Sephardi Identity & Legitimacy in the Age of Direct-to-Consumer DNA Tests

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FLORIDA INTERNATIONAL UNIVERSITY

Miami, Florida

SEPHARDI IDENTITY & LEGITIMACY IN THE AGE OF DIRECT-TO-CONSUMER DNA TESTS

A thesis submitted in partial fulfillment of the requirements for the degree of

MASTER OF ARTS

in

RELIGIOUS STUDIES

by

Caitlyn Rose Campana

2021
To:  Dean John F. Stack  
     Steven J. Green School of International and Public Affairs

This thesis, written by Caitlyn Rose Campana, and entitled Sephardi Identity & Legitimacy in the Age of Direct-to-Consumer DNA Tests, having been approved in respect to style and intellectual content, is referred to you for judgment.

We have read this thesis and recommend that it be approved.

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Florida International University, 2021
DEDICATION

For my Oma and Opa, refugees who risked everything to come to a foreign land and begin again. Thank you for every story, lesson, and sacrifice. For my parents, Monica and Caesar, who taught me to approach life with curiosity and compassion. Thank you for always coming to the rescue. For my siblings, Catrina, Carl, and Caesar, the best big sister and big brothers anyone could ask for. Thank you for always being the role models I need most. And for the millions of our human family lost to the coronavirus pandemic.

May this tragedy show us that we are all connected beyond our comprehension.

May your memory teach us to accept and love one another abundantly.
ACKNOWLEDGMENTS

The research for this thesis was conducted and the thesis itself written in the midst of a global pandemic and significant sociopolitical unrest in the United States. I cannot thank anyone enough for their flexibility and willingness to help in the face of such demanding, unprecedented times.

I would like to extend my gratitude to Dr. Tudor Parfitt, my Major Professor, for his unwavering support throughout the research, writing, and editing process. Your expertise is inspiring and your guidance invaluable. I will miss our weekly Zoom meetings! Thank you also to committee members Dr. Oren Stier and Dr. Whitney Bauman. Dr. Stier, you were my first connection to FIU and you have made my academic experience in Miami so special. I am grateful for your encouragement, candor, and sincerity over these two years. Dr. Bauman, I am deeply appreciative of your kindness and careful instruction. Thank you for helping me navigate the difficult topics of DNA testing and identity in a mindful, informed, and empathetic way. Learning from and working with each of you has been an extraordinary honor.

I am grateful to all of the anonymous respondents whose stories are contained within this work. Without you, there would be no thesis. Thank you for your openness and trust. Speaking with and getting to know every one of you has been the most incredible experience. I would also like to thank Jeannette Nemon-Fischman, Genie Milgrom, and Andrée Aelion Brooks, all of whom were indispensable resources throughout the research and respondent-locating processes.

In a broader scope, I am grateful to all the people who helped me reach this point: every teacher, coach, professor, and mentor who saw potential where I didn’t. My
deepest appreciation goes to the lovely individuals at the Jewish Museum of Florida-FIU; I was so lucky to learn from you during my internship. Thank you for trusting me with the library! I am also thankful to the good people at Trinity Presbyterian Church in Palm Coast, Florida, who reminded me of my love for religious studies, saw me through sorrow, and sent me off to Miami with hope and a full heart. I carry your lesson of grace with me wherever I go.

Finally, I am grateful to my loved ones for their endless support and patience. Mom and Dad, thanks for reading every paper and every chapter. Aashi and Sedi, thank you for your friendship. Deepthi, Vishnu, Kanishk, and Sudhanshu, thank you for your kindness and hospitality; my final months of this degree were completed in your company and it couldn’t have been a lovelier time. Vicky, my Hebrew class buddy and confidante, you’re the best! Thank you for your encouragement, sweetness, and humor. Tara and Allison, thanks for always being there despite the miles that separate us. Finally, Amol, thank you for being such a loving partner and for turning my world upside down in the most beautiful way imaginable. I hope we get to sing “Man Udhan Varyache” and “Saaj Hyo Tuza” together for many more years.
ABSTRACT OF THE THESIS

SEPHARDI IDENTITY & LEGITIMACY IN THE AGE OF
DIRECT-TO-CONSUMER DNA TESTS

by

Caitlyn Rose Campana

Florida International University, 2021

Miami, Florida

Professor Tudor Parfitt, Major Professor

Today, individuals may purchase genetic tests that promise to reveal one’s true self through ancestry composition reports, health reports, and lists of DNA relatives. Such tests add another dimension to the ongoing debate about what it means to be Jewish, but also what it means to be legitimately Sephardi. Through qualitative interviews, this thesis illuminates the experiences of Sephardim who received identity-affirming DNA test results and Sephardim who received identity non-affirming DNA test results. Findings suggest that contemporary Sephardim consider a link to the Iberian Peninsula as indicative of Sephardi identity, despite expanding definitions of the label. They also suggest that motivations for taking at-home DNA tests may be overwhelmingly relational in nature. Respondents with an ambiguous identity orientation tended to assign more importance to their test results, while respondents with a less ambiguous identity orientation tended to do the opposite, in keeping with the hypothesis that at-home DNA tests are only as authoritative or meaningful as individuals or groups want them to be.
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I note the obvious differences
in the human family.
Some of us are serious,
some thrive on comedy.

Some declare their lives are lived
as true profundity,
and others claim they really live
the real reality.

The variety of our skin tones
can confuse, bemuse, delight,
brown and pink and beige and purple,
tan and blue and white.

I’ve sailed upon the seven seas
and stopped in every land,
I’ve seen the wonders of the world,
not yet one common man.

I know ten thousand women
called Jane and Mary Jane,
but I’ve not seen any two
who really were the same.

Mirror twins are different
although their features jibe,
and lovers think quite different thoughts
while lying side by side.

We love and lose in China,
we weep on England’s moors,
and laugh and moan in Guinea,
and thrive on Spanish shores.

We seek success in Finland,
are born and die in Maine.
In minor ways we differ,
in major we’re the same.

I note the obvious differences
between each sort and type,
but we are more alike, my friends,
than we are unalike.

We are more alike, my friends,
than we are unalike.
We are more alike, my friends,
than we are unalike.
INTRODUCTION

A typical direct-to-consumer\(^1\) DNA test kit provided by 23andMe, an industry leader with over 12 million customers worldwide\(^2\) and perhaps the best known of the DTC DNA testing companies, is a rather plain thing to behold. It is smooth and white and smaller than the advertisements would have you believe. Inside, you find a specimen bag, a tube meant to hold a saliva sample, and directions for how to successfully collect that sample. But it is the three words on the kit exterior, rendered in bold, grey block letters above artistic representations of the twenty-three pairs of chromosomes found in human DNA, that may very well give someone pause. In them, there is a greeting and a promise: “Welcome to you.” Through these words, we are meant to acknowledge that the whole of what makes a person unique—indeed, what makes a person *who they are*—is located in DNA, and that with an understanding of one’s genes comes a complete understanding of the “Me” in “23andMe,” and thus of one’s identity.

For Jews, the question of identity is far from straightforward. It is often related to religious or linguistic issues, historical affinities, familial connections, or intersectional\(^3\) labels applied to and animated by each individual. At the same time, the historical construction of Jewish identity has always involved, to varying degrees, an assumption

\(^1\) Hereafter, “direct-to-consumer” is represented by the acronym DTC.


\(^3\) Coined by Professor Kimberlé Crenshaw in 1989, the term *intersectionality* speaks to the overlap of various identities (such as gender, race, sexual orientation, religion, etc.) and the impact this overlap has on lived experiences. It is closely associated with feminist discourses and critical race theory (Kimberlé Crenshaw, “Mapping the Margins: Intersectionality, Identity Politics, and Violence against Women of Color,” *Stanford Law Review* 43, no. 6 [July 1991]: 1241, https://www.jstor.org/stable/1229039).
that Jewishness is not just created and maintained through rituals, customs, and doctrine, but that it is also inherited. Possibly the most frequently cited example of this is the halachic rule that, simply put, a person is Jewish if his or her mother is Jewish. In an external—and heinous—context, the repeated othering of Jewish communities by non-Jewish actors throughout time has played not only on theological or cultural antisemitism, but also, since the 1870s, on racial antisemitism. This reached a devastating crescendo in the race war waged by Nazi Germany during World War II, which culminated in the mass murder of approximately six million mainly European Jews in the Shoah.

Explorations of the age-old “Who is a Jew?” question draw on all aspects of Jewish identity, including those deemed biological. Contemporary scholarly work associated with these explorations is multifaceted and partially focused on the position of marginal Jewish communities. The quest for an answer (or, more appropriately, a slate of answers) to the question is further complicated by the concept of genetic Jewishness and, more specifically, by the rise of DTC DNA testing. Such testing has not only made accessible to the masses something that, not too long ago, only occurred in laboratories as part of complex genetic studies but has also adopted a unique sense and position of authority (often self-imposed) within the broader Jewish identity discourse. Now, some

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4 Halacha (translated literally from Hebrew as “the way to walk”) refers to what is now considered Jewish law as outlined in the Talmud and other authoritative Jewish texts.

5 I use the lowercase, unhyphenated version of this term because of the complicated root word “Semitic.” Although in the past this term was used to describe many people groups from West Asia, it is now understood to refer to either a language family or, when referring to people, Jews.

6 I use the word “Shoah” (Hebrew for “destruction”) instead of the more popular “Holocaust” here and throughout this thesis, mainly due to the problematic origins of the latter term (the Hebrew root word olah translates to “burnt offering”). That said, both terms are widely accepted.
enthusiasts may say, “Who is a Jew?” has a definitive answer; no longer is there a need to debate the who, what, where, when, and why of Jewishness when a simple test can spell it out in the language of crisp percentages. I argue that the opposite is true: DTC DNA testing only carves out another place for itself in the great—and unsolvable—puzzle of Jewish identity. I make this assertion early for two reasons. First, any work on the negotiation of Jewish identity is incomplete without mentioning, at least in abstract terms, the “Who is a Jew?” issue. Second, because it shapes my approach to the central topic with which this thesis is concerned, and to which I will now turn: the impact of DTC DNA testing on contemporary Sephardi identity.

By the most conservative definition, Sephardi Jews are people who descend from members of particular Iberian Peninsula Jewish groups. Their roots are in Spain and Portugal, and their language(s), liturgical traditions, and customs ensure they comprise an ethnic division different from their Ashkenazi and Mizrahi cousins. The story of the Sephardim is intertwined with that of the Iberian Peninsula as the seat of a past political, religious, and economic superpower—the Hebrew word Sepharad, as it is understood today, refers to Spain. Sephardim were associated with the “golden age” of Hispanic Jewish culture, a frequently idealized period in which Jews and Muslims coexisted under

7 I use the term “Sephardi” throughout this thesis, but “Sephardic” is also a common variant. The latter is used by many respondents and sources and has the same definition as the former.

8 Ashkenazim are Jewish people with Central European heritage.

9 Mizrahim are Jewish people with West Asian and North African heritage.


11 Sepharad is a biblical place name, but scholars are not positive about its exact location. In Modern Hebrew, the word refers to Spain. This is explored further in the final section of Chapter 1.
Islamic rule in al-Andalus\textsuperscript{12} during the broader European Middle Ages. Their story is equally linked with Portugal, another mighty power occupying a part of the Iberian Peninsula. Sephardim suffered persecution and forced conversion and were violently expelled from Spain and Portugal in 1492 and 1497, respectively. They—through a long history of migrations to Western Europe, South America, and the Caribbean—were the first Jews to settle in the territory that would later become the United States.\textsuperscript{13} But by the loosest and most liberal definition, Sephardi Jews are any non-Ashkenazi Jews. The lack of collective agreement about what exactly it means to be Sephardi, and the intra-Jewish dispute about who really has a “legitimate” claim to the Sephardi handle, set the stage for an exploration of Sephardi identity through the lens of genetic testing.

This is not a thesis based on my opinions about Judaism and Jewishness. It is not my purpose to define the words “Jewish” or “Sephardi.” It is similarly not my purpose to explain to members of the Jewish community what their identities are or what their identities mean, nor is it my purpose to make assertions about who should and should not be considered Jewish or Sephardi.

This is a thesis about ambiguity, Jewish multiculturalism, the versatility of identity, the challenges of modernity, and the universal human desire to belong. More specifically, it is about the experiences of contemporary Sephardim who face the journey of identity negotiation in a rapidly evolving world. The questions that frame my work,

\textsuperscript{12} Al-Andalus was the name given to the Iberian Peninsula during Muslim rule.

\textsuperscript{13} Jonathan D. Sarna, \textit{American Judaism} (New Haven, CT: Yale University Press, 2004), 3.
then, are as follows: Do DTC DNA test results, be they identity-affirming\textsuperscript{14} or identity non-affirming\textsuperscript{15} impact the way individuals construct and define their identity as Sephardim? If so, how? What is the place of DTC DNA tests in constructing ethnic identity? Why do Sephardim seek out DTC DNA tests? How, if at all, are DTC DNA tests reshaping the Sephardi experience and complicating our understanding of what it means to be Sephardi? Moreover, the primary research objectives associated with this project are (1) to illuminate the difference (if any) between the experience of Sephardim who received identity-affirming DTC DNA test results and Sephardim who received identity non-affirming DTC DNA test results, (2) to contribute to a broader body of scholarly work focused on the complexity of contemporary Jewish identity, specifically focusing on non-Ashkenazi communities, (3) to examine the understanding of DNA testing as “authoritative” or somehow capable of determining “legitimate” membership in various ethnic groups, and (4) to provide a surface treatment of the role of social media platforms in the establishment of online communities related to Jewish identity and DTC DNA testing.

Because textual interpretation alone could not help me adequately paint the picture of lived experience I sought to reproduce here, fieldwork was a necessary component of this project. The findings outlined in the pages to come are the product of nineteen personal interviews, conducted via Zoom and telephone conversations between November 2020 and January 2021, with self-identified Sephardim who had previously

\textsuperscript{14} By this I mean that a person’s DTC DNA test results were what the person expected and reflect what the person thought they knew about their ancestry and ethnic identity.

\textsuperscript{15} By this I mean that a person’s DTC DNA test results were not what the person expected and do not reflect what the person thought they knew about their ancestry and ethnic identity.
taken a DTC DNA test. The majority of respondents\(^\text{16}\) were drawn from Facebook groups related to genetics and Sephardi culture, while personal contacts referred others to me. The Facebook groups were identified as digital locations of interest primarily because I wished to speak with people whose self-identity as Sephardim before testing was somehow uncertain or unclear as well as with people whose self-identity as Sephardim before testing was well defined. Individuals who volunteered to participate in the study were not selected based upon age,\(^\text{17}\) gender identity, sexual orientation, nationality, race, ethnicity, religion,\(^\text{18}\) or any criteria not listed in the second sentence. Because of the private nature of these online communities, and due to the sensitive topics discussed during the interviews, all respondent data has been anonymized. Direct quotes have been used with respondents’ permission.

The choice to utilize a first-person approach in my presentation and analysis of the data arises from my belief that relational storytelling is a powerful ethnographic tool. This decision was also informed by my identity as a young woman on the Millennial/Gen Z cusp and a person of mixed ethnic heritage. My understanding of the overlap between social media, genetics, and identity guides the research, but does not efface the experiences of those around whom the study truly revolves. I have endeavored to present their stories in a manner consistent with the ethics of human subjects research, and in such a way that both respect and transparency are maintained throughout.

\(^{16}\) I refer to study participants interchangeably as respondents, participants, and interviewees throughout this work.

\(^{17}\) Children and minors were not included in the study.

\(^{18}\) A person can self-identify as Sephardi and practice a religion other than Judaism.
Conclusions drawn from the interviews are supplemented by theoretical models in the fields of psychology, cultural anthropology, and sociology. I use the first of these models, the belongingness theory proposed by Roy F. Baumeister and Mark R. Leary (1995), to understand the ancestry-related motivations that drive people to take DTC DNA tests. Although discussed in greater detail later, it is salient to note that DTC DNA tests occupy a unique place on the spectrum of social and genetic studies, as their promulgation depends upon individuals actively seeking out testing. I argue that the decision to take a DTC DNA test is not simply the product of curiosity about one’s ancestors or health status, but rather the result of a need to belong, or “a need to form and maintain at least a minimum quantity of interpersonal relationships,” which Baumeister and Leary posit is “innately prepared (and hence nearly universal) among human beings.”

These theorists are certainly not the first to suggest the importance to people of a sense of belonging, but their emphasis on “frequent interaction plus persistent caring” is distinct and notable. In my work, I stretch the boundaries of these two concepts and apply them to respondents’ testing objectives, which appear to exist on two different but related planes. The first involves a desire to learn about ancestors from whom an individual may be many generations removed, thus making real the distant and establishing a caring bond with people who are no longer living. The second involves a desire to learn about and participate in Sephardi culture, and by extension become part of a broader social community. As illustrated later, this often takes the form of physical acts


20 Ibid., 497.
and intentional engagement with the non-digital realm through organized gatherings, connections between newfound cousins and non-related Sephardim, and group excursions to towns and cities in various Mediterranean countries where group members’ ancestors once lived.

The process by which this second goal is realized is most clearly contextualized by Victor Turner’s theory of liminality and communitas (1969). In his examination of rites of passage and initiation rituals, Turner claims that liminal people, or those in between statuses, are marked by ambiguity and are “neither here nor there; they are betwixt and between the positions assigned and arrayed by law, custom, convention, and ceremonial.” Such people, represented by symbols of uniformity that characterize their liminality, eventually unite into a larger community—deemed communitas—comprised of others who have undergone the same liminal processes. The basics of Turner’s theory help illuminate how DTC DNA tests, in the case of identity non-affirming results, function as catalysts to a liminal phase marked by significant questioning and identity ambiguity on the part of the test taker. This phase, I assert, leads people to search for others like them (i.e., people with similar DTC DNA testing experiences) via social media, in turn fashioning Facebook groups into platforms through which people can nurture social bonds, fulfill their need for belonging, and create a born-digital communitas. We will see, however, that Turner’s theory also applies to those who have received identity-affirming results, as they too experience a deluge of questions after

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taking a DTC DNA test and tend to look to social media for interpersonal and cultural connections.

In addition to the ideas summarized above, I rely on the genetic options theory developed by Wendy D. Roth and Biorn Ivemark (2018) to investigate the ways in which interviewees responded to their DTC DNA test results. Roth and Ivemark challenge what they call the genetic determinism theory of identity, which they assert is problematic due to oversimplification and the fact that “it is not informed by the scholarship on identity formation or the experiences of test consumers.” Instead, the researchers advocate for an identity theory in which “consumers view and assess their genetic ancestry information by selecting the ancestries that offer them positive and distinct social identities and disregard the others but do so within the limits of what they believe others will accept.” These findings align well with the trends I observed in my fieldwork, namely that identity non-affirming results were marked by acceptance but simultaneous rationalizing and skepticism, and that identity-affirming results were simply confirmation of what respondents already deeply felt was the truth about their heritage.

