asia.

R: 40 entries (25.9%). Haplogroup R is widespread across Europe and Asia, and some Jewish paternal lines belong to it. A well-studied example is an R1a branch shared by many Ashkenazim Levites; research also discusses the Horowitz rabbinical Levite dynasty who carried that lineage. This shows why an R result should not be dismissed as unrelated to Jewish history. It does not mean that the R results in this study group belong to the same Levite or rabbinic branch as many renown Jewish families. They may or may not share the same haplogroup; that question requires comparison at a much more precise level than the letter R. Further testing has been commissioned.

H: 34 entries (23.1%). Haplogroup H includes a paternal lineage strongly associated with the South Asian ancestry of Romani populations. Its presence fits the established South Asian component of Romani history. A Y-DNA result cannot tell us the religion of the man who first brought that line into a community. If we want to investigate a possible Indian Jewish connection, the specific H branches must be compared with paternal lines from Jewish and non-Jewish South Asian families.

I: 20 entries (13.6%). Haplogroup I has a deep European history. Jewish men also carry branches of I, so a I result does not rule out a Jewish paternal family history. In this study, repeated I branches may help identify paternal lines shared among the sampled communities. To find out whether any such line has a Jewish connection, we would need matches to known Jewish I haplogroup branches. This work has been commissioned.

E: 13 entries (8.8%). Haplogroup E contains many branches with histories across Africa, West Asia, the Mediterranean, and Europe. Some branches occur among Jewish men. The group had a repeated E-CTS2001 result. As this can be a Jewish branch, further testing has been commissioned.

G — 2 entries (0.7%). Haplogroup G occurs in the Caucasus, West Asia, and Europe, and some of its branches are found in Jewish populations. There is only one G entry in this group of men, so it cannot show a pattern across the sampled communities. Deeper testing of that individual line could still be informative if it identifies closely related paternal branches with documented Jewish histories.

The Y chromosome results point to several paternal lines which may have a Jewish connection. Haplogroup J is the largest broad group in this sample, appearing in 39 of the 147 men. Within it, J-Y3612 appears in 12 men across seven communities, J-Y6959 in eight men across four, and J-M67 in four men. E-CTS2001 also recurs, appearing in eight men across three labels. J and E include lineages found among Jewish populations, so these repeated branches are sensible priorities for deeper testing. The strongest evidence would be a more precise branch shared with well documented Jewish paternal lines, together with an estimate of when their common ancestor lived. This work has been commissioned.

The reported paternal results include the South Asian-associated H lineage alongside J, R, I, E, and G. H accounts for 30 of the 147 men (21.9%) in this tally; the other 107 carry J, R, I, E, or G (78.1%). Several shared haplogroups recur within and across communities and may help identify shared paternal founders.

The European-associated I lineages may reflect paternal ancestry acquired in Europe.

In this tally, 36.7% carry haplogroups associated with West Asian or broader regional histories, and 39.5% carry haplogroups associated with European histories. Some West Asian and European branches may be associated with known Jewish populations. Further testing is needed to place the individual haplogroups in or out of known Jewish haplogroups. That work has been commissioned.

We are awaiting deeper paternal branch reports as well as mtDNA results. These tests may help identify more specific maternal and paternal lineages for comparison with documented Jewish and other populations.

Paternal Branches Reported Among Indian Jews

A comparison of this project's FamilyTreeDNA haplogroup results with JewishDNA.net known Jewish haplogroups identifies an overlap between H haplogroups recorded in the project and broader paternal branches reported among Indian Jews. The clearest connections between the Romani people tested here and Indian Jewish lines involve H-M2867 and the more specific PH4549 branch.

JewishDNA.net lists H-M2867-S as branch AB-795 and H-PH4549 as branch AB-841, marking both in its Indian Jewish column. Its table legend identifies that column as Indian Jewish paternal ancestry. In this project 16 men carried the haplogroup H-M2867. These men span several Romani communities, including French Corari, French Piedmont Sinti, Spanish Gitano, Hungarian, Romanian and Slovakian groups.

The public Greater Hindustan Y-DNA project hosted by FamilyTreeDNA records the following progression from an older branch to increasingly specific descendants:

H-M2867 → H-PH4549 → H-PH124 → H-PH927 → H-BY47158 → H-FT39510

This establishes that H-PH124 and H-FT39510 lie downstream of PH4549, a branch represented in the Indian Jewish listing. Four men in this study had the haplogroup H-PH124. This included two Bergitka Carpati and 2 Slovakian Romungro. Four men carried the haplogroup H-FT39510.

The finding is therefore a documented overlap with Indian Jews at the broader paternal-branch level. The H lineages in this project provide specific candidates for further investigation of possible Romani –Indian Jewish paternal connections. That work has been commissioned.

Beyond the H haplogroups discussed above, the comparison of the male haplogroups of the men tested in this project, with the JewishDNA.net list of Indian Jewish haplogroups yielded interesting results. It identifies three further haplogroups which may also be Indian Jewish haplogroups: J-L283, R-Z93 and G-P303. Each shares an upstream branch with a lineage reported among Indian Jews. These are broader branch overlaps, rather than confirmed matches to the specific Indian Jewish terminal branches.

J-L283. A Hungarian Gypsy was found to carry haplogroup J-L283. JewishDNA.net lists Indian Jewish branch AB-153 as J2b-L283-Z39653. The shared L283 marker makes this individuals haplogroup a candidate for further research to determine if his paternal line carries the Indian Jewish associated Z39653.

R-Z93. A Hungarian Gypsy carried the male Haplogroup R-Z93. The Indian Jewish catalogue lists AB-764, R1a-Y5-V4683, within the R1a-Z93 group. The dedicated R1a-Z93 page additionally marks

branches characterized by Z29081, Y34256, YP527 and FT291373 as Indian Jewish. This individual who has the broader Z93 classification is another good candidate for further haplogroup study to see if he shares the same branch with Indian Jews.

G-P303. A French Jenish was found to carry the haplogroup G-P303. Although the shorter Indian Jewish catalogue gives limited detail for its G entry, the dedicated G page lists Indian Jewish branch AB-792 as G-P303-SK1163. This individual therefore shares the upstream P303 designation. This is another good candidate for further haplogroup study to see if he carries the Jewish Indian associated haplogroups.

Haplogroups found in the men in this study, indicate that there may be more matches between them and the Jewish Indian haplogroups found on JewishDNA.met. These observations extend the comparison beyond H and identify three individuals whose haplogroups warrant further investigation: does Z39653 belong to one of the listed Indian Jewish R1a-Z93 subbranches, does and the G-P303 the Indian Jewish associated SK1163.

More detailed SNP results, comparison of Y-STR profiles and documented paternal genealogies would be needed to assess a recent shared ancestry between the European Romani and the known Jewish Indian haplogroups.

This evidence alone suggests the haplogroups found in this study, which belong to haplogroup branches carried by Indian Jews, need to deeper analysis. This work has been commissioned. However, when you add the fact that the overwhelming majority of participants were found to have autosomal affinities to the Jewish groups in India, Cochin Jews, Benei Menashe, and Bnai Israel included, this work seems especially warranted.

Crypto Jewish Practices

In identifying Crypto Jewish communities, another technique is to look for Jewish practices that are still maintained by the community in question. We endeavored to see if there were any practices, found in traditional Romani culture, which could have come from Jewish culture.

Traditional Jewish communities and traditional Romani communities both have bodies of rules and customs that guide communal life. Jewish religious practice is regulated through Halakha, while Romanipen expresses Romani identity, values, and obligations. Some customs associated with Romanipen invite comparison with aspects of Halakha.

Romanipen is the sense of being Romani: the shared identity, values, customs, and obligations that shape belonging to a Romani community. It can encompass family loyalty, respect for elders, hospitality, language, and rules concerning purity and proper conduct. Its meaning and expression vary among Romani communities; it is not a single uniform code. Within Romanipen are the concept of užo (also written uzho), clean or ritually pure, and Marime, unclean or impure.

Marime (also spelled *mahrime*) means ritually unclean or impure in Romani traditions. It describes a condition a person or object may acquire through contact or conduct considered improper under that community’s rules.

Halakha is the body of Jewish law and practice derived from the Torah and developed through rabbinic interpretation. It guides religious observance and everyday life, including food preparation, holidays, marriage, and business dealings. Different Jewish communities interpret and follow it in different ways.

Some of the rules found in Halakah and Romanipen have to do with physical hygiene, cleanliness and menstruation would be two examples. Rules guide how both are to be handled and compliance with the rules keeps you in good standing in the community.

In both traditions, a serious breach of communal rules, Romanipen or Halakha, could threaten a person's place in the community. In some historical Jewish communities, someone who persistently defied a communal ruling could face *niddui* (temporary shunning) or, in more severe cases, *ḥerem* (excommunication), limiting ordinary social and religious contact. In some Romani communities, a person judged to have broken with the Romanipen, could be ruled *marime* or ritualy impure due to behaviour not befitting the Romanipen. This would happen after a serious violation of purity or conduct rules and could lead to the person being excluded from shared meals and gatherings, and sometimes from the community itself.

Such sanctions, in the Jewish community and the Romani community, could also strain family ties, marriage prospects, and livelihoods. Their severity varied between communities, and exclusion was not the automatic result of every broken rule.

Some Romani customs closely resemble practices found in Jewish communities, especially in the way families regulate marriage, food, and ritual status. In some Romani groups, *marime* rules treat menstruation or childbirth as temporary states requiring separation or washing; Jewish *niddah* and other purity rules also assign a temporary ritual status to bodily events. Some Romani households keep utensils or laundry in separate categories and regard food or objects as affected by contact. Jewish dietary and purity laws likewise set rules for vessels, food, and contact, although the specific rules are not identical. Both traditions use household practice to mark a boundary between the community and outsiders.

There are similarities in how community life is maintained, too.

Some Romani groups prefer marriage within their own network, teach customary rules at home, use internal names alongside official ones, and settle disputes through a *kris*.

A kris is a traditional Romani gathering for settling disputes. In communities that use one, respected members hear the people involved and seek a resolution; they may also decide whether someone has broken community rules and what is needed to make amends. A *kris* may decide whether a person should be excluded because of a serious breach associated with *marime*.

Jewish communities also demand marriage within the group, teach customary rules at home, use both home names and official names, and have a forum for settling disputes: the *beit din*, or Jewish court. In many historical communities, it heard disagreements over business, family matters, and religious obligations, applying Jewish law and communal rules.

Conflicts within the community, used the Kris or the Beit Din to settle internal conflicts. Both could bring a dispute before respected members of the community and give their decision social weight. A *beit din* drew its authority from Jewish law and communal institutions, while a *kris* drew on the Romanipen of the Romani community that convened it.

In many Romani communities that observe *Romanipen*, rules about preparing food, washing, bodily contact, and conduct toward others help define what is considered clean and acceptable. *Halakha* likewise reaches into daily life through rules about food, washing, family relationships, and ethical behavior. In both traditions, cleanliness means more than ordinary hygiene: an action may matter because of its ritual or moral meaning, even when no physical dirt is involved. These practices make a community's values visible in everyday conduct, although the specific rules differ among Romani groups and Jewish communities.

Although the specific requirements of halakha and the customary obligations associated with Romanipen differ, they share an important social function. In some Orthodox Jewish and traditional Romani communities, observance is understood both as a responsibility in itself and as a means of maintaining a distinct communal identity. Rules concerning marriage, food, and social relations can reinforce boundaries between community members and the surrounding population. For those who uphold these traditions, maintaining such boundaries can be regarded as essential to preserving communal life and transmitting it to future generations.

Shared Professions

This study aims to determine if the Romani communities tested can be considered Crypto-Jews. One of the ways to make that determination is to look at occupations of the community in question. Does the community in question earn their living in a "traditional Jewish profession?"

What is a traditional Jewish profession? The answer is complex. In Christian and Muslim societies, Jewish occupations were shaped by local law, economic opportunity, and access to training and markets. Some scholars have proposed that Jewish families carried particular skills between the Levant, Europe, and the wider Mediterranean world, including aspects of metalwork, textile production, music, and commerce. The occupations associated with Jewish communities varied by place and period.

The permitted professions varied from place and time. But, at a point, Jews were compelled by law to stick with their "permitted" professions. As such, certain occupations became known "Jewish" occupations.

In the decades surrounding the Spanish expulsion of Jews in 1492, an occupation associated locally with Jews or conversos could contribute to suspicion in some circumstances. Jewish and converso families worked in commerce, finance, medicine, and a range of crafts, including tailoring, weaving, dyeing, silk work, leatherwork, goldsmithing, silversmithing, and bookbinding. The perception of an occupation varied by town and period, and these trades were also practiced by people without Jewish ancestry.

The next question is this. Historically, did Romani communities earn their living in occupations that might be considered Jewish occupations? The answer is yes.

Jewish and Romani people both earned livelihoods as traveling merchants, horse dealers, metalworkers, musicians, and healers. The overlapped way of living included specialized skills: Kalderash coppersmiths made and repaired cauldrons, while Jewish artisans also worked in precious and other metals; Romani and Jewish musicians performed at weddings and courts; and members of both communities traded goods and practiced healing across regions. Skills like these could travel with

families and be taught to children over generations. But Jews and Gypsies most certainly shared learned occupations.

Shared Professions in Jewish and Romani History

Across Europe and the Mediterranean, Jewish and Romani communities entered overlapping occupational worlds: itinerant trade, horse dealing, metalwork, music, healing, repair work, and the sale of portable goods. Many trades involved specialist knowledge transmitted within families. These occupations could also have created settings in which Jewish and Romani people met, exchanged techniques, and formed commercial relationships.

