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# Jews and Their DNA

*Hillel Halkin*

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EIGHT YEARS ago, I published an article in these pages called “Wandering Jews—and Their Genes” (September 2000). At the time I was working on a book about a Tibeto-Burmese ethnic group in the northeast Indian states of Mizoram and Manipur, many of whose members believe that they descend from the biblical tribe of Manasseh, and about a group of Judaizers among them known as the B’nei Menashe, over a thousand of whom live today in Israel as converts to Judaism.

This led me to an interest in Jewish historical genetics, then a new discipline. Historical genetics itself was still a pioneering field, launched by the discovery that two sources of DNA in the human body, the Y chromosome that determines male sex and the mitochondria that aid cell metabolism, never change (barring rare mutations) in their transmission from fathers to sons and from mothers to children of both sexes. This made it possible to trace paternal and maternal lines of descent far into the past and to learn about the movements and interactions of human populations that originated hundreds, thousands, and even tens of thousands of years ago.

In my article, I observed that preliminary studies in Jewish genetics had both “shored up” and “undermined” some conventional ideas about Jewish history. On the one hand, they had indicated

that there was a high degree of Y-chromosome similarity among Jewish males from all over the world, coupled with a much lower degree when the comparison was made between Jews and non-Jews in the same region. The one part of the globe in which Jews correlated as highly with many non-Jews as they did with other Jews was the Middle East—precisely what one might expect of a people that claimed to have originated in Palestine (or in Ur of the Chaldees, if you go back to Abraham) and to have spread from it.

Other studies established that the Y chromosomes of *kobanim*—male Jews said to descend from the priestly caste whose supposed progenitor was the biblical Aaron—had their own unique DNA signature, labeled the Cohen Modal Haplotype. Not only did half of all *kobanim*, who comprise about four percent of the world’s Jewish population, share this DNA configuration, but minor mutations in it pointed to a common ancestor who lived a few centuries before or after 1000 B.C.E.—that is, close to the period in which Aaron and his brother Moses are situated by biblical chronology.

Such evidence seemed to confirm traditional notions of Jewish origins. It suggested that the Jews, while certainly not a “race,” were indeed, despite the skepticism of many modern historians, the highly endogamous people they had always considered themselves to be, one that had admixed with outsiders relatively little during long centuries of wandering in the Diaspora. It also strengthened

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the reliability of the Bible as a historical source. Modern critics who contended that the Bible was a late document that imagined a largely non-existent past had always singled out the priestly codes of the Pentateuch as a prime illustration of this. But if the priesthood was really an institution going back to early Israelite history, rather than the backward projection in time of later generations, revisionist Bible criticism itself needed to be revised.

Yet there was contrary evidence, too. Early studies of mitochondrial DNA reported that Jewish women, unlike Jewish men, did not correlate well with one another globally. Furthermore, the greatest demographic mystery of Jewish history—that of the origins of the Ashkenazi population of Central and Eastern Europe—had only appeared to deepen.

The standard Jewish version of these origins was that Ashkenazi Jewry had first crystallized in the late first millennium of the Christian era in the French-German borderland along the Rhine; that it had reached the Rhineland from southern France, to which it had come in earlier centuries either directly from Palestine or via Italy and Spain; and that it had then migrated eastward and northward into Central and Eastern Europe. Even before the advent of historical genetics, however, this account had been challenged. There were linguists who argued that East European Yiddish, the Germanic language of most Ashkenazi Jews, had more in common with the dialects of southern and southeastern Germany than with those of the Rhineland in the west. There were demographers who contended that the Jewish population of the Rhineland prior to the appearance of East European Jewry, which would eventually become the world's largest Jewish community, was too small to account for the latter's rapid growth.

The early genetic findings appeared to support the challengers. If the Rhineland theory was correct, Ashkenazi DNA should have had greater affinities with non-Jewish DNA from northern France and western Germany than with non-Jewish DNA from elsewhere; no one denied, after all, that wherever and whenever Jews had lived, some Gentiles must have joined them or begotten children with them. Yet there was no sign of this. Where, then, had Ashkenazi Jewry come from?

It was a mixed picture. Since then, eight years have gone by, historical genetics has greatly refined its methods and taxonomy, and several major studies in Jewish genetic history have been published. What, viewed from their perspective, does Jewish history look like now?