The impact of DTC DNA testing on the identity of contemporary Sephardim is worthy of study for two reasons. First, at-home DNA testing is a relatively new phenomenon, and consequently studies focusing on this topic are far outnumbered by research devoted to more regulated or organized means of genetic testing. Studies that center on the overlap between DTC DNA testing and ethnic identity are even less

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23 Ibid., 155-6.
common. With that said, there has been a recent shift from critical work concerned with the potentially harmful impact of accessible genetic testing to investigative work concerned with examining the impact on test takers. Studies of the latter variety that also explore racial and ethnic identity are gaining traction, and that is the niche into which this thesis fits. Second, studies on Ashkenazi identity and genetic testing dominate the current discourse—in part because of the distinctive “traits” of Ashkenazi DNA due to a history of endogamy—and as a result there is a dearth of research concentrated on the genetic testing experiences of Sephardim. This project is the first attempt to specifically address these experiences in the contexts of DTC DNA testing and identity negotiation.

Before delving into an analysis of interview data, several concepts spanning history, sociology, and science must be addressed. Without this, it is difficult to understand the complex, turbulent backdrop against which the problem of this thesis is set. In Chapter 1, for example, Sephardi history is traced from the community’s origins in the Iberian Peninsula to its place (or rather, places) in the Jewish diaspora. The central purpose of this chapter is to show why and how the boundaries of the term “Sephardi” as an ethnic and cultural label became contested, and to suggest what this could potentially mean for the construction of modern Sephardi identity. Chapter 2 presents a timeline of population genetics and DNA testing, examines the origins of and differences between four popular DTC DNA testing companies (23andMe, Ancestry, FamilyTreeDNA, and MyHeritage), provides a straightforward explanation of how DTC DNA tests work, and discusses the problematic idea of “Jewish” DNA. Additionally, this chapter highlights how DNA could potentially be used to break down or validate existing ideas about racial categories. These topics are accompanied by a review of genetic determinism in which
Anne Fausto-Sterling’s ideas and Robert Plomin’s controversial 2018 book *Blueprint* are considered in light of Jewish identity and DNA. Chapter 2 also sheds light on the varied reference populations tested for by the four companies listed above. For instance, 23andMe tests for Ashkenazi Jewish as a reference population but does not test for Sephardi Jewish, Mizrahi Jewish, etc. as reference populations, whereas MyHeritage tests for populations based on ethnic groupings as well as countries of origin, generating results as specific as Yemenite Jewish. The overarching purpose of this chapter is to problematize the idea that DTC DNA tests provide comprehensive, consistent ancestry composition results across the board.

Chapter 3 opens with an overview of the historical trends that have contributed to an Ashkenormative orientation in the field of genetics research. This sets the stage for an in-depth presentation of the fieldwork findings. Respondents’ motivations for testing and their response(s) to their ancestry results are noted here. This chapter also includes a section juxtaposing interview data against research that suggests around 20 percent of the Iberian Peninsula population has Jewish ancestry—relevant because it furthers the concept of the “genetic Jew” and introduces new questions about the social position and identity of *anusim* and their descendants (also called *b’nei anusim*, meaning “children of *anusim*”). Finally, the Conclusion examines the limitations of the project, suggests topics for further research, and presents the multipart conclusion that DTC DNA tests are

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24 I use this term to describe the position of Ashkenazi culture and narratives as representative of all Jewish cultures and narratives, the result of which is often the marginalization of other Jewish groups and experiences. I do not know by whom this term was coined, but I first read it in Sabina Ali’s master’s thesis, “Jewish Racialization, the ‘Jewish Gene,’ and the Perpetuation of Ashkenormativity in Direct-to-Consumer Genetic Ancestry Testing in the United States,” published in 2020 through Georgia State University.

25 Jewish law understands *anusim* as Jews who were/are coerced into abandoning Judaism.
only as meaningful or influential as individuals and groups want them to be. Such tests do not account for lived experience, narrative, or emotion, and consequently create more questions about what it means to be Jewish—and what it means to be Sephardi—than they answer. Definitions of Jewishness and one’s status as Sephardi vary not simply from group to group, but from person to person. This highly individualized climate ensures that, even in light of identity-affirming or identity non-affirming DTC DNA test results, each person is ultimately responsible for his or her own identity negotiation process.
I. WHO ARE THE SEPHARDIM?

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Sephardi Identity: Historical Elements

For Sephardi Jews, as is the case with many cultural groups, identity is inextricably linked to history. Because of this, a succinct overview of the narratives, events, and attributes that distinguish Sephardi existence is important. A deeper exploration of the impact of DTC DNA testing on contemporary Sephardi identity would not be nearly as impactful or meaningful without this context. With that noted, this chapter is comprised of five sections: “Origins,” “Expulsion,” “Language and Tradition,” “In the Diaspora,” and “Definitions.” The first of these, “Origins,” details the Iberian Peninsula-bound beginnings of the Sephardim, the development of the “pure Sephardi” naming tradition, the richness of the “golden age” of Hispanic Jewish culture, and the Sephardi contributions to this era of intellectual renaissance. The second section, “Expulsion,” explains the historical antisemitism faced by Sephardim within their unique geographic and sociopolitical settings, the events and impact of the Jewish expulsions from Spain and Portugal, and the emergence of crypto-Jews (also conversos or anusim), individuals who were coerced into officially converting to Christianity but who continued to secretly practice Judaism. The third section, “Language and Tradition,” explores the linguistic traditions and customs that set Sephardi Jews apart from other Jewish groups, including their liturgical practices and affinity for music and poetry. The fourth section, “In the Diaspora,” includes a brief examination of Sephardi history and identity as associated with the Americas and with Israel followed by a summary of the Sephardi experience during the Shoah. Finally, the fifth section, “Definitions,” unpacks the term
“Sephardi,” describing its biblical origins and the consequences of understanding its meaning in terms of narrow ethnic distinctions or, conversely, broad religious distinctions.

**Origins**

A unique Sephardi cohort did not coalesce all at once, nor was the idea of collective Sephardi identity fully developed at the time of expulsion in the 1400s. However, the beginnings of Sephardi cultural life are indeed linked to particular places and moments in history. Research shows that Jews began living in ancient Iberian Peninsula communities during Roman rule, although some have theorized that their arrival was even earlier.\(^{26}\) The relative peace, social mobility, and freedom to worship they experienced during this period ended after Visigoth leaders elected to adopt Roman Catholicism, after which “Catholic clergy assembled at synods where they passed anti-Jewish legislation that made the life of Spanish Jewry intolerable.”\(^{27}\) Zion Zohar suggests that this era may have produced some of the first instances of *anusim*. A reprieve from persecution came in the form of Muslim conquerors, who invaded the Iberian Peninsula in 711 CE, eventually toppling the Visigothic Kingdom and expanding the Umayyad Caliphate.

Muslim rule in the Iberian Peninsula, which waned over time and officially ended when the Emirate of Granada was surrendered to the Spanish Crown in 1492, was characterized by a period (approximately 900-1200 CE) deemed the “golden age” of

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\(^{27}\) Ibid., 8.
Hispanic Jewish culture. This period is often idealized as an “interfaith utopia,” a label deriving from the common view that Jews living “under the crescent” (as Mark R. Cohen describes it) in Muslim-controlled lands possessed greater freedom and opportunities than Jews living “under the cross” in Christian-controlled lands. Cohen notes that although this narrative of total harmony does not align with historical reality—there are certainly cases of Iberian Jews experiencing persecution at the hands of medieval Muslim leaders—Jews living in al-Andalus “enjoyed much greater security than Jews living under the cross.”

Multiple factors, including an absence of Islamic theological antisemitism (discussed further in the next section) and the recognition of Jews as “People of the Book” and dhimmis (non-Muslims) who possessed rights, account for the generally positive relationship between Iberian Jews and Muslim political powers during the “golden age.” What made these several hundred years “golden,” however, was the frequency with which cultural sharing between Muslims and Jews occurred, the proliferation of Iberian Jewish literature and art, advances in medicine, and a guaranteed place in the social hierarchies established and maintained by Muslim rule. Even after the Reconquista (the Christian campaign to “reclaim” Iberian lands controlled by Muslims) had begun, Jews enjoyed political, economic, and intellectual prestige. Cohen explains:

Thanks to the Reconquista the Sephardim of Arab Spain brought the superior Arab culture of the Muslim world to Castile and Aragon. In Christian Sepharad, they translated Arab works into Latin. The Sephardim were honored with elite positions in the courts of Spanish Christian kings, just as they had served caliphs and sultans in the Muslim domain. Jewish physicians, learned in Greco-Arabic medicine, flourished in Christian circles because of their superior medical knowledge. The Jewish intelligentsia from Andalusia (which included the physicians) also imported Greco-Arabic philosophy to a society that did not know

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its traditions. The Sephardim of Christian Spain continued to pursue the philosophical study of Judaism, notably the Aristotelian approach known as Averroism. Two Arabic-speaking Sephardim of the twelfth century, Moses Maimonides and Abraham ibn Daud, paved the way in Jewish Aristotelianism. Maimonides left Spain and wrote in Muslim Egypt. Ibn Daud wrote in reconquered Christian Toledo.²⁹

The concept of Sephardi superiority, which some scholars argue is still tangible today, was cultivated by the type of social positioning described above. One of the best indicators of this is the “Sephardi tahor” (“pure Sephardi”) naming tradition,³⁰ indicated at the end of one’s full name by an acronym consisting of the Hebrew letters samekh (ס) and tet (ט).³¹ Used by Iberian Jewish exiles post-expulsion as a means of distinguishing themselves from the various North African groups among whom they came to live,³² the “pure Sephardi” tradition also became a way to trace one’s lineage back to Jews who had come from the Iberian Peninsula communities of the “golden age,” and perhaps even more so to Jews who came from prominent families in those communities. Naturally, it is associated with the concept that Sephardim were the progenitors of this “golden age,” the participants in a respected “interfaith utopia,” and the foil to “the irrational, ultra-religious, insular Ashkenazic Jews, who were represented by the Yiddish-speaking Jews

²⁹ Ibid., 33.

³⁰ Even though this technically should be discussed in the Expulsion section, I choose to mention it here because of its relevance to the theme of Sephardi superiority.


of Eastern Europe.” In short, the “pure Sephardi” practice is notable because it speaks to the issue of some Jews who were not entirely of Iberian ancestry. In these contexts, “Sephardi” designated high status. Indeed, in many parts of the Jewish world it still does. The practice of adding סט to a name began as a way of marking who was “legitimately” entitled to Sephardi identity and merited the prestige that was believed to come with it.

**Expulsion**

The notion of “expelling” Jewish populations from a country is one of the paradigmatic examples of early state-sponsored antisemitism avant la lettre. Although Sephardim were subject to occasional instances of cultural antisemitism—forms of anti-Jewish sentiment centered on the belief that Jews were somehow inherently different and therefore lesser than Christians—the most prevalent iteration of antisemitism they faced under Catholic rule was theologically oriented. Spurred on by replacement theology, or the idea that Christians “replaced” Jews as the “Chosen People” and established a new covenant with God after the death of Jesus Christ, this flavor of hatred emphasized the Jews’ role in the Passion as either (1) direct murderers of Jesus or (2) acquiescent bystanders to the crucifixion. Interestingly, there was also a significant fear on the part of Catholic powers that Sephardim were “Judaizing,” or converting their Christian neighbors, however the extent to which this is true is debated. At any rate, the subjugation suffered by Jews at the hands of Catholic monarchies in the Iberian Peninsula marked a dramatic departure from earlier relations between Jews and Muslim authorities,


34 The biblical narrative of Jesus Christ’s crucifixion.
who had no theological basis—no claims to “propheticide” and no “iconographic tradition that might have provided the illiterate Muslim masses with a graphic depiction of Jewish enmity toward Muhammad in Medina”—for rejecting Jews.\textsuperscript{35}

The theological bent of the Spanish Crown’s antisemitism is evident in the push for conversion, forced baptisms, and the fact that Jews who did convert to Catholicism were permitted to remain in Spain. Of course, this is not to say that those who did choose to convert were treated well. A kind of social ghettoization emerged, as did the pejorative term \textit{marrano} (meaning swine), a moniker used to identify and humiliate crypto-Jews, who were seen to occupy a space between Judaism and Christianity and whose loyalties were thus always in question. Cohen draws attention to the fact that the practice of converting but still maintaining one’s “true” religion in secret mimicked a practice Jews adopted from Islam: \textit{taqiya}, or the justifiable act of denying one’s religion when confronted with persecution.\textsuperscript{36} In all, \textit{anusim} played a symbolic role in the eventual expulsion of Jews from Spain and Portugal in that there was a widely felt concern that Jews would entice those who had previously converted (following an outbreak of anti-Jewish violence beginning in 1391) into reverting back to Judaism.

\textit{Anusim} emerged before the expulsion of Jews from Spain. But for Jews who decided not to convert to Christianity, the process of leaving Spain was not as straightforward as we are often led to believe. Jonathan Ray explains the misconception of a clean break with Spain:

\textsuperscript{35} Cohen, “The Origins of Sephardic Jewry,” 27.

\textsuperscript{36} Ibid., 35.
Ostensibly, the Sephardi experience following 1492 differs from contemporary Diaspora communities in that Iberian Jews were summarily exiled and forbidden to return. However, the break with their homeland was not as absolute as it is sometimes portrayed. To begin with, voluntary Jewish migration from the Spanish kingdoms took place long before the edict of expulsion was written and, in the case of Portuguese Conversos, continued through the sixteenth and seventeenth centuries. Furthermore, Jews could and did return to Iberia after 1492.\(^{37}\)

The inception of the Inquisition and the passing of the Alhambra Decree in 1492 did indeed facilitate the departure of thousands of Jews from Spain. Many sought refuge in neighboring Portugal—where they were required to pay a head tax in exchange for some protections—until King Manuel I of Portugal, under pressure from Spanish monarchs Ferdinand II of Aragon and Isabella I of Castile as well as the Catholic Church, ordered their expulsion in 1497.\(^{38}\) During this period, thousands of Jewish children were deported to the western African islands of São Tomé and Principe.\(^{39}\) But while the expulsions were emblematic of a horrific end to a long and important era of Jewish history, they also paved the way for a transnational blossoming of Sephardi culture and the birth of a \textit{sui generis} diasporic identity.

**Language and Tradition**

Before moving on to a discussion of Sephardi life post-expulsion, it behooves us to briefly diverge into the aspects of Sephardi culture that make it unique. One of its most striking characteristics is language, an element with which the Sephardim (and Jews in


general) have always had a fascinating relationship. As Norman A. Stillman writes, “The Jews, subconsciously, created and preserved a unique linguistic identity” throughout history. Due to Muslim influence, many Sephardim began speaking and writing in Arabic, a language similar to the Semitic languages Iberian Jews were already familiar with—namely Hebrew and Aramaic. In medieval Iberian Peninsula communities, Judeo-Arabic (as it came to be known) was typically written using Hebrew letters and accounted for the consonants found in Arabic, but not in Hebrew, by adding diacritical points to characters. The linguistic tradition most often associated with Sephardi identity, however, is Judeo-Spanish, also called Judezmo or Ladino. This language has several variations, including Hakitia, a Moroccan dialect. A Romance language that is derived from Medieval Spanish and that uses the Hebrew alphabet, Judeo-Spanish and its cultural buttressing “continue(s) to be maintained today as the modern heir to a noble, centuries-old, East-West Jewish heritage.”

In addition to language, Sephardim embraced and mirrored other elements of surrounding cultures, infusing them with uniquely Jewish qualities. First, some beliefs of Iberian folk religion found their way into Sephardi culture, in a manner similar to that of the connection between Ashkenazic cultural practice and the folk traditions of Eastern Europe. Sephardim also often adopted the traditional dress of neighboring cultures, perhaps most evident in the lush velvets, prominent headdresses, and intricate beading


41 Ibid., 44.

characteristic of Sephardi wedding attire in countries like Morocco, Egypt, and Algeria. Moreover, Sephardi staples—representing a fusion of Jewish and Mediterranean cuisine—include bourekas (savory pastries made with phyllo dough), *pescado frito* (fried fish, typically served with lemon on Shabbat, the Jewish Sabbath), and *kitnyot* (Hebrew for “legumes”), a mix of rice and corn products consumed on Passover. Finally, like other Jewish communities throughout history, Sephardim practiced endogamy, and marriage to first or second cousins was not viewed as inappropriate, but rather a way to ensure that individuals married into families of esteem.

While they both recognize the authority of the Torah and the Babylonian Talmud, there are notable differences in liturgical traditions between Sephardim and Ashkenazim. (Mizrahim, in terms of religious worship, are very similar to Sephardim, as they too follow the Sephardi rite.) Sephardi Jews, for example, wind their *tefillin* straps outwards, while Ashkenazi Jews wind them inwards; Sephardi Torah scrolls are stored and read differently from Ashkenazi scrolls; Sephardi worship incorporates psalms and poems that Ashkenazi worship does not; and Sephardi prayers and blessings are recited

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43 Passover is the Jewish holiday commemorating the biblical Exodus from Egypt. Jews are prohibited from eating leavened bread during the holiday, while Ashkenazim generally avoid legumes as well.


45 The Torah, in its simplest definition, consists of the first five books of the Hebrew Bible: Genesis, Exodus, Leviticus, Numbers, and Deuteronomy.

46 The Babylonian Talmud is the main source of *halacha* and the central text in Rabbinic Judaism.

47 *Tefillin*, also called phylacteries, are small boxes attached to leather straps worn by (typically male) Jews during weekday prayers. The boxes contain specific verses from the Torah.
using different melodies. Largely as a product of the fact that divisions between Orthodox, Conservative, Reform, and Reconstructionist Judaism are an Ashkenazi phenomenon, most Sephardi synagogues practice segregation between men and women, with the latter relegated to balcony seating. A final characteristic that truly highlights the uniqueness of Sephardi culture is a pervasive inclination toward music and poetry. A shining example is the development of *piyyutim* (singular *piyyut*), poetic Hebrew texts “closely tied to a religious concept and context” that were first written in the fourth and fifth centuries. Taken together, the customs embraced by Sephardim, from cuisine to music, reflect the cultural exchange that occurred between Iberian Jews and neighboring groups before and after expulsion.

**In the Diaspora**

Sephardim carried many of the cultural practices detailed above to their new transnational homes. After expulsion, eastern Sephardim (as they came to be known) settled throughout the Ottoman Empire. While North African Sephardim settled in the Maghreb and western Sephardim settled in the Netherlands, France, England, and other

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49 Ibid.


areas, the Americas also feature prominently in the wider Sephardi story. Having fled Portugal in 1497, some Sephardim found refuge in Holland, where they joined what has been called a “vibrant center of world trade.” As traders and merchants, they travelled with the Dutch West India Company to the newly captured Brazilian colony of Pernambuco, establishing in the 1630s the “first organized Jewish community in the new world” in the city of Recife, complete with an active synagogue and two Jewish schools. Following the Portuguese recapturing of Pernambuco, some Sephardim returned to the Netherlands, some made their way to England, some helped begin new settlements in the West Indies (specifically Curaçao, Cayenne, and Surinam), and still others looked for opportunities in Dutch New Amsterdam, in turn forming the first Jewish communal settlement in North America. However, crypto-Jews were living in the American Southwest well before the colonial era with which the “first” North American Jewish communities are associated, making it difficult to pinpoint when the first Jewish people actually set foot in North America. With the arrival of Ashkenazim en masse in the 1800s, Sephardim quickly became a minority within American Judaism. Later Sephardi immigrants were also looked down on because of an association with areas outside of Europe, with people of color, and with non-European cultures: “In the 1880-1925 period, those Sephardim who emigrated to the United States (largely from Greece, Turkey,

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53 Sarna, American Judaism, 5.

