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A Biochemical Response to an Halakhic Challenge: The Case of the Ethiopian Jews

The recent mass immigration of Ethiopian Jews (Beta Israel) to Israel has its origins in the interest taken in this community during the late nineteenth and early twentieth centuries by the French Orientalist Joseph Halevy and his student, Jacques Faitlovitch.¹ Their attempts to create ties between the Beta Israel and European Jewry were endorsed by leading rabbinic authorities of the time. As a result of two World Wars, however, the nascent connection between European and Ethiopian Jewry was weakened. It was not until the 1950's that an interest on the part of European Jews for their Ethiopian coreligionists was renewed. In 1973, R. Ovadya Yosef, the then Sephardic Chief Rabbi of Israel, rendered the opinion that the Beta Israel descended from the tribes of Israel, and that it was therefore obligatory upon the Jewish community to accelerate the immigration of this community to Israel.² This pronouncement, subsequently supported by the Ashkenazic Chief Rabbi, R. Shlomo Goren, led to the Ethiopian Jews being recognized under the Law of Return. The arrival in Israel of thousands of Beta Israel in 1984 and 1991 was the culmination of the Israeli government's commitment to restore these Jews to their homeland. However, although the Ethiopians were embraced as citizens of the State, their religious identity as Jews has been the subject of continuing controversy and debate.

In the *Kebra Nagast*, the national legend of Ethiopia, Menelik I, the alleged child of the Queen of Sheba and King Solomon, is identified as the ancestor of the Ethiopian ruling family. Tradition has it that Menelik

returned to his homeland from Jerusalem accompanied by Israelite bodyguards. It is to these Jews that the Beta Israel trace their origins. There are other theories, however, that assert that the Beta Israel are descendants of the tribe of Dan, who migrated to Ethiopia either after the Exodus from Egypt, or after the destruction of the First Temple. What these various theories have in common is that they associate the Beta Israel with the Jewish people. On the other hand, some modern researchers suggest that the Ethiopians who identify themselves as Jews actually originated from local Ethiopian tribes, particularly the Agua, who were converted to Judaism by Jews from either Egypt or Yemen.

The chronicles of medieval travelers, Eldad ha-Dani, Benjamin of Tudela, and Elijah Ferrara, and the records of seventeenth-century Spanish and Portuguese missionaries, paint a picture of the Beta Israel as being intermittently under siege by Ethiopian ruling authorities. Very often the struggle was political or economic in nature, as these authorities attempted to wrest power from the Ethiopian Jews. Periodically, the struggle took on religious overtones, as the Beta Israel were forced to convert to other religions, either Christianity or Islam. This turmoil ended about three hundred years ago when the political power and autonomy of the Beta Israel was finally overcome.

The language of the Beta Israel is Amharic, the same as that of the local tribes. Their Bible, written in Ge'ez (Ethiopic), is a translation of the Septuagint, and is similar to that used by Ethiopian Christians. Other religious writings of the Beta Israel, such as the *Book of Baruch* and *Abba Elijah*, contain Christian elements that suggest significant literary sharing between the Beta Israel and their Christian neighbors.³

The Judaism practiced by the Beta Israel in Ethiopia consists of biblical laws and rituals, but it contains no material from the *Torah she-Be'al Peh* which has shaped normative Judaism for the past two thousand years. For example, following a literal interpretation of the relevant biblical verses, the Beta Israel have no fires burning on the Sabbath, and they eat only cold food. They have, over the years, continued to ritually sacrifice animals, although economic hardship has significantly reduced the frequency of those sacrifices. They practice circumcision on the eighth day for a male child. But they also carry out an excision ceremony for a female child, a custom shared by the African communities in whose midst they live.