TWO NEW books address this question. One, David B. Goldstein's *Jacob's Legacy: A Genetic View of Jewish History*, is the work of a scientist who teaches at Duke University and has been personally involved in much Jewish genetic research.\* The other, Jon Entine's *Abraham's Children: Race, Identity, and the DNA of the Chosen People*, is by a layman and journalist.† Yet since Entine has done a serious and responsible job of reporting, and Goldstein has written a non-technical survey for the general reader, the difference between them is one more of style than of substance. They agree on most major points, starting with the puzzling disparity in the distribution patterns of Jewish Y-chromosome and mitochondrial DNA.

The fact of this disparity is now solidly established. There is no doubt that statistically (and *only* statistically: it is important to keep in mind that any randomly chosen Jewish individual may prove an exception to the rule), Jewish males with antecedents in such widely separated places as Yemen, Georgia, and Bukhara in Central Asia are far more likely to share similar Y-chromosome DNA with one another than with Yemenite, Georgian, or Bukharan non-Jews. Jewish females from the same backgrounds, on the other hand, yield opposite results: their mitochondrial DNA has markedly less resemblance to that of Jewish women from elsewhere than it does to that of non-Jewish women in the countries their families hailed from. The main difference between them and these Gentile women is that their mitochondrial DNA is less varied—that is, they descend from a small number of maternal ancestors. Geneticists call such a phenomenon, in which a sizable population has developed from a very small number of progenitors, a “founder” or “bottleneck” effect. (In “bottlenecks,” these few progenitors are survivors of larger groups that were drastically reduced by war, famine, plague, or other calamities.)

This calls for a new understanding of the spread of Jewish settlement in the Diaspora. Until now, it has been assumed that nearly all of the world's Jewish communities began with the migration of cross-sections of older communities, which took their families, institutions, and practices with them and perpetuated their lives in new surroundings. Now, it would seem, as David Goldstein writes, that

[some] Jewish men . . . travel[ed] long distances to establish small Jewish communities [by themselves]. They would settle in new lands

\* Yale, 176 pp., \$26.00.

† Grand Central, 432 pp., \$27.99.

and, if unmarried, take local women for wives. The communities might [at a later date] have been augmented by additional male travelers from Jewish source populations. Once they were established, however, the barriers would go up against further input of new mitochondrial DNA, precisely because of female-defined ethnicity [i.e., the halakhic practice of determining Jewishness by the mother]; few [additional] females would be permitted to join.

Presumably, these adventurous bachelors setting out (perhaps on business ventures) for far lands could not persuade Jewish women to come with them, or else they traveled to their destinations with no intention of staying there. In the absence of rabbis to perform conversions, they married local women who, while consenting to live as Jews, were not halakhically Jewish. By halakhic standards, therefore, their descendants were not Jewish, either, even though their Jewishness was not challenged by the rabbinical authorities. Although such communities must, in their first generations, have known the truth about themselves, this does not appear to have bothered them or anyone else very much.

**I**N A CLASS by itself is the mitochondrial DNA of Ashkenazi women. It does not correlate closely with the DNA of non-Jewish women in Western, Central, or Eastern Europe and it has a large Middle Eastern component. Yet in their maternal lineage, Ashkenazim, too, exhibit a strong “founder effect.” Over forty percent of them, a 2005 study showed, descend from just four “founding mothers” having Middle-Eastern-profile mitochondrial DNA. Since Ashkenazi Y-chromosome DNA does not exhibit so dramatic a founder’s effect, one can assume that Ashkenazi Jewry, too, began with the migration of a preponderantly male group of Jews to new territories. Because these territories, however, were more contiguous with the old ones than were far-flung regions like Bukhara or Yemen, the men were more able to import wives from existing Jewish communities and less dependent on marrying local Gentiles.

But where did Ashkenazi Jewry, male and female alike, derive from if not from the Rhineland? One possibility that is more consistent with the linguistic data is that it entered southern Germany from northern Italy and pushed further north from there into the Slavic-speaking areas of Europe. Another is that Jews migrated to Slavic lands from the Byzantine Empire. These hypotheses, which are not mutually exclusive, can now claim a measure of scientific support, since the Y chromosomes of Ashkenazi

Jews have more in common with those of Italians and Greeks than with those of West Europeans.