54 Ibid., 7.

55 Ibid., 7-8.

Rhodes, and the Balkans) were by and large neglected, marginalized, frequently more impoverished, and less mobile than their Ashkenazi peers—and tensions between Sephardim and Jews within the dominant Ashkenazic culture sometimes took on a racially or ethnically tinged spin.”\textsuperscript{57} The Sephardi experience in Israel has also proven to be rife with controversy and narratives of exclusion. Negative Israeli perceptions of Sephardim and Mizrahim have contributed tremendously to contemporary interpretations of “Sephardi” as an all-encompassing term applied to non-Ashkenazi Jews.

One important component of the contemporary Sephardi story worthy of mention is the Shoah. The experiences of Sephardim during the genocide are often so overlooked that, as Henry Abramson puts it, a “double occlusion” has formed: not only are Sephardim frequently written out of the overarching Shoah narrative, but scholarly accounts of the topic are difficult to come by.\textsuperscript{58} Regardless, it is clear that the Sephardi enclaves in Greece, Bulgaria, Tunisia, France, and Yugoslavia (today Croatia, Serbia, Bosnia and Herzegovina, Kosovo, Montenegro, North Macedonia, and Slovenia) were devastated during World War II. Jewish populations in Sarajevo, Belgrade, Sofia, and Salonika were hit exceptionally hard.\textsuperscript{59} Salonika, once home to the largest Jewish community in Greece, saw its Jewish numbers decrease from 50,000 pre-war to 2,000


post-war. Only ten percent of the overall Greek Jewish population survived World War II. The fate of Salonika’s Sephardim mirrored that of Ashkenazim in other parts of German-occupied Europe, both in cruelty and patterns of forced labor, ghettoization, and mass murder. One story from the city summarizes the Nazis’ contempt for Jewish existence: “The German authorities demanded a ransom for the release of the Jews [who had been held captive for labor]. The Jewish community in Salonika collected money in Salonika and Athens and sold the Jewish cemetery in Salonika to raise the required sum. (Salonika’s city administration purchased the cemetery, then broke up the headstones for construction materials and later built a university at the site.)” While the Nazis’ systematic persecution of Greek Jews was much like their persecution of other European Jews, Sephardi experiences during the Shoah varied by country. For example, the Jews of Croatia suffered at the hands of the Ustaša, a fascist organization known for its brutal killing methods, and Serbian Sephardim were the first Jews in Europe to be murdered via experimental gas vans in 1942. Other communities experienced minimal losses. Nevertheless, the fact remains that countless Sephardi Jews were indeed victims of the Shoah. The erasure of their suffering feeds into Shoah-centric definitions that imagine “Jewish” as being synonymous with “Ashkenazi.”

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61 Abramson, “A Double Occlusion,” 287.

62 United States Holocaust Memorial Museum, “Salonika.”

63 Abramson, “A Double Occlusion,” 293.
Definitions

As briefly mentioned in the Introduction, today, the Hebrew term *Sepharad* translates to “Spain.” It first appeared in the biblical Book of the Prophet Obadiah, in which “an oracle prophesies that ‘the Jerusalemite exile community of Sepharad shall possess the town of the Negev.’”64 Over time, the Aramaic equivalent of *Sepharad*, “Aspamia,” became conflated with the antiquated term “Hispania,” which was once used to refer to the Iberian Peninsula. Consequently, “medieval Spanish Jews concluded that ‘Sepharad’ in the oracle of the Prophet of Obadiah meant ‘Spain’”65 and their self-labeling as Sephardim became tied to the belief that they descended from members of Jerusalem’s exiled Jewish nobility.

Although *Sepharad* may refer to Spain, it is plain to see that the “Sephardi” title, and consequently the identity that goes along with it, are subject to interpretation based upon time, national context, and other factors. Much of this, as we’ve seen, has had to do with the diasporic experience of Sephardi Jews. Before the expulsions from Spain and Portugal, identity for people living in the region, including Jews, was deeply linked to nation and city. Consequently, “At no point did a Sephardi community exist that operated in a politically cohesive manner, nor was there anything that might be described as a Sephardi consciousness.”66 In the Americas, the differences between Sephardim and Ashkenazim (especially in North America) were understood in racial terms. In Mandatory Palestine, as Harvey E. Goldberg notes, Sephardim were widely associated

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65 Ibid.
with “the East” and, after the establishment of the Jewish State, came to be understood as derived from a sub-category of “Oriental” Jewry. “Sephardi,” it seems, has no singular concrete definition. It has meant different things to different people over time and space. All of this brings us back to Mark R. Cohen’s “under the cross” and “under the crescent” dichotomy. Cohen suggests that Sephardim constitute a third type of Jewish group, one who came into existence while occupying a space between the cross and crescent, intricately tied to Spain and therefore Europe, but simultaneously claiming a connection to the Middle East and North Africa. Ray finds this somewhat ambiguous state responsible for the formation of Sephardim as a sub-ethnic group: “The creation of the Sephardi Diaspora community…highlights the significance of sub-ethnic identity as a defining element within Jewish history and forces a reevaluation of the uniqueness of the Jewish Diaspora experience.” The boundaries of identity and status have an uncanny tendency to shift throughout time, and it is these shifting boundaries that make the issue of Sephardi “legitimacy” cloudy.

So far, we’ve explored the Sephardi elements of the global Jewish community, illustrating how a complicated past has translated into complicated terminology. Now we shall look at the intricacies of DTC DNA testing, as these add another layer of complexity to our subject.


68 Ibid., 176.


II. DIRECT-TO-CONSUMER DNA TESTING: CHALLENGES

Population Genetics and Direct-to-Consumer DNA Tests

The already perplexing sociohistorical concept of “being Sephardi” or “Sephardi-ness” is further complicated when examined in light of genetic studies and DTC DNA testing. To demonstrate why exactly this is, we first have to consider how these tests came about and the science on which they’re based. DTC DNA testing is anchored in population genetics, a subfield of evolutionary biology that focuses on identifying and studying the genetic differences between and among species groups. Consequently, despite the individualistic bent of DTC DNA marketing (i.e., the “Welcome to you” concept mentioned in the Introduction), it is important to understand that the focus of these tests is “the population or the species—not the individual.”71 DTC DNA test results, therefore, are dependent upon previously determined human groupings, or reference populations. These reference populations are formulated by geneticists using ancestry informative markers, or AIMs, which are “unevenly distributed between population samples from different geographical areas.”72 Herein lies one of the cardinal limitations of DTC DNA tests: they are virtually entirely dependent on the decisions of geneticists,73 who are responsible not only for determining which groups are included in databases (and thus meaningful), but also for determining the particular genetic information that is

71 University of Leicester, “Population genetics,” Virtual Genetics Education Centre, https://www2.le.ac.uk/projects/vgec/highereducation/topics/population-genetics.

72 Roth and Ivemark, “Genetic Options,” 159.

73 This is not to discredit the expertise or careful work of geneticists, who use advanced technology to conduct their research and draw conclusions.
representative of reference populations. As Roth and Ivemark explain, “Scientists choose the AIMS used in admixture [population mixing] tests to differentiate socially predefined populations—for instance, choosing markers offering the greatest genetic differentiation between predetermined clusters of Europeans and Africans. Thus, the analysis depends on scientists’ preconceived ideas about who is European and who is African, rather than revealing group memberships that are inherent within genetic material.” By extension, DTC DNA tests also operate under the assumption that reference populations have “isolated” origins, or origins unmarked by admixture, and that some have maintained this “purity” in a traceable way. In many cases, however, an individual’s AIMS do not necessarily align with the reference population they belong to, and people from disparate groups can share AIMS. This renders test results “probabilistic” as opposed to “deterministic.”

To generate percentages on a DTC DNA customer’s results page, most companies fuse research samples of the nature described above with self-reported information from their customers. Each of the most popular DTC DNA testing companies has a similar but unique procedure for carrying this out, but most take into consideration ancestor birthplaces and AIMS. It is in this way that ethnicity, ancestry, and heritage become conflated by DTC DNA testing companies, something even more notable when we

74 Roth and Ivemark, “Genetic Options,” 160.


76 Ibid., 666.

77 Roth and Ivemark, “Genetic Options,” 159.
contemplate just how genetically similar humans actually are to one another. To put things into perspective, the Human Genome Project found that “99.9% of human genetic sequences are identical and only 3%-10% of the variation is associated with geographic ancestry.” Genetic ancestry tests are preoccupied with unpacking the 0.1% of a person’s genetic profile that identify them with particular geographic reference populations. This is done by analyzing single nucleotide polymorphisms, or SNPs: locational variations across the human genome that, when combined, can “develop a picture of [a person’s] genetic ancestry.” 23andMe, Ancestry, FamilyTreeDNA, and MyHeritage analyze SNPs in what’s known as an autosomal DNA test, or a test centered on the twenty-two pairs of autosomal chromosomes each person has. Autosomal DNA tests do not fully examine the twenty-third pair of chromosomes, as these are sex chromosomes (females exhibit an XX sex chromosome pattern and males exhibit an XY sex chromosome pattern). Each company offers different services to their customers, including expansions of the autosomal DNA test explored in the next section.

The “Big Four”: 23andMe, Ancestry, FamilyTreeDNA, and MyHeritage

To say that DTC DNA testing is a booming market would be an understatement. As of 2019, over 26 million people had taken one of these tests, and the MIT Technology Review found that “the number of tests purchased surpassed sales of all previous years

78 Ibid., 158.


80 This is not meant to suggest an XX/XY dichotomy; I mention it here only to clarify the difference between autosomal and sex chromosomes. Varying combinations of sex chromosomes also occur naturally, and intersex people may exhibit these combinations. Sex and gender both exist on spectrums.
combined” in 2018. But what do we know about the companies offering these tests? What differentiates them, and how do their tests really work? For the purposes of this project, I’ve elected to only highlight the services offered by 23andMe, Ancestry, FamilyTreeDNA, and MyHeritage. This choice was made for three reasons. First, each of these companies is an industry leader with over 1 million people in their database; second, if a person were to perform a web search using the phrase “Buy direct-to-consumer DNA test,” these are the names and products that would more than likely appear first; and third, each of the individuals interviewed for this study have tested with at least one (many with several or even all) of these companies. Summed up, this decision was equal parts about the size of a company’s consumer base, a company’s visibility on the web, and the frequency with which a company was represented among respondents. I refer to my chosen companies as the “Big Four.”

The first of the “Big Four” is 23andMe. Based in Sunnyvale, California, the company is owned by several private investors, including current CEO Anne Wojcicki. 23andMe’s first DTC DNA testing product launched in November 2007 and was designed for medical, genealogical, and personal ancestry purposes. Today, the

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83 Much of the following information (i.e., specific details about each testing company) is drawn from the International Society of Genetic Genealogy (ISOGG) Wiki. All data has been crosschecked using the 23andMe, Ancestry, FamilyTreeDNA, and MyHeritage websites.
company offers three different products. The Ancestry and Traits service ($99)\textsuperscript{84} promises 80+ personalized reports, ancestry percentages to the 0.1%, 2,000+ geographic regions, and the option to upgrade to the Health and Ancestry service in the future. The Health and Ancestry service ($199) promises 150+ personalized reports, the full Ancestry and Traits service, FDA-authorized health reports (this includes a customer’s carrier status for a range of diseases and disorders), and FSA/HSA eligibility. Finally, the VIP Health and Ancestry service ($499) provides two Health and Ancestry service kits (the other options only include one kit) and promises overnight shipping, priority lab processing, direct access to 23andMe’s customer support line for one year, and a one-on-one 30-minute “ancestry results walkthrough” with one of 23andMe’s “trained experts” (also valid for only one year).\textsuperscript{85} 23andMe’s tests are available in 56 countries, the majority of them in Europe and North America. Health reports are only available in select countries. The company’s website is fully functional and user friendly, offering an online community forum and streamlined viewing of customers’ ancestry composition results, health results, and DNA relatives. Customers may also use the site’s direct messaging system to contact DNA relatives with whom they wish to compare genomes. What sets 23andMe apart from the other three companies is the fact that they automatically incorporate Y chromosome DNA (Y-DNA) and mitochondrial DNA (mtDNA) results\textsuperscript{86} into their autosomal results. Additionally, the company analyzes customers’ DNA for

\textsuperscript{84} All prices listed are in USD. Prices listed were accurate at the time of publication but may change over time. This is also the case with any statistics presented in this chapter.

\textsuperscript{85} 23andMe, “Compare Our Services,” 23andMe, last modified 2020, https://www.23andme.com/compare-dna-tests/.

\textsuperscript{86} More on these in the following sections.
Neanderthal variants and reports what percentage of a person’s DNA comes from their Neanderthal ancestors (see Fig. 1). Once in 23andMe’s possession, DNA samples are stored indefinitely, unless the customer requests destruction of their sample. As of October 2020, about 12 million people are in 23andMe’s database.

Ancestry is the second of the “Big Four.” A Utah-based family history research company founded in 1996 and currently owned by the private management company Blackstone Group, Inc., Ancestry launched its first DNA product in the United States in May 2012. Subsequent releases in the United Kingdom, Ireland, Australia/New Zealand, and Canada occurred in January 2015, followed by releases in twenty-nine more

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87 According to the 23andMe website, Neanderthal variants are more common in European, Asian, and indigenous American populations. They are almost entirely absent in Sub-Saharan African populations because it is unlikely that Neanderthals ever lived in that region.


countries (almost all of them in Europe) in February 2016. Similar to those offered by 23andMe, Ancestry’s three products encompass medical, genealogical, and personal ancestry services. The first, AncestryDNA ($99), provides users with an ethnicity estimate and DNA matches. The second, AncestryDNA Traits and Family Tree Bundle ($188), promises an ethnicity estimate, DNA matches, a personal traits report, and a three-month World Explorer membership, which gives users access to “the world’s largest online collection of family history records—including over 3 billion international records.”\(^91\) The third, AncestryHealth ($199), promises an ethnicity estimate, DNA matches, a personal traits report, and health reports (like 23andMe, this includes carrier status reports). Ancestry used to offer Y-DNA and mtDNA tests to customers but discontinued these services in June 2014.\(^92\) Customers may access their ethnicity estimates, personal traits reports, health reports, and DNA relatives through Ancestry’s website, and they may also contact DNA matches using the site’s private messaging system. Like 23andMe, Ancestry stores customers’ DNA samples indefinitely unless instructed otherwise. As of October 2020, roughly 18 million people are in the company’s database.\(^93\)

The third of the “Big Four” is FamilyTreeDNA. Based in Houston, Texas, the company is owned by Gene By Gene, a genetic testing company founded in 2000.\(^94\) The

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\(^92\) ISOGG, “Autosomal DNA testing,” International Society of Genetic Genealogy Wiki.

\(^93\) Ibid.

first FamilyTreeDNA product launched in February 2010. Today, tests include genealogical, personal ancestry, and medical services. The Family Finder test ($79) provides customers with DNA matches and ethnic percentages through myOrigins, a “unique visual mapping tool that provides a detailed ethnic and geographic breakdown” of where a person’s ancestors came from. The Y-DNA ($119) and mtDNA ($159) tests trace the paternal and maternal lines of an individual. Finally, the Tovana Health Report and Family Finder test ($899) provides customers with in-depth information about health conditions (including carrier status), fitness and nutrition traits, and medication response. It also includes all of the features of the Family Finder test. FamilyTreeDNA ships to most international locations, except for Sudan and Iran. Users can access all of their reports through the company’s intuitive website, and DNA matches may share contact information if desired. DNA samples are stored for a minimum of twenty-five years, provided a user does not request that the sample be destroyed. As of October 2020, approximately 1.15 million people are in FamilyTreeDNA’s database.

With headquarters in Or Yehuda, Israel, MyHeritage is somewhat of an outlier in the “Big Four” schema. Founder and current CEO Gilad Japhet first developed the company as a family tree building platform (similar to Ancestry) in 2003, but in 2016 MyHeritage expanded into the realm of DTC DNA testing. Its first product was launched

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98 Ibid.
in November of that year.\textsuperscript{99} Currently, the company offers a genealogical and personal ancestry-oriented service in the form of its MyHeritage DNA test ($79), which identifies a person’s DNA matches as well as the ethnic groups from which customers’ ancestors came.\textsuperscript{100} MyHeritage ships to all countries except Iran, Libya, Sudan, Somalia, North Korea, Lebanon, Syria, and, ironically, Israel.\textsuperscript{101} Ancestry reports and DNA matches can be accessed via the company’s website, and customers may use the MyHeritage messaging system to correspond with their matches. Like all of the other “Big Four” companies, MyHeritage stores customers’ DNA samples unless instructed otherwise by individuals who wish to have their sample removed. As of October 2020, roughly 4 million people are in the MyHeritage database.\textsuperscript{102}

The Testing Process

The testing process for all of the “Big Four” companies is nearly identical, with slight variations in sample collection method and a customer’s wait time between sending their sample in and receiving their results. First, users must order their desired product using the company website. The company then ships them a kit similar to the one described in the Introduction. Customers must collect their DNA sample in a prescribed way. For 23andMe and Ancestry, this means producing about 2mL of saliva, then

\textsuperscript{99} Ibid.

\textsuperscript{100} Several sources mentioned a MyHeritage test that combines health and ancestry reports. I could find no such test described on the company’s website, so opted not to include secondhand information about it here. This may have changed post-publication.

\textsuperscript{101} ISOGG, “Autosomal DNA testing,” International Society of Genetic Genealogy Wiki.

\textsuperscript{102} Ibid.
combining that sample with a stabilization buffer liquid. For FamilyTreeDNA and MyHeritage, it means performing a straightforward cheek swab.\textsuperscript{103} After samples are sent back to the company’s lab, they are put through a process of phasing, window classification, smoothing, calibration, and aggregation.\textsuperscript{104} This is where samples are matched with already existent reference datasets to determine ancestry composition. Because there are around 3 billion base pairs (combinations of GC and AT) in the human genome, DTC DNA testing companies only focus on the parts of our DNA that differ (which, as mentioned before, are few and far between), represented by SNPs.\textsuperscript{105} 23andMe tests for 630,132 autosomal SNPs, Ancestry for 637,639, FamilyTreeDNA for 612,272, and MyHeritage for 702,442.\textsuperscript{106} After a customer’s results have been “finalized,” the company notifies them via email that their reports are ready to view. The entire process takes anywhere from three to eight weeks.

**Reference Populations**

Each of the “Big Four” companies has its own way of rendering customers’ ancestry composition results based on reference population data. 23andMe’s ancestry composition results are ordered in a hierarchy beginning with a continental identifier, then a regional identifier, and finally populations. In addition to providing customers with these identifiers, 23andMe’s algorithm attempts to match a person’s DNA to upwards of

\textsuperscript{103} Ibid.

\textsuperscript{104} 23andMe, “How Ancestry Composition Works.”

\textsuperscript{105} Resnick, “The limits of ancestry DNA tests,” *Vox*.