R. David ibn Zimra (Radbaz), the sixteenth-century Egyptian halakhist, makes reference to the Ethiopian Jews in two of his responsa. In one, he deals with the status of a Beta Israel slave who had been bought by an Egyptian Jew. Radbaz ruled that the slave must be set free, since he is to be viewed as a Jewish captive whose redemption is incumbent upon the Jewish community. In this responsum, Radbaz indicates that the Beta Israel generally are from the tribe of Dan and are to be considered no

different from any case of *tinok she-nishbah*. Interestingly, in this responsum Radbaz parenthetically comments that while Beta Israel marriages appear to be halakhically acceptable, their divorces may be improper. A second responsum deals with a married Beta Israel woman who was taken to Egypt as a captive, where she was sold to a Jewish man who later married her. Although the woman claimed that her husband in Ethiopia had been killed during an attack on the community, there existed no independent confirmation of this allegation. When the son born to the woman and her new Egyptian Jewish husband wished to marry within the Jewish community, Radbaz was asked to clarify the child's religious status (i.e., should he be considered a *mamzer*, born of the illicit union of a married Jewish woman with a man other than her husband). In his response, Radbaz is very clear in stating that the Beta Israel woman is to be considered Jewish.⁴

Despite the unequivocal stand of Radbaz, the attitude and approach of modern *posekim* to the Jewish identity of the Beta Israel is varied.⁵ In a 1985 article, R. Hershel Schachter, presenting one such approach, argues that issues of personal identity, such as the assertion that one is Jewish, fall into the category of *issurim*.⁶ In this regard, the testimony of one witness, even that supplied by the individual himself, is typically sufficient to establish one's Jewish identity. This is true, however, only in those cases in which one may reasonably presume that the witness has the requisite expertise to testify on this matter (i.e., he or she knows the halakhic definition of Jewish status). In the absence of this presumption, the individual would have to be considered as a *safek Yisrael* (doubtful Jew). Moreover, asserts R. Schachter, a *safek Yisrael* is no different from any (certain) Jew in being subject to the halakhic parameters of *mamzerut*. Thus, whether one considers the Beta Israel as either Jews or as *safek Yisrael*, one would still have to be concerned that their ignorance over the years of halakhic divorce laws may render them subject to the stain of *mamzerut*. They, therefore, may be unable to join the Jewish community.

R. Schachter then suggests that one might use the concept of *sfek sfeka* to resolve the dilemma presented by the Beta Israel. According to this logic, if there is an equal probability that the Beta Israel are Jewish or not Jewish (the first *safek*), and one combines this with the question of whether they have the status of *mamzerim* or not (the second *safek*), one could then use the construct of *sfek sfeka* to include the Beta Israel among the Jewish community (i.e., maybe they are not Jews and, even if they are, maybe they are not considered *mamzerim*). However, it is R. Schachter's contention that the first *safek*, i.e., are they Jews or not, cannot be assumed, but must be actually established as a legitimate *safek*. He suggests that one might consult anthropologists who are familiar with known intermarriage trends among the Beta Israel community in order to

achieve the necessary clarification. Although I do not believe there is systematic sociological research that could bear on R. Schachter's challenge, there is a body of biochemical data that may well address the issue as R. Schachter presents it.⁷

The development over the last few years of a range of high resolution biochemical techniques has made it possible to quantify the similarities and differences between cell samples taken from different populations.⁸ Israeli population geneticists have applied these techniques to study the various ethnic groups that have immigrated to Israel in waves since the 1950's. Although much of the early interest among Israeli scientists centered on issues of medical genetics (i.e., genetic diseases), other questions quickly came to the fore. Thus, the ability to develop a biochemical genetic profile of a population made it possible to ask questions about the genetic homogeneity of the Jewish people as a whole, the differences between Jews of various geographic origins, and the genetic relationship between Jewish populations and the indigenous peoples among whom they have lived.⁹

Although the details of these biochemical techniques are highly sophisticated, the reasoning that makes it possible to use their results to describe a population is rather straightforward. Genes exist in alternate forms, called alleles. This means that with respect to any particular gene, two individuals may resemble each other by carrying the same allelic form of the gene in their cells, or they may differ from each other by carrying different allelic forms of the gene. By looking at the pattern of polymorphisms (allelic forms) of many genes in different populations, one can quantify the genetic similarities between them.