A more dramatic scenario, popularized by Arthur Koestler in his 1976 book *The Thirteenth Tribe*, has to do with the Khazars, a Turkish people living between the Black and Caspian Seas, whose royal house adopted Judaism (with what degree of rabbinical supervision, we have no way of knowing) in the 8th century C.E. A great deal is obscure in the history of the Khazar kingdom, which at its apogee ruled much of present-day Ukraine, and the degree of the Judaization of its population is uncertain. Yet Koestler and a small number of historians on whom he based himself were convinced that, following the destruction of this kingdom in the 11th century by its Slavic enemies, many of its Jews fled westward to form the nucleus of what was to become East European Jewry.\*

The Khazar theory never had many backers in scholarly circles; there was little evidence to support it and good reasons to be dubious about it. Why, for instance, does medieval rabbinic literature almost never mention the Khazars? Why, if they spoke a Turkish language, did East European Jewry become Yiddish-speaking? “Like virtually every academic I have ever consulted on the subject,” David Goldstein writes, “I was initially quite dismissive of Koestler’s identification of the Khazars [with] Ashkenazi Jewry.” Yet, he continues, “I am no longer so sure. The Khazar connection seems no more farfetched than the spectacular continuity of the Cohen line.”

This is one of the few occasions on which Jon Entine disagrees with him. *Abraham’s Children* declares:

The studies of the Y-chromosome and [mitochondrial] DNA do not support the . . . notion that Jews are descended in any great numbers from the Khazars or some Slavic group, although it’s evident some Jews do have Khazarian blood. The Khazarian theory has been put to rest, or at least into perspective.

**W**HOO IS right? Either could be, for the latest evidence is ambiguous. It consists of two studies. One, “Y-Chromosome Evidence for a

\* An assimilationist Jew and at one time of his life an idiosyncratic Zionist, Koestler was attracted to this theory because it demonstrated, so he thought, that the Jews of the Diaspora were a “pseudo-nation” held together by “a system of traditional beliefs based on racial and historical premises which turn out to be illusory.” Either, therefore, they should emigrate to Israel or they should cease to exist. Ironically, however, Koestler’s book was soon enlisted by Arab propaganda in its war against Israel and Zionism. What claim could the Jews have to Palestine, Arab spokesmen asked, if their original ancestors came from southern Russia?

Founder Effect in Ashkenazi Jews,” was published in 2004 in the *European Journal of Human Genetics* by a small team from the Hebrew University of Jerusalem. The other was the work of a larger, American-Israeli-British group to which Goldstein belonged; its report, “Multiple Origins of Ashkenazi Levites: Y-Chromosome Evidence for Both Near Eastern and European Ancestries,” appeared in the *American Journal of Human Genetics* in 2003. Both studies discuss a mutation, widely found in Poland, Lithuania, Belarus, and Ukraine, that occurs in a Y-chromosome classification known as Haplogroup R, at a DNA site labeled M117.

The Hebrew University study states:

Recent genetic studies . . . showed that Ashkenazi Jews are more closely related to other Jewish and Middle Eastern groups than to their host populations in Europe. However, Ashkenazim have an elevated frequency of R-M117, the dominant Y-chromosome haplogroup in Eastern Europeans, suggesting possible gene flow [into the Ashkenazi population]. In the present study of 495 Y chromosomes of Ashkenazim, 57 (11.5 percent) were found to belong to R-M117.

As for the American-Israeli-British study, it was designed to ascertain whether Levites, who functioned as priests’ assistants in the ancient Temple and are supposedly also descended from Aaron, have a worldwide genetic signature similar to or the same as the Cohen Modal Haplotype.\* The answer turned out to be negative, since the Y chromosomes of Levites from different geographical backgrounds proved to correlate no better with one another than they did with the Y chromosomes of non-Levitic Jews. And yet, rather astonishingly, Ashkenazi Levites, when taken separately, do have a “modal haplotype” of their own—and it is the same R-M117 mutation on which the Hebrew University study centered! Fifty-two percent of them have this mutation, which is rarely found in non-Ashkenazi Jews and has a clear non-Jewish provenance.

WHAT IS one to make of this finding? An 11.5-percent incidence of R-M117 among Ashkenazi Jews in general is easily explainable: the mutation could have entered the Jewish gene pool slowly, in small increments in every generation, during the thousand years of Ashkenazi Jewry’s existence. (This need not necessarily have been via conversion to Judaism and marriage to Jewish women. Pre- and extra-marital sexual relations, and even rape, widespread in times of anti-Jewish violence, were in all

likelihood more common.) But the 52-percent rate among Levites is something else. Here we are dealing not with a gradual, long-term process (for no imaginable process could have produced such results), but with a one-time event of some sort.