\textsuperscript{106} ISOGG, “Autosomal DNA testing,” International Society of Genetic Genealogy Wiki.
150 recent ancestor locations. These are *different* from reference populations. For example, a person may receive results that look like this: European > Northwestern European > French & German > Germany, Belgium, and Luxembourg. If the algorithm is unable to determine specific ancestry locations, a person’s ancestry composition percentages may be allocated to broader categories. For instance, instead of reading 25 percent French & German, results may read as 25 percent Northwestern European, or even “Broadly European.” If the algorithm is unable to match parts of a person’s DNA to known populations, a percentage of their ancestry composition results may read as “Unassigned.” 23andMe tests for 40+ reference populations. Only one of them is a Jewish group: Ashkenazi Jewish.\(^{107}\) Ancestry’s ethnicity estimates are based on a hierarchy similar to 23andMe’s. They list seven major regions: Africa, African Americans, America, Asia, Europe, Oceania, and West Asia. Beyond these are over 1,000 global regions, ranging from something as general as “Iran/Persia” to something as specific as “Bay of Fundy, Nova Scotia Settlers.” Of these regions, only one is a Jewish group, divided into two subgroups and six further national classifications (three per subgroup): European Jewish (see Fig. 2).\(^{108}\)

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FamilyTreeDNA structures their myOrigins results first by “Continental Region,” then “Overarching Population,” then “Population Cluster.” There are seven “Continental Regions” (Africa, Americas, Arctic, Asia, Europe, Middle East, and Oceanic), 34 “Overarching Populations,” and 90 “Populations Clusters” (Africa-19, Americas-8, Arctic-2, Asia-29, Europe-16, Middle East-13, Oceanic-3). FamilyTreeDNA tests for two Jewish “Overarching Populations;” these are European Jewish and Middle East Jewish. The Ashkenazi Jewish and Mizrahi Jewish “Population Clusters” are the only ones listed under these respective “Overarching Populations.” However, the company also houses two Jewish “Population Clusters” under other “Overarching Populations” that are not singularly Jewish. These are Sephardic Jewish (under Middle East & North Africa) and Yemenite Jewish (under Arabia). There is no Sephardic Jewish reference population (either “Overarching” or “Cluster”) found under Europe.109 MyHeritage organizes their ethnicity estimate results in an arguably simpler format. Six large regions (Africa, America, Asia, Europe, Middle East, Oceania) are broken down into 42 ethnic groupings.

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Of these, five are Jewish: Ethiopian Jewish and Sephardic Jewish-North African under Africa, Mizrahi Jewish-Iranian/Iraq under Asia, Ashkenazi Jewish under Europe, and Yemenite Jewish under Middle East. This is the highest quantity of Jewish populations tested for by any of the “Big Four” companies. Like FamilyTreeDNA, MyHeritage does not include a Sephardic Jewish ethnicity under Europe. A unique feature on the MyHeritage website is their “Ethnicities around the world” map (see Fig. 3), which not only demarcates transnational ethnicity clusters, but can also list the most common ethnicities in each country (according only to their customers’ data, however). For example, if we were to look at the South Asian ethnicity, we’d see that the countries exhibiting the greatest proportion of MyHeritage users with that ethnicity are India (69.1 percent) Mauritius (58.2 percent), Bahrain (55.9 percent), Kuwait (51.9 percent), and Oman (48.5 percent).  

Figure 3. The Sephardic Jewish-North African ethnicity cluster highlighted on MyHeritage’s ethnicity map.

Determining Reference Population Candidates

Each company does things a bit differently when it comes to reference populations. But how do reference populations come about in the first place? DTC DNA testing companies determine customers’ ancestry composition based upon reference populations previously determined by geneticists to be significant, as mentioned earlier. For many of these companies, a customer’s candidacy for inclusion in reference populations is based upon perceived genetic proximity to one of the predetermined groups and their AIMs, but also on ancestor birthplaces and traceable family history. For example, 23andMe may recognize a customer of Gujarati Patidar ancestry as a reference group data candidate only if all four of their grandparents were born in western India with a shared ethnicity and the customer’s AIMs align with those already on file for the Gujarati Patidar reference population. A user’s finalized ancestry composition report is, on average, the product of their DNA being compared with public datasets (like the Human Genome Diversity Project, HapMap, and the 1000 Genomes project, all used by 23andMe) and private datasets unique to each company and its users. The more users a company has, and the more customers who consent to being included in datasets should they meet the requirements for candidacy, the more “accurate” test results will be. Other companies, like MyHeritage, have a more fixed (i.e., not evolving as quickly) system for calculating ancestry composition:

MyHeritage’s Founder Populations project is unique. It is the largest of its kind ever conducted, involving more than 5,000 participants, hand-picked from

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MyHeritage’s 92 million members.\textsuperscript{112} Participants were selected based on their family trees—those with consistent heritage from the same region or ethnicity over many generations were eligible to participate…MyHeritage used a statistical procedure called Principal Component Analysis to ensure that each Founder Population is well-clustered, removing outliers and people who were mistaken about their own heritage. The end result became a very rich and consistent reference of 42 Founder Populations, considered to be the best of its kind in the world.\textsuperscript{113}

If customers consent to participating in research, many DTC DNA testing companies will prompt them to answer survey questions about a range of topics, from social anxiety to past diagnosis with serious health conditions. These surveys may result in users being showered with seemingly frivolous statistics, like “Your DNA matches are 96 percent more likely to have blonde or red hair” or “You may be more likely to move during sleep.” But beyond these speculative, light, and sometimes fun observations lies a truth that companies don’t seem keen on highlighting (i.e., the information is available to any curious potential test taker, but it isn’t plastered on companies’ home pages): test results—especially ancestry composition results—are not just subject to change. They are \textit{designed} to change.\textsuperscript{114} As more customers consent to research and the reference datasets become more diverse, a company’s algorithm improves, resulting in variable test results: percentages fluctuate, new ethnicities may appear, and old ethnicities may disappear altogether (see Fig. 4 and Fig. 5). This may have significant implications for those

\textsuperscript{112} This does not mean that 92 million people have DNA tested with MyHeritage. MyHeritage membership does not mean that a customer has taken a DNA test. People can simply use the website to build family trees and browse historical records.


\textsuperscript{114} 23andMe, “How Ancestry Composition Works.”
seeking to root their identity in or “discover” something about themselves through DTC DNA test results.

(Left) Figure 4. A 23andMe customer’s ancestry composition results before the company’s most recent update in December 2020 (author’s screenshot).

(Right) Figure 5. The same 23andMe customer’s ancestry composition results after the company’s most recent update in December 2020 (author’s screenshot). Notice that the percentages of British & Irish and Eastern European increased dramatically, while the percentage of French & German decreased dramatically. Scandinavian disappeared.


**Sephardim as a Reference Population**

Where does all this put Sephardim in the DTC DNA testing design? For the “Big Four” companies who do test for a Sephardi reference population—FamilyTreeDNA and MyHeritage—we can assume that their data is drawn from preselected groups comprised of individuals who met the candidacy requirements for North African Sephardi ethnicity. What’s fascinating is that neither of these companies include a European Sephardi ethnicity, and this is reflective of just how complex the sociohistorical moniker “Sephardi” really is. Does it refer to a group with genetic ties to North Africa, the Middle East, or the Iberian Peninsula? Does it refer to a group with genetic ties to one, two, all, or none of these? Things become more convoluted when we consider why the other two “Big Four” companies, 23andMe and Ancestry, avoid testing for any Jewish reference populations outside of European/Ashkenazi Jewish. Under their description of the Ashkenazi Jewish reference population, 23andMe writes, “Although not a country or region, they have their own reference population in Ancestry Composition because Ashkenazi Jews are so genetically distinct.”\(^{115}\) Does this mean that Sephardim are not genetically distinct? Perhaps, yes, if we use 23andMe’s definition of “genetically distinct.” But the absence of a Sephardi reference population doesn’t mean that Sephardi-identifying people aren’t testing with companies like 23andMe and Ancestry. It’s just that instead of the terms “Sephardi” or “Jewish” appearing on their results page, they may be seeing North African, Middle Eastern, broadly West Asian, Italian, Greek, Balkan, Spanish, Portuguese, or something else. Sephardim, like all other human populations, have always exhibited admixture; this helps contextualize why diverse results may appear

\(^{115}\) 23andMe, “Reference Populations.”
despite the fact that Sephardi generally practiced endogamy like other Jewish groups throughout history. Moreover, Sephardi communities have not been the subjects of enough studies, genetics-based or otherwise. Their titular exclusion from some DTC DNA testing companies’ reference population lists helps perpetuate an already socially existent Ashkenoractivity (discussed further in Chapter 3), but it also underlines an even larger problem with DTC DNA testing: its European inclination. 23andMe, for example, currently has 2,179 reference individuals in their Western Asian & North African database, 1,980 in Sub-Saharan African, 29 in Melanesian, 2,243 in East Asian & Native American, and 1,634 in Central & South Asian. Their European number: 6,328.116

**Haplogroups**

Haplogroups are the final scientific concept one needs to understand in order to piece together the DTC DNA testing picture, complete with limitations. Essentially, a haplogroup is a group of people who share a single genetic ancestor, traceable through their direct paternal or maternal line. In other words, your paternal haplogroup is determined by your father’s father’s (and so on until we reach the mutation that originated in one male ancestor) father. Your maternal haplogroup is determined by your mother’s mother’s (and so on) mother. Y-DNA and mtDNA tests are used to determine a person’s paternal and maternal haplogroups, respectively.117 Currently, of the “Big Four,” 23andMe and FamilyTreeDNA are the only companies who offer Y-DNA and mtDNA testing services (see Fig. 6). Because Y-DNA can only be ascertained if a person has a Y

116 23andMe, “Ancestry Composition Guide.”

117 Roth and Ivemark, “Genetic Options,” 159.
chromosome, females cannot be tested for their paternal haplogroup. Males have both X and Y chromosomes, and therefore can be tested for both their maternal and paternal haplogroups. This does not mean that females do not have a paternal haplogroup, but rather that they do not carry markers of it in their DNA. Haplogroup branches stretch back thousands of years, and ultimately lead back to the first two haplogroups through which all humans share a common male and female ancestor. In this way, some DTC DNA tests provide customers with a glimpse into a deeper, more interconnected genetic past.

Figure 6. A 23andMe haplogroup report showing a branch of Haplogroup H (author’s screenshot).

The Phenomenon of “Jewish” DNA

Jewish communities have a complicated relationship with genetic testing, and this mainly spans from the idea that Jewish people are somehow genetically distinct from non-Jewish people. The Cohen Modal Haplotype (CMH) is one of the best-known
examples of modern geneticists attempting to identify ways in which this genetic
uniqueness manifests:

In a well-known story, in 1997 Karl Skorecki recognized the implication of the
mode of inheritance of the Y chromosome for the paternally inherited Kohen status\textsuperscript{118} among Jewish populations. Working with a team of geneticists, DNA
samples were collected from self-identified \textit{kohanim}, and data from the Y
chromosome were analyzed. One result of this study was the claim to have found
a genetic motif (a defined set of genetic markers) on the Y chromosome that was
exclusive to \textit{kohanim}. Named the Cohen Modal Haplotype, later studies seemed
to support this finding. The popularization of these findings has even led some
males with no familial history of Judaism to claim Jewish identity, basing their
claim on their having this genetic motif on their Y chromosome.\textsuperscript{119}

In a similar vein, other groups with long-term ties to Jewish traditions (but who were
previously not explicitly self-defined as “Jewish”), such as the central African Lemb
people, found significant validation in genetic studies that showed a high frequency of the
CMH among male community members.\textsuperscript{120} But the notion that the CMH is an
exclusively “Jewish gene” is, of course, problematic. Wesley K. Sutton notes that the
understanding of the CMH as a gene is itself flawed, as it’s simply a marker of a gene
mutation passed down from a “probable Middle Eastern paternal ancestor.”\textsuperscript{121} From that
ancient paternal ancestor spanned multiple haplogroups, and, as we saw in the previous
section, haplogroups are broad categories that link many different cultures and people
groups. This explains why the CMH is not exclusive to Jewish-identifying people: a 2009

\textsuperscript{118} This refers to the pre-Rabbinic Judaism tradition of Jewish males inheriting priestly status. Custom
holds that all \textit{kohanim} are direct descendants of the biblical figure Aaron, the brother of Moses.

\textsuperscript{119} Wesley K. Sutton, ““Jewish Genes”: Ancient Priests and Modern Jewish Identity,” in \textit{Who is a Jew?:
(West Lafayette, IN: Purdue University Press, 2014), 106.

\textsuperscript{120} Tudor Parfitt and Yulia Egorova, \textit{Genetics, Mass Media, and Identity: A Case Study of the Genetic
Research on the Lemba and Bene Israel} (London: Routledge, 2005), 58.

\textsuperscript{121} Sutton, ““Jewish Genes,”” 108.
study found the J1c3 haplogroup associated with the Extended Cohen Modal Haplotype (ECMH) in “21.2 percent of their Jewish subjects (46.1 percentage in kohanim), but at even higher frequencies in other Middle Eastern populations; as high as 67 percent in Bedouins and Yemenis.”\textsuperscript{122} While the CMH “may point to a Jewish contribution at some point in history,”\textsuperscript{123} it cannot be taken as a singular indicator of Jewishness. This has not stopped FamilyTreeDNA from using a stylized cartoon Torah scroll as a “profile badge” indicating that a customer matches or is “close to” the CMH (see Fig. 7).\textsuperscript{124}

![The Cohen Modal Haplotype](image)

Figure 7. FamilyTreeDNA’s Cohen Modal Haplotype profile badge.

Inherited predisposition to certain diseases has also featured in the discussion of genetics and Jewish people, not as a determinant of Jewish identity or origins, but rather as a distinguishing characteristic for some Jewish groups, especially Ashkenazim. Although “the Jewish share of the overall burden of genetic disease is probably no greater than that of Africans, Arabs, Icelanders, or anyone else,” the frequency of diseases like

\textsuperscript{122} Ibid.

\textsuperscript{123} Parfitt and Egorova, \textit{Genetics, Mass Media, and Identity}, 58.

Tay-Sachs disease, Crohn’s disease, Gaucher disease, and breast cancer among Jews has received special attention from clinical researchers. More than forty Mendelian disorders, or “conditions determined by single genes,” exist among Jewish populations. Some, like Tay-Sachs, which is caused by a mutation in the HEXA gene on a particular chromosome and usually results in death before a child reaches the age of five, have especially devastating effects. This genetic disorder became known as a “Jewish disease” because it was “found a hundred times more frequently in infants of Ashkenazi ancestry” before screening became widespread, and because “one child in thirty-one” among North American Jews carries a mutation on the HEXA gene. In Jacob’s Legacy: A Genetic View of Jewish History (2008), geneticist David B. Goldstein names two schools of thought that seek to explain how certain diseases became prevalent among Jews. The first has to do with genetic drift, and essentially argues that historical events resulting in reduced populations (genocide, pogroms, epidemics, and war) coupled with the trend of Jews consistently marrying other Jews—sometimes first or second cousins—have resulted in genetic mutations being passed down from generation to generation. The second theory is concerned with selection, positing that certain traits were “selected for” by Jewish groups over time, and along with them came mutations in lysosomal storage 125 David B. Goldstein, Jacob’s Legacy: A Genetic View of Jewish History (New Haven, CT: Yale University Press, 2008), 100-1. 126 Ibid., 101. 127 Ibid., 106. 128 “Pogrom” is a Russian word used to describe acts of organized violence (riots and massacres) against particular ethnic communities, especially Jewish communities. 129 Goldstein, Jacob’s Legacy, 103.
genes (which are linked to various diseases). One controversial 2005 publication by Gregory Cochran, Jason Hardy, and Henry Harpending argued that lysosomal storage genes are also tied to intelligence, and that the moneylending jobs in medieval Europe to which Ashkenazim were forcibly consigned “acted as a selective force favoring intelligence.” A mention of disease and Jewish DNA research is relevant here because we sometimes see genetic characteristics being associated with socially constructed stereotypes of Jewish people. In other words, social characteristics are being read into DNA and therefore the DNA itself, seen as scientifically derived and therefore objectively reliable, is being used to explain historical trends.

With both the CMH discovery and the phenomenon of certain genetic diseases occurring at a higher frequency among Jewish groups comes the overarching message (or underlying idea) that Jews are simply different. In a 2010 article in The American Journal of Human Genetics, Gil Atzmon et al. observe, “Jews originated as a national and religious group in the Middle East during the second millennium BCE and have maintained continuous genetic, cultural, and religious traditions since that time, despite a series of Diasporas.” This begs the question of what a “genetic tradition” is, but also gets us thinking about religiocultural components. Diasporic communities were not based on inherent biological differences, but other factors—including conversions to Judaism—that arose throughout history. Jewishness is, after all, rooted in Judaism the religion.

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130 Ibid., 108-9.

131 Ibid., 109.

Susan Martha Kahn writes of a 2002 study that examined the mtDNA of Jewish women from nine different Diasporic Jewish communities: “The authors of the study argue that the striking dissimilarities in the genetic signatures of these women suggest that Diasporic Jewish communities were established when Jewish male traders from the ancient Near East intermarried with local non-Jewish women along their trade routes.”

The implication is that these women, and therefore their descendants, adopted Judaism as their faith. So, the concept that “Jewish genes” reflect innate religious or even ethnic endogamy is problematic and leaves us wondering what could possibly make a gene Jewish—or if “Jewish genes” even really exist.

Another problem arises when we consider that reference populations are constructed by geneticists, who use advanced technology but at the same time rely upon preconceived and outdated notions of human groupings, some of them reifying the concept of “race.” Several scholars have argued that DTC DNA tests simply repackage old racial categories and embed them in the language of scientific objectivity. Janet Shim, Sonia Rab Alam, and Bradley E. Aouizerat explain:

The spreading use of AIMs sustains the idea that they “measure” fractional ancestry, an idea that is illusory given that continental ancestry was always already admixed to begin with. The replacement of “race” with “continental ancestry” does not, then, undermine notions of the biological basis of race, but in fact contributes to the “molecular reification of racial categories.” Claims about genetic admixture and proportionate ancestry are combined with a well-intentioned but misguided assumption that using genetic ancestry in health research (even if combined with consideration of environmental determinants)

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can contribute to explaining health disparities. What then results is the molecular reinscription of race.¹³⁴ This shows why the discourse surrounding intersections between genetic testing and Jewish identity is so important: it isn’t abstract. The issues at hand have real impacts on individuals’ lives. The pseudoscientific framing of Jews as a “race,” for example, has informed public opinion—and emboldened antisemitic actors—for centuries. Israel’s legal policies as well as the aid given to some marginal Jewish groups by Jewish organizations are other examples. In 2018, rabbinical courts in Israel began accepting mtDNA (halacha, of course, holds that a person is Jewish if his or her mother is Jewish) as supplemental evidence that a person is Jewish.¹³⁵ Where on one hand this has ignited anxieties about creating a “‘de facto portal into Judaism,’” on the other, it has helped people, like refugees from the former Soviet Union who are looking to receive official recognition that their family was Jewish.¹³⁶ This echoes an idea latent in the title of Goldstein’s book: it isn’t that the science behind DTC DNA testing is totally unreliable or bad; in many ways, it’s doing the best it can with the information it has. But that information is subject to human error and bias, and DNA is only one of countless ways we may choose to view the global Jewish story.