A 1979 study by Samuel Karlin of Stanford University presented data describing the gene frequency distribution for 14 different genetic markers among nine Jewish and six non-Jewish populations. Karlin presented the data in the form of distance from a standard for each of the groups studied. Table 1 presents a portion of his analysis.¹⁰

These data lead one to the conclusion that Ashkenazic and Sephardic populations are similar to each other in genetic profile and distant from the non-Jewish populations with whom they were compared. Karlin puts these findings in an historical perspective by suggesting that these data are consistent with the thesis that "the present-day Ashkenazi and Sephardi Jews were the remnants of several small Jewish populations of the 14th and 15th centuries . . . since the Christian reconquest at the end of the Middle Ages, the contribution of non-Jews to the Jewish gene pool has been extremely small."¹¹

Karlin's declaration of the genetic isolation of the Jewish people contrasts sharply with the results of studies of the Beta Israel. In the early 1980's, the direct analysis of DNA (rather than looking at gene distribution) was refined as a means of developing a profile of a population.¹²

Table 1: Distances Relative to Standards

Increasing Distance —————→

Standards	Population Groups		
JEWISH STANDARDS			
Polish Jewish	Russian J.	Iraqi J. Morrocan J. Libyan J. German J. Arabs Armenians	Germans Poles Russians
Morrocan Jewish	Libyan J. Iraqi J. German J. Polish J. Russian J.		Arabs Armenians Germans Poles Russians
NON-JEWISH STANDARDS			
Arab			Polish J. German J. Russian J. Iraqi J. Morrocan J. Armenians
German	Polish J. Russian J.	Libyan J. Iraqi J. Morrocan J. German J.	

This technique involves the enzymatic cleavage of the DNA molecule at particular sites dictated by the specificity of the enzyme being used and the analysis of the resultant DNA fragments. Thus, if one were to compare two identical DNA samples by this technique, the fragment patterns (morphs) would be identical. In the case where the DNA samples differ, the pattern of morphs would differ as well. Since many different enzymes, each cleaving at a different site and each producing its own met or morphs, can be used in this analysis, a comprehensive, relatively high resolution profile of a given sample of DNA can be produced. Although most DNA found in the cell is inherited in part from the father and in part from the mother, mitochondrial DNA comes entirely from the mother. Thus, the cleavage pattern of mitochondrial DNA is a direct reflection of that individual's mother, the source of the DNA.

In a 1988 paper presented at the XII International Congress of Anthropological and Ethnological Sciences, Dr. Batsheva Bonne-Tamir and her

colleagues described the genetic relationship between Beta Israel and various other Jewish and non-Jewish groups based on mitochondrial DNA analysis.¹³ Table 2 presents some of these data.

Table 2: Frequency of Selected Morphs

Enzyme	Morph	Frequency (%)					
		Yemenite	Ashkenazi	Arab	Caucasian	Ethiopian	African
Bam HI	1	100	100	100	86	100	100
Hpa	2	100	100	87	98	57	13
	3	0	0	13	0	41	86
Ava II	1	88	76	70	74	65	27
	3	5	0	5	2	22	22

Bam HI/Morph1 is a pattern found universally in high frequency. By contrast Hpa/Morph3 is essentially non-existent in Yemenite and Ashkenazi Jews but is found in significant amounts among Ethiopian Jews and Africans. A similar observation can be made for Ava II/Morph3. On the basis of these and other data presented, the authors concluded that the pattern of mitochondrial DNA polymorphisms among Ethiopian Jews indicates that their gene pool reflects a mixture of both Mediterranean and African maternal origins. In a more comprehensive study, Bonne-Tamir and her associates conducted a distance analysis on 16 African and Asian groups based on 11 classical polymorphic genes and 10 populations based on mitochondrial DNA analysis. In both cases, the Ethiopian Jews placed clearly within the African cluster, revealing greatest genetic affinity to the Amhara and Senegalese. The data point strongly to the existence of significant genetic similarities between Ethiopian Jews and the peoples of East Africa.¹⁴

This observation stands in stark contrast to the earlier studies suggesting that Ashkenazi and Sephardi Jews have remained largely isolated genetically from their non-Jewish hosts. Based on the biochemical genetic evidence, one can speculate that the Beta Israel are composed of significant numbers of African tribesmen who entered the community either through intermarriage or through non-halakhic conversions. In either case, the first part of the *sfek sfeka* that R. Schachter presented has been resolved. The evidence that the Beta Israel may not be Jewish eliminates any possible concern of *mamzerut* and thereby opens the door to their complete inclusion within the Jewish community.