Such an event could obviously not have been a sudden influx of Levites into the Jewish community from a Gentile society. Both of our studies, therefore, raise the possibility that the original R-M117 Levites were Khazarian Jews who migrated westward upon the fall of the Khazar kingdom. Of course, since all or most Khazarian Jews were converts (although some may have been Jews who came from elsewhere), few could have descended from Aaron. Yet it is quite possible that some became, or were designated, “honorary” Levites in the course of the Judaization of the Khazarian population. As the American-Israeli-British study observes, Jews traditionally held to “a lesser degree of stringency for the assumption of Levite status than for the assumption of Cohen status,” so that self-declared Khazarian Levites might have fathered lineages whose Levitic pedigree came to be accepted.

But if R-M117 did enter the East European Jewish gene pool via a lineage of Khazar Levites, how many Khazars can be assumed to have joined the Ashkenazi community? At this point, it becomes pure guesswork. Analyzing the data, the American-Israeli-British study concludes that the number of R-M117 Levites absorbed by Ashkenazi Jewry ranged from one to fifty individuals. But as much as we might like to do the rest of the arithmetic ourselves, we can’t. For one thing, we have no way of knowing what the percentage of Levites in the Khazarian Jewish population was. Nor do we know the percentage of Khazars possessing M117, which is found in 12 or 13 percent of Russian and Ukrainian males today. If these were also its proportions among the Khazars, there would have been seven non-M117 Khazars joining or founding Ashkenazi Jewry for every Khazar who had the mutation.

In sum, even if the R-M117 Levites are traceable to Khazaria, the total flow of Khazarians into the East European Jewish population could have been anywhere from a single person to many thousands. If it was the latter, the Khazar input was significant, as David Goldstein suspects it was; if the former, it was trivial, as Jon Entine believes. The last eight years of research in Jewish historical genetics have not left us any wiser in this respect.

\* Constituting, like priests, about four percent of the world’s Jews, Levites can easily be identified because, again like priests, they are assigned minor tasks in Jewish ritual to this day, so that every religiously observant Levite knows he is one.

TRADITIONAL ACCOUNTS of Jewish history, it would appear, are part true and part myth. Despite their dispersion in space and time, the Jews have continued to be that most curious (and in the eyes of many, preposterous) of combinations: at once a people or nation, fellow communicants in the world's oldest monotheistic religion, and a family or tribe belonged to only by those born or married into it. They could not have remained such an amalgam had they not clung to strict rules of membership and admission.

Yet these rules were not observed everywhere or always. There were periods and places in which a blind eye was turned to them, most often when violations were not remediable. Had a rabbi arrived in Yemen or Bukhara soon after the founding of its Jewish community, he might have been able to insist on the halakhic conversion of its handful of Jews. But this would no longer have been practicable after several generations had gone by, especially since Yemenite and Bukharan Jews would have forgotten by then that their maternal progenitors were not halakhically Jewish and would have reacted with resentment to such a demand. Similarly, Khazars identifying themselves as Levites were accepted as such without inquiries into their past. It is an old rabbinic adage that one does not inflict demands on the public that the public is incapable of meeting. Better a tolerated myth than an intolerable truth.

Such, at any rate, was the attitude of a pre-modern age in which all Jews accepted rabbinic authority, so that all rabbis felt obliged to find solutions for all Jews. Since the mid-19th century, however, this has progressively ceased to be true. Rabbinic authority itself has fractured and dissipated. Most Jews no longer want rabbis to be responsible for them, and most rabbis no longer feel responsible for most Jews. The consequence of this, as reflected in the "Who Is A Jew?" debate that has racked world Jewry for the past several decades, is that the Jewish tribe is breaking up. In the United States, Orthodox rabbis do not recognize the Jewishness of converts to Reform or Conservative Judaism, Conservative rabbis do not recognize the Jewishness of children born to Jewish fathers but not to Jewish mothers, and Reform rabbis routinely preside over the marriages of Jewish men to non-Jewish women even though they may be creating future generations that they alone will consider Jewish.

In Israel, where non-Orthodox marriages and conversions cannot be performed, the problem is even more severe, for Jewishness in a Jewish state is a secular legal category as well. Israel's Law of Return, for example, guarantees the right to immi-

grate and acquire Israeli citizenship to every Jew and his immediate family, including the first two generations of his descendants. Yet the more contentious the question of who is a Jew becomes, the more this law divides Jews rather than unites them.