The overlap between Jewish communities and Romani communities nevertheless requires careful interpretation. Exclusion from landholding, guilds, and settled occupations pushed both peoples toward work that could be performed with movable tools, small inventories, and extensive personal networks. Parallel discrimination can therefore explain part of the pattern. It does not, however, explain where particular technical knowledge originated, how knowledge crossed regions, or why the same clusters of knowledge demanding occupations recur so consistently. Those questions require documentary history, genealogy, and population genetics to be considered together.

Three explanations remain possible and may have operated simultaneously: independent adaptation to similar restrictions; direct exchange and intermarriage between neighboring Jewish and Romani communities; and the incorporation of Jewish or Jewish-connected families into populations later identified as Romani. The genetic findings reported elsewhere in this study make the latter two models testable, but occupations alone cannot decide among them.

The Occupational Pattern

The broad pattern of shared occupations is not based on one trade. It spans commerce, animal husbandry, metallurgy, medicine, and performance. The strongest parallels are occupations that combined mobility with specialized knowledge that could be taught within a household.

Occupation	Jewish Communities	Romani Communities
Long-distance merchants	Yes	Yes
Caravan traders	Yes	Yes
Traveling merchants	Yes	Yes
Peddlers	Yes	Yes
Market traders	Yes	Yes
Fair traders	Yes	Yes
Livestock dealers	Yes	Yes
Horse traders	Yes	Yes
Horse breeders	Yes (regional)	Yes

Occupation	Jewish Communities	Romani Communities
Metal merchants	Yes	Yes
Goldsmiths	Yes	Yes
Silversmiths	Yes	Yes
Jewelers	Yes	Yes
Copper workers	Yes	Yes
Tinsmiths	Yes (regional)	Yes
Blacksmiths	Yes (regional)	Yes
Repair of metal goods	Yes	Yes
Knife/tool sharpening	Yes	Yes
Musicians	Yes	Yes
Entertainers	Yes	Yes
Herbal medicine	Yes	Yes
Folk healing	Yes	Yes
Animal trading	Yes	Yes
Pack-animal transport	Yes	Yes
International commerce	Yes	Yes

The table is intentionally broad. “Yes” means that the occupation is historically documented in both communities. The most informative comparisons are the occupations that required apprenticeship, expensive tools, trade contacts, or a reputation built over generations.

Portable Expertise and Family Transmission

Metalworking, medicine, music, and commerce were portable in different ways. A smith could travel with hand tools and obtain fuel and raw metal locally. A healer carried remedies, recipes, and a reputation. A musician carried an instrument and a repertoire. A merchant relied on languages, credit, kinship, and trusted agents. In each case the decisive asset was knowledge rather than land.

Family transmission helped protect that asset. Children learned by watching parents and relatives; marriages linked households with complementary skills; and commercial information circulated through kin networks. This does not mean that every Jewish or Romani family guarded a secret tradition. It means that occupations organized through households were especially durable among mobile and legally restricted minorities.

Healing and Medicine

Romani healers are documented as herbalists, folk practitioners, bonesetters, midwives, veterinary healers, horse doctors, sellers of medicinal plants, and providers of practical first aid. Their work is especially visible in the Balkans, Romania, Hungary, Slovakia, Spain, France, and Britain. Travelling practitioners could accumulate botanical and veterinary knowledge from several regions and serve rural populations with limited access to physicians.

Women were particularly important as herbalists, midwives, and locally recognized “wise women.” Some combined remedies with divination or fortune telling, activities that observers often recorded together even when clients distinguished between them. Romani medicine was usually practical and community based: wounds, childbirth, digestive complaints, animal illness, and the everyday consequences of hard physical labour. Romani healers tended to work in rural settings, while making their services available at fairs and other market events.

Jewish medicine developed in a different institutional setting but also depended on mobility and multilingual knowledge. Jewish physicians, pharmacists, apothecaries, and merchants worked within the medical cultures of the Islamic world, Byzantium, Iberia, Italy, and northern Europe. Their access to Arabic scientific literature and long-distance commerce connected to drugs imported from China, India, and Africa. They were noted healers; though their medical practice could be mobile or urban sedentary.

Metalworking

Metalworking provides the most substantial occupational comparison between the two groups. Jewish artisans are documented as goldsmiths, silversmiths, blacksmiths, coppersmiths, tinsmiths, armourers, engravers, jewellers, and metal merchants across the Mediterranean, West Asia, North Africa, and Europe. Romani communities became similarly prominent in blacksmithing, copper work, tinning, cauldron making, tool repair, weapon repair, and the production of household vessels.

Metalworking required specialist knowledge in both communities. Samuel Kurinsky proposed that some metalworking traditions reached Europe with Jewish migrants from the Levant. This interpretation raises questions about the histories of craft knowledge in Jewish and Romani communities.

Kurinsky and a Levantine Route of Transmission of Metal Working Skills

Samuel Kurinsky, in his book, “The Eighth Day: The Hidden History of the Jewish Contribution to Civilization, and his fact sheet, “Silver Smithing” argue that conventional histories have underestimated the part played by ancient Israelites and later Jewish communities in the development and transmission of pyrotechnic crafts. These included copper and iron working, goldsmithing, glassmaking, and related technologies requiring controlled furnaces and specialist knowledge. In Kurinsky's reconstruction, such expertise travelled with Jewish merchants and artisans from the Levant into the Mediterranean and Europe. The long association of Jewish communities with goldsmithing, silversmithing, copper smithing, and other branches of metalwork may therefore represent not merely

the adoption of medieval occupations, but the continuation and adaptation of a much older technical tradition brought with them from Israel.

Kurinsky's work argues that metalworking and other crafts requiring high temperatures included traditions associated with ancient Israel. His research draws attention to the possibility that specialist knowledge could be carried between regions by mobile families and occupational communities, surviving migrations that left relatively little documentary evidence of its origins.

This possibility is relevant to the occupational similarities considered here. If some of the ancestral populations incorporated into the Romani came from the Levant or neighboring parts of western Asia, they may have acquired metal working skills in Israel. Jewish and proto-Romani-associated populations could therefore have acquired or developed related craft traditions within the same Levantine and eastern Mediterranean technological environment. Early Byzantine and Ottoman evidence for Romani smiths recorded the continuation of an established profession, without necessarily revealing where or from whom it had originally been learned.

The genetic findings in the present study make this hypothesis worthy of investigation. The recurring Jewish and West Asian affinities are consistent with at least part of the occupational tradition having been acquired in West Asia. Establishing a specifically Jewish or Israelite route of transmission would require additional evidence, including dated population comparisons, shared haplotypes, family histories, and records connecting particular metalworking communities across the Levant, Byzantium, and the Ottoman world.

But metal work can most assuredly be described as a Jewish profession. One that was shared by the Romani communities.

Documented Romani Metalwork

By the late Middle Ages, metalworking was already associated with Roma in southeastern Europe. Documents concerning the feudum acinganorum on Corfu begin in 1475 and later descriptions include blacksmiths and cauldron makers. Ottoman records from 1475 identify Roma blacksmiths in Rumelia who made or repaired weapons and could receive tax concessions for military service. Western pilgrims visiting the large Roma settlement at Methoni in the 1490s repeatedly described smiths, forges, anvils, and the production of nails and other iron goods.

These records establish the occupation before the better-known early modern migrations into Central and Western Europe. They also show that smithing was not an incidental activity practiced by a few individuals. In several places it was sufficiently visible to define the community in the eyes of administrators and travelers.

Romani groups associated with metalworking and related crafts

Romani Group	Region	Traditional Metalworking Occupation
Kalderash (Căldărari)	Romania, Balkans, Europe	Coppersmiths, cauldron makers, kettle makers, boiler repair

Romani Group	Region	Traditional Metalworking Occupation
Lovari	Hungary, Slovakia, Balkans	Horse traders; some communities also practiced blacksmithing and metal repair
Koritari	Balkans	Manufacture of wooden and metal household vessels
Kotljari (Kotlari)	Balkans, North Macedonia	Copper cauldron and kettle makers (*kotel* = “kettle”)
Demirdži (Demirci)	Turkey, Balkans	Blacksmiths and ironworkers (*demir* = “iron” in Turkish)
Čurari (Ciurari)	Romania	Makers and repairers of metal sieves and household utensils
Lăutari	Romania	Primarily musicians, although some families practiced fine metalworking
Sinti	Germany, France, Italy	Tinsmiths, knife grinders, metal repair, later machinery repair
Manouche	France	Tinsmiths, blacksmiths, and general metal repair alongside entertainment trades
Corari	France and Romania	Copper workers and manufacturers of copper vessels
British Romanichal	Britain	Tinkers, tinsmiths, knife sharpeners, soldering, and metal repair
Scottish Nacken	Scotland	Tinsmiths, blacksmiths, and repairers of agricultural implements
Spanish Gitanos	Spain	Blacksmiths, farriers, ironworkers, and metal craftsmen, especially in Andalusia
Greek Romani	Greece	Coppersmiths, blacksmiths, and farriers
Turkish Romani	Turkey	Blacksmiths, locksmiths, knife makers, and copper workers
Serbian Romani	Serbia	Blacksmiths, horseshoers, and

Romani Group	Region	Traditional Metalworking Occupation
		makers of agricultural tools
Bulgarian Romani	Bulgaria	Blacksmiths, coppersmiths, and tinsmiths
Macedonian Romani	North Macedonia	Copperware manufacture and ironworking

Coppersmiths and Distillers: The Intersection of Two Occupations

Romani coppersmiths, especially Kalderash families, manufactured and repaired cauldrons, boilers, kettles, dairy vessels, cooking pots, and copper stills. Their work required specialized techniques, and a travelling smith could maintain equipment for households, villages, estates, and commercial producers. The movement of distilling and still-making knowledge across regions is a subject for further research.

In Eastern Europe, Jewish leaseholders and entrepreneurs were often involved in distilling, tavern keeping, brewing, and alcohol distribution, particularly under the propinacja system of the Polish-Lithuanian Commonwealth and neighbouring territories. Romani makers and repairers of copper vessels and Jewish distillers worked in related rural economies, creating opportunities for commercial contact.

Occupational surnames such as Vinokur or Winokur preserve this association with distilling. The historical record therefore places Jewish distillers and Romani makers or repairers of stills within connected rural economies.

The division of skills should not be made too tidy. Jewish coppersmiths also produced distilling vessels, and Roma also distilled and sold alcohol. Shared occupations in metal work resulted in shared surnames.

Occupational and group names associated with metalwork, animal trading, and related crafts.

Occupation	Literal/traditional meaning	Roma association	Jewish?	Surname
Kalderash / Kalderaš	Cauldron-maker / coppersmith	Major Vlax Roma group	Yes	Kalderash / Kalderaš
Kelderari / Căldărari	Cauldron-makers / coppersmiths	Roma occupational group	Yes	Kelderari / Căldărari
Lovari	Horse dealers	Major Vlax Roma group	Yes	Lovari
Čurari / Churari	Sieve/strainer makers	Roma occupational	Yes	Čurari / Churari

Occupation	Literal/traditional meaning	Roma association	Jewish?	Surname
		group		
Kovači / Kovač	Smith / blacksmith	Balkan Roma; occupational name	Yes	Kovači / Kovač
Kovachi / Kovači Roma	Smiths / blacksmiths	Balkan Roma occupational designation	Yes	Kovachi / Kovači Roma
Demirdži / Demirci	Blacksmith / ironworker	Ottoman/Balkan Roma metalworkers	Yes	Demirdži / Demirci
Džambazi / Cambazi	Horse/animal dealers	Roma occupational group	Yes	Džambazi / Cambazi
Kalaydži / Kalajdžije / Kalajdzhi	Tinner / tinsmith	Balkan Roma metalworkers	Yes	Kalaydži / Kalajdžije / Kalajdzhi
Arămar / Arămari	Coppersmith / copper worker	Romanian Roma occupational group	Yes	Arămar / Arămari
Zlătari / Zlatari	Goldsmith / gold worker	Romanian/Balkan Roma occupational designation	Yes	Zlătari / Zlatari
Rudari	Ore/mining workers; later often woodworkers	Roma/Boyash-related population	Yes	Rudari
Lingurari	Spoon-makers, usually wood	Roma/Boyash occupational group	Yes	Lingurari
Băieşi / Boyash	Historically associated with mining	Roma/Boyash population	Yes	Băieşi / Boyash
Koritari	Trough-makers, usually wood	Roma occupational group	Yes	Koritari
Sepečides / Sepetçi	Basket-makers	Roma occupational group	Yes	Sepečides / Sepetçi
Kovács / Kovacs	Smith / blacksmith	Documented Roma surname	Yes	Kovács / Kovacs
Kovář / Kovar	Smith / blacksmith	Documented Roma surname	Yes	Kovář / Kovar

Names such as Kovač, Kovács, Kessler, Kupferschmied, Blecher, Spengler, Kalaycı, Demirci, and Căldăraru occur in regional naming systems used by both Jews and Romani people.

Music and Instrument Making

Music was another portable profession in which both Jewish and Romani performers became highly visible. Musicians could work at weddings, fairs, religious celebrations, taverns, civic ceremonies, military events, and aristocratic courts. Reputation travelled with the performer, and repertoire could cross linguistic borders more easily than many other forms of work.

Jewish musical traditions ranged from liturgical chant and communal celebration to court and urban performance. In the Islamic Mediterranean, Jewish singers and instrumentalists worked alongside Muslim and Christian musicians and used instruments such as the oud, rebab, qanun, flute, and percussion. By the late Middle Ages and Renaissance, Jewish minstrels, fiddlers, singers, and ensembles appear in Iberian, Italian, Provençal, and German records. Salamone Rossi at the Gonzaga court of Mantua is a prominent later example.