¹³⁶ Ibid.
Genetic Determinism and Uncharted Waters

Any work on DTC DNA testing and identity is probably incomplete without at least a brief exploration of the conflict between two camps: those who believe that our genes make us who we are, like Robert Plomin, and those who meet that assertion with skepticism, like Anne Fausto-Sterling. Plomin’s 2018 book, *Blueprint*, argues that our genes are far greater indicators of how we’ll “turn out” than social elements of human experience are. This is partly because, according to him, even social elements are genetically informed. He explains that “most measures of the environment that are used in psychology—such as the quality of parenting, social support, and life events—show significant genetic impact…genetic influence slips in because these are not pure measures of the environment ‘out there’ independent of us and our behavior.” Framed another way, the “nature vs. nurture” debate is illusory. For Plomin and those who agree with him, “nurture” is itself colored by genetic influence. Fausto-Sterling doesn’t entirely disagree with the idea that genes play a role in the human experience, and this is evident in her approach to the construction of gender in *Sex/Gender* (2012). But she and others, including contributors to Hilary Rose’s and Steven Rose’s *Alas, Poor Darwin* (2000), take issue with the argument that genes are the only or most dominant determining factors when it comes to making sense of the constellation of human life. Fausto-Sterling writes, “Evolutionary explanations of difference often entail elegant theories based on very partial knowledge of contemporary cultures and on analogies from animals, but without

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any foundation in the specific history of human evolution.”139 Although Plomin’s ideas circulate more around human behavior and less around cultural identity or notions of “race,” the genetic determinism umbrella under which they fall still poses problems when extended to the latter areas. If our genes make us who we are, and we literally can’t escape their influence, is there room at all for us to take identity construction into our own hands?

In many ways, genetic testing is leading us into uncharted waters. This isn’t necessarily negative, but it does mandate a degree of diffidence. Dorothy Roberts points out one glaring problem with the DTC DNA testing industry: it tends to treat continental groupings as if they do not share landmasses (Europe and Asia, for example) by reading the traditions of western “linguistic and anthropological studies” into science.140 She writes, “The misperception of continental populations as natural groupings is grounded in a broader concept of populations as natural, isolated, and static.”141 In reality, nothing about the DTC DNA testing topic is static: not the reference populations, not the test results, and not the sociocultural labels we apply to ourselves and to others. We also must consider how DTC DNA testing is being used not just to identify or negotiate links to the past, but also links to our living, breathing human neighbors. As Paul Brodwin observes,


141 Ibid.
“Knowledge of ancestry ratifies or even creates a social connection in the present.”

Laws and ethics also don’t always keep up with changing science. People sometimes discover devastating NPE events or unexpected information about their health through DTC DNA tests. Moreover, the waters are uncharted—and potentially dangerous—because these tests have the ability to both unite and divide people. Although DNA testing as a whole has largely helped dismantle racial thinking, the messages set forth by DTC DNA testing companies may lead individuals to believe that there are in fact genetically, perhaps racially, distinct groups of people in the world. While “genetic evidence can destabilize long-standing patterns of community membership,” this destabilization doesn’t have to look like groups becoming more exclusive. However, the loss of inclusivity for some groups could pose other concerns, namely the fear that people will “lose” their culture and thus way of life. Geneticists Mark A. Jobling, Rita Rasteiro, and Jon H. Wetton ask us to separate the test from the interpretation, as the former may be reliable, but the latter is “driven by established cultural preconceptions” and “feeds notions of indigeneity and group membership.” DTC DNA tests may group people off, but they also indicate that bit of knowledge we all possess yet often hesitate to acknowledge: we are all cousins.


143 A non-paternity event (NPE) is a situation in which the paternity of a child is misattributed. Today the acronym is more widely applied to anyone with misattributed parentage (maternal or paternal) and is often alternatively transcribed as “non-parental event” or “not parent expected.”

144 Brodwin, “Genetics, Identity,” 327.

Advertising, Trends, and Overpromising

While DTC DNA testing companies do conduct important research, it is necessary to keep in mind that they are trying to sell a product. All too often, their advertising and marketing campaigns rely on flavors of genetic determinism, engaging in a certain level of identity “overpromising” to consumers. This takes the form of television spots in which customers give testimonials about their results using phrases like, “This is me,” “Now I know,” and “It’s like a self-portrait.” Other advertisements—and the “Big Four” websites and products themselves—are glossy and aesthetically pleasing. Each company, like any other retail giant, reduces their product prices around the holidays, encouraging potential buyers to give the gift of a DTC DNA test. 23andMe recently began providing customers with the option to purchase a $40 bound book with a summary of their ancestry composition results and haplogroups (somewhat odd, as we’ve seen that users’ results are likely to change over time). Whether a video or an Instagram feed intrusion, DTC DNA testing company advertisements (at least those concerned with ancestry instead of health) conflate identity and heritage with genetic clues. In other words, where a person’s DNA comes from becomes confused with where the person comes from. The stories they heard as children, their language(s), their likes and dislikes, their joys and traumas, and the values instilled in them by culture, religion, and family somehow become secondary to the “truth” of DNA. This sets users up to fall into the trap of thinking “Well, this is me” when it’s really more like, “Well,

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147 Ibid.
this is a variable, scientifically informed interpretation of the potential groups I share genetic ties with.” We’re led back to population genetics 101: DNA is not about the self, it’s about the group. It can’t tell you all that much about you; that’s your job. As we’ll see in Chapter 3, it’s up to each individual to harvest whatever level of meaning they wish from DNA. No answer is wrong and no answer is right. They are merely different.
III. SEPHARDI IDENTITY AND DIRECT-TO-CONSUMER DNA TESTING

Drawing Meaning from DNA in an Ashkenormative World

Before presenting an analysis of the interviews conducted for this project, one additional piece of the contemporary Jewish identity puzzle must be addressed: Ashkenormativity, or the trend of painting Jewish culture as essentially Ashkenazi. As Melanie Kaye/Kantrowitz explains in *The Colors of Jews: Racial Politics and Radical Diasporism* (2007):

Too often anthologies, performances, booklists, conferences, or seminars titled Jewish culture, history, experience...include only Ashkenazi culture, history, and experience. In most Jewish courses, anthologies, seminars, series, studies...at best, there is a small postscript for diversity, into which the one or two Sephardi or Mizrahi items are tokenistically slotted: as though Sephardic and Mizrahi Jews are diverse, while Ashkenazi Jews are what? Normal? As Shoshana Simons, a Jew of mixed Sephardic-Ashkenazi heritage, has remarked, “Often I’m asked to speak as a Sephardic Jew at progressive events. I feel like I’m the spice to add flavor and multicultural legitimacy to events whose dominant perspective is, tacitly, Ashkenazi.”

Ashkenormativity is especially prevalent in the United States, where most respondents were located at the time this research was conducted, and where immigrant groups—including Jewish people from Europe and West Asia—historically vied for social statuses based on racial categorizations and assimilation into hegemonic white Anglo-Saxon Protestant (WASP) society. This phenomenon is frequently played out in terms of cultural elements and media representations; consequently, it speaks not only to how Ashkenazim may view other Jewish groups, but also how non-Jews understand what it means to be Jewish. Because non-Jewish conceptualizations of Jewishness frequently do

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not align with Judaism as a purely religious distinction—and because they can range from one-dimensional to outright antisemitic—this fact is potentially worrisome. The great diversity exhibited by all Jewish groups in all parts of the world may be boiled down to innocent assumptions that all Jews know Yiddish and eat gefilte fish, or they may be reduced to “playful” stereotypes with less friendly pasts and harmful implications, such as the “nice Jewish boy” and the “Jewish American princess.” In all of these processes, the unique cultural attributes and historical narratives associated with Sephardi identity are marginalized.

Another fascinating component of the conversation surrounding Ashkenormativity is the fact that Ashkenazim are themselves incredibly diverse. Just as the “Who is a Jew?” debate has shown us that there is no one way to be Jewish, history—particularly European and North American history—has shown us that there isn’t exactly one way to be Ashkenazi either. For starters, unlike Sephardim, Mizrahim, and other Jewish groups in Africa and Asia, Ashkenazim exhibit denominational variations that translate into divergent approaches to religious practice and level of observance. The lifestyle and beliefs of an Ashkenazi-identifying Reform Jewish person, for example, may be markedly different from the lifestyle and beliefs of an Ashkenazi-identifying Orthodox Jewish person. Furthermore, no single political alignment defines Ashkenazi history or being. In both Europe and North America, Ashkenazim have identified as capitalists, socialists, communists, anarchists, and loyalists. Ashkenazi political affiliations depended greatly upon national context, as did language and cultural practice.

149 This refers to the different branches of Ashkenazi Judaism (present mostly in the United States), including Reconstructionist, Reform, Conservative, Orthodox, and others.
For instance, the story of a Romanian Ashkenazi family may have some overlap with the story of a Ukrainian Ashkenazi family, but ultimately each is informed by its own regional ingredients. Kaye/Kantrowitz points out that Ashkenazi literature and art (pre- and post-Shoah) also smack of diversity and richness, writing, “There is a whole literature, not just Nobel Prize winner Isaac Bashevis Singer, or Sholem Aleykhem, whose Tevye stories hit Broadway as *Fiddler on the Roof*, but also brilliant narrative writers and experimental poets such as Chaim Grade, Kadia Molodowsky, Anna Margolin, Mani Leyb, Itsik Manger, and a host of others.”\(^{150}\) Finally, the notion that Ashkenazim are “racially” or ethnically homogeneous is inaccurate. One does not have to have genetic roots in Europe or white skin to be Jewish or to be Ashkenazi. A 2012 article in the magazine *New York* titled “The Black Orthodox” details the experiences of African American Jews who are members of the Ashkenazi Orthodox branch of Judaism. Many of the individuals interviewed for the article note that while their intersectional identities do shape their lives (Manishtana Rison, a rabbi and published author, refers to himself as a “unicorn” because the outside world perceives coexistent blackness and Jewishness as mythical), they do not feel any less Jewish or Ashkenazi.\(^{151}\) Individuals may be adopted into Jewish families and raised Jewish, they may convert to Judaism, or they may pursue other faith-based avenues of affiliation. “Jewish” implies both an ethnic identity as well as a religious one, but the latter often gets written out of the story.


Traumatic experiences (such as those linked to the Shoah) shared by Ashkenazim, Sephardim, and other Jewish groups are frequently depicted as predominantly Ashkenazi traumas, further contributing to Ashkenormativity. The Shoah saw the deaths of six million Jews at the hands of the Nazis, a loss of unquantifiable magnitude that has shaped the contemporary world in profound ways. Memory of this event is embedded in our global consciousness, and there is little denying that it is also an important component of Jewish identity. This is clearly outlined in a 2013 survey of Jewish Americans conducted by the Pew Research Center as part of their Religion & Public Life Project. The survey tackles topics such as intermarriage, religious beliefs, social and political views, and opinions about Israel, but the chapter of particular interest to this section deals with different elements of Jewish identity. As a part of this chapter, respondents were asked to rate characteristics “essential” to being Jewish (answer options included eating traditional foods, observing Jewish law, being part of a Jewish community, having a good sense of humor, caring about Israel, being intellectually curious, working for justice/equality, leading an ethical and moral life, and remembering the Holocaust). By a larger amount than any of the other traits listed, 73 percent of the net Jewish population surveyed identified “remembering the Holocaust” as an integral part of their Jewishness. “Jews by religion” and “Jews of no religion” indicated the same, at 76 percent and 60 percent, respectively. While the study does differentiate between these two groups (as opposed to “people of Jewish background” and “people with a Jewish affinity,” who are not included in the net Jewish population), it does not distinguish between diaspora populations. Regardless of whether respondents were majority Ashkenazi, Sephardi, Mizrahi, etc.—

and despite the fact that “remembering” is never explicitly defined—what we can glean from the Pew findings is the seriousness with which American Jews approach Shoah remembrance, not just as a cultural obligation, but as a foundational part of their identities as Jews. Still, the popular characterization of Shoah trauma as belonging to Ashkenazim is problematic for two reasons: first, it isn’t historically accurate (as briefly explained in Chapter 1), and second, it ignores a collective, modern Jewish identity that is partially constructed using narratives of historical oppression, in turn relegating Sephardim and other non-Ashkenazi groups to an “other” status.

Ashkenormativity does not stop with cultural elements or traumatic events, however. Today, it extends into the realm of DNA testing and is perpetuated especially by DTC DNA testing companies who do not test for Sephardi reference populations as well as by genetic health studies that ignore non-Ashkenazi Jewish groups. A glaring example of the latter is found in 23andMe’s approach to testing for BRCA1 and BRCA2 gene mutations, which are associated with breast and ovarian cancer. One page on the 23andMe website is devoted to explaining the basics of these mutations and what a positive result could mean for DTC DNA test takers.\^{153} The page also includes links to three testimonial videos in which different women describe their experiences with 23andMe and their BRCA mutation results. In the first video, a woman named Hilary explains that through 23andMe, she discovered she was “38 percent Ashkenazi Jewish” and that her grandparents had concealed their Jewish identity to survive World War II. Hilary relays to the audience that her test results indicated a BRCA mutation, and that this discovery led her to make informed decisions about her health. In the second video, a

\^{153} 23andMe, “BRCA Genes,” 23andMe, last modified 2020, https://www.23andme.com/brc/a/.
woman named Ann tells us that she tested with 23andMe after learning she was donor-conceived. Her results indicated that she was half Ashkenazi (as expected, since her mother was Ashkenazi and her biological father was not) and that she had a BRCA mutation. The third video begins with a woman named Jill describing her experience with DTC DNA testing, her discovery of a BRCA mutation, and her sister’s battle with cancer. Jill’s video suddenly transitions from headshots and apartment interiors to dramatic images of a synagogue, a menorah, and footage of Jill’s son and husband donning kippot (yarmulkes). Her voiceover narrates, “Judaism has always been a really big part of my life and my identity. It’s important to raise my family Jewish, and I found out that because I’m an Ashkenazi Jew, I have such a high risk of having a gene mutation. It’s one in forty instead of one in four hundred. I don’t understand why more Jewish people aren’t tested.” All three women ended up having a double mastectomy, and two ended up having an oophorectomy (removal of the ovaries).  

23andMe is, of course, one of the “Big Four” companies that does not test for any Jewish reference populations aside from “Ashkenazi,” so the focus on this group in terms of the BRCA mutation is somewhat understandable. That said, neither the webpage nor the videos mention that the BRCA mutation is not exclusive to Ashkenazim. They also fail to mention something that several genetic studies have concluded: BRCA mutations “are most probably founder mutations in Sephardic Jews.” One study from 2011 found that the frequency of the BRCA1/2 mutations “was 26-31% among Sephardic high risk

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154 Ibid.

families and about 3% among the full cohort of 177 patients of this origin” who were tested. These statistics appear to go unacknowledged by DTC DNA testing companies like 23andMe, thus Jill’s wondering at why more Jewish people aren’t tested is perplexing. Even if she was indeed talking about all Jewish people, Sephardim included, the company through which she is speaking makes it seem as though “Ashkenazi” is actually just a stand-in for “Jewish.” This is not only an issue in terms of cultural Ashkenormativity, but the lack of attention given to issues relating to Sephardim and genetic health is, frankly, troubling. Sephardim do comprise culturally distinct communities across the globe, but drawing meaning from DTC DNA tests, especially in an Ashkenormative world and specifically if one is looking to confirm known or suspected Sephardi heritage, is not always easy. As we’ll see, Sephardi individuals must not only negotiate their identities with respect to what they already know or feel about their heritage, but (depending on the company they choose to test with) they must also face the possibility that their ancestry composition results may not include the word “Jewish” at all.

Key Interview Profiles

The following are brief profiles of ten study participants. These are highlighted as key interviews because they encompass a range of identities and DTC DNA testing experiences and, when taken together, are especially illuminating. Key interviews contain only background information about each of the ten respondents, but they do not detail how participants responded to their DTC DNA test results. The decision to differentiate

156 Ibid.
between key and supplemental interviews was based upon a need for context; providing extended context for ten interviews as opposed to the entire nineteen allows for necessary perspective while limiting length. However, information and quotes from the nine supplemental interviews are included in the sections to follow, and the contents of these interviews carry as much significance to this study’s conclusions as the contents of key interviews do. To ensure anonymity, each respondent has been assigned a number 1-19 (not pertaining to the order in which interviews were conducted), with the first ten being key interviews. This numbered system is how interviewees are referenced in the remainder of this work, and they/them pronouns are used for all respondents, regardless of gender identity.

Profile 1. Respondent 1 identifies as Jewish and was raised within Judaism. They also identify as Ashkenazi and Sephardi, or “half and half,” as they put it. Their father was born in Vienna, Austria to Ashkenazi parents and their mother was born in Egypt to Sephardi parents whose families had Spanish origins. Growing up, Respondent 1 attended synagogue and engaged with Sephardi culture primarily via cuisine. They understand “Jewish” as a cultural, religious, familial, and emotional designation, and also referenced persecution and traditions when asked for their definition of “Jewish.” They understand “Sephardi” as referring to Jews who existed in Spain and were ousted in the late 1400s. Respondent 1’s reason for taking DTC DNA tests through 23andMe, FamilyTreeDNA, and Ancestry (as well as uploading their results to MyHeritage and another site called GEDMatch) was to build their family tree and discover more about the Sephardi side of their family (particularly female ancestors’ surnames). Respondent 1 was the only participant who did not look at (or rather, was not interested in) their
ancestry composition results, and consequently it is impossible to say what results they expected to receive.

Profile 2. Respondent 2 identifies as Jewish and was raised within Judaism. Their family was originally Orthodox, then transitioned to Conservative Judaism, and today Respondent 2 is a practitioner of Reform Judaism. Their mother’s side of the family was comprised of Sephardi Jews from Syria, and their maternal grandparents were both born in Damascus. Their maternal grandfather was recognized as a “pillar in the community and in the family” and helped found a Syrian Jewish synagogue after immigrating to the United States. Respondent 2’s father came from an Ashkenazi family and immigrated to the United States from present-day Belarus in the 1920s. Growing up, Respondent 2 had a b’nei mitzvah\(^{157}\) and attended Hebrew school. They understand “Jewish” as a primarily family-based distinction but acknowledge that Jewish identity is a fusion of religion and culture, explaining to me that “in a way [it’s] a nation.” They understand “Sephardi” as referring to Jews who came from Spain and went into North Africa after the expulsions from Spain and Portugal. Respondent 2 initially took a DTC DNA test because of curiosity about health information and family tree building. They tested with 23andMe, FamilyTreeDNA, and MyHeritage. Although they expected to receive ancestry composition results indicating a “50/50” Ashkenazi and Middle Eastern breakdown, their results instead indicated a mix of Ashkenazi, Middle Eastern, North African, and Southern European heritage.

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\(^{157}\) This refers to a bar (masculine) or bat (feminine) mitzvah, life cycle ceremonies in Judaism. I use the plural masculine form as a default to compliment the they/them pronouns used.
Profile 3. Respondent 3 identifies as Quaker and was raised Episcopalian. They told me that there is “a strong possibility” that their paternal grandmother’s family, who lived in Thessaloniki, Greece and spoke Greek, Turkish, and Ladino, was Sephardi. They explained to me that their grandmother’s maiden name was also a Greek transliteration and pronunciation of a common Hebrew name. Respondent 3 understands “Jewish” as a religious and cultural designation and explained to me that they believe halacha is also another component that complicates Jewish identity. They understand “Sephardi” as referring to Jews who lived in Spain, were expelled from Spain, and who were “scattered” throughout the Middle East, North Africa, and Europe post-expulsion. Respondent 3 initially took a DTC DNA test because they, along with several cousins in Greece, were curious about their possible Sephardi heritage. They tested through 23andMe first, then through all of the other “Big Four” companies (plus others not discussed in this thesis). They expected their results to indicate English and Greek/Balkan heritage. Depending on the company, their ancestry composition results varied, but did indicate Northwest European, Greek/Balkan, North African, Middle Eastern, Ashkenazi, and Sephardi heritage.