Meanwhile, already living in Israel are hundreds of thousands of halakhically non-Jewish immigrants, most from the former Soviet Union, who entered the country under the Law of Return because they were either married to Jews or had a Jewish father or grandfather. As matters stand now, they and their children cannot have a Jewish wedding in Israel. Many of them, probably most, would like recognition as Jews, and not a few would be willing to convert in order to obtain it. But Israel's Orthodox rabbinate has made the conversion procedure so difficult, in part by hinging it on the promise to live an Orthodox life, that most prospective converts have been deterred. Recently, perhaps for the first time in Jewish history, a conversion was retroactively annulled by the rabbinate on the grounds that such a promise was not kept.

For its part, the rabbinate insists that it has been forced to adopt more rigorous standards by the secular nature of Israeli society, which precludes the kind of "honor system" for determining Jewish identity that was operative in Jewish life in the past. Even Israelis whose Jewishness might appear to be beyond question now find themselves questioned about it.

TO TAKE a small personal example: my Israeli-born daughter, whose Israeli ID card lists her as "Jewish" and who is getting married in Israel this month, has been required to provide a letter from an Orthodox rabbi in the United States, where I and my wife were born and raised, attesting to the Orthodox ceremony in which we were wed in New York. The reasoning behind this is simple. Had we been married in Israel, this would have been considered proof of our daughter's Jewishness, since our own Jewishness would already have been rabbinically certified. But if we were married in a non-Orthodox ceremony in the United States, we would have to bring further proof of our Jewishness since no non-Orthodox rabbi could be trusted to have vetted us properly.

And what could such further proof be? If we could find no Orthodox rabbi to speak for us, it would indeed be difficult to supply. My daughter would then have had the option of either arduously trying to assemble convincing evidence or of getting married outside of Israel (in which case her marriage would be recognized by Israeli secular law). Yet if she were to choose the second of these

courses, as an increasing number of young Israelis are doing nowadays in their disinclination to deal with the rabbinate, she would in effect be choosing it for her children, too, since by the time *they* reached marriageable age, proof of their Jewishness would be even more difficult. In this manner, a growing public is being created in Israel that is losing its Jewish status in the eyes of rabbinic law.

The rabbinate's position is understandable. Once, when there was no secular advantage in being Jewish, there was no reason to suspect anyone's declaration of Jewishness; now, such avowals can no longer be taken at face value. And understandable, too, is the position of Israeli secularists who are indifferent to the rabbinate's attitude or even welcome it.

For such secular Israelis, the idea of biological Jewishness is an embarrassing anachronism. Secular Zionism, after all, set out to normalize Jewish existence. Surely, they reason, its goal should therefore be to make Israelis a people whose identity is based, like that of other peoples, on territory, language, and culture rather than on shared blood ties. If Orthodoxy wishes to hasten this process, so much the better. Perhaps one day Israel will become the "state of all its citizens" that democratic values require it to be, a country of Hebrew-speaking Jews, Muslims, and Christians, all equal before the law. Although the great majority of secular Israelis do not yet subscribe to this point of view, more and more will come to it if things continue on their present course.

As far as much of the rest of the world is concerned, biological Jewishness has *always* been an embarrassing anachronism—at least ever since the time of the Roman Empire and early Christianity. For the most part, Jews have nevertheless managed to go their own unembarrassed way. The genetic record shows that they have on the whole succeeded. But this is only, the same record shows, because they have made a point in the past of not embarrassing one another. There is a lot of DNA in the Jewish people that came in, as it were, through the back door. Unless ways are found to keep this door open, the walls of the house may have to be torn down.

**I**N 2003, a year after the publication of my book *Across the Sabbath River*, I became involved in a historical genetics-research project myself. I did so at the invitation of two geneticists whose names appear on many of the scientific papers mentioned in this article: Professor Karl Skorecki and Dr. Doron Behar of Rambam Hospital and the Rappaport Research Institute in Haifa. They had read my book and wanted to know how I felt about taking part in

a DNA study of the Mizo and Kuki people of northeast India, the purpose of which would be to determine whether there was evidence for a "Jewish"—that is, a Middle Eastern—origin for any of them.