Romani musicians became central to regional traditions from the Ottoman lands and Balkans to Hungary, Romania, Spain, France, Britain, and Russia. Turkish Romanlar shaped wedding and urban music; Romanian Lăutari developed hereditary professional ensembles; Hungarian Roma became renowned as violinists and cimbalom players; Sinti and Manouche musicians later became associated with distinctive guitar and string traditions. In West Asia, local labels such as Luti, Ghorbati, Koli, Dom, and Lom describe complex populations and should not automatically be treated as synonyms for European Roma.

Instrument construction and repair connected music with existing woodworking and metalworking skills. Some families made or repaired violins, guitars, cimbaloms, drums, bells, brass instruments, bows, strings, and fittings. Jewish and Romani merchants also moved instruments between workshops and markets.

Trade, Horses, and Mobile Commerce

The commercial occupations shared by Jews and Roma included peddling, market trading, fair trading, dealing in second-hand goods, livestock trading, horse dealing, brokerage, money changing, and the transport of small, valuable commodities. These activities depended on movement, multilingualism, knowledge of prices, and trust extending beyond a single locality.

Horse dealing deserves special attention. Horses were transport, capital, military equipment, and agricultural power. A successful dealer needed expertise in breeding, age, health, temperament, shoeing, feeding, and veterinary treatment. Jewish and Romani horse traders were repeatedly accused by hostile authorities of deception, but the persistence of the occupation also reflects genuine specialist knowledge and the ability to work across jurisdictions.

Peddling and fair trading likewise created contact zones. Jewish and Romani traders sold textiles, metal goods, jewelry, glass, leather, medicines, livestock, tools, and repaired household objects. They met customers who might otherwise have little interaction with either minority. Because these trades were organized through routes rather than fixed shops, family and community networks were essential.

How Shared Professions Should Be Interpreted

The evidence suggests several possible interpretations.

Jewish and Romani communities were documented in overlapping occupations, including portable trades that could involve family apprenticeship. These trades created opportunities for contact among coppersmiths, distillers, horse dealers, healers, musicians, and merchants. The movement of knowledge between West Asia and Europe, including the route proposed by Kurinsky, remains a subject for investigation.

Two historical models can explain the convergence:

Parallel adaptation: Similar legal restrictions and exclusion from land, guilds, and office pushed both communities toward portable and marginal occupations.

Shared or incorporated ancestry: Some Jewish or Jewish-connected families may have entered populations later identified as Romani, carrying both genetic ancestry and occupational knowledge.

Some researchers consider occupations associated with Jewish communities when investigating possible crypto-Jewish histories. Jewish and Romani communities worked in a number of overlapping trades, providing material for further historical comparison.

Shared occupations in Jewish and Romani history provide one line of inquiry into possible connections. Their interpretation benefits from documentary and genealogical evidence concerning particular families and places.

Shared Surnames

Jews and Romani families sometimes bore the same occupational surnames. Examples in this chapter include Kovács or Kovač (blacksmith), Szabó and Terzi (tailor), Schneider(tailer), Schmidt(smith), Kessler (cauldron maker), Molnár and Moraru (miller), Cojocaru (furrier), Wagner (Cart maker), and Demirci (ironworker). These names reflect trades practiced in both communities, but they could have arisen independently: two families doing the same work in the same region might acquire the same surname without being related.

In some cases, Jews and Romani families shared “nice” surnames, like Rosenberg (rose mountain), Adler (Eagle), Bernhardt (brave as a bear), or place names like Bamberger (someone from Bamberg) and Herzberger (someone from Herzberg), or biblical names like Adam, David, and Joseph.

Many surnames were used by both Jewish and Romani families. Names such as Gabor, Horvath, Kovac, Lehman, and Steinbach occur in both settings, and individuals in the sampled groups bore surnames also used by Jews. These overlapping names offer possible starting points for genealogical research.

If one reviews the list of German Sinti Porajmos (Holocaust) victims, in the “Memorial Book-The Gypsies at Auschwitz-Birkenau”, one finds Gypsies and Jews entering the camp bearing the same surnames. Names like Adler, Bauman, Blum, Boehmer, Fischer, Florian, Gruber, Hanstein, Hersberger, Horvath, Jung, Kessler, Klein, Landsberger, Leuenberger, Lehmnan, Mettbach, Rose, Rosenfeld, Schar, Schwarz, Steinbach, Strauss, Trollman, Weiss, and Winter could be either Gypsy or Jewish. One can only distinguish the Gypsy victims and Jewish victims by examining camp records. Specifically, if the victim’s inmate number began with a Z, the person was a Gypsy. (Z for Zigeuner or Gypsy in German)

One could say, “Oh the names shared by Gypsies and Jews are just common German surnames” or “Oh those are common Hungarian names”. And to an extent that is true. Unless it’s not.

Elisa Galut, was born St.Servais, France on 8 April 1921. Her family were “nomades” living in the Normandy region. She and the rest of her family and community were rounded by the Germans and taken to the SS assembly camp at the Dossin Barracks in Mechelen, Belgium, on 15 January 1944. They were transported to Auschwitz on 1 February 1944. Elisa’s prisoner number, Z-9928, indicates she was a Gypsy. She and her community were one of the last Gypsies to enter the camp. Almost all were murdered by the Germans. This specific group of French Gypsies were “liquidated” or murdered as the Germans had Hungarian Jews coming into the camp and they had to “make space”.

Elise Galut b. 1921 transported to Auschwitz 1944. Perished.



There were more.

Nathalie Galut, born 7/1/1926 Auschwitz Tattoo Z9772. Perished



Jean Galut, born January 4, 1928 Tattoo number Z9087. Perished



In Kazerne Dossin, (https://kazernedossin.memorial/biografie/henri-maitre/) we read of Henri Maitre, and his fate during the war. His memorial biography mentions that the Galut family were part of this German deportation of Sinti from France.

"After all, the decision to deport the Roma and Sinti in Europe had already been made. About fifteen Belgian Roma and Sinti families were rounded up in late November 1943 by the Feldgendarmerie and the SD of Brussels in Hénin-Liétard, today Hénin-Beaumont, (Pas-de-Calais). These were the Annies, Boudin, Colicon, Demestre, Fasci, ***Galut****, Cal, Maitre, Modis, Petrebost, Roussalino, Todor, and Vadoche families. They were imprisoned in Loos-lez-Lille and subsequently transferred to and registered at the Dossin Barracks in Mechelen, Belgium, on December 9, 1943. This assembly camp was part of the plan developed for racial deportation by the military commander in Belgium and*

*Northern France. Henri Maitre was registered at the Dossin Barracks under the number Z 301 (Z for the German word * Zigeuner *).*

On January 15, 1944, Convoy Z, the only one of its kind in Belgium, departed from Mechelen with 352 Roma and Sinti on board. Destination: Auschwitz. The convoy was coupled with Transport XXIII, which contained 655 Jewish deportees. The train arrived in Birkenau on January 17, 1944. The Roma and Sinti underwent no selection. Upon arrival, none of them were gassed. All, including the infants and the elderly, were tattooed and interned in the family camp in Birkenau. Living conditions there were extremely poor, and mortality rates exceptionally high: between January and March 1944, half of the Roma and Sinti deported on Transport Z perished. On August 2, 1944, the inmates of the Gypsy family camp were murdered. The SS running the camp had to make way for the Hungarian Jews who were being deported en masse during that period."

Members of the French Galut family were among those persecuted and murdered by the Germans. Yayal Galut and his wife Paprika are described as survivors who later had another child, whom Yayal named Moise.

The Galut family, and their use of Jewish first names, becomes significant when you know something about the surname Galut.

Galut is a surname found among some Jewish families. In Hebrew, the word galut (גלות) means "exile" or "diaspora" and is derived from the root ג־ל־ה (g-l-h). Throughout Jewish history, *t*he term has referred to periods of life outside the Land of Israel following successive exiles. The hope for redemption and the gathering of the Jewish people has remained an important theme in Jewish tradition.

The Hebrew word galut is associated with exile and the Jewish diaspora. JewishGen records variants of the Eastern European Jewish surname Golod, including Golad, Gollod, Holod, Golodetz, Goloditz, and Holoditz. Similar spellings in western Europe, including Galut, Galuth, Galod, Galoud, and Galout, invite further investigation into their particular family origins.

The use of the surname Galut by a Romani family invites genealogical investigation. Some members also used biblical forenames found among Jewish families, making the family an interesting case for closer research.

The Galut family name and its possible associations with Hebrew invite further research. In the genetic analysis, participants from the sampled groups also showed reported connections to individuals buried in the medieval Jewish cemeteries at Norwich and Erfurt, as well as affinities to Ashkenazi, Sephardic, and Mizrahi reference populations.

Some Jewish and Romani families used biblical names such as Adam and David, and both communities suffered persecution and murder under the German Nazi regime. The shared names and reported Jewish-reference affinities in some participants invite closer examination of particular family histories.

The shared name story becomes really perplexing with another family. In this case, it's a documented Jewish family who used the surname Zigeuner (Gypsy) and Cigan (Gypsy) intermittently.

Indeed, JewishGen, the genealogical database of the Jewish people, houses over 1963 records of Jews who used Cigan or Zigeuner as a surname.

Why a Jew would take or use the name Gypsy, in a world filled surname options? Life as a Jew was hard enough without making yourself a double minority.

According to historians, that designation does not necessarily mean the individual was ethnically Romani**.** They say Medieval and early modern surnames frequently originated as descriptive nicknames bestowed by other people. Someone might have acquired the nickname Zigeuner or Cigan because he traveled extensively, dressed unusually, worked in an occupation associated locally with Roma, came from somewhere associated with Roma, or had dark skin. Just looking at that last one, the brown skinned Jew, throws the nickname theory into question. Dark skinned Jews did get the nick name braun(brown) and or cherny(black) and those did become surnames. Surnames that would have been preferable, in the racist Europe, to "Gypsy".

One way or the other, the fact remains, Jews used "Gypsy" as a surname. Below are the number of records of Jews who did so found in JewishGen.

Cigan

Israel: Israel Genealogical society 135 Records

Lithuania 534 Records : (Zigan, Zigon, Shegan, Ciganiene, Dzigan)

Poland 159 Records: Tsygan, Sheigan, Chigan, Tsigani, Cyganiene(Cigan), Ciganas, Cygan, Tsigan.

Ukraine 1046 Records: Tzigan, Cygan, Cigan.

Czech Republic 20 Records : Cigan, Tsygon, Sygan, Tsigan.

Belarus: 37 records Cigan

Zigeuner

Old Prague Cemetery 23 Austria 3 records

Czech marriage records 2 records

Czech Bohemia 2 records

Czech Prague 1792-1794 Census 2 records

Region/database	Cigan/Zigeuner-type records
Ukraine	1,046
Lithuania	534
Poland	159
Israel Genealogical Society	135
Belarus	37
Old Prague Jewish Cemetery	23
Czech Republic	20

Region/database	Cigan/Zigeuner-type records
Austria	3
Czech marriage records	2
Czech Bohemia	2
Prague 1792–94 census	2
Total	**1,963**

When asked why Jewish families used "Gypsy" as a surname, ChatGPT provides the following response. Because AI draws on information from a variety of sources, its answer may offer insight into commonly expressed beliefs and assumptions about Jewish families who adopted this surname, rather than necessarily reflecting established historical fact.

"1. Nickname → hereditary Jewish surname. *This is probably responsible for at least a substantial portion. A Jew acquired the byname "Gypsy," and descendants eventually inherited it.*

2. Occupational/social association. *Jewish and Romani populations historically overlapped in certain mobile commercial and craft niches—horse dealing, metal trades, music, itinerant commerce, peddling and other occupations. A Jewish family associated with one of those environments could conceivably acquire the designation without being Romani.*

3. Geographic or lifestyle designation. *"Gypsy" could have meant someone perceived as itinerant rather than making a literal statement about ancestry.*

4. Actual Jewish–Romani ancestry. *This cannot be excluded. Individual Roma entered surrounding populations, and individuals from surrounding populations entered Romani communities. Conversion and intermarriage occurred historically. A surname meaning "Gypsy" could therefore sometimes preserve an ancestral identification. But the surname alone cannot tell us which families have that history."*

Due to the social disabilities associated with using "Gypsy" as a surname, it seems unlikely Jews would have taken the name voluntarily. The important line here is voluntarily. Bear in mind, a decree from Joseph II in 1787 required Habsburg Jews to adopt fixed German surnames. Thus, people adopted this surname.

Before the decree, Jews used their name conjoined with their father's name. David ben (son of) Samuel. In some cases, this person would have used Samuel as a surname and his legal name would become David Samuel. Let's assume David was a tailer (Schneider). After the decree, David might have used Schneider for his official surname. David the Tailer or became David Schneider.

The how and why people opted for "Gypsy" as a surname is a real mystery.

The Zigeuner Family

The Zigeuner surname was present in Prague more than 170 years before Joseph II's 1787 decree requiring Jews to adopt fixed German surnames**.** Salman Zigeuner lived and had a family in Prague in the 1580's. His father and his children used both Zigeuner and Cigan as a surname.

Zigeuner as a family name cannot simply be explained as an artificial German surname taken or assigned to a Jewish family at the time of the late-eighteenth-century surname reforms. It was in active use by a Jewish family long before they were obliged to have a surname. The Prague cemetery records the following Zigeuner family members being buried there.