Profile 4. Respondent 4 identifies as Jewish and was raised within Judaism. They are currently a practitioner of Reform Judaism and they do not attend synagogue regularly. Their mother’s side of the family was comprised of Sephardi Jews with ties to present-day Turkey, and their father’s side was comprised of Ashkenazi Jews from Russia and Poland. Respondent 4 understands “Jewish” as a religious, cultural, familial, and ethics-based designation, and they understand “Sephardi” as referring to Jews with Mediterranean, Spanish, or broadly Southern European ties. The first and only DTC
DNA test they took was through 23andMe, and their reasons for testing had to do with health and curiosity about ancestry. They expected to receive “50/50” ancestry composition results indicating Ashkenazi heritage on one side and Spanish heritage on the other. However, their results indicated Ashkenazi, North African, Italian, Middle Eastern, and West Asian heritage, with only a minute percentage (around .06) of Spanish/Iberian heritage.

Profile 5. Respondent 5 identifies as Jewish, but also Greek Orthodox-adjacent, as they married a Greek Orthodox individual and chose to raise their children in their spouse’s religion. They draw a distinction between religion, which they view as something “in the heart,” and culture, which to them is more external. Respondent 5 was raised within Judaism by a Sephardi Jewish father from Thessaloniki, Greece and a Greek Orthodox mother (also from Macedonia) who adopted Jewish traditions and cultural practices—including the speaking of Ladino—after the couple married. Respondent 5’s father was a survivor of the Shoah. Respondent 5 was born in Greece, however their family came to the United States as displaced persons shortly after World War II and ended up living in a city with a considerable Sephardi population. Respondent 5 understands “Jewish” as an identity based in culture and traditions, and “Sephardi” as referring to Jews who come from Spain, Portugal, North Africa, and the Middle East. Their reason for taking a DTC DNA test, first through 23andMe and then through MyHeritage, was primarily to learn more about their father’s family and to potentially locate DNA relatives. They expected to receive ancestry composition results indicating mostly Greek, broadly Southern European, and Sephardi heritage. Their actual results—
variable in percentages depending on the company—indicated Greek, Italian, Sephardi, broadly Southern European, and a small amount of Ashkenazi heritage.

Profile 6. Respondent 6 identifies as Jewish and was raised Roman Catholic. They were born in Cuba and immigrated to the United States with their family at the age of four. Their maternal grandparents were Spaniards and their father’s side of the family had roots in Costa Rica and the United States. Growing up, Respondent 6 always felt religious and spiritual; they attended Catholic school, eventually attended a conservative university, and married a Cuban Catholic individual. At the age of 28, they “had a change of heart,” got divorced, and began to learn about Judaism. After trying out Reform and Conservative congregations, they gravitated toward Modern Orthodox Judaism, eventually pursuing a formal conversion that took five and a half years to complete. After this conversion and the death of their maternal grandmother, Respondent 6 began to realize that many of the traditions they were raised with—such as baking *challah*—resembled Jewish traditions. This revelation set them on a path of family history research conducted in Spain and Portugal, through which they discovered extensive ancestral ties to Iberian Jewish communities. Respondent 6 seemed to associate both broadly Jewish identity and Sephardi identity with emotional, regional, religious, and cultural markers. Their choice to take DTC DNA tests with all of the “Big Four” companies (as well as others) spanned entirely from curiosity about what the tests would say and a desire to match with DNA relatives. They expected to receive ancestry composition results

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158 A type of braided bread, eaten on Shabbat and other significant occasions, that is unique to Jewish cuisine.
indicating Iberian and Sephardi heritage, and their actual results did, along with a small percentage of Ashkenazi and Native American heritage.

Profile 7. Respondent 7 identifies as Jewish and was raised within England’s Spanish-Portuguese Sephardi community. They are currently a practitioner of Orthodox Judaism. They are half Ashkenazi on their father’s side and a mix of Sephardi, Mizrahi, and Ashkenazi on their mother’s side. Many people on the latter side of the family were conversos who fully reverted to Judaism. Although Respondent 7’s father was not Sephardi by birth, he adopted Sephardi practice and traditions entirely, becoming “full-on involved” with the community after meeting Respondent 7’s mother. Respondent 7 understands “Jewish” as a tribal affiliation or grouping, noting that there are “lots of different standards of Judaism,” many of which are “valid.” They understand “Sephardi” as referring to a purely cultural and liturgical—as opposed to ethnic—affiliation. Their decision to take DTC DNA tests with all “Big Four” (and additional) companies was spurred by curiosity about ancestry composition as well as a desire to perhaps add to stories they already knew about their family. They expected to receive ancestry composition results indicating mostly Iberian and Ashkenazi heritage, and in general their actual results did.

Profile 8. Respondent 8 identifies as Native American, specifically First Nations Cree, and was raised Christian. Earlier in life, they identified as Métis. They do not identify as Jewish because they have been unable to find “direct evidence of an unbroken [Jewish] maternal line,” however their known ancestry consists of Native American, European, and possible Spanish crypto-Jewish heritage. Respondent 8 understands “Jewish” as a cultural, religious, and spiritual designation, but also acknowledges the
legal aspects of Judaism that play a part in Jewish identity construction. They appeared to understand “Sephardi” as referring to Jewish people with historical ties to the Iberian Peninsula, specifically Spain. After discovering the Sephardi roots of their surname, Respondent 8 began doing extensive genealogical research, in the process constructing a family tree going back to the 1550s. Their primary motivation for taking a DTC DNA test through all of the “Big Four” companies was to see if they actually did have Jewish ancestry. They expected to receive ancestry composition results indicating Native American, European (specifically French), and possibly Sephardi heritage. Their actual results—variable, of course, based upon company—indicated Native American heritage, a small proportion of French heritage, and a larger proportion of Sephardi/Iberian heritage.

Profile 9. Respondent 9 identifies as Catholic and was raised within Catholicism. They currently practice this religion and attend church services regularly. Both sides of their family have deep historical ties to Portugal, specifically the Azores. Their father’s family immigrated to the United States in the early 1900s and their mother’s family immigrated in the 1920s. Respondent 9 understands “Jewish” as a cultural, religious, and familial designation, however they noted that this is based on a “limited knowledge” of Judaism. They appeared to understand “Sephardi” as referring to Jews with Spanish or Portuguese heritage. Following a trip to Israel and the discovery that their surname has potential Sephardi roots, Respondent 9 began to build family trees, conduct interviews with relatives, and research their family. However, their main purpose for doing this was to uncover why their family had moved from mainland Portugal to the Azores at some point in history. They did not locate any ancestors who were “clearly Jewish” throughout
their research but did eventually decide to take DTC DNA tests with FamilyTreeDNA and Ancestry as a way to connect with DNA relatives and build their family tree. Their expected ancestry composition results were not provided, however their results did suggest Iberian and Mizrahi heritage.

Profile 10. Respondent 10 identifies as Jewish in a cultural, not religious, sense and was raised within Judaism. Their mother’s side of the family was comprised of Ashkenazi Jews from Poland, and their father’s side of the family was comprised of Middle Eastern Jews with ties to various countries, including Turkey, Syria, Iran, Iraq, and Egypt. Respondent 10 did not attend synagogue while growing up, as their father—whose family they knew little about—was highly skeptical of organized religion. They understand “Jewish” as a cultural and religious designation existing on a spectrum, and “Sephardi” as mainly referring to Jews who had once lived in Iberian Peninsula communities and who had eventually migrated to the Middle East, North Africa, and surrounding European countries. Their main motivation for taking a DTC DNA test through Ancestry was to learn more about their father’s family and possibly discover DNA relatives. They expected to receive ancestry composition results indicating Ashkenazi and Iberian/Sephardi heritage; instead, their results indicated Ashkenazi, Middle Eastern, and a small proportion of Iberian heritage.

“Just Curious”: Motivations

Because taking a DTC DNA test appears to be an intensely personal endeavor—sensitive health information, ancestry composition results, and long lists of DNA relatives, many of them previously unknown to the test taker, would have us think so—
we might be tempted to draw the conclusion that a person’s motivations for testing are equally focused on the self. We may also assume that some people take DTC DNA tests as a means to correct feelings of cultural ambiguity and arrive at an “answer” about who they truly are. The interviews conducted for this study tell a different story. Indeed, the stated reasons for testing among interviewees showed overwhelmingly relational motivations, consequently embodying the innate human need for belonging as described by Baumeister and Leary (1995) in their belongingness theory. According to the authors, the need to belong has two main features: “First, people need frequent personal contact or interaction with the other person. Ideally, these interactions would be affectively positive or pleasant, but it is mainly important that the majority be free from conflict and negative affect. Second, people need to perceive that there is an interpersonal bond or relationship marked by stability, affective concern, and continuation into the foreseeable future.”

Because there are “cultural and individual variations in how people express and satisfy” the need to belong, these standards of belongingness are applicable to DTC DNA test takers’ motivations.

Of the nineteen individuals I spoke to, fourteen of them explained that their reason for taking a DTC DNA test was either to learn more about their ancestry or to connect with DNA relatives (as mentioned in the previous chapter, all of the “Big Four” companies provide customers with lists of genetic relatives who have also tested through that company or uploaded their raw data from another company’s site). Among these fourteen people, most expressed at least some interest in DNA-based family tree building.


160 Ibid., 499.
One person, Respondent 1, was solely focused on the sections of their test results indicating genetic relatives; they paid very little attention to their ancestry composition results. As they told me, “Since I know my ancestry so well, and have been very involved in building my [family] tree and sponsoring tests for other family members, I honestly have not really focused on or paid great attention to the degree of Iberian Peninsula, the degree of this area, that area, because I know who I am and I know who my ancestors were.”

Respondent 1 views their family tree as a unique tool through which they may foster belongingness with their ancestors and belongingness with their future descendants. They related to me their elaborate tree building system:

I like to build my tree with pictures of people when they’re in their prime, either teenaged or in their twenties. Why do I do that? Because I like to look at family resemblances. I think heredity is very interesting. And so I try to get pictures of people in their prime. My tree is strictly DNA-based; I’m not interested in non-relatives. I make each picture black and white, and you can really see the resemblances, and to me that’s exciting...It makes their profile come alive. It makes them a dimensional person, whereas they were just conceptually, eh, somebody way in the past, and you can’t relate to that. When you can relate to people, I feel, spiritually, like because I know so much about my history, that I’ve sat down and had a cup of coffee with some of these people, y’know? Call it time travel. There’s absolutely a story, and that’s what makes the tree so fascinating. And the fact that I, when I’m long gone, can pass this down and maybe have a great grandchild who I’ll never have the opportunity to meet who can look at this and...feel that it comes alive, that’s priceless to me, the thought of that.

The five people who did not test out of a curiosity about ancestry or family trees instead tested for specific reasons. One wished to figure out if they were related to a suspected cousin, two wished to find out if they had Sephardi—or even broadly Jewish—heritage, and two were participants in a school project that involved DNA testing (in other words,  

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161 Respondent 1, interview by author, November 2020.

162 Ibid.
these two respondents did not seek out a DTC DNA test on their own, however one of them went on to test with additional companies out of a curiosity similar to that exhibited by the fourteen respondents described above).

Whether motived by general curiosity about ancestry or a more specific question, respondents’ decisions to take a DTC DNA test seemed heavily informed by a desire to foster connections between themselves and other humans, either in the form of cultural groups, ancestors, descendants, DNA relatives, or all of these together. The first characteristic of a need to belong, frequent personal contact, is therefore variable here; what one individual may consider frequent contact with, say, a DNA relative, another person may consider inadequate contact. However, the second criterion, that interactions be largely pleasant, is met by all of the cases included in this study. Respondents’ interactions with newfound DNA relatives appeared almost entirely to be nurturing and mutually beneficial. Likewise, respondents’ engagement with the past (through ancestors’ stories and family history research) and with the future (through a hope that their descendants will remember) may be characterized as positive. This is because the relationship with a distant ancestor is based on records and narratives passed down, not on actual face-to-face interactions that might be negative; the situation with yet-to-be descendants is much the same.

The criterion for stability is met simply because the evidence put forth by DNA is widely considered irrefutable. Although an essentialist perspective is problematic for a multitude of reasons and DTC DNA tests are not necessarily the most accurate predictors of a person’s heritage, customers’ DNA relatives are actually their DNA relatives. Moreover, the predicted relationships provided by DTC DNA testing companies (i.e.,
mother, uncle, first cousin, fifth cousin, etc.) are almost always correct. Stability is therefore a byproduct of how we perceive DNA: there may be room to argue about the percentage of a person’s ancestry that comes from Greece, but there’s far less room to argue about someone’s status as a DNA relative, especially when DTC DNA testing companies show customers how many segments of DNA they share with others. The criterion for affective concern is met via a vested interest in one’s cultural positioning, one’s ancestors, and/or one’s descendants. As Respondent 15 told me of their testing experience, “More than anything, it means more of a connection to my ancestors, because it’s caused me to think a lot about them, and to wonder what they went through. I think, to wonder what of them I carry inside me, you know, to realize that I am the result of all those people who came before me, and that I must have them inside me somehow.”

Respondent 14 expressed a similar sentiment about both their ancestors and their descendants: “It’s important to me to carry on not so much the traditions, but just the knowledge…Mostly [my grandchildren] knew their grandparents, but not their second great grandparents, who were so close me, and who meant the world to me…it’s important that [my grandchildren] know who they were and where they came from.”

Finally, the criterion for continuation of a belongingness-centered relationship is met when DNA is considered a catalyst to building family trees or preserving stories and information that can be passed down to future generations. Efforts toward continuation are evident in the words of people like Respondent 1, but also in the attitudes of people with a more ambiguous orientation to their Sephardi or broadly Jewish identity, like

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164 Respondent 14, interview by author, November 2020.
Respondent 8. When I asked Respondent 8 if they planned on telling their son about the family’s suspected crypto-Jewish heritage, they explained, “I haven’t told him I have Jewish ancestry yet. I haven’t really said that to him yet. But I will, and I would like to take him to Israel with me, if we ever go there. Just travel there and tell him, ‘This is where we come from, a long time ago, possibly.’ I’ve been meaning to tell him…If I have other children, I would tell them that we are of Jewish ancestry, I would explain to them everything that I’ve found, and if one of them wanted to convert I would be more than thrilled.”

Belongingness theory can help us understand the relational motivations behind a person’s decision to take a DTC DNA test. For those curious about their ancestry, perhaps an interest in cultural group belonging (“where my ancestors came from/who my ancestors were”) is front and center. For those curious about their DNA relatives, perhaps an interest in familial group belonging (“where my family came from/who my family is”) is dominant. And for those curious about something specific, like possible Sephardi origins, perhaps direct relational belonging (“if we share family”) or cultural group belonging are most important. The self, of course, is not totally lost when it comes to testing motivations—after all, cultural identity or DNA tests probably wouldn’t matter if not for the concept of the self as seen in relation or opposition to other people—but it did seem secondary for those I spoke with. This is even more pronounced in the sections to come, specifically when the role of social media is explored.

165 Respondent 8, interview by author, December 2020.
Culture, Nation, Tribe: Religious versus Ethnic Declarations

When asked what it means to be Jewish and what the term “Sephardi” means to them, respondents tended to reflect on the relational aspects of religion and ethnicity. Many greeted the first question with a laugh and some variation of the statement, “That’s a big question.” Of the nineteen people I spoke to, no respondent understood “Jewish” as a religious or cultural designation alone, and most said that Jewishness is a blend of cultural, religious, ethics-based, and familial identities. As Respondent 4 explained to me, “It’s a cultural religion, as well as following God and the beliefs you read in the Old Testament. A lot of it has become foods you eat, celebrating holidays with family, closeness with family, being a good person. To me it’s more about being good in life.”

When asked what it means to be Jewish, other respondents referenced concepts like national and tribal affiliation, although this was less common than references to religiocultural identity. As mentioned in their profile, Respondent 7 believes “Jewish” is above all else a tribal designation; to explain this belief to me, they used the example of Norwegian versus Jewish belonging. The illustration was simple enough: a person cannot convert into being Norwegian, but they can convert into being Jewish. Jewish-identifying respondents’ explorations into other religions also showcase how Jewishness, especially for those born into Judaism, is not purely belief- or doctrine-bound. People can explore other spiritualities while also maintaining cultural and ethnic ties to Judaism. Respondent 16, who has both Ashkenazi and Sephardi heritage and who in recent years has begun to explore Buddhism, is living proof of this phenomenon. They told me, “My dad used to make this joke, saying, ‘If you were Jewish, you were a good Buddhist,’ and then later on

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166 Respondent 4, interview by author, November 2020.
in life I understood that eastern and western religions don’t clash, they have the best of both worlds…I’m not necessarily turning Buddhist, but I am actually looking more into a spirituality versus religion…[but] if you ask me who I am, I am Jewish…even if I do become full Buddhist later on, I will be a good Buddhist and I will be a good Jew.”

Interviewees’ broad definitions of the term “Jewish” demonstrate a striking yet unsurprising awareness of just how complex Jewish identity is. They also align with Calvin Goldscheider’s observations about contemporary Jewishness in *Boundaries of Jewish Identity* (2010). I would particularly note in this connection his statement that the modern “boundaries that make Jewish identity distinctive and mark Jewish communities off from others” are not “fixed or rigid” but rather “porous” and conducive to people migrating in and out of their Jewishness.

While all Jewish-identifying respondents acknowledged that there is no one way to be Jewish or to express one’s Jewishness, most defined “Sephardi” in far narrower terms. In other words, most had a pretty specific idea of what it means to be Sephardi, and all but two interviewees mentioned Spain, Portugal, or the Iberian Peninsula in general when asked how they define the term. Respondent 11, one of the participants who did not mention the Iberian Peninsula in their definition, explained that to them “Sephardi” means Jews who are “not Eastern European.” When I asked Respondent 11 if their definition included, for example, the Bene Israel (a community of Jews in India),

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they replied, “I suppose so,” but subsequently noted that they did not know enough about
the terminology or the community to say for sure. Respondent 7, the other participant
who did not include any reference to the Iberian Peninsula in their definition of
“Sefardí,” instead emphasized cultural practices and adherence to the Sephardí rite. The
specific nature of participants’ “Sefardí” definitions is especially interesting in light of
the fact that not one interviewee mentioned the “pure Sefardí” naming practice (see
Chapter 1) when discussing their family histories. Almost all of them had not even heard
of this tradition, yet their conceptualization of “Sefardí” as a label unique to Jews with
historical roots in Spain and Portugal echoes some of the ideas embodied by it. The
narrow definitions provided by interviewees suggest that, despite shifting notions of
Sefardí identity, self-identified Sefardíms may very well still believe that what makes
them Sefardí is a strong—or at the very least, provable—connection to the Iberian
Peninsula.

The importance of Iberian ancestry is especially evident in the experiences of two
interviewees, Respondent 4 and Respondent 10, whose sense of Sefardí identity was
shaken after they received DTC DNA test results that indicated little to no Spanish or
Portuguese heritage. Respondent 4 told me that they felt “a little less” Sefardí after
taking the test, and that because of this, they are identifying more with their father’s
Ashkenazi side of the family today. “It’s a little confusing now,” they admitted.170
Respondent 10 was surprised by their testing experience, but said that it would probably
have been more jarring if they had taken a DTC DNA test when they were younger—

especially around the age of twenty-five, when being “exotic” was very much a part of their constructed Sephardi identity:

Respondent 10: It was much more interesting to be identified as Sephardic than it was to be as Ashkenazi.

