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## The Ties That Bind

### *As Scientists Explore the Genetic Links Between Jewish Populations, Rabbis and Thinkers Wrestle With the Question of What This Means for Jewish Identity*

**By Debra Nussbaum Cohen**

Published August 11, 2010, issue of [August 20, 2010](#).

What is the essence of Jewish identity? Is it revealed in the choices we make, like giving *tzedakah* or observing the Sabbath, or is it in our genetic code? Is it a matter of faith, or a matter of heritability? Is it something we can choose, or is it a biological imperative embedded in nearly every cell of our body?

New genetic research, published as a paper titled “Abraham’s Children in the Genome Era” in the June issue of *The American Journal of Human Genetics*, highlights the strong genetic bonds both within and among Jewish communities around the world, their distinctiveness vis-à-vis the populations among which they have dwelled, and their links to the Middle East.

For some, findings such as these offer powerful confirmation of the continuity and cohesion of the Jewish people throughout the ages.

“We are a people distinct, as [the biblical figure] Balaam said. We are ‘a nation that will live alone,’” said Rabbi Moshe Tendler, a Yeshiva University bioethicist and *rosh yeshiva*. “That’s who we are, that’s how God intended us to be.”

“I would like to think this new study is true, because it would indicate that over the course of centuries we still maintain a vast majority of loyal Jews,” Tendler explained. “It is comforting because it confirms a success that no other religion can claim, that there would be inadequate intermarriage to affect the gene pool.”

The steady stream of genetic research into Jewish populations and their origins has sparked widespread discussion of its potential implications for contemporary Jewish identity. Yet the notion that genetics could become a significant factor in Jewish identity is also incendiary for many, with some Jewish thinkers expressing profound discomfort with the idea.

“It smacks of racist and racial innuendo that is suspicious for someone like me in light of the 20th century and the very negative uses to which genetic data was put,” said Rabbi David Ellenson, president of the Reform movement’s Hebrew Union College-Jewish Institute of Religion.

The article “Abraham’s Children in the Genome Era” was based on research by a team of geneticists from leading medical research centers and was co-authored by Dr. Harry Ostrer of New York University School of Medicine and Gil Atzmon of Yeshiva University’s Albert Einstein College of Medicine. While the study broadly echoed many of the findings of earlier Jewish genetic population studies, which looked at maternally inherited mitochondrial DNA or paternally inherited Y-chromosome markers, Ostrer’s team examined 160,000 markers on the entire genome.

Their study looked at the genetic material of people whose origins lay in seven different Jewish communities: Iranian, Iraqi, Syrian, Italian, Turkish, Greek and Ashkenazi Jewries. Researchers compared these groups’ genetic markers to those of other Jewish groups and to those of the local non-Jewish populations. They found

far more genetic linkage between Jews within each community than to gentiles from the same areas, and significant linkages between Jews of different communities. The study also demonstrated “distinctive population clusters, each with shared Middle Eastern ancestry.”

“We found a high degree of relatedness among Jewish Diaspora groups. It supports the notion of Jewish peoplehood, that there’s greater relatedness between the Jewish populations than between the Jewish and non-Jewish populations,” said Ostrer, director of the Human Genetics Program at NYU’s medical school and of the Jewish Hapmap Project, which examines the genome structures of global Jewish populations.

A second high-profile study of Jewish population genetics by other researchers appeared in the July issue of the journal *Nature*. That study similarly found Levantine origins for widely dispersed Jewish communities.

The latest findings about Jewish genes come amid a wave of intense popular interest in population genetics. Researching ancestry through DNA is the focus of two recent television series, one hosted by Harvard professor Henry Louis Gates Jr., and another by actress Lisa Kudrow. There has been a swell of companies, such as Ancestry.com and FamilyTreeDNA.com, eager to sell ancestry genomics tests, which help people trace their individual heritages.

But Steven M. Cohen, a sociologist at the Berman Jewish Policy Archive at NYU who studies issues relating to Jewish identity, drew a distinction between individual ancestry searches and broader associations of genes with peoplehood. He questioned whether genetics would have much of an impact on American Jews’ self-conception.

“American culture has created a Jewish subgroup that is extraordinarily committed to a values conception of what it means to be Jewish, as opposed to the more collective, even tribalist conception that prevails in other countries,” he said.