Date	Zigeuner individual/connection	Relationship information
1614	Salkind Zigeuner	spouse of Goldeh
1645	Abraham Zigeuner	father Jizchok
1648	Jizchok Zigeuner	father Moscheh
1648	Moscheh Zigeuner	spouse of Reichel, daughter of Jizchok
1672	Hirschl Zigeuner	spouse of Beleh; father Moshe
1677	Hirschl Zigeuner	father Moscheh
1680	Reichel Zigeuner	father Moscheh
1714	Sarah/Sorl Zigeuner	father Moshe; spouse Pories
1714	Elijeh Zigeuner	spouse of Breindl Jutschin
1714	Elijeh Zigeuner	father Leb
1714	Leb Zigeuner	father Moscheh
1720	Reichl/Reichel Zigeuner	father Moscheh; spouse Chajat
1733	Peretz Zigeuner	spouse of Jitel Wien
1781	Moscheh Zigeuner	father Elijeh
1784	Elijeh Zigeuner	spouse of Beleh Tias

And this was definitely a Jewish family. We have three independent pieces of evidence that fit together.

1. They appear in the Prague Old Jewish Cemetery, whose surviving burial stones date from 1439 through 1787. JewishGen says its database was compiled principally from Simon Hock's *Die Familien Prags* and Leopold Popper's cemetery work.
2. Soloman Salkind Zigeuner occurs in Prague cemetery records in 1614.
3. Solomon Salkid-Zigeuner founded a Prague synagogue at about the same time, circa 1613, and that synagogue was named for him.

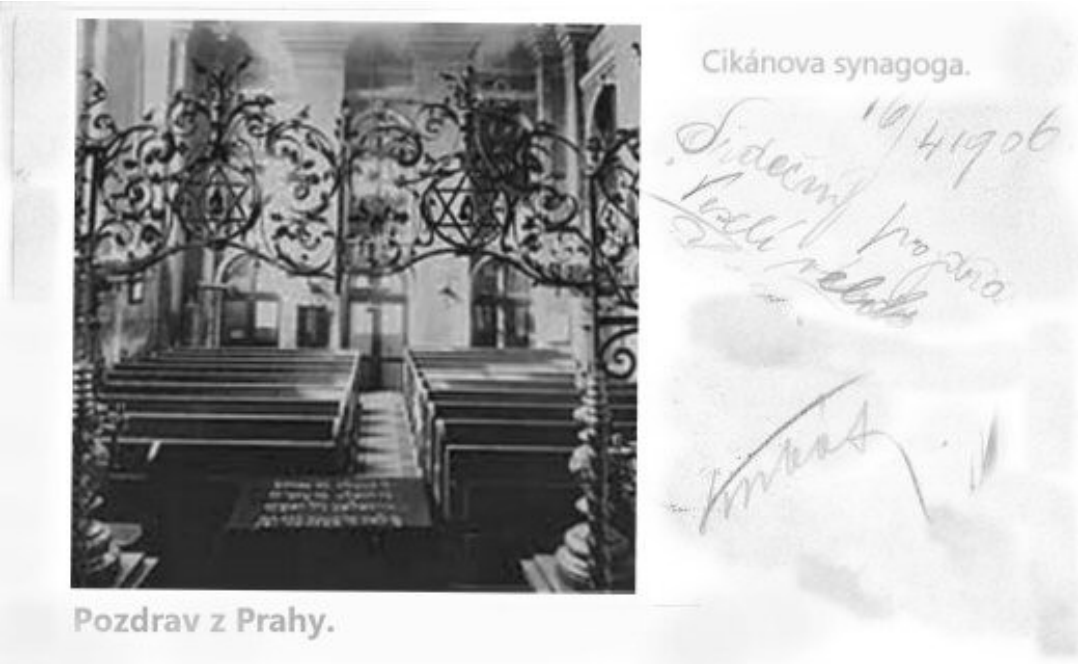
That makes the Jewish identity of this particular Zigeuner family exceptionally well established. They used “Gypsy” as a surname long before surnames were compulsory. Indeed, Salman the Gypsy (Zigeuner or Cigan) left a permanent impression on the history of Prague.

The Zigeuner Synagogue (Gypsy Synagogue) built *ca* 1613

Solomon Salkid-Zigeuner founded a synagogue in Prague that was built in 1613. The story of this synagogue and the man who founded it, may hide a connection between Jews and Gypsies.



The Zigeuner Synagogue (Gypsy Synagogue) built *ca* 1613



The Gypsy Synagogue was named after its founder, Solomon Salkind-Cikán or Salkind Zigeuner or Solomon Salkind the Gypsy. After a fire in 1689, it was rebuilt on a larger scale in 1701. It was destroyed by fire again in 1754 and was rebuilt in 1755. It was demolished in 1906 replaced by the Jubilee Synagogue, built on Jerusalem Street in 1906.

Was the Gypsy Synagogue built by a Gypsy Jew for Gypsy Jews? Does it prove there were Gypsy Jews? Historians are largely silent on that subject as to why the founder of the synagogue was called Solomon the Gypsy. Some say it was called the Gypsy Synagogue because it was built in the Gypsy neighborhood. False. Some say it got its name because it was built on "Gypsy Street". False. The Cikanova Sinagoga was named after its founder, Salomon Salkind-Cigan.

This raises certain obvious questions about Solomon Salkid-Zigeuner or Cigan.

What do we do about Salomon Salkind-Cigan? He was born in Selenica, Slovakia in 1580. His parents were Moses Zigeuner and Reginia Futralmacher.

His mother came from a family of case makers. Regina the Case Maker. Case-making (*Futteralmacherei*) belonged to the broader world of specialized wood-, leather-, and container-making crafts that overlapped with occupations practiced by itinerant artisans. That would include Jewish and Romani artisans. The Romani Rudari/Boyash were known to be fine woodworkers, and they made cases, but she lived in Slovakia. So, his mother's name gives us no clue about whether she was Gypsy, Jew, or Gypsy Jew.

We do know he was a wealthy merchant. He would have to be wealty to buy the land and erect a synagogue. H married a woman called Golde(1580-1613). He had five children, Braun, Abraham, Josef, Gerson, and Herschman. His children used the surname Cigan and Zigeuner interchangeably. He and his wife built the synagogue, and when Goldi died, heartbroken, Salomon left Prague for Vienna. Saloman the Gypsy left the synagogue in the hands of his sons. All that remains is his headstone.

תנצבה

656. Salomo Salkind Zigeiner.

. . . (ג) ד' [?]תכ"ו — 166[?] . . . Mittwoch.

Sandstein. 105 *cm* hoch, 56 *cm* breit, 13 *cm* dick, 70 *cm* Texthöhe, 28 *cm* Zeilenlänge. **404.**

Der untere linke Teil des Steines ausgebrochen.



אבן שלמה
זקן ושבע ימ[י]ם
הלך בדרך תמים
גמל חסדים ׳ לדל[ים]
ונכבדים וצדק[תו]
עומדת ׳ בהכ מיוחס
אשר בנה בפראג
קריה נאמנה ׳ הה
הישיש כמר של[מה]
זאלקינד צ[יגיינר] . .
משה ב . . . . . .
יום ד (ג) . . . . . .
תך(ו) לפק ת(נ)צבה

Diese Inschrift ist, wie bekannt, die einzige Quelle für die Erbauung der Prager Zigeiner-synagoge durch Salomo Salkind Zigeiner. Über den Erbauer und die Synagoge vgl. die Monographie von Aladar Deutsch, Die Zigeiner-Grossenhof- und Neusynagoge in Prag (Prag 1907). Die Angaben

Translation: This inscription is, as is well known, the only source for the construction of the Prague Gypsy Synagogue by Salomo Salkind Gypsy. For more information about the builder and the synagogue, see the monograph by Aladar Deutsch, Die Zigeiner-Grossenhof- und Neusynagoge in Prag (Prague 1907).

So, on his headstone, we learn he built the Gypsy Synagogue.

Alastair Deutch wrote a monograph on the three synagogues demolished to build the Jubilee Synagogue. Out of respect for the 3 demolished synagogues, he wrote a history of all three. He goes into great detail about Solomon Zigeuner or Cigan's family life. He had five children with Golde. He moved to Austria and had two more children. And is buried in the cemetery there.

What else can we know about Solomon the Gypsy. To start, his first name was Solomon. And that was and is a Jewish name.

From the "Dictionary of German Jewish Surnames" we find some information about his second name, Salkind.

"Salkind; see Sulkind" - "Sulkind: "possibly from Sulka; possible from Yiddish feminine given name sulka or suke , a hypocoristic form of shulamit from the Hebrew originally meaning woman from

shulem, a location in ancient Eretz Israel, Song of songs 7:1 Or an old German masculine given name which was used by Middle and east European Jews as a Germanized form of Saloman."

The founder of the synagogue was a man named Soloman. His second name, Salkind, meant either son of Solomon or son of Shulamit.

Now, his third name, Gypsy, is where things get interesting. As for his perplexing last name, in the scholarly article is by Petr Uličný, an architectural historian associated with the Czech Academy of Sciences (Petr Uličný, "Architektura pražských synagog 16. a 17. století" / "The Architecture of Prague's Sixteenth- and Seventeenth-Century Synagogues," *Umění / Art,* vol. 61, no. 2 (2013), pp. 120 ff.) Uličný writes:

"Byl to tedy pražský Žid Salomon Salkind, zvaný Cikán, a jeho žena Golde…" A direct translation is: "It was therefore the Prague Jew Salomon Salkind, called the Gypsy, and his wife Golde…" The official English abstract is even more explicit. It describes the founder as"Salomon Salkind also known as 'Cikán' or 'the Gypsy' "

So, he absolutely was known as Salomon Salkind, the Gypsy.

His father Moses went by Zigeiner (Gypsy) and Salomon went by Cigan(Gypsy).

This brings us back to the central question. Why was his last name Gypsy? Some say that Jews with the last name Gypsy (Cigan, Tsiganes, Zigeiner, Zigeuner) got their last name as a nickname because they were dark skinned. Sometimes Jews ended up with last names that reflected some physical feature, like Gross(fat)= Grossman or fat man, or rot(red)= Rotman=red haired man or kurz(short)= Kurzman= short man. So, some say Jewish people with the last name Gypsy got the surname because they were dark skinned.

The Yiddish reference works consulted did not reveal examples of Cigan or Zigeuner used to describe a dark-skinned person. Cherny (black) and Braun (brown) could be used descriptively and also became surnames. The origins of particular Cigan or Zigeuner family names remain open to investigation.

But many Jewish people carried the last name "Gypsy". Jewishgen has over 1600 records for Jews bearing the last name "Gypsy".

Moreover, Gypsies use the surname, Gypsy. Cigan is a common last name amongst the eastern European Gypsy communities. A Cigan family participated in this study. Gypsies and Jews, with the last name Cigan, lost their lives in the German death camps.

In conclusion, some surnames are shared by Jewish and Romani families, including occupational and biblical names. In the case of the Romani Cigan family, the analysis reported Ashkenazi Jewish reference affinities and connections to individuals buried in the medieval Jewish cemeteries of Norwich and Erfurt. These observations provide leads for further genealogical work.

This provides another line of unexplored interconnectedness of the Gypsy and Jewish communities.

Can the 25 Romani Groups be Considered Crypto-Jews?

The following patterns, considered in crypto-Jewish research, suggest questions worth pursuing among the 25 sampled groups:

1. Autosomal reports from three commercial testing companies identified Jewish-related ancestry categories among participants.
2. GEDmatch calculators, including Dodecad V3, reported affinities to Jewish reference populations.
3. Autosomal reports included ancient, medieval, and modern Jewish-related reference categories.
4. Y-haplogroup testing identified paternal branches that can be compared with documented Jewish lines.
5. Some marriage patterns resemble those found in crypto-Jewish communities.
6. Some practices invite comparison with Jewish communal life.
7. Members of the groups worked in occupations also practiced in Jewish communities.
8. Members of the test group carried Jewish surnames, some common to Jews and non-Jews, some very specifically Jewish in origin.

Taken together, these patterns raise the possibility of Jewish connections in the histories of the sampled Romani groups, including the question of whether any families preserved aspects of Jewish identity or practice.

The DNA results raise questions about the geographic breadth of the reported affinities. Across the commercial and calculator analyses, Jewish reference populations from India through West Asia, North Africa, and Europe appeared in the results, including Ashkenazi, Sephardic, Mizrahi, and Yemenite categories.

This broad pattern of Jewish-reference affinities is one of the features that invites further investigation.

In investigating these Jewish-related affinities, two possible avenues are local contact and the movement of families through wider networks. “Mixing by virtue of proximity” would involve Jewish and Romani people sharing social, occupational, and physical space and, in some cases, intermarrying. The results also invite examination of contacts extending across a wider geographic area.

One question concerns the recurring Indian Jewish reference affinities. Cochin Jews lived on the southwest coast of India, and their reference population appeared in the comparisons examined here. The historical relationship behind that affinity is a subject for further study.

Some reported Jewish-reference affinities do not correspond neatly with the present geographical locations of the sampled groups. For example, the paper reports Ashkenazi reference affinities among Spanish Gitanos and Sephardic reference affinities among Polish Bergitka Carpati participants. These patterns invite closer comparison across populations and reference models.

The other hypothesis is this. The Romani people are the descendants of now extinct Jewish overland and over sea merchants who travelled in and through the Jewish diaspora. We feel the second of the two hypothesis is more likely.

The testing reported affinities to Ashkenazi, Sephardic, Mizrahi, Yemenite, Moroccan, Algerian, Tunisian, Libyan, Iraqi, Iranian, Georgian, Azerbaijani, Uzbek, Cochin, Bene Israel, and Bnei Menashe Jewish reference populations.

In addition to this, these groups showed consistent DNA links to the Yellow River region in China, home of the Jews of Kaifeng, and to Vietnam, Thailand, and Indonesia. The DNA matches to the

extremes of Asia suggest the journey of this interrelated family of people known as Romani started far further east than originally imagined.