Author: Why do you say that?

Respondent 10: Because it was exotic. Because it was something nobody else—I didn’t grow up with anybody I knew who was Sephardic. I did not know any Sephardic Jews. Everybody I knew was Ashkenazi, and this was a way of kind of distinguishing myself from others. And also because I didn’t know [my father’s family] I could romanticize them. I could think about them in a very different way. I knew my mother’s family, through whom I had first and second cousins in New York, and they were very boring. But my father’s family, wow!171

Another participant, Respondent 2, has witnessed their self-definition as Sephardi “evolve” over time, and now identifies as both Sephardi and Mizrahi, largely because of their grandparents’ birthplaces (cities in Syria). After taking a DTC DNA test, Respondent 2 was “shocked” that their results (which partially indicated Iberian ancestry) showed such a large proportion of “true Sephardic” heritage. “It was very surprising in a very positive way,” they reflected.172 While this Sephardi/Mizrahi dilemma does showcase the complicated pasts of both labels, it also highlights the issues that accompany DTC DNA testing companies’ limited reference populations. Both Respondent 4 and Respondent 10 tested through companies that include neither a Sephardi nor a Mizrahi reference population, meaning that even if they do share DNA with Iberian groups (specifically Sephardim) or Middle Eastern groups (like Yemenite Jews), this will not be indicated in their results—at least, not using these labels. It is also


possible that if they tested through other companies, their percentage of Iberian ancestry could be higher. In other words, just because their results didn’t include certain words, and just because they exhibited low Iberian and higher North African/Middle Eastern percentages, it doesn’t mean they aren’t Sephardi or that they don’t have Sephardi ancestors. This analysis is absolutely not meant to discredit these respondents’ interpretations of their results; rather, their responses are indicative of the wide range of DTC DNA testing experiences. They also contribute to a fascinating trend that suggests contemporary Sephardim may define their identity first through human relationships, and second through historical associations with Spain and Portugal—even in the face of expanding, fluid definitions of the word “Sephardi.”

“Soul-Driven”: B’nei Anusim and Concepts of Return

The dialogue about what it means to be Jewish and what it means to be Sephardi is further complicated by concepts of return, one being a symbolic return to Spain or Portugal (for those born into Judaism and b’nei anusim) and the other being a return to Judaism (for b’nei anusim). Both Spain and Portugal offer pathways to citizenship for Sephardi individuals without requiring them to renounce their current citizenship. The point of these offers is to right the historical wrongs committed against Spanish and Portuguese Jews in 1492 and 1497. The Spanish pathway requires that applicants meet two main requirements: proof of Sephardi status and proof of a special connection to
Spain.\textsuperscript{173} Applicants may prove their Sephardi status in the following ways: via a certificate from the Federation of Jewish Communities of Spain (FCJE), a certificate from the president of the Jewish community of the applicant’s place of residence or birth, a certificate from a recognized rabbinical authority, proof of knowledge of Ladino or Hakitia (certified by an Israeli entity), a birth certificate or ketubah (Jewish marriage contract) proving celebration in the Castilian tradition (which must include validation by a community leader or rabbi), a report proving that an applicant’s family names are of Spanish Sephardi origin, or “any other circumstance that clearly demonstrates” an applicant’s status as a Sephardi Jew of Spanish origin.\textsuperscript{174} Applicants may prove their special connection to Spain via a certificate from an accredited institution proving study of Spanish history and culture, proof of knowledge of Ladino or Hakitia, “inclusion of the applicant or his/her direct ancestry on the lists of Sephardic families protected by Spain, that, concerning Egypt and Greece, refer to the Decree of December 29, 1948, or of others naturalized by special way of the Royal Decree of December 20, 1924,” blood relationship of the applicant with a person who meets the previous qualification, fulfillment of “charitable, cultural or economic activities” to the benefit of Spanish persons or institutions, or any other circumstances that clearly demonstrate a special connection to Spain.\textsuperscript{175} Applicants are also required to pass two tests, one to demonstrate


\textsuperscript{174} Ibid.

\textsuperscript{175} Ibid.
a basic knowledge of the Spanish language and the other to demonstrate knowledge of
the Spanish constitution and “Spain’s social and cultural reality.”

The entire process is initiated via an online application form and payment of a
100€ fee, after which documents proving Sephardi status and a special connection to
Spain are submitted. Once these documents are reviewed, applicants visit Spain to appear
before a notary, a background check is run, and each case is either accepted or dismissed.
If the resolution is positive, the applicant must swear an oath to the Spanish king and the
Spanish constitution (this can be done abroad, at an embassy or consulate); this oath must
be taken within one year after the applicant is notified of their case resolution. The
Portuguese citizenship pathway is very similar to Spain’s, although Portugal does not
require that applicants demonstrate knowledge of Portuguese. Controversy erupted
after less-defined qualifications led Portugal’s Socialist Party to attempt to make the law
more restrictive (their amendment would require applicants to have lived in Portugal for
two years, plus prove their Sephardi heritage). The Party’s amendment was not passed,
but did spark conversations about contemporary antisemitism. Both countries’ citizenship
laws took effect in 2015. Spain’s original application deadline was set for fall 2019 but
was subsequently extended to September 2021. This extension only applies to people
who initiated their application before the original deadline, but who have not been able to

176 Ibid.
177 Ibid.
179 Ibid.
take the required tests or travel to Spain to appear before a notary due to the coronavirus pandemic. Unlike the Spanish law, Portugal’s law has no application deadline and no expiration date. More than 62,000 applications for Portuguese citizenship have been submitted since 2015, and 16,750 of those applicants have been granted citizenship. By October 2019, over 132,000 people “who claim Sephardic origins” had requested Spanish citizenship, according to Spain’s Ministry of Justice.

One of those 132,000 people is Respondent 15, the only study participant who elected to pursue Spanish citizenship. Respondent 15 took several years to prepare for the rigorous process, learn Spanish at an intermediate level, gather paperwork, and prove their Sephardi status and special connection to Spain. As they explained, “I spent six months doing very little else besides learning Spanish, and it was very gratifying when I passed the test. You have to be tested at a particular institute that is connected with the Spanish government…it took me two years until I gathered all the paperwork, passed all the tests.” At the time I spoke with them, it had been over a year and a half since Respondent 15 visited Spain and met with a notary, and they had not yet heard back from the Spanish government. Of this process, they told me, “It’s just a matter of waiting.” Respondent 15’s motivation for pursuing Spanish citizenship was at first “purely

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184 Ibid.
prompted by a deteriorating political situation in the United States, they sought “options” for living abroad. However, as they began to invest in learning Spanish and researching their ancestry, their quest for citizenship became far more consequential: “It took on this really meaningful reason of completing the circle and doing it on behalf of my ancestors...[and] accepting some form of healing.”\footnote{Ibid.}

Another form of return, largely unique to \textit{b’nei anusim}, is informed by relational—but also spiritual—interests: return to Judaism. Many institutions have been established in the United States to aid those who suspect they have crypto-Jewish heritage, and who wish to learn more about Judaism or officially return to the faith of their ancestors. Perhaps the most prolific of these is the Anusim Center of El Paso in Texas, currently headed by Bill Carvajal. Established in 2014, the Anusim Center’s mission is “to distribute information about the historical effects of the Spanish Inquisition on Spanish and Portuguese Jewry, to educate the descendants of the Sephardim who were forcibly converted from their faith or expelled from the Iberian Peninsula, and to provide a path of return to those who desire to reclaim their Jewish ancestral heritage.”\footnote{“Our Mission,” Anusim Center of El Paso, https://www.anusimcenterep.org/our-mission.html.} Rabbi Stephen Leon, author of a 2017 memoir entitled \textit{The Third Commandment and the Return of the Anusim: A Rabbi’s Memoir of an Incredible People}, is a prominent figure in crypto-Jewish circles and was instrumental in the founding of the Anusim Center.\footnote{Ben Zehavi, “US Crypto-Jews Race to Reclaim Heritage before Spanish Citizenship Offer Ends,” \textit{The Times of Israel}, last modified February 17, 2019, https://www.timesofisrael.com/us-crypto-jews-race-to-reclaim-heritage-before-spanish-citizenship-offer-ends/.} His hope for the Center is presented on the institution’s home webpage:
In August of 2014, the Anusim Center became the fulfillment of my dream as it was dedicated here in El Paso. The ceremony of dedication included dignitaries from Mexico, the Mayor’s office of El Paso, leaders of synagogues and many civic organizations. It is my hope that the Anusim Center will be a source of information, knowledge, and education to all those who visit and learn about the history of crypto-Jews. May this Center provide the means and inspiration to help bring that day closer when all who wish to will begin their return to their Jewish heritage, when all of humanity will become more understanding, compassionate, and respectful toward one another, and when the entire world will work as one to bring true Shalom [peace] to the world.188

A widespread “awakening” and mass movement among b’nei anusim to return to Judaism has the potential to change global Jewish demographics, something two participants—both of whom had either completed or initiated a return—spoke about. Interestingly, neither case was spurred by DTC DNA discoveries, but rather by a “feeling” and subsequent family history research; for both Respondent 6 and Respondent 8, DNA test results were only used to validate what was already deeply felt. The “feeling” both respondents spoke of was spiritually informed, and each placed far more emphasis on the religious aspects of Jewish identity (like the recitation of prayers, interaction with ritual objects, observance of holidays, etc.) during their interviews. For example, Respondent 6, having always felt different from their Cuban Catholic family, eventually pursued a formal conversion to Modern Orthodox Judaism; it was only after this conversion that they believed they had discovered crypto-Jewish heritage. Among their many positions, they now work as an advocate for b’nei anusim, telling me that in these individuals, they “see the fire to cleave to the Jewish people.”189 Respondent 8 has not pursued a formal conversion to Judaism, but has spent a considerable amount of time


189 Respondent 6, interview by author, December 2020.
researching Judaism and their crypto-Jewish roots. They have also prayed in Hebrew, visited synagogues, and studied with a rabbi who in time became a close friend. During our interview, they showed me a tallit (prayer shawl) and shofar (a musical instrument used during the Jewish holidays of Rosh Hashanah and Yom Kippur) they own, and explained that they regularly recite the Shema, a fundamental Jewish prayer. They also noted that, having grown up Christian, it was “a big step” for them to “deny Jesus and go to Judaism,” saying, “I’ve connected with the spirituality of Judaism. You know when you feel the presence of HaShem [God]? I felt that, and it made me weep so many times. So, it’s been a great experience like that…I don’t know why I of all people would be so interested in and drawn to this, but I feel like I’m drawn somehow to learn more about it. I don’t know if I’ll ever convert, but I’ll always be drawn to it.” Respondent 6’s words echo a similar sentiment: “This is what I can tell you. I understand that to come back to the Jewish people, you have to find this maternal lineage. I get it that you do that, or you have to convert, but with all of this DNA testing, with all of this documentation, with everything—it’s in your soul. This is literally soul-driven.” As if testament to the power of such feelings, both participants began their returns to Judaism at considerable cost to familial ties, which is discussed in the following section.

190 Respondent 8, interview by author, December 2020.

Themes of return are set against a backdrop of wider genetic studies that suggest nearly 20 percent of the current Iberian Peninsula population has Jewish ancestry. One study is described below:

We analyzed Y chromosome haplotypes, which provide the necessary phylogeographic resolution, in 1140 males from the Iberian Peninsula and Balearic Islands. Admixture analysis based on binary and Y-STR haplotypes indicates a high mean proportion of ancestry from North African (10.6%) and Sephardic Jewish (19.8%) sources. Despite alternative possible sources for lineages ascribed a Sephardic Jewish origin, these proportions attest to a high level of religious conversion (whether voluntary or enforced), driven by historical episodes of social and religious intolerance that ultimately led to the integration of descendants.

When asked about these results, most respondents were not at all shocked; this indicates an awareness among interviewees of the tumultuous history of the Iberian Peninsula. Studies like the one described above seem to suggest that there are in fact quite a few b’nei anusim out there, but this brings us back to the question of how much DNA can really tell us about ourselves—or rather, how much we allow it to tell us about ourselves. For instance, in the case of obtaining Spanish or Portuguese citizenship, DNA could only really be helpful in one way: to help locate a DNA relative who meets the special connection to Spain requirement; ancestry composition results are, of course, not accepted as proof of Sephardi status. The aforementioned citizenship laws leave us asking if it really is possible to legislate identity, to define in legal terms what does and doesn’t make someone a member of a group. Moreover, even if 20 percent of today’s


Iberian Peninsula population has “Jewish” DNA—and even if hundreds of thousands of Latin Americans are estimated to have some Sephardi ancestry, it does not necessarily mean those people are Jewish. In fact, to say that it does would be to sideline their lived experiences. Although there are certainly many people like Respondent 6 and Respondent 8, who have crypto-Jewish heritage and also feel a sincere connection to Judaism, it is likely that there are also many individuals who have crypto-Jewish heritage (as indicated by DNA) and who feel a sincere connection to, say, Catholicism and non-Sephardi Spanish culture. This is precisely because DNA is not the sole determining factor when it comes to a person’s identity. It may be very meaningful for some, particularly those who are seeking an identity “lifeline” of sorts, but merely an interesting anecdote—or even an afterthought—for others, especially those who genuinely feel they know who they are.

**Turkish Coffee, Spanish Guitar: Negotiating Familial Identity**

For the overwhelming majority of Jewish-identifying respondents, DTC DNA test results did not have a significant impact on direct familial relationships. However, a fascinating relational pattern did develop as more interviews were conducted: of the nine cases in which individuals had known Sephardi heritage on only one side of their family (either their mother’s side or their father’s side) and known Ashkenazi heritage on the other, most tended to identify more closely with the former. For some of these participants, DTC DNA test results did have an impact on this feeling of closeness to one side over the other, even if they simply validated the feeling. Respondent 1, for example, received identity-affirming results but has always felt closer to the Sephardi side of their

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family, in part because of exposure to culinary traditions and the passing down of naming practices (unlike Ashkenazim, Sephardim typically name children after living relatives), both of which “fanned the flames of [their] adoration” for Sephardi culture.\textsuperscript{195} Respondent 2 grew up in a location where theirs was the only Syrian—and only Sephardi—family in town. They always felt more connected to their Sephardi side because there was an overarching sense of “feeling different,” even among other Jews. They explained to me that this feeling persists today and proceeded to tell a brief Ashkenormativity-themed story about a recent interaction with a Russian Jewish friend who didn’t understand why Respondent 2 insists on identifying as a Syrian Jew when they are, in the friend’s eyes (and words), “Just a Jew.” Interestingly, Respondent 2’s DTC DNA test results led them to appreciate (but not necessarily identify more closely with) their father’s Ashkenazi side, observing that their father “was the minority” in the family.\textsuperscript{196} In earnest language, Respondent 7, who was raised within the Sephardi rite, juxtaposed religious practice with DNA-bound “fact”: “I don’t think [DNA] would ever change the way I see myself. Again, I’ve always viewed culture as how you’re raised rather than your blood…my dad’s family is Ashkenazi, but I wasn’t raised that way, I’m not going to pretend to do that stuff, but the fact remains I’m more than half Ashkenazi by blood. Does that mean that I should—or even could—start just adopting all their practices? That would be foreign to me.”\textsuperscript{197}

\textsuperscript{195} Respondent 1, interview by author, November 2020.

\textsuperscript{196} Respondent 2, interview by author, November 2020.

\textsuperscript{197} Respondent 7, interview by author, December 2020.
A sensation of closeness to the Sephardi side of one’s family appeared to manifest even if respondents lived far away from the Sephardi members of their extended family while growing up. For example, Respondent 4 felt very close to their maternal grandmother, whom they would only get to visit occasionally. During our interview, they reflected on the experience of being in their grandmother’s apartment while she made bourekas: “My memories of my grandmother…are her making these triangles and folding them, and she was very artistic with needlepoint, and the camaraderie…when you’d go to her apartment, she would be with all of our Sephardic friends, drinking the heavy Turkish coffee…and eating their little sweets that they liked, that was kind of what ‘Sephardic’ meant to me. Just good memories of my grandmother.”

Respondent 4 also referenced their physical features when explaining why it is they felt more connected to their Sephardi side, calling attention to their curly hair and olive complexion. Despite these long-standing feelings of closeness, however, Respondent 4 did begin to identify more closely with their Ashkenazi side upon receiving DTC DNA test results indicating a very small percentage of Iberian ancestry. Respondent 10, who used to identify closely with their Sephardi side because they believed this identity to be “exotic” and unique, and who took constructed narratives about their colorful Sephardi family to heart, had their feelings somewhat affirmed through language when they finally did travel to Istanbul to visit their father’s relatives. They recalled one instance in which everyone was gathered
together while five different languages were spoken, each with its own “domain,” or subject (Ladino for family affairs, French for cultural topics, and so on).  

Experiences like those of the above respondents may indicate two things. First, familial relationships may have a significant impact on cultural identity. Second, for some contemporary Sephardim, self-identification as Sephardi may be partially based on either a desire to be different or an already present feeling of uniqueness. Many of the individuals I spoke to expressed great pride in their Sephardi identity because it is different from Ashkenazi identity. It is also possible that this feeling is more prevalent among Sephardim who reside or resided for some time in the United States, where Ashkenazim comprise the majority of the Jewish population. If this is the case, questions of how to maintain their status as a distinctive Jewish community while avoiding marginalization may gradually become more prevalent among Sephardim in the coming years. 

As we saw in the previous section, for b ’nei anusim who have returned to Judaism or initiated a return, DTC DNA test results may be important, but possibly secondary to an undefined “pull” toward Judaism. However, the actual decision to pursue conversion or return (whether informed by DNA or not) often does have a significant impact on individuals’ relationships with family members. Respondent 8 spoke of their family’s mixed response to a discovery of possible crypto-Jewish heritage, noting that while some relatives were somewhat receptive or indifferent to the revelations, others were not: “I have relatives who are in total denial, they want nothing to do with being a Jew, they’ll never convert. They want nothing to do with Judaism, they’re happy being Christians,  

Respondent 10, interview by author, January 2021.
and they love their identity. They’re never going to move to Israel. They want to eat bacon, they’re just going to keep doing what they’re doing, you know? And even if I proved it, even if I showed them, they wouldn’t accept it.  

During their conversion, Respondent 6 was isolated from much of their family, who initially didn’t understand or accept that Respondent 6 was turning away from Christianity:

Over time, I pretty much lost everyone along the way. My family wasn’t talking to me…when I finally converted, it was difficult because my kids were still in the home, and their [other parent] was taking them to church on Sundays…I did not convert my children with me. I never felt that that was a fair thing to do…I just thought it was unfair, because I was having an existential crisis, I thought it was unfair that I should bring them along with me. So I didn’t convert them, but made my life a lot tougher, because being a Modern Orthodox still, I observe the Sabbath, we don’t ride in cars, we don’t go out, we just go to synagogue, and you pretty much are with your community, and I hadn’t been accepted yet in the Jewish community. So, it was very, very tough. You have to be very resilient to take this kind of path. You have to be very sure of what your feelings are.