The frequency of intermarriage has much to do with it, he explained. “It leads both Jewish spouses and Jewish children to adopt a more faith-based conception of what it means to be Jewish,” in order not to exclude the non-Jewish parent, he said.

“It would be ironic and counter-intuitive for younger, postmodern Jews today to embrace evidence that appears to lend support to the idea that Jews are something like a race, or ought to be bound to each other because of some notion of common ancestry,” he explained.

Nevertheless, the implications of recent genetic studies have already infiltrated at least one contentious debate over Jewish identity

In 2008, Tel Aviv University historian Shlomo Sand published a much discussed and highly controversial book questioning the historicity of the very concept of Jewish peoplehood. In the book — published in English last year by Verso, under the title “The Invention of the Jewish People” — Sand argued that Jewish identity is a social construct and dismissed as a myth the idea of the Jewish people having a shared ethnic origin traceable to the Land of Israel.

Reporting on the two recent Jewish population genetics studies, New York Times science writer Nicholas Wade went so far as to argue that their findings “refute the suggestion made last year by the historian Shlomo Sand in his book ‘The Invention of the Jewish People’ that Jews have no common origin but are a miscellany of people in Europe and Central Asia who converted to Judaism at various times.”

Sand, however, was dismissive of the significance of the new genetic research.

“It is a pity and sad that a people have to prove that it is a people by genetics and not by a secular culture,” Sand wrote in an e-mail to the Forward. “The new ‘discoveries’ are not different from the old ones.”

While Sand, who is known for his far-left views, occupies the political margins, many more mainstream figures also believe that genetics should have no bearing on Jewish peoplehood.

“It can point to some interesting data about Jewish marriage patterns and perhaps tell us something about historical patterns of Jewish settlement, but it doesn’t tell us anything about Jewish peoplehood,” said Rabbi Dan Ehrenkrantz, president of the Reconstructionist Rabbinical College.

Similarly, HUC-JIR’s Ellenson said: “I find this type of research interesting but not compelling. Frankly there are cultural and religious reasons that are far more significant to me in terms of affirming Jewish solidarity than genetic claims alone.”

“Jewish peoplehood for me has to do with a sense of solidarity Jews feel for one another worldwide. A sense of connection between Jews has more to do with the internalization of cultural and religious norms than it does a biological kinship,” Ellenson said. “Genetic claims alone are not decisive for most people.”

Others, however, feel more positively toward the significance of genetic findings.

“The religion doesn’t need this confirmatory evidence, but it does enhance people’s belief in religion or can spark an interest in religion,” said Dr. Edward Reichman, an Orthodox rabbi and associate professor of bioethics and education at the Einstein College of Medicine. “It does have some verification, which religious people don’t need, of the historicity of the Jewish people. These are all wonderful things.”

Still, there is wide agreement that genetics do not define whether or not an individual should be considered Jewish.

“There have been people who convert into Judaism — it’s been a regular feature of Jewish life. Those who do are no less Jewish than anybody else. Trying to narrow what it means to be Jewish to carrying particular genetic markers would be a complete misunderstanding of what it means to be Jewish,” Ehrenkrantz said.

Tendler, for his part, said he doubted that rabbinic authorities would ever use genomic ancestry as a measure of someone’s Jewishness. “In Judaism there’s a halachic component as well as a genetic component,” Tendler said. “I don’t think it would ever be used as a test.”

Tendler cited the example of Ethiopian Jews, a group that studies have found lack genetic ties to other Jewish groups. “We don’t believe that they came from the same origin anyway, but rather that they joined our people in the distant past, and that doesn’t make them any less Jewish,” Tendler said.

Still, Ostrer said that the genetic element of Jewish ancestry can be a powerful point of connection.

“I do want people to feel more strongly connected because of my findings. It’s another way of touching the legacy,” he said. “You may have given up corned beef, but you haven’t given up your genome.”







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Ruth · [8 weeks ago](#)

If you read the study you see it's utterly over-hyped, especially as American Jews are concerned.

The study only examined individuals who had all four grandparents as full-Jews from the same community (eliminating 50% of religious American Jews. The study then dropped 5% of their data and 1% of their reference data that they considered as being too far from the group.