The reported genetic affinities extend across regions connected by historic trade routes, including the Silk Road and routes toward China and Southeast Asia. Jewish merchants were among the many people who travelled these networks, alongside Arab, Persian, Armenian, and other traders. The possible role of Jewish merchant networks in the histories of the sampled groups is one avenue for further research.

The Descendants of International Merchant Jews

In the ancient world, there were sedentary Jews, like the Jews of Jerusalem, Fez, Toledo, Paris, and Prague. And there were merchants Jews. Merchant Jews travelled and transacted with sedentary Jews, from Prague to Kaifeng, and from Germany to Kochi, India.

International Merchant Jews are an understudied Jewish group, but they did exist for at least 2000 years or longer. They did move goods from the far reaches of Europe to the far reaches of Asia long before the time of the Romans and Jesus Christ. Ingots of tin have been found off the coast of Israel with hallmarks of English tin; Cinnamon from India was to be found in the markets of Israel in the biblical times. International merchant Jews were not one group of people, but rather a series of overlapping Jewish groups who worked in the caravan and sea trade.

As has been stated, sedentary Jews married amongst their own, often within their own family. They practiced endogamy. This was due to internal and external factors. Within a community, marrying within the group helped maintain group integrity. Externally, for a Christian or a Muslim, to embrace Judaism was considered apostasy and carried severe penalties.

From the bits of history that survive regarding the international trading Jews, Endogamy was not strictly the rule. There are historical records that detail the business and personal lives of international trading Jews and their marital practices. These records indicate the merchant Jews married Jews from other parts of the world, particularly those they traded with and travelled through. The 10th century Cairo Geniza records reveal merchant North African and Egyptian Jews married Jews from Aden, Yemen.

Some Jewish merchants formed families in the places where they traded. The case of Abraham Ben Yijū suggests one such connection between a North African Jewish merchant and an Indian woman who converted to Judaism. Jewish communities also became established in China, and their possible links with Central Asian Jewish communities are a subject of research. Over time, merchant families may have developed connections with Jewish communities in different regions.

While at the moment we cannot reconstruct the genetic make up of the international trading Jews, there is some evidence we can extract from history that demonstrates what it might have looked like.

The Cairo Geniza

The Cairo Geniza is a collection of approximately 400,000 manuscript fragments preserved in the Ben Ezra Synagogue in Fustat (Old Cairo). The documents span an extraordinary period, from approximately the 6th century CE to the 19th century CE**.** For historians of trade, the overwhelming majority of the important documents date from approximately 950–1250 CE.

This is the period studied most extensively by S. D. Goitein (*S. D.* Goitein and Mordechai Akiva Friedman, India Traders of the Middle Ages: Documents from the Cairo Geniza ("India Book") and others because it preserves the correspondence of Jewish merchants operating across the Mediterranean and Indian Ocean.

Documents from this era includes:

- merchant letters,
- shipping contracts,
- partnership agreements,
- marriage contracts,
- dowries,
- family correspondence,
- account books,
- letters from India,
- letters from Yemen,
- letters from Aden,
- letters from North Africa.

These documents date primarily from approximately 1000–1150 CE. They include correspondence between Jewish merchants in Fustat (Cairo), Alexandria, Aden, Yemen, Gujarat, the Malabar Coast, and Sri Lanka.

Among the famous merchants represented are Abraham ben Yiju, Nahray ben Nissim, and Halfon ben Nethanel. Their letters, found in the Cairo Geniza, discuss ships, pepper, indigo, cinnamon, cardamom, coral, textiles, debts, marriages, inheritance, and family affairs, often in the same document.

Merchant families were geographically dispersed.

The Cairo Geniza documents show Jewish merchant families with members living simultaneously in:

- Egypt (Fustat/Cairo)
- Alexandria
- Aden
- Yemen
- Sicily
- Tunisia
- Morocco
- Iraq
- Persia
- Gujarat
- the Malabar Coast of India

Letters regularly passed between these communities discussing not only cargoes and prices but also marriages, inheritances, dowries, and the welfare of family members.

Marriage reinforced commercial trust

S. D. Goitein repeatedly emphasized that long-distance commerce depended less on formal contracts than on trust**,** and trust was often rooted in kinship. Merchant partnerships were commonly strengthened by marriages within extended Jewish mercantile families or between families in different trading centers. As Goitein summarized, partnerships were "based usually on ties of common religion but often reinforced by family connections."

This was especially important because voyages to India often lasted more than a year, merchants entrusted fortunes to partners thousands of miles away, legal enforcement was difficult, and reputation and family relationships substituted for modern commercial law.

Women appear frequently in the Geniza

One of the surprises of the Geniza is how visible women are. There are numerous letters:

- mothers writing to daughters,
- wives writing to absent husbands,
- fathers arranging dowries,
- widows managing businesses,
- sisters discussing inheritances,
- women traveling between communities.

These letters demonstrate that women were integral to merchant households that stretched across the Mediterranean and Indian Ocean. The correspondence reveals families maintaining close ties across distant trading centres, including Yemen and India.

Abraham ben Yiju

One particularly interesting example is Abraham ben Yiju. Originally from North Africa, he spent approximately 17 years on the Malabar Coast of India. The Geniza documents indicate that he formed a long-term union with an Indian woman named Ashu, with whom he had children. His surviving correspondence shows that he maintained commercial and family relationships spanning Egypt, Aden, and India.

Although this was not an arranged political marriage, it demonstrates that Jewish merchants could establish permanent family connections in India while remaining embedded in wider Jewish trading networks.

Nahray ben Nissim

Another excellent example is Nahray ben Nissim. His letters show an enormous network linking Cairo, Alexandria, Aden, Tunisia, Sicily, India

His correspondence concerns relatives, in-laws, business partners, and trusted agents scattered across these regions. The picture that emerges is not of isolated merchants but of extended mercantile families spanning the entire trading world.

The Cairo Geniza demonstrates that medieval Jewish commerce operated through extended family networks spread across multiple trading cities. Marriage served not merely as a domestic institution but as an economic one, reinforcing trust between merchant families separated by thousands of kilometres. Daughters married into established commercial households in distant ports, creating kinship ties that complemented business partnerships and facilitated the movement of goods, credit, information, and people from Egypt and Yemen to India. The surviving correspondence reveals mothers writing to daughters, husbands to wives, fathers to sons, and business partners to relatives, illustrating that the Jewish trading diaspora functioned as a network of interconnected families as much as a network of individual merchants.

This resulted in Jewish trading families absorbing DNA from Jewish families in India, Uzbekistan, Georgia, Azerbaijan, Iran, Iraq, and North Africa.

Abraham Ben Yijū: A Jewish Merchant Between Tunisia, India, Yemen, and Egypt

Abraham Ben Yijū (also Ibn Yijū) was a 12th-century Jewish merchant born in al-Mahdiyya, in present-day Tunisia, probably around the beginning of the 1100s. He belonged to the network of Jewish merchants whose commercial correspondence and personal papers were later preserved in the Cairo Geniza. These documents make Ben Yijū one of the unusually well-documented Jewish participants in the medieval Indian Ocean trade. The Princeton Geniza Project identifies him as active from approximately 1131 to 1156.

Ben Yijū traveled east through the Jewish commercial networks linking North Africa, Egypt, Yemen, and India. He spent time in Aden, one of the principal ports connecting the Red Sea with the Indian Ocean, before arriving at Mangalore on the southwestern coast of India in 1132.

It would seem his mother’s family had a position in India. The Cairo Geniza records indicate Ben Yijū was greeted by his maternal cousin, Ibn Kalati or Abu L’Khayr Ibn Al-Minquar.

Ben Yijū remained in South Asia, principally around Mangalore and other ports on the Malabar coast, until 1149, roughly seventeen years. His business included long-distance import and export and the manufacture of bronze vessels, with correspondence connecting his Indian operations to Jewish merchant partners in Yemen and Egypt.

One of the most significant aspects of Ben Yijū's biography concerns his family. Shortly after arriving in Mangalore, he purchased a local Tuluva Indian woman named Ashū, freed her, and arranged for her conversion to Judaism; she took the Hebrew name Berakha. Goitein and Friedman reconstructed from the Geniza documents that Ben Yijū subsequently married her and that they had three Jewish children during his years in India. Recent work by the Cambridge Genizah Research Unit emphasizes that the marriage and maternity are reconstructed from strong circumstantial documentary evidence rather than stated in a surviving marriage certificate.

In 1149 Ben Yijū left India and returned to Yemen, taking his children with him; the surviving evidence leaves uncertain what happened to Ashū at this point. He lived first in Yemen, including Aden and later Dhū Jibla, before eventually moving to Egypt. He reached Cairo/Fustat around 1152–1153. His daughter Sitt al-Dār, born to his Indian wife, subsequently married her paternal cousin Surūr in Fustat

in 1156. They had at least four children who in turn married into their extended North African Jewish family. Thus, a child born from the union of a North African Jewish merchant and an Indian Jewish convert became incorporated into the wider Jewish community of medieval Egypt.

Ben Yijū is particularly relevant to the present study because his life provides a documented historical example of exactly the kind of demographic mechanism by which Indian ancestry could enter a western Jewish population through the medieval Indian Ocean trading network. A Jewish merchant originating in Tunisia traveled through Yemen to India, formed a family with an Indian woman who converted to Judaism, and subsequently carried their children westward through Yemen to Egypt. His biography establishes that Jewish merchant migration and intermarriage with Indian women who converted occurred as late as the 12th century. And there was a subsequent westward movement of their Jewish descendants back to Egypt. The *India Book* devotes an extensive section to Ben Yijū and his family, reconstructed from the Cairo Geniza documents.

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PERAḤYĀ BEN YIJŪ
North African Jewish family
└─ ABRAHAM BEN YIJŪ
    Jewish merchant, born in al-Mahdiyya, Tunisia. Lived in Tunisia, Yemen, India,Yemen, Egypt.
    └─ ASHŪ (AŚU) / BERAKHA
        Tuluva woman of southwestern India
        Bought, freed and converted to Judaism by Abraham Ben Yiju
        ├─ PERAḤYĀ b. ABRAHAM BEN YIJŪ
        │   Born in India
        │   Died in Yemen
        ├─ SURŪR
        │   Born in India
        │   Died young
        └─ SITT AL-DĀR bt. ABRAHAM BEN YIJŪ
            Born in India
            Migrated west with her father
            India → Yemen → Egypt
            └─ married her paternal first cousin
                PERAḤYĀ b. YOSEF BEN YIJŪ
                Jewish scholar and judge
                ├─ NISSĪM b. PERAḤYĀ BEN YIJŪ
                │   ├─ PERAḤYĀ b. NISSĪM BEN YIJŪ
                │   └─ unnamed DAUGHTER
                │       └─ married her first cousin
                │           YOSEF b. MOSHE BEN YIJŪ
                ├─ MOSHE b. PERAḤYĀ BEN YIJŪ
                │   └─ YOSEF b. MOSHE BEN YIJŪ
                ├─ YOSEF (II) b. PERAḤYĀ BEN YIJŪ
                │   ├─ MENAḤEM b. YOSEF (II) BEN YIJŪ
                │   └─ PERAḤYĀ (II) b. YOSEF (II) BEN YIJŪ
                │       ├─ MOSHE (II) b. PERAḤYĀ (II) BEN YIJŪ
                │       └─ SHEMUʾEL b. PERAḤYĀ (II) BEN YIJŪ
                └─ YUMN (II) bt. PERAḤYĀ BEN YIJŪNorth African Jewish father
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Abraham Ben Yijū

North African Jewish merchant

× Ashū / Berakha

Tuluva Indian woman; freed and converted to Judaism

↓

Sitt al-Dār

Indian-born Jewish daughter

× Peraḥyā b. Yosef Ben Yijū

her paternal first cousin

↓

Nissīm • Moshe • Yosef II • Yumn II

Jewish children in Egypt

↓

Later Ben Yijū descendants

including Peraḥyā b. Nissīm, Yosef b. Moshe, Menaḥem, Peraḥyā II, Moshe II and Shemuʾel

Sitt al-Dār's story offers a valuable example of how Indian ancestry could enter a western Jewish family. Princeton's reconstruction identifies her marriage to her cousin Peraḥyā b. Yosef Ben Yijū and four children, with later descendants also identifiable in the documentary record.

This is an unusually concrete historical demonstration of the mechanism of how an Indian woman entered a Jewish merchant family in India; her Indian-born Jewish daughter traveled west through Yemen to Egypt; that daughter married within the wider Jewish Ben Yijū family and produced another generation of Jewish descendants.

This shows how Indian ancestry was introduced into the Jewish world and then disseminated within a western Jewish kinship network through subsequent endogamous marriage. It demonstrates a demographic mechanism which is historically documented.

This Indian-Jewish family did not disappear into obscurity. Though Abraham Ben Yijū himself was not a relative of the very famous Maimonides, his descendants became closely connected with Maimonides and the Maimonidean family.

Abraham's Indian, Indian-born daughter Sitt al-Dār married her cousin Peraḥyā b. Yosef Ben Yijū. Peraḥyā became a Jewish judge in Egypt. Maimonides personally supported his judicial position: in 1187 Maimonides issued an ordinance protecting Peraḥyā's position as judge (*dayyān*) of al-Maḥalla.

The connection became even closer in the next generations. Sitt al-Dār's grandson Peraḥyā b. Nissīm Ben Yijū was connected by marriage to Maimonides' family. His wife's sister married Abraham Maimonides, the son and successor of Moses Maimonides. He also studied in the scholarly circle associated with Maimonides' in-laws. Princeton summarizes the evidence by saying that the Ben Yijū descendants "remained loyal to the Maimonidean family for years."