It is important to note that, just as there are differences in types of return, there is a fundamental difference here: people within the Jewish community from birth and who come from mixed Ashkenazi/Sephardi families often have to negotiate between those intra-Jewish identities, and their relationship to family members or sides may be upset by this negotiation. For people not raised Jewish, but who have either converted or initiated a return to Judaism, there is far less negotiating between intra-Jewish identities. Tension instead spans from existence in a liminal space between the Jewish and non-Jewish worlds.

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201 Respondent 6, interview by author, December 2020.
**Ijo de ken sos tu?: Social Media and a Born-Digital Communitas**

With respect to the experiences of participants in this study, the relational elements of the DTC DNA testing process are especially apparent when we consider what happens after results have been received and test takers have spent time thinking about them. For many of the individuals I spoke to, social media seemed to be the next logical step. Several created their own groups with the intention of establishing connections with other Sephardim who had tested or with DNA relatives, while others created groups with the goal of family history research or getting answers to questions about crypto-Jewish heritage. The act of turning to social media may be best understood in terms of Turner’s theory of liminality and communitas (1969), which (as mentioned in the Introduction) maintains that people in-between statuses in time come together to create a community of individuals who have experienced similar liminal processes. Bruce Kapferer observes that this community, what Turner refers to as communitas, “has the quality of possibility, opening up new lines of human direction into their realities. It is more than a kind of togetherness…but reaches into the depths of a common humanity, realizing dimensions of it that lived structures have suppressed or refused.” For respondents whose identity or affiliation with Judaism is somewhat ambiguous, the liminal process seemed to consist of (1) doing research and uncovering possible crypto-Jewish heritage, (2) taking a DTC DNA test, and (3) receiving results that solidified suspicions about said heritage. Communitas was then established via the creation or

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202 This is not to say that all respondents took a DTC DNA test and then turned to social media to find answers to DNA-related questions. There were several participants who connected with other Sephardim on social media first and subsequently took a DTC DNA test.

joining of social media groups where people may discuss their experiences, draw connections between families, express their feelings, discuss returning to Judaism, and share research. Respondent 8, for example, received DTC DNA test results indicating a significant proportion of Sephardi ancestry (which has since disappeared after the company in question changed its algorithm; see Chapter 2 for an explanation). Of their initial reaction to the results, they told me, “I was really happy about it because I was like, ‘Oh, I’m a Jew!’ but then I found out I wasn’t after doing research.”204 A persistent curiosity about their heritage, coupled with a feeling of closeness to Judaism, led Respondent 8 to create a private Facebook group205 which garnered far more interest than they had originally expected:

Maybe somebody in the group will know something I don’t know and share something and I can find out more about my ancestry or heritage and we can share, and share with other people who might not know. So that’s kind of the thing I wanted to do, because somebody out there might know something I don’t know, because things are being uncovered all the time, like Inquisition records or stories, and I’m always looking for those types of things.206

For those with less ambiguous orientations to their Jewish or Sephardi identities, the liminal process appeared to consist of (1) taking a DTC DNA test, (2) receiving identity-affirming results, and (3) still having questions about DNA relatives or still wanting to make connections with others to construct family trees or learn more about their Sephardi heritage. Communitas was created via the establishment or joining of social media groups where questions are answered, people share family information,

204 Respondent 8, interview by author, December 2020.

205 In order to protect respondents’ anonymity, Facebook group names are not presented in this thesis.

pictures, and trees, and where individuals sometimes help one another solve “mysteries” pertaining to their family trees. For some participants, membership in such groups seemed to be partially motivated by a lack of exposure to or interaction with other Sephardim. For example, Respondent 11, like Respondent 10, commented on not having known any other Sephardim as a young person: “I never knew any Sephardic Jews growing up, so now I’m connected to a bunch of people [through social media]. I mean, I didn’t know anybody that was Sephardic when I was a kid.” Respondent 5 expressed similar feelings, only in their case it was reconnections—not new connections—that resulted from social media: “I remember growing up, our ‘family,’ our ‘cousins’—because we didn’t have any family—were the families that my dad knew from Greece. They were people we grew up with, spent time with, holidays. Facebook has reconnected us, and I feel a connection that way. I’ve seen a few of them [in person], we’ve kind of connected over time.”

The sharing of family stories is also important for many respondents. Respondent 1, who created their own private Facebook group specifically for Sephardi DNA relatives, explained:

Hearing other people’s stories, seeing that there’s other people who are just as passionate about their culture, having people post photos that they found in a pile and saying, ‘Does anybody see their family in this picture?’ The fact that people have forged these connections with cousins they never knew they had is very exciting…social media has enabled me to connect with cousins all over the world who I may never have met otherwise…it’s been invaluable.

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207 Respondent 11, interview by author, November 2020.


209 Respondent 1, interview by author, November 2020.
Beyond stories and family photos, Respondent 12 spoke of events and reunions organized via social media. For instance, a group of users who shared or had associations with Respondent 12’s mother’s maiden name ended up traveling to Spain together and connecting in person: “We had a family reunion at the [ancestral] town a few years ago, it was kind of funny, 50 of us going back 500 years later...We had the first Shabbat dinner [in the town] 500 years after the exile.”\textsuperscript{210} They also mentioned an organized gathering in Greece that they had missed, but followed their statements up with, “I talk to them [those who went to Greece] on Facebook all the time. I’ve always said that when the pandemic is over, I need to get a round-the-world ticket and go visit everybody.”\textsuperscript{211} The acts of sharing stories and participating in reunions may be especially meaningful for those wishing to reconnect with their Sephardi heritage in light of ancestors who suppressed their Jewishness in an effort to assimilate after immigrating to the United States. For others still, like Respondent 15, social media became a place to “not feel so alone” throughout the process of obtaining Spanish citizenship: “It’s been a super interesting voyage…I’ve connected with these relatives I didn’t know existed, I helped two people find their birth families—people who were adopted who I connected with through Ancestry—and I befriended a third cousin who ended up going with me to Spain, so it’s really been a rich experience.”\textsuperscript{212}

Belongingness is likely an underlying influence for most social media connections. According to Baumeister and Leary, the need to belong “should stimulate

\textsuperscript{210} Respondent 12, interview by author, November 2020.

\textsuperscript{211} Ibid.

\textsuperscript{212} Respondent 15, interview by author, November 2020.
goal-directed activity designed to satisfy it. People should show tendencies to seek out interpersonal contacts and cultivate possible relationships, at least until they have reached a minimum level of social contact and relatedness. Meanwhile, social bonds should form easily, readily, and without requiring highly particular or conducive settings.”213 Goal-directed activity is present in circumstances where both ambiguous and non-ambiguous people look to social media, as members of each cohort are seeking information. These individuals also likely wish to nurture social bonds within and among one another, perhaps especially so in a world altered by the coronavirus pandemic; digital means of communication and connection now occupy an even more critical space in the human story. Finally, social bonds appear to form easily within the groups respondents mentioned, especially as members all have something in common, be it a testing experience, a family story, a surname, or even DNA. The turn to social media seen among many respondents is reflective of the universal nature of a need to belong: whether feeling ambiguous or secure in one’s identity, whether motivated by a desire to learn more about one’s ancestry or to build family trees, the need to foster relationships with other humans is a constant. Moreover, for many of the Sephardim I spoke to, social media ventures seemed guided by a simple question, either aimed inward at themselves or at others in Facebook groups. This question is, appropriately, a common Ladino phrase used when meeting another Sephardi person for the first time: *Ijo de ken sos tu?* (“You are the child of whom?”). This question is not asked to discern status or material wealth, but rather to help the speaker figure out how the two might be related, either through blood or simply regional proximity. I posit that its digital equivalent is today found in

friend requests, Facebook groups, Zoom meetings, and the “sharing” of DNA on “Big Four” sites, but its sentiment—and its undeniable relational bent—remains unchanged.
CONCLUSION

Feeling and Being: Does DNA Really Change Anything?

The findings outlined in the previous chapter present a deceptively simple question: do DTC DNA test results really change the way contemporary Sephardim negotiate their identities? The genetic options theory developed by Roth and Ivemark (2018), which argues that individuals “select” ancestries that “offer them positive and distinct social identities,” helps to contextualize the multifaceted answer. First, the interviews conducted for this study indicate that if individuals approach DTC DNA test results (either identity-affirming or identity non-affirming) with a concrete idea of who they are and what their cultural affiliation(s) are, then those individuals will more than likely experience little to no change in their sense of identity. As demonstrated in the section concerned with testing motivations, the attitude behind statements like “I know who I am” is predominately relational and therefore strengthened by long-term exposure to particular cultural practices and interaction with Sephardi-identifying relatives and ancestors. For most non-ambiguous participants, any DTC DNA test results that could be considered non-affirming (such as any unexpected ancestry from areas outside the Iberian Peninsula, West Asia, and North Africa) were either overlooked, briefly considered, or incorporated into historical narratives still linked to Sephardi history.

By contrast, interviews also showed that if individuals approach DTC DNA test results (again, either identity-affirming or identity non-affirming) with comparatively ambiguous notions of who they are and what their cultural affiliation(s) are, then they

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214 Roth and Ivemark, “Genetic Options,” 155-6.
may be more apt to assign meaning and weight to DNA. In this sense, DNA may serve as a motivator for either new or continued explorations into different identities. Although very different from the cases examined in this thesis, reactions from two Jewish-identifying groups to DNA studies done within their communities are relevant to the broader argument. The Gogodala, a tribe from Papua New Guinea who believe they are one of the Lost Tribes of Israel and who engage with some Jewish cultural elements and symbols, wished to affirm their “biological Jewishness,” and to thus be considered Jewish in the same way the Lemba are (largely because of religious practice and the presence of the Cohen Modal Haplotype among many Lemba men). In keeping with Roth and Ivemark, the Gogodala’s identification with a particular group (Jews), conferred on them certain social and potential economic advantages, like access to mission schools, association with Israel, and future migration to Israel. In short, there was some incentive for the Gogodala to cling to a Jewish identity and have it validated by DNA testing. Despite the fact that these tests did not indicate Jewish heritage, the Gogodala still maintain their theory of Israelite origin. Similar DNA studies were also conducted with members of the Bene Israel community in western India. The results indicated Middle Eastern, “possibly Jewish” descent, as well as the presence of the Cohen Modal Haplotype. Tudor Parfitt describes the group’s reaction to the study:

In addition to observing media reports, we conducted a survey to find out what the reaction among the Bene Israel had been to the genetic testing. The majority of the respondents was positive about the tests. Their argument was that the tests were much needed for the community, and that publication of the results was going to change things for the better in respect to their self-esteem and

recognition of their Jewishness by others. Perhaps the latter factor was more important than the former, as apparently the Bene Israel were already utterly convinced of their Jewish identity. 216

Both the Gogodala and the Bene Israel could be considered ambiguous in terms of identity, not because of inward insecurity about what culture or religion they belong to, but rather because of the apparent global doubt surrounding their claims to Jewish heritage. On the other hand, identity ambiguity for some of this study’s participants did not span from outward skepticism about their identity claims, but rather from the practice of claiming multiple cultural identities and consequently having to negotiate between them.

Throughout my research, I did not find any cases of participants outright denying their DTC DNA test results, but rather cases of individuals justifying why, for example, a large chunk of Italian heritage was showing up on their ancestry composition reports. Respondent 11 told me, “I think we’re probably Romaniote, which means that we’re direct descendants from Jews that were in Israel back in 70 AD, when the Romans came and took over and destroyed the Temple…that’s what I’m guessing…I guess that kind of solidifies that.” 217 Respondent 19 seemed to chock the “Italian phenomenon” up to limited reference populations, expressing frustration with the way some companies group customers: “I just know that there’s nothing that can be done, [but] it is frustrating a little bit because when you do the DNA test, you know, you don’t really want to give them any information then anyway, but afterwards I would have loved to be able to have told them,


‘Hey, this is my DNA, and I have all the right connections to other relatives to know that we are Sephardic Jews from Greece, so take my DNA and use that to help identify other people and not just tell them [they’re] Italian.’ Respondent 5 approached their test results with a different, more essentialist outlook, perhaps because of a limited knowledge of how reference populations work or simply because of a different interpretational approach: “When I first did the 23andMe, I was shocked with the heavy Italian…growing up, I had this total affinity with Sicily, and I couldn’t understand why…But when I did the DNA and I found out that there was Italian, specifically Sicily, I said, ‘Okay there you go. It’s in the genes!’ So that sort of validated why I loved Italy and Sicily. To me, Greece is like a second home, and Italy is like a third home, and now I understand why. It kind of pulls at you.”

With this considered, one preliminary conclusion is that “identity non-affirming” may actually not be an appropriate descriptor for how some respondents viewed their DTC DNA test results. Rather, as Marc Scully, Steven D. Brown, and Turi King conclude in a Y-DNA study on individuals in northern England, “new DNA information is incorporated into narratives of identity in a more subtle way; it becomes a placeholder, to be woven into a broader narrative of selfhood in relation to the past, in a dialogue with past personal or familial narratives, to be drawn upon at appropriate junctures, or to be retained until further information becomes available.”

Even for those whose sense of identity was—or would have been—altered

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by DTC DNA test results, like Respondent 10, DNA does not exist in a vacuum.

Temporal factors are also at play, showing that identity is changeable, negotiated and re-negotiated over an entire lifetime. Respondent 10’s closing words paint a poignant picture of this:

When I was in my teens, like all teenagers, I was trying to find out who I was. I was a rebel, and engaged in all kinds of activities designed to get me in trouble at school. I played hooky and spent many happy hours at museums or watching foreign language films at a nearby cinema. And in my last year, I joined the school newspaper and we decided to defy all rules and use the front page of the paper to protest the end of the OPA, or Office of Price Administration, which had kept prices down during the war. We put out the newspaper and then quaked, waiting to be thrown out of school, but for some reason we got away with it…My efforts to find myself, however, like those of most kids, involved figuring out a way to be different. I cut my hair very short (not at all fashionable in 1945) and wore jeans (which were forbidden at my high school). Sometime later, I began to think of myself as a Sephardic Jew—yet another way to differentiate myself from my peers. Had I found out then that I was not Sephardic, I would have undoubtedly been upset. I think I could have shifted into a Mizrahi identity—had I known such a thing existed—if it allowed me to maintain my uniqueness. I actually had distant relatives named “Mizrahi,” but had no idea what the word meant. I can sum up by saying that I have earned a very different identity over my lifetime, as an anthropologist…whether I am Mizrahi or Sephardi means very little to me at this time in my life.221

DNA and its ancestry-related interpretations appear to only really “matter” if an individual wants them to. But the revolution of DTC DNA testing itself has undeniably changed things for many people, including those I spoke to. Despite its at times problematic approaches and companies’ essentialist language, the fact remains that DTC DNA testing is not all bad. For those wishing to foster connections to the past and to the future through family trees, it may help fill in the gaps and answer questions about family history. Although Respondent 1 paid very little attention to their ancestry composition results, they had their careful family history research “validated through the results of

221 Respondent 10, interview by author, January 2021.
DNA testing” via DNA relatives. After testing, their tree was no longer theoretical, and predicted relations were proven to be accurate. People who are looking for information about their family and cannot find it any other way, like Respondent 5 and Respondent 3, may also be helped by DTC DNA testing. Respondent 5’s father was the only member of his family to survive the Shoah, and did not speak openly about his experiences or his family history:

We could never ask my father anything. He spent four tortuous years in the concentration camps. He was in Auschwitz, he was in Bergen-Belsen, and then he ended up at Mauthausen in the labor camps. And he lost all his family; he had major, major survivor’s guilt. I remember, growing up, at nighttime I could hear him screaming and yelling in his sleep—the bad dreams. I must have been ten or eleven years old, but I remember them vividly. And my mom said, “You never talk to your dad about that, ever, ever.” And then my daughters tried, “Oh, papou [grandfather], can you tell us?” and he’d just say, “No, no.” He passed away [recently] and took with him the knowledge, the history, his pain, his sorrow, his everything.

DTC DNA testing helped Respondent 5 connect to their paternal family’s history and Sephardi heritage, despite the painful memories that kept their father from sharing information about what his life was like before the Shoah. Respondent 3, who believes their paternal grandmother was Sephardi but who could not verify this through records research alone, turned to DTC DNA testing to help confirm it. Of the lack of information in their family, they observed, “It strikes me how easily the memory of certain ancestry can be lost. Dad grew up under occupation during World War II. There wasn’t exactly an incentive there to remember Jewish ancestry.” Finally, although Respondent 6 does

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222 Respondent 1, interview by author, November 2020.
fiercely believe that returns to Judaism are soul-driven, they also told me that, for some
*b’nei anusim* they work and correspond with, DTC DNA test results are also
consequential: “The excitement, those texts that I get with, you know, a thousand emojis,
just people going wild when they get that they have 5 percent Sephardi [ancestry], ‘I
knew it! I knew it!’ …it makes all the difference to them.”

DNA is not malleable. It is inherited from our parents and can tell us a great deal
about our physical makeup and health. But because they are expressed through cultural
action and language, ancestry-related interpretations of DNA are malleable and are
subject to modeling, exclusion, or inclusion depending upon each person’s unique beliefs,
feelings, and life experiences.

**Limitations and Future Research**

This project is certainly not without its limitations. The most glaring of these is
the small—perhaps inadequate—sample size. I embarked on my research with an original
goal of conducting thirty interviews, but time constraints led to a final count of nineteen
total participants. Although each of these yielded great conversation and rich information,
the fact remains that with less interviews comes less data, and with less data comes a less
comprehensive analysis. A second limitation is the lack of *b’nei anusim* perspectives.
This may be attributed to difficulty locating respondents as well as to hesitation among
many *b’nei anusim* to share their stories—especially when contacted first via social
media. Technically, only two respondents fall into the category of *b’nei anusim*, and

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consequently the very important experiences of members of this community (and people returning to Judaism) are underreported.

Despite my attempts to fairly and equitably represent each “Big Four” company, the second chapter and the thesis as a whole reflect a slight inclination toward 23andMe. This is because (based on my observations) 23andMe has been the most successful advertiser among the “Big Four,” leading to a popular opinion that 23andMe is the “face” of DTC DNA testing. It is also because I have taken a DTC DNA test through 23andMe, and therefore have greater insider knowledge about this company than I do about the others discussed in Chapter 2; most respondents also tested through either 23andMe alone or through several companies, 23andMe included. However, a focus on 23andMe is not entirely disagreeable, as it is the paradigmatic example of a “trendy” DTC DNA testing company with limited reference populations.

My original intention was to present the data with a more narrative-centric approach, inserting my descriptions and voice into the findings. This proved challenging, mainly because I had also hoped to travel and conduct the majority of my interviews in person, which could not be done during the coronavirus pandemic. A final limitation that deserves to be mentioned is the project’s staunch adherence to anonymity. Given the level of Institutional Review Board clearance and, more importantly, the needs and wishes of participants, this choice was absolutely necessary. However, experiences are influenced by multiple elements of a person’s identity; age, gender, and other identifiers could all impact study results. Not being able to mention them or truly include them in an analysis removes a possibly valuable dimension of the project.
In addition to future research that would include a gendered or age-based investigation, another endeavor may feature applications of the genetic options theory to the phenomenon of non-Jews learning of Jewish heritage via DTC DNA testing; this particular research may best be conducted with individuals who test and discover Ashkenazi heritage as opposed to