NOTES

This essay is dedicated to the memory of Ivan Tillem, Yizhak Leib b. Reb Gershon ha-Levi, who was dedicated to saving Ethiopian Jewry, and who died while on a trip to that country.

1. For the general background information in this paper regarding the origins, history and customs of the Beta Israel, see Moshe Corinaldi, *Yabadut Etiopiah, Zehut u-Masoret* (Jerusalem, 1988); Wolf Leslau, *Falasha Anthology* (New Haven, Conn., 1951); David Kessler, *The Falashas, The Forgotten Jews of Ethiopia* (New York, 1982).
2. The responsum is dated 7 Adar 5733 and is reprinted in M. Corinaldi, *ibid.*, 243–44.
3. Steven Kaplan, “The Beta Israel (Falasha) in the Ethiopian Context,” in *Ethiopian Jews and Israel*, ed. Michael Ashkenazi and Alex Weingrod (New Jersey, 1987), 9–18.
4. *She’elot u-Teshuvot ha-Radbaz* VII:5, 9.
5. See, for example, R. Moshe Feinstein in *ha-Pardes* 59:1 (Tishrei, 5744), 20, in which he dissents from Radbaz’s position. For rejoinders to R. Feinstein and for two different presentations of the case for the Jewish identity of the Beta Israel, see R. Ovadya Yosef’s responsum dated 1 Shevat 5745, reprinted in M. Corinaidi, 245–54 and Menachem Elon, “The Ethiopian Jews: A Case Study in the Functioning of the Jewish Legal System,” *International Law and Politics* 19 (1987): 535–63.
6. R. Herschel Schachter, “Determining Jewish Identity: Ethiopian Jewry,” *The Journal of Halacha and Contemporary Society* 9 (1985): 143–60.
7. For a review of some of the issues pertaining to the interaction between contemporary research and the halakhic process, see Don Seeman, “Ethnographers, Rabbis and Jewish Epistemology: The Case of the Ethiopian Jews,” *Tradition* 25:4 (Summer 1991): 13–29.
8. For a general popular discussion of the application of these techniques to trace ancestral links in human beings, see Joanna Paulton, “All about Eve,” *New Scientist* 114:1560 (May 14, 1987): 51–53 and “The Search for Adam and Eve,” *Newsweek* 111:2 (January 11, 1988): 46–52.
9. See R. M. Goodman, *et al.*, “Medical Genetics in Israel,” *Journal of Medical Genetics* 26 (1989): 179–89.
10. Samuel Karlin, Ron Kebe and Batsheva Bonne-Tamir, “Analysis of Biochemical Genetic Data of Jewish Populations: II. Results and Interpretations of Heterogeneity Indices and Distance Measures with Respect to Standards,” *American Journal of Human Genetics* 31 (1979): 341–65.
11. *Ibid.*, 361.
12. Rebecca L. Cann, Wesley M. Brown, and Allan C. Wilson, “Evaluation of Human Mitochondrial DNA: A Preliminary Report,” *Progress in Clinical and Biological Research* 103A (1982): 157–65.
13. Personal communication and I. Hakim, M. Gross, and B. Bonne-Tamir, “Genetic Relationships between Ethiopian and Yemenite Jews by Means of mtDNA Polymorphisms,” in A. Choventré and D.S. Roberts eds., *Pluridisciplinary Approach of Human Isolates* (Paris, 1990), 43–57.
14. A. Zoossman-Diskin, A. Ticher, I. Hakim, Z. Goldwitsch, A. Rubinstein, B. Bonne-Tamir, “Genetic Affinities of Ethiopian Jews,” *Israel Journal of Medical Sciences* 27 (1991): 245–51.