The *India Book* is particularly valuable because it brings together the Cairo Geniza documentation concerning Jewish merchants involved in the India trade, chiefly in the 11th–12th centuries. Abraham Ben Yijū was one of many Mizrahi Jews who participated in the trade from North Africa and Yemen to India.

Abraham Ben Yijū converted and married an Indian woman and brought his Indian Jewish children back to the Jewish world in North Africa. This mixing went both ways. We also know some Jewish men and women went from the Mizrahi-Yemenite world to India, converted local women and men, and created the Jewish community in India. It was mostly men, but, women cannot be ruled out.

The Cochin Jewish community developed on the Malabar coast of southwestern India, in present-day Kerala. Its presence is securely documented by copper plates granting privileges to the Jewish leader Joseph Rabban around 1000 CE. Although traditions place its origins considerably earlier, some saying it might be as old as the times of the Davidic Israelite kingdoms. There is concrete evidence of Mizrahi

Jewish traders making their way from Yemen to the southwest Indian coast and their creation of Jewish communities there.

Genetic research on modern Indian Jews supports a mixed origin for the Cochin Jews. Genome-wide studies identify substantial local Indian ancestry alongside a distinct contribution from Jewish populations. Mitochondrial DNA findings indicate predominantly Indian maternal origins, consistent with male Jewish migrants incorporating local women into the community. These findings support a history of migration, intermarriage, and continuation of practicing Jewish communities.

The Romani groups tested here were found to be DNA matches to both Mizrahi Jews, Yemenite Jews and Cochin Jews.

Uzbek/Bukharan Jews: A Jewish Community at the Crossroads of the Silk Road

The Central Asian Jewish presence is documented from at least the fourth century CE, while Jewish communities in Samarkand and Bukhara are explicitly recorded in the twelfth and thirteenth centuries respectively. The Jewish community in central Asia is very old.

In the early 300s CE, Merv**,** in present-day Turkmenistan, was known to host a Jewish community. The Talmud describes the visit of the Babylonian rabbi Samuel bar Bisena. Hebrew-inscribed burial objects dated to the fifth–seventh centuries provide archaeological evidence of Jewish settlement there.

In the twelfth century, Samarkand**,** in present-day Uzbekistan, was known to have a Jewish community. Benjamin of Tudela reported an established Jewish community with a leader named Obadiah. His information was secondhand, rather than a personal observation. Bukhara itself is explicitly documented as having Jews by the early thirteenth century.

The Jews of Uzbekistan are the historic Jewish populations of Central Asia, particularly the regions that are now Uzbekistan and Tajikistan**,** with important communities in Bukhara and Samarkand. Their history long predates the modern state of Uzbekistan. The location of these communities is especially significant. They occupied one of the great crossroads between Persia and Mesopotamia to the west, India and Afghanistan to the south, and China to the east**.**

Bukharan Jews, belong to a Persian-speaking Jewish tradition that developed over centuries in Central Asia, particularly in Bukhara and Samarkand, both important cities on the Silk Road. Their history reflects migration from the Iranian world and continuing religious and commercial connections with other Jewish communities. Jewish artisans contributed to the region's economy through silk weaving, textile dyeing, and related crafts, while merchants participated in trade linking Central Asia with Persia, Afghanistan, India, and China. Bukharan Jews thus formed part of the wider networks of production, exchange, and cultural contact associated with the Silk Road.

The Silk Road, which passed by and through Bukhara and Samarkand, was really a network of caravan routes. These were not a single road but an interconnected system through which silk, textiles, spices, precious metals, animals and other commodities moved between Northeast Asia, Southeast Asian, India, Central Asia, Iran and the Mediterranean world.

Central Asian Jews therefore lived within a commercial environment that connected the east with the west. There is direct evidence of Jewish participation in this trade: Jewish religious authorities in

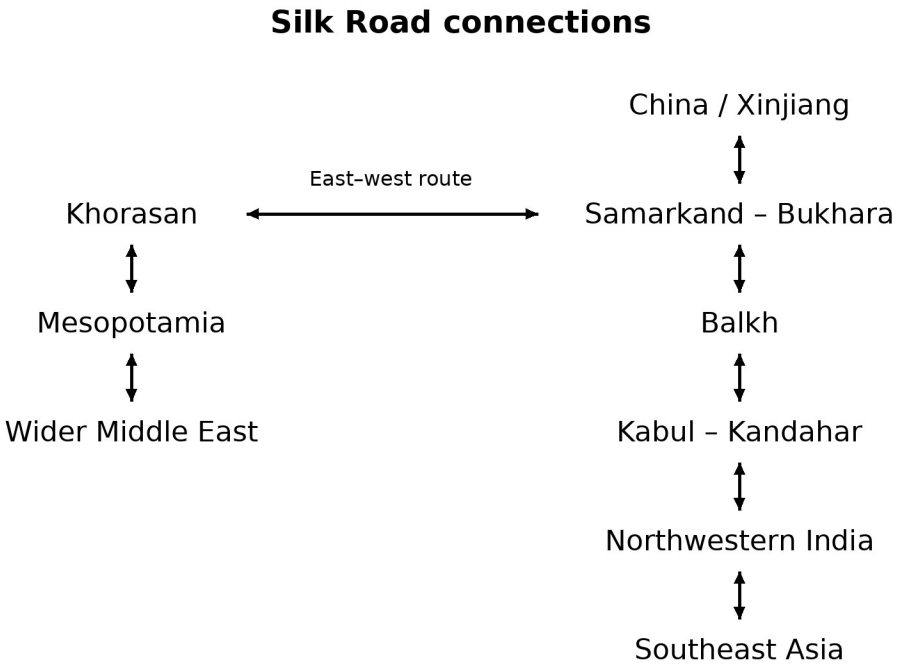
Babylonia were involved in the silk trade, Jews were present at Merv, an important Silk Road center. An eighth-century Judeo-Persian merchant letter discovered at Dandan Uiliq in the Tarim Basin of western China demonstrates Persian-speaking Jewish commercial activity far to the east.

Jewish long-distance traders connected Central Asia with India. Medieval Islamic geographical sources describe the Jewish merchants known as the Rādhānites, whose enormous trading network extended through the Middle East and Central Asia to India and China. *Encyclopaedia Iranica* notes that their routes included Khorasan, Transoxiana, India and China, while its history of Bukharan Jewry concludes that Central Asian Jews undoubtedly participated in Radhanite commercial activity and that one Radhanite route crossed Central Asia.

The Central Asia-India connection was not merely theoretical. Bukhara eventually became an important northern terminus of an extensive commercial corridor running through Afghanistan into the Indian subcontinent. Indeed, it became a cosmopolitan hub of trade.

By the sixteenth century, Indian merchant communities were established in Bukhara, Samarkand and other Central Asian cities. An English visitor to Bukhara in 1558–59 observed Indian merchants who remained there for years conducting business. By the seventeenth century, approximately 500 Indian merchants were living in Bukhara, while thousands more operated across Central Asia. Kandahar and Kabul were important intermediate commercial centers connecting the Indian and Central Asian worlds.

The connection can therefore be visualized as a north-south branch intersecting the better-known east-west Silk Road:



Bukhara connected westward through Khorasan and Iran toward Mesopotamia and the Middle East. This Central Asian trade also extended eastward toward Kashgar and China. Bukhara consequently

occupied an unusually important position at the intersection of the Middle eastern, Persian, Indian and North Asian, and Southeast Asian commercial worlds**.**

Bukharan Jews belonged to a Jewish population situated precisely within the overland commercial system connecting the Middle East, Central Asia and India. Jewish merchants are independently documented participating in long-distance commerce extending through Central Asia to India and China. Evidence of this trade can still be seen in modern Bukharan Jews.

63% of the Romani participating in this study showed Uzbek Jewish ancestry. The better understand the connection, a small group of eleven Uzbek/Bukharan Jewish individuals were DNA tested. The analyses of the Uzbek Jews indicated DNA inputs from those trade routes. They were found to carry South. Asian, Northeast Asian, and Southeast Asian ancestry. This indicates DNA entered the Uzbek Jewish communities from the Asian extremes, India, China and Southeast Asia.

The individual Indian percentages were 5.78%, 8.38%, 11.21%, 9.84%, 9.93%, 8.63%, 7.39%, 9.69%, 10.12%, 9.22%, and 11.50%, producing an average of 9.24% Indian ancestry. All eleven individuals exhibited some Indian ancestry, with values ranging from 5.78% to 11.50%. Although the sample is small the consistency of the signal is noteworthy. An Indian-related component was reported for every individual tested and averaged nearly one-tenth of the measured ancestry.

The individual Northeast Asian percentages were 1.40%, 1.44%, 1.52%, 0.40%, 1.00%, 1.95%, 1.92%, 0.76%, 0.87%, 0.00%, and 1.41%, producing an average of 1.15% Northeast Asian ancestry. Ten of the eleven individuals exhibited some Northeast Asian ancestry, with values ranging from 0.00% to 1.95%. Although the sample is small the consistency of the signal is noteworthy. a Northeast Asian component was reported in ten of the eleven individuals tested and averaged slightly more than one percent of the measured ancestry.

The individual Southeast Asian percentages were 1.69%, 1.48%, 0.62%, 0.08%, 1.97%, 0.00%, 0.13%, 1.00%, 0.00%, 0.27%, and 0.89%, producing an average of 0.74% Southeast Asian ancestry. Nine of the eleven individuals exhibited some Southeast Asian ancestry, with values ranging from 0.00% to 1.97%. Although the sample is small the consistency of the signal is noteworthy. a Southeast Asian component was reported in nine of the eleven individuals tested and averaged approximately three-quarters of one percent of the measured ancestry.

When one takes a closer look at the secondary populations appearing in the mixed mode modeling of Gedmatch Dodecad V3 for six of those self-identified Bukharan Jews, a striking pattern emerges.

Person	**Secondary populations appearing in the top 20 Mixed Mode results**
Bukharan Jew #1	Kashmiri Pandit, Burusho, Pathan, Pakistani, Sindhi, Vaish, AP Madiga, Balochi, Kurumba, Vysya, Velama, **Bnei Menashe Jews,** TN Dalit, Mala
Bukharan Jew #2	Pathan, Indian (Dodecad), Vaish, Pakistani, Sindhi, GIH, AP Brahmin, Meghawal, TN Brahmin, INS, Lodi, **Cochin Jews**, Kashmiri Pandit, Irula, Srivastava, North Kannadi, Naidu, Balochi, Hallaki, Velama
Bukharan Jew #3	Kharia, Santhal, Sahariya, Burusho, Nepalese, Satnami, Kurumba, Tharu, AP Mala, Kamsali, Chenchu, **Cochin Jews**, Pathan, Madiga, AP Madiga, Mala, Hallaki, Vysya, Bhil, Naidu, Lodi

Person	Secondary populations appearing in the top 20 Mixed Mode results
Bukharan Jew #4	Burusho, Pathan, Kashmiri Pandit, Pakistani, Sindhi, Meghawal, AP Brahmin, Indian (Dodecad), Tharu, Balochi, TN Brahmin, Vaish, GIH, Nepalese, Velama, INS, TN Dalit, Srivastava, **Cochin Jews**, Mala
Bukharan Jew #5	Burusho, Kashmiri Pandit, Vaish, Srivastava, Meghawal, Pathan, Pakistani, Sindhi, AP Brahmin, Balochi, Lodi, Brahui, Satnami, Tharu, TN Brahmin, **Cochin Jews**, Sahariya, Nepalese, Makrani, Indian (Dodecad)
Bukharan Jew #6	Velama, AP Madiga, Kurumba, Vysya, Kashmiri Pandit, **Bnei Menashe Jews**, Srivastava, Hallaki, Mala, **Cochin Jews**, Kamsali, Bhil, Pathan, TN Dalit, Madiga, Satnami, INS, TN Brahmin, North Kannadi, Naidu

In the first instance, the secondary populations are overwhelmingly South Asian. Even more interesting, explicit Indian-Jewish reference populations appear in several individuals:

- Cochin Jews: 5 of 6 (83.3%)
- Bnei Menashe Jews: 2 of 6 (33.3%)
- Either Cochin or Bnei Menashe: 6 of 6 (100%)

Bukharin Jew #1's Bnei Menashe combination is particularly explicit: 87.5% Uzbekistan Jews + 12.5% Bnei Menashe Jews**.** Bukharin Jew #6 has both 14% Bnei Menashe Jews and 10.3% Cochin Jews among his top Mixed Mode solutions.

The historical position of Bukharan Jewish communities along Central Asian routes explains their ancestry. In one direction, the Uzbek Jewish communities connected Afghanistan with Persia and the middle east, and in the other direction India, Southeast Asia, and Northeast Asia. It seems long distance trade with these communities led to the influx of genetic material!

As has been stated, 306/456 (63.1%) of the participants across the studied Romani populations displayed an Uzbek Jewish (Behar) reference affinity. Its recurrence in over 60% of the participants makes Uzbeki Jewish ancestry particularly relevant.

Population	People with Uzbek Jewish affinity	Total people	%
Anglo Romany	8	30	26.7%
Bulgarian	15	17	88.2%
Finnish	12	20	60.0%
French Corari	5	18	27.8%
French Jenish	2	15	13.3%
French Manouche	8	21	38.1%
French Piedmont Sinti	1	9	11.1%

Population	People with Uzbek Jewish affinity	Total people	%
French Spanish Gypsies	6	17	35.3%
German Sinti	6	13	46.2%
Greek Gypsies	14	21	66.7%
Hungarian Gypsies	21	28	75.0%
Swiss Jenish	1	4	25.0%
Romanian Kalderash	7	9	77.8%
Romanian Vartari	3	5	60.0%
Scottish Nacken	1	19	5.3%
Serbian	16	24	66.7%
Slovakian Karpati	2	4	50.0%
Slovakian Lovari	4	6	66.7%
Slovakian Romungro	84	89	94.4%
Spanish Gypsies	60	85	70.6%
Turkish	22	23	95.7%
Ungro Rom	8	8	100.0%
TOTAL	**306**	**456**	**63.1%**

As reported previously, the Romani groups tested in this study had an average South Asian component of about 18%. In the small sample of self-identified Uzbek Jews, the calculators produced affinities for same South Asian reference populations, including Cochin Jews, as were found in the Romani groups. The fact both the Uzbek Jews and the Romani groups share the same Indian ancestry invites further investigation.