The group found that WITHIN group Jewish variance was small. If you're a Russian Jew, you're a Russian Jew. But it further found that BETWEEN group Jewish variance evaporated rather quickly as you moved away from the Middle East along the historical migration path. Russian Jews are on the very outside, along with individuals from the Iberian Peninsula, for instance.

Middle Eastern Jews share more in common with Bedouins, Palestinians, Druze, and Iranians than they do with Greeks (see Figure 2).

What the study shows is that there are certainly unambiguous historical ties. What it also shows is that there was massive intermarriage. Not enough to completely meld with a population, but enough to make you more similar to your host population than to Middle Eastern Jews--this is especially true for French, Russian, and Basque/Iberian Jews.

I read this study as a (former) biologist and I can do nothing but conclude that it's being used to further political ends rather than scientific...at least by some social groups.

I wish people could just recognize Judaism as a choice, a way of thought, as a connection to G-d rather than as a matter of racial superiority and purity.

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Sarah · [8 weeks ago](#)

Who said anything about superiority?

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eli · [8 weeks ago](#)

i suppose what ruth is saying is that in our community, oftentimes we see an atheist with two jewish parents as more jewish than a practicing jew who underwent a reform conversion. in such a case, racial superiority or at least self-perceived superiority obviously plays a role.

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David · [8 weeks ago](#)

I think your observations are well-taken, Ruth. One important dimension of this issue is curiously missing from the discussion, that is, a scientific connection between a supposed Jewish genome and substantive patterns of behaviour, values and culture that distinguish the Jewish people. That is because there are none, except in the minds of racists. There is no proven correlation between genome and culture amongst any group of people, as much as ethnic chauvanists of the world would like there to be. And until scientists can prove a link between genetic markers and behaviour, such phenomena are curiosities, interesting indicators of patterns of demographic dispersion, and little more (although they do put the lie to the assertions of certain contemporary anti-Zionists that the Jews have no connection to the Middle East whatsoever). The only people who believed emphatically in a Jewish "race" determined by "Jewish" genes were called Nazis.

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jgarbuz · [7 weeks ago](#)

What do you mean "Judaism is a choice?" What if I choose to be a Navajo instead? Will that tribe willingly accept me? I was born a Jew, in a German DP camp after the war. I didn't choose it. Nobody asked me. If they had, I would say to God or to whomever, make me Italian instead. Why anyone would willingly CHOOSE to be a Jew constantly confounds me. Our tribe and its religion promises no path to salvation, or a guarantee of riches or genius by osmosis. But having been born a Jew, and child of Holocaust survivors, this is the tribe I am part of, like it or not, and am not going to deny it. I'm neither overly proud of it, nor am I a self-hater. Our tribe is as good, or as bad, as any other. It neither had to be better nor worse than any other. And it has nothing to do with some special connection to God. There are some who believe that, and others who vehemently pooh pooh the idea. We are as connected as anyone else; no more, no less. We have our own tribal ways and means, and others are entitled to theirs. I don't particularly want to be part of a tribe that does not want me, and I can't understand those Jews who want to insinuate themselves into the society of those who don't want them. Self-hatred? Or perhaps they hope the genetic superiority of others will rub off on their offspring? Zionism was supposed to be a movement to liberate Jews from the Exile, and to liberate the Jewish homeland for our return. But it was also supposed to "normalize" the Jewish people, to become a normal people, with a land, with a wider stratification of occupations, and to think, feel and act like a normal people used to having their own homeland and their own autonomous institutions. But it appears that Jews still have a long way to go to achieve this hoped for normalcy.

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Rosa L · [7 weeks ago](#)

<http://inventionofthejewishpeople.com/>  
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[Reply](#)0 [Vote up](#) [Vote down](#)Ken · [7 weeks ago](#)

Hmmm.As one myself, I should believe that if majorities of European Jewish and other non-Middle East Jews are "more similar" to their host populations than to Middle East Jews, that is quite enough to significantly bolster many and probably most "contemporary" anti-Zionist arguments, short of proving "no connection whatever."