Both men had qualms about the matter. Unlike other genetic investigations they had participated in, this one might have practical consequences. The B'nei Menashe believe that they descend from one of the "ten lost tribes" of Israel that was driven into exile by the Assyrians in the 8th century B.C.E. This belief, which first surfaced in Mizoram and Manipur in the 1950's, is basic to their identity. Because of it, they have chosen to live Jewish lives and to convert once they have managed to reach Israel.

In my book I had come to the unexpected conclusion that there was a kernel of historical truth in their claim, although I did not think that more than a tiny fraction of Mizos and Kukis might have distant Israelite ancestors. What would happen, Skorecki and Behar asked, when our study was published? Whatever its findings, they would be certain to disappoint the B'nei Menashe and perhaps even to undermine their sense of Jewishness. And what if these findings were seized on by those in the Israeli government who wished to shut the country's gates to the B'nei Menashe? Did we have the moral right to take such risks?

I answered that I thought we did. (This is the only basis I can imagine for David Goldstein's strange statement in *Jacob's Legacy* that I "agitated for the Mizos to undergo DNA tests in order to vindicate their claims.") Israel's gates had already been shut—and, apart from briefly swinging open again in 2006-7, have remained so—and even if one did not agree that the scientific truth was worth pursuing at all costs, someone else would pursue it in this case if we didn't. It was best for the work to be done by an Israeli team that was sensitive to the issues involved.

In the end, we went ahead. Three rounds of sampling, based on the theories in my book and involving approximately 500 people, were carried out in India in 2003, 2006, and 2007. Although Goldstein writes (on what grounds, I again don't know) that "most" Mizos and Kukis "resisted" genetic testing, I am aware of only one case in which someone who was asked to be sampled refused to cooperate. The difficulties were of an entirely different nature, such as a suitcase full of samples that was lost for several days in Tashkent, or the fact that at a critical juncture one of our samplers was murdered for reasons having nothing to do with our study.

The final lab results are now being tabulated.

They will not, so it seems, be earth-shaking. Nearly all of the samples have turned out to have typically Tibeto-Burmese DNA. Although a very few look Middle Eastern, there may be no way of absolutely ruling out other possible sources for them. After all our effort, the results are inconclusive. And in any case, as historical geneticists are fond of saying, “absence of evidence is not evidence of absence.” There are many reasons why an originally small input of DNA might not turn up in a study: its bearers may have failed to reproduce their lineage, or the sample may be too small, or a crucial population group may be missing from it.

It has not been my impression, however, that the B’nei Menashe are waiting for the results with bated breath. In the five years that have passed since the study was commenced, scarcely any of them has contacted me to ask about it, and there has been, as far as I know, little discussion of it in their community. There appears to be no reason to think that, when eventually published, it will have much of an impact on them or their fate.

This comes as a relief. Despite my assurances to Skorecki and Behar, I too had my doubts. But the B’nei Menashe are more grounded in their own beliefs than we had feared. They will stick to them regardless of what two highly professional geneticists and one sadly amateur historian say in some scientific journal.

**T**HIS, I THINK, is as it should be. There may be a few people who can subsist on an austere regimen of all truth and no myth, and there are all too many people who live on a flabby diet of all

myth and no truth. But some indeterminably proportioned combination of the two dispositions is what most of us require for our health. This is as true of societies as it is of individuals.

I myself have long suspected, starting far before I knew anything of historical genetics or Arthur Koestler’s *The Thirteenth Tribe*, that I have Khazar blood in me. One of my father’s sisters had distinctly slanty eyes. In one of her daughters, these are even more pronounced. The daughter’s daughter has features that could come straight from the steppes of Asia.

I rather like the idea of Khazar forefathers. Far from deconstructing my Jewishness, it romanticizes it even more. The thought that my distant ancestors on the plains of Russia had the intelligence and folly to choose Judaism for their religion; that they prayed to a Jewish God as they rode into battle; that (as the historians tell us) they held back the Muslim invasion of Europe from the east and helped keep the West safe for Dante and Shakespeare. Does it make me feel that, as Arab propaganda would have it, I don’t belong in Palestine? Why should it? We Khazars threw in our lot with the Jews and the Jews embraced us. Since then, we’ve also been Jews.

And who is we? Each of us has had many thousands of forebears, and each of those had many thousands in turn. The traces of millions of human beings are in our minds, our hair, our eyes and noses, our inner organs, the shape of our toes, our trillions of cells. By pure chance, two of these trillions are passed on unchanged and can be given labels like R-M117. Instructive as they are, we needn’t make too much of them.