Southeast Asian and Northeast Asian ancestry detected in Romani Groups

Like the Uzbek Jews, the Romani groups tested in this project were found to carry both Northeast Asian and Southeast Asian ancestry.

In the corrected 15-cohort FamilyTreeDNA table (n=274), the Southeast Asian assignments are uncommon but geographically specific:

FTDNA Southeast Asian reference	Individuals	% of 274
Myanmar	2	0.7%

FTDNA Southeast Asian reference	Individuals	% of 274
Malaysia / Western Indonesia	1	0.4%
Laos, Vietnam, Cambodia, Borneo, Indonesia	1	0.4%

MyHeritage Northeast Asian and Southeast Asian Affinities

Testing with MyHeritage, of the 210 individual tested, 105 individuals (50.0%) had at least one recorded ancient East, Northeast, or Southeast Asian affinity.

MyHeritage ancient reference	Individuals	% of 210
Bronze Age Southeast Asian	66	31.4%
Iron Age Southeast Asian	49	23.3%
Roman Southeast Asian	77	36.7%
Medieval Southeast Asian	66	31.4%
Bronze Age Yellow River	11	5.2%
Iron Age Sinitic	12	5.7%
Roman Era Sinitic	15	7.1%
Medieval Sinitic	11	5.2%
Bronze Age Liao River	5	2.4%
Iron Age Liao River	2	1.0%
Bronze Age Amur River	4	1.9%
Iron Age Amur River	6	2.9%
Roman Era Amur River	3	1.4%
Medieval Amur River	3	1.4%
Hmong-Mien	6	2.9%

Thus, like Uzbek Jews, the Romani groups tested have consistent genetic connections to the extremes of the Jewish trading world, China and Southeast Asia included.

The Jews of Kaifeng

One might wonder, what is the connection between the Romani groups and the Jews of Kaifeng. The answer is, we don’t know yet. But there may be a connection.

The history of the Kaifeng Jews is not entirely known. Some accounts propose that their Jewish ancestors came through Central Asia, and Bukharan Jewish traditions refer to members of the community moving to China. The precise relationship between those traditions and the founding of the Kaifeng community remains a subject for research. They are an especially intriguing branch of the Jewish tree because they were simply lost and forgotten to the Jewish world for a very long time.

The Kaifeng Jews became known to European scholars and missionaries through a chance meeting in Beijing in 1605 between Ai Tian, a Jewish man from Kaifeng, and the Italian Jesuit Matteo Ricci**.** The community had already existed for centuries; this was when the European world found out about their existence.

Ai Tian had heard that Ricci worshipped one God and apparently thought he might share his religion. On seeing a Christian picture of Mary with Jesus and John the Baptist**,** he interpreted it as Rebecca with Jacob and Esau**.** Their conversation gradually revealed the misunderstanding: Ai Tian was Jewish, and he told Ricci about Kaifeng's synagogue, religious practices, and sacred books.

Ricci subsequently sent visitors to investigate the community and reported the encounter to his superiors in Rome. These contacts began the European documentation of the Kaifeng Jews.

Interest in the Jews of Kaifeng has come and gone over the years. The Kaifeng Jewish descendants still exist, and some continue practicing Judaism. Though their community life has faced substantial government restrictions. Reporting published in 2026 describes both continuing pressure and some easing of surveillance. Reports indicate Jewish life continues privately. An August 2026 report describes families holding Sabbath dinners in their homes, with one local participant reporting several gatherings across the city each week. Some descendants actively practice Judaism; others primarily preserve a family identity and historical connection.

Y-DNA research has identified reported links between particular Kaifeng Jewish paternal lines and Jewish lines from Central Asia and West Asia.

> "As of April 2024, Family Tree DNA estimates that the most recent common male ancestor of the Kaifeng Jew and the Bukharian Jew lived in approximately the year 700 CE, but with a 95% confidence interval enabling a theoretical range from 74 BCE to 1237 CE, while YFull, which gives the haplogroup the alternate name R-Y168245, believes the common ancestor lived around 1000 CE with a 95% confidence interval from 350 CE to 1450 CE. Leo Cooper, a co-administrator of the Kaifeng Jewish project, informed us that their haplogroup is also shared with a Jew from Baghdad, Iraq and a Jew from Iraqi Kurdistan.
> Historians have known that some Kaifeng Jews converted to Islam several centuries ago and that some of them assimilated into the Hui ethnic group which practices Islam. The Dungan people of Central Asia descend from the Hui. A particular Dungan Muslim who had a patrilineal ancestor from Hebei province in northeastern China similarly belongs to this Jewish haplogroup according to his genetic test by the Chinese company 23mofang; his assignment of R-Y168245 is visible on YFull.
> R-FT14557 is part of the R1b cluster and of West Eurasian origin. Two levels up from their haplogroup is R-Y99503, also called R-FT18731, which

was found in a Palestinian Arab from the Muslim village of Beit Iksa (northwest of Jerusalem) and in Armenians and has a descendant subclade called R-FT388189 that was found in an Ashkenazi Jewish patriline from Khotyn, Ukraine who tested with Family Tree DNA. Cooper also informed me of a R-FT388189 carrier whose patriline is Sephardic Jewish from Greece. There is also a Kabyle Berber from Algeria in R-FT388189 who tested with the German company YSEQ. Cooper observes that the ancestors of these lineages lived in West Asia during the Bronze Age.

The other Kaifeng Jewish Y-DNA lineage of West Eurasian origin that has been found and confirmed through "Big Y" testing is called haplogroup J-7FTF9916. Family Tree DNA lists a Kurdish Jewish carrier of the same haplogroup as having an origin in Iraqi Kurdistan. Their most recent common male ancestor is estimated to have lived around 550 CE with a 95% confidence interval from 269 BCE to 1122 CE. It is part of the J-ZS1737 cluster within haplogroup J1 which also includes an Iraqi Arab man and a man from Qatar, among others, and has a Lebanese match in its ancestral clade J-FT41076.

The genetic results above confirm that the Kaifeng Jewish community was founded by Mizrahi Jewish traders in medieval times, which had long been what historians posited. The first of them arrived no later than the 12th century. A stele dating from 1489 stated that Jews built their first synagogue in Kaifeng in 1163. According to Elkan Adler, Jews from Bukhara remembered through the centuries that some members of their community had moved to China and subsequently lost contact. Speaking of Kaifeng Jews in particular, Adler mentioned that "the Persian rubrics in their liturgies" were "in the Bukharan dialect" . A Jewish community had been established in Bukhara by the 13th century when Ibn al-Fati mentioned them and may have had a continuous presence in Bukhara from the 14th century." (Genetic Confirmation: The Jews Of Kaifeng Descend From Mizrahi Jews. Kevin Alan Brook. 17 JULY 2024)

A small number Chinese Jews have settled in Israel. Nineteen had moved through Shavei Israel's assistance by 2016, undergoing formal conversion. That is a documented historical count, rather than a verified present-day total.

The handful of Kaifeng Jews sampled had the following haplogroup tree which is said to be a match to an Uzbek Jew.

R-M269 → R-L23 → R-Z2103 → R-M12149 → R-Y4362 → R-Y99503 → … → R-Y168245

And this is where the two worlds, European Romani and Kaifeng Jews, collide. Three of the men participating in this study, one French Jenish, one Hungarian Gypsy, and one Slovakian Romungro, had haplogroups downstream from haplogroup R-M12149 (R-CTS7763, R-CTS9219). These haplogroups falls within the broader R-Z2103 / R-M12149 family…contains the Jewish Kaifeng/Uzbek Jewish associated line.

R-M269	
↓	
R-L23	
↓	
R-Z2103	
↓	
R-M12149	
↓ ↓	R-M12149 ↓
R-Z2106	R-Y4362
↓	↓
R-CTS7763 R-CTS9219	R-Y99503
2 Romani participants 1 Romani participant	↓
	R-Y168245 / R-FT14557
	Reported Kaifeng line

This study has commissioned deeper enquiry into these three individuals to see if their haplogroups match up with the haplogroup identified amongst the Kaifeng Jews. The results are forth coming.

*Ancient DNA research has identified R-M12149 in men from Bronze and Iron Age Armenia and northwestern Iran**,** and in earlier populations associated with the Yamnaya of the Eurasian steppe. A 2022 study interpreted these findings as evidence of a paternal connection between populations of the steppe and parts of West Asia. Some Jewish men, like the Kaifeng Jewish founder, carry haplogroups downstream from R-M12149

The fact that members of these Romani groups are genetically allied with the Uzbek Jews is remarkable. The fact they have Northeast and Southeast Asian genetics, suggests they may be part of the Jewish merchant world extending from Egypt all the way to China. is If they are connected genetically to the Jews of Kaifeng, a community, it would cement the idea that they are part descendants of the ancient Jewish trade world.

Proposed Origins of the Romani Groups tested in this Project

Several patterns which indicate Crypto Jewish ancestry appear among the 25 Romani and related groups examined here. In the opinion of the Schar Institute of Genetic Genealogy, these recurrent patterns indicate they have Crypto Jewish ancestry. But their connections to the Jewish world are so

unusual, the situation warrants further investigation. Their Jewish ancestry, which spans Germany and Spain to the far reaches of Asia, and all Jewish points between the two, is very hard to explain,

One possible historical explanation is a genetic contribution from Jewish merchant families involved in long-distance trade.

The problem is, this class of Jew, the international merchant Jew, do not exist today. There is no way to test them to see what their genetic profile looked like and if it parallels the genetic make-up of the Romani groups tested here.

Based on the historical data currently available, it is possible that some international Jewish merchant families acquired Jewish ancestry from Jewish communities along the trade routes. Reconstructing the DNA profile is a project being undertaken at the moment.

International Jewish merchants and some Romani families shared aspects of a mobile commercial life. Historical Jewish merchants travelled in trading caravans and used overland and maritime routes; some Romani families travelled for trade and craftwork. The shared forms of travel, housing, and family organization, suggests if they are not the same people, they shared a way of life. One could argue they just shared a way of life if it weren't for the recurrent trans-diaspora genetic findings for these Romani groups.

One group of international merchant Jews, whose history is preserved to this day, would be the Radhanite Jews. The Radhanites moved goods from Europe to Asia and from Asia to Europe between the 7th and the 12th centuries. They used a combination of overland and sea routes to make the journey. How they got their name is still unsettled.

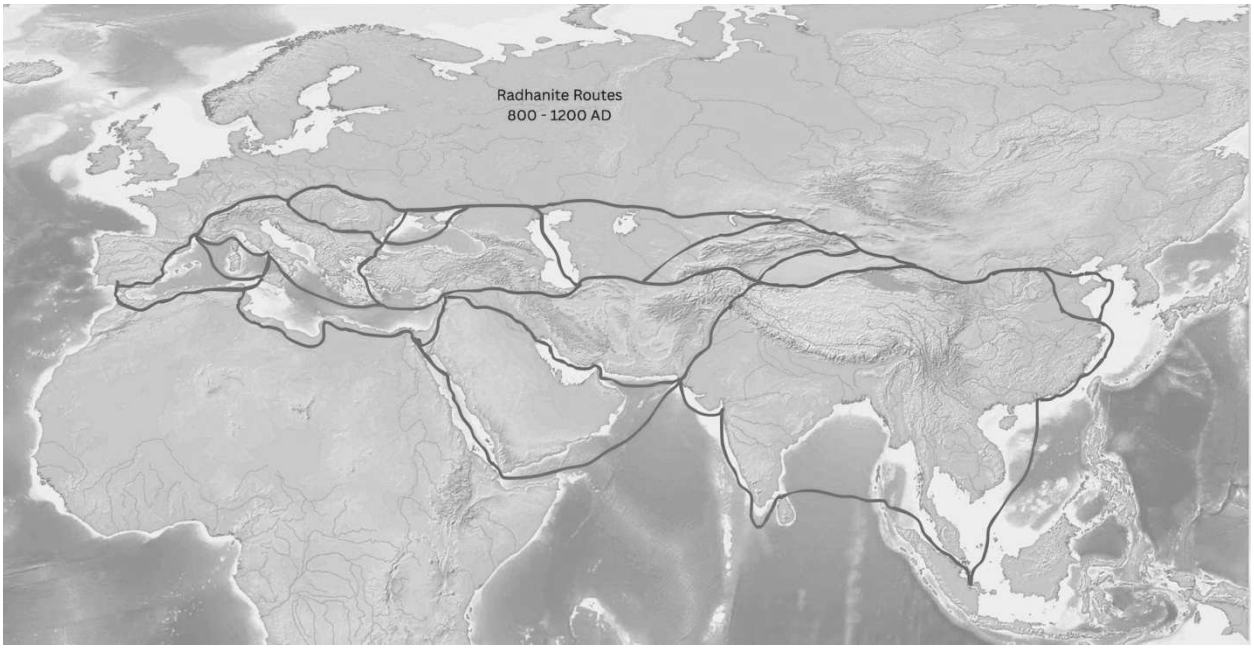
The term comes primarily from the 9th-century Persian geographer Ibn Khordadbeh, who described these Jewish merchants trading from western Europe to India and China. He used the Arabic term al-Rādhāniyya. The problem is that he never explained where the name came from.

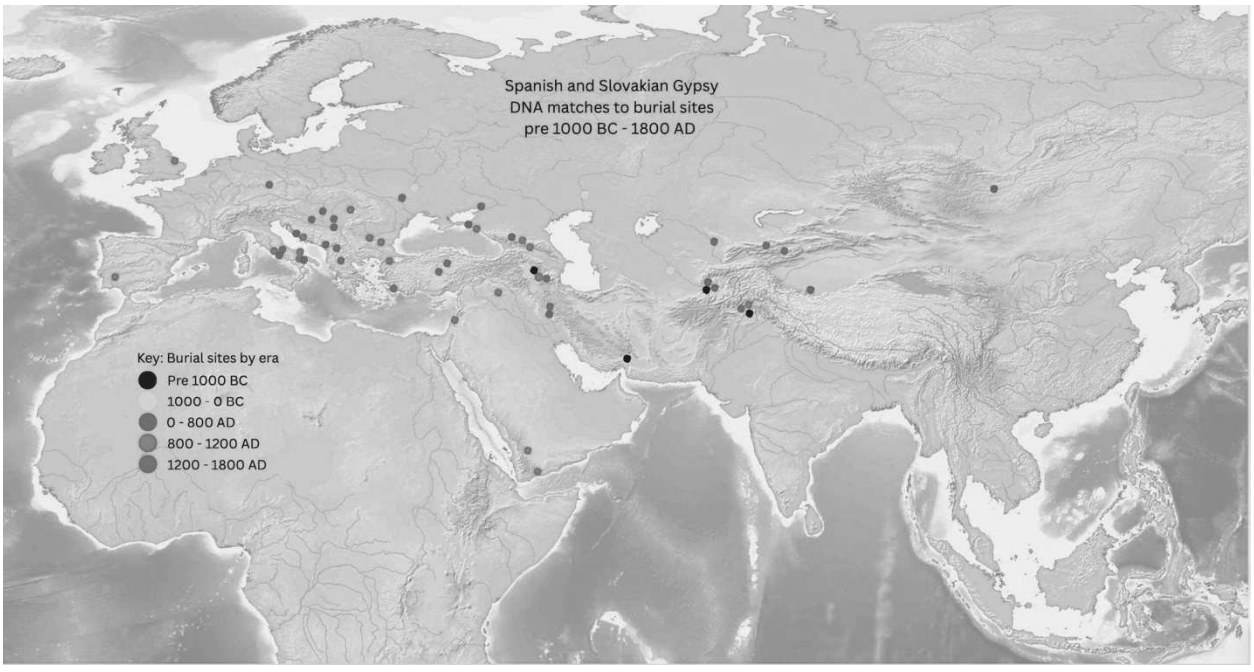
The origin of the Radhanites' name and their precise regional background remain debated. Most agree their homeland was Western Asia. They operated through a network that connected Jewish communities and other trading populations across a wide area. They traded from northern and southern Europe to China and Southeast Asia. This lifestyle Such may have enabled more than the exchange of goods. It may have resulted in the sharing of knowledge and the creation of family connections over time.

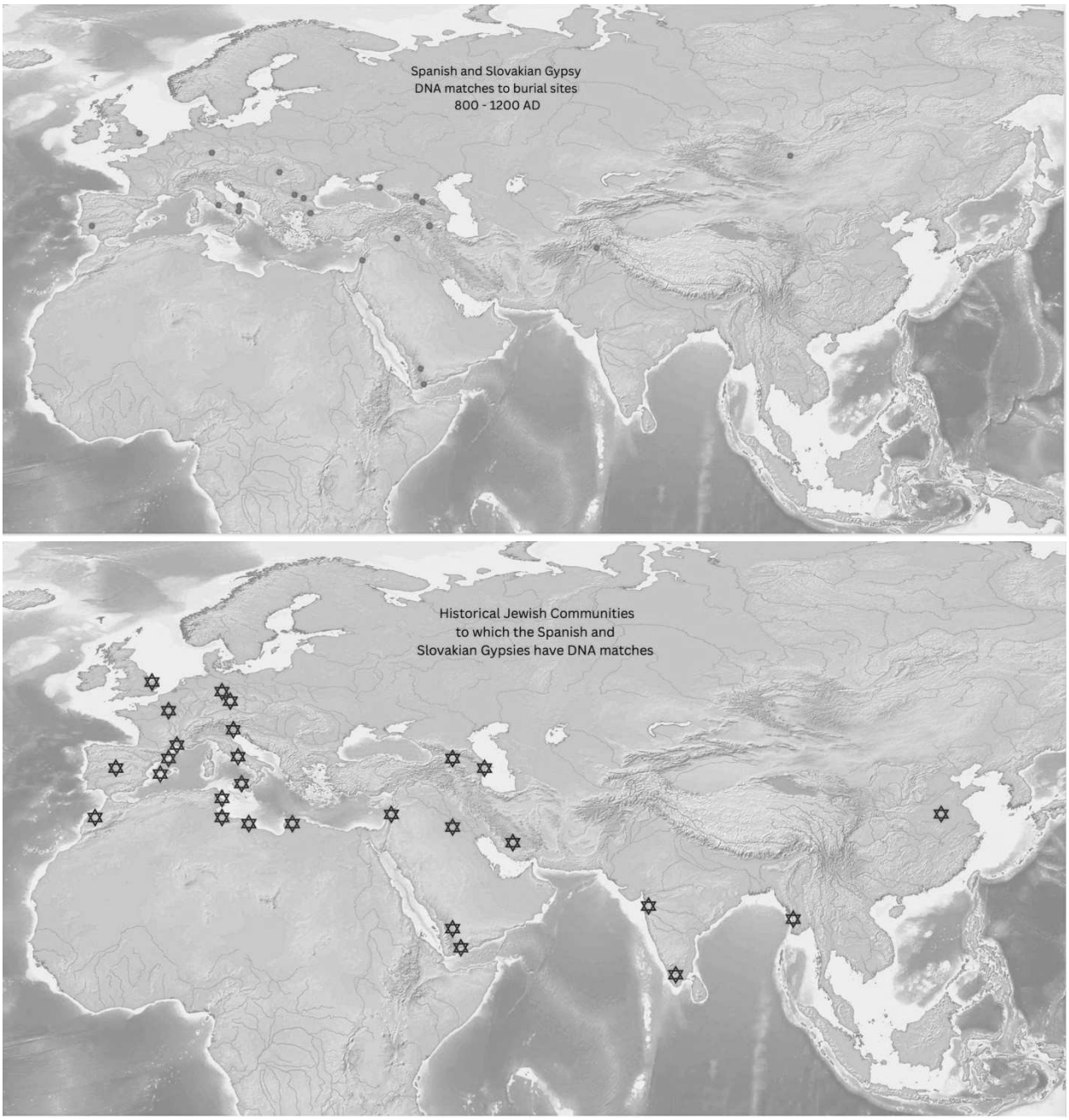
Across the 25 Romani datasets analyzed in this study, approximately 75% of individuals were assigned Yemenite Jewish or Mizrahi Jewish categories in FamilyTreeDNA results. The analyses also reported affinities to Sephardic, Ashkenazi, Moroccan, Algerian, Tunisian, Libyan, Iraqi, Iranian, Georgian, Azerbaijani, Uzbek, and Indian Jewish references.

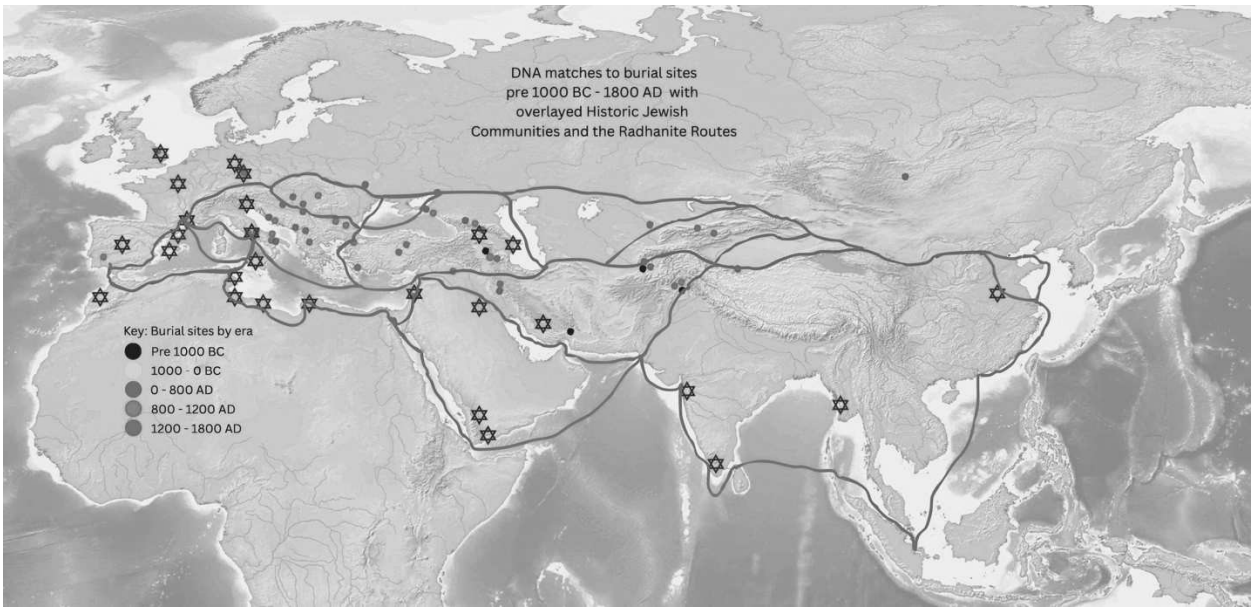
The genetic makeup of historical international Jewish merchant families remains uncertain. However, we do have remnants of that international Jewish merchant trades in groups like the Jews of India and the Uzbeki Jews, communities that survive to this day. Through these communities DNA reality, we get a small window into a missing part of the Jewish diaspora; the international merchant Jew. Comparing the histories of the now extinct international merchant Jews networks with the DNA patterns reported in these Romani communities, offers a direction for future research.

If you plot the DNA findings for two groups tested in this study (the Slovakian Gypsies and the Spanish Gypsies), on the map, that pattern matches the known Radhanite routes, a intriguing pattern develops.






Spanish and Slovakian Gypsy
DNA matches to burial sites
800 - 1200 AD
Historical Jewish Communities
to which the Spanish and
Slovakian Gypsies have DNA matches



The known Radhanite routes and DNA records, past and present, of two of the Romani Groups tested, parallel each other. In order to attribute the founding population of the Romani people tested to international merchant Jews, more work will need to be done on the DNA realities of international merchant Jews. This reconstruction of an extinct branch of the Jewish family tree will be challenging but it is underway. There may be other models which explain the Romani groups tested pan Jewish diaspora genetics, the fact they carry Jewish DNA from India to Spain and Germany and every Jewish community between the two extremes. Though travelling Jewish merchants seems a probable source of the unique Jewish ancestry.

Simply put, and answering the original question in this project, these groups are crypto-Jews. More than that, it appears they are very unique crypto-Jews.

Conclusion: The Purpose and Structure of the Series

The results presented here suggest possible Jewish connections of the sampled Romani and related groups. The upcoming papers in this series will examine different strands of evidence separately and address the broader question of how the reported Jewish-related affinities arose.

Paper or thematic study	Principal question
Combined Genetic results for the 25 populations	What genetic patterns recur, and how do the populations differ?
South Asian ancestry	How large and geographically diverse is the South Asian component? What is the genetic relationship between the tested groups and Indian Jewish groups.
Jewish ancestry	Which Jewish reference affinities recur across the population set?
Jewish merchant networks	Are the Romani people the descendants of the now extinct international merchant Jews?

Paper or thematic study	Principal question
Shared professions	Where did Jewish and Romani occupational histories overlap? Always skilled, did these skills come from the same place?
Shared surnames	What can and cannot be learned from overlapping family and occupational names?
Crypto-Jewish practices	Which practices warrant comparison, and which alternative explanations remain?
Male and Female Haplogroup Lineages	Do paternal and maternal haplogroups found in these groups match those of known Jewish groups?

The upcoming series of papers will be cumulative. The genetic papers will examine recurring patterns, the historical papers will investigate possible pathways of contact and ancestry, and the cultural and occupational papers will consider parallels in work and lifestyle. Together, they aim to build a fuller understanding of the sampled communities and their connection to the Jewish world.

In summary, this must be said. Although linguistic and genetic evidence firmly establishes a South Asian component in Romani origins, the precise composition of the founding population, the circumstances of its migration, and the subsequent formation of distinct Romani communities remain incompletely understood. This project aims to discover more, to learn more, to add another layer of understanding to this incomplete understanding.

Our goal is to fill in some of the blanks. Everyone tested here had between 5% and 20% South Asian ancestry. We are not debating that point. Who were those south Asians? Our evidence indicates some of those South Asian founding mothers and fathers were Indian Jews. We have commissioned haplogroup testing to see if members of our group share haplogroups with Indian Jews. Everyone tested was between 95% and 80% NOT South Asian ancestry. Basic math indicates this ancestry is primary ancestry; 80% is more than 20%. At a minimum it matters. Where were these ancestors from? Our evidence suggests a substantial number of them were Ashkenazi, Sephardic, Mizrahi, and Yemenite Jews. We have commissioned haplogroup testing to see from which Jewish groups our founders came. Rather than making a definitive statement or statements; the goal here is to give a progress report on what we have found so far and to announce more will be revealed.