[Report](#)[Reply](#)0 [Vote up](#) [Vote down](#)jgarbuz · [7 weeks ago](#)

What's wrong with a tribe having genetic ties? Why is that racist? Our tribe has two simple criteria as to who is, or is not, a member thereof. Either the mother had to have been a Jew, or the outsider seeking to be part of the tribe has to undergo a long and tendentious "conversion" or naturalization process. It seems reasonable. Why are so many mostly left wing Jews so horrified at the notion that as a people, we have retained considerable genetic evidence of tribal kinship and as mostly being of Middle Eastern origins? Otherwise, what right did we have to displace hundreds of thousands of Arabs to reclaim an ancient homeland most of us had lost physical contact with for over 2 millennium? I am overjoyed that DNA evidence indicates that we are not merely some spontaneous construct as professor Sands chooses to espouse, but rather that we have tangible evidence of distinct peoplehood. We should celebrate rather than bemoan that "Am Yisrael Od Chai" and mostly intact.

[Report](#)[Reply](#)0 [Vote up](#) [Vote down](#)David (pt. 1) · [7 weeks ago](#)

Zionism is not based upon race in the anthropological sense, it is based upon "peoplehood"; an amalgam of historical, cultural, linguistic, religious, and national elements which define a group identity coupled with the historical precedent of Jewish statehood in the ancient world. There is no nation on earth which has been immune to intermarriage or which can claim a pure lineage, and, indeed, the Old Testament documents such cases even in ancient times among the Hebrews and surrounding peoples (the case of "Ruth the Moabitess", to name the most famous example). The distinctiveness of the Jews as a people or the legitimacy of their claims to national self-determination are in no way diminished by this. Nor does it negate the drama of the Jewish quest for survival in the face of great historical adversities.

[Report](#)[Reply](#)0 [Vote up](#) [Vote down](#)David (pt. 2) · [7 weeks ago](#)

Second, Middle East Jews are not necessarily more authentic or closer to the ancients than European ones. The same process of intermarriage took place among Middle Eastern peoples as among the Europeans (Jews from Iran look a lot like non-Jewish Iranians, and Jews from Yemin like non-Jewish Yeminis, etc.). Not to mention, that modern Israel is composed in large percentage of Jews whose ancestors never left the region. But in the final analysis, these genetic variations have no significant content and are irrelevant.

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David (pt. 3) · [7 weeks ago](#)

Consider the converse. Many European populations undoubtedly have Jewish ancestry (the Spaniards for example). Does that make them less Spanish? Is that question even raised in connection with their national identity and claims? Does anyone say to them, "well, you know you probably have Jews and Moors in your family tree so you're not a "pure" Spaniard and your national identity is a myth"? Of course not. So why is it relevant with respect to the Jews? The Bible describes Moses as looking like an Egyptian, David as being "ruddy", and the woman who narrates portions of the "Song of Songs" tells us she is "black but comely". We have always been a racially heterodox people united by a common identity, belief-system, and land, and that, I submit, is what Zionism is about, not your genome.

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jgarbuz · [7 weeks ago](#)

TO David,

You are 100% spot-on. Nice posts.

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Zev Shanken · [7 weeks ago](#)

This article on the community's ambivalence about finding Jewish genes avoided the real questions in favor of sociological questions. Even the rabbis failed to address it (though Rabbi Ellenson came closest.) Is there a mitzvah gene? Is there a drash gene? Is there a halacha gene? It's a question no less trivial or volatile than the sociological ones. I am not asking about the heritability of IQ, but I suppose the question would be treated that way. It may be impossible to prove or disprove, but asking the question might at least focus our attention on questions about our essential nature rather than our fears of giving Nazi theoreticians posthumous victories or giving Jewish xenophobes ammunition.

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Colin Wright · [1 week ago](#)

The thing about the genetic argument is that it will almost inevitably show that between Jews and Palestinians, the group with the stronger claim to Palestine would be the Palestinians. Indeed, that's exactly what some of these studies have shown. The one modern group that seems to share the most with what would seem to be the ancestral Judeans would be...Palestinians.

So it's counter-productive for Zionists to seize on these studies to demonstrate a racial claim to Israel. It doesn't matter if Jewish Danes have a better claim than gentile Danes -- what matters is that neither group has as good a claim as the Palestinians do.

If the goal is to show that Jews are at least to some extent a people in a biological as well as a cultural sense, that's one thing -- and the studies have some hope of advancing such a claim. If the hope is that they're going to establish a Jewish 'right' to Palestine, it's a forlorn one. They'll be able to show they should get it before the Danes do -- but the Danes aren't the ones who want it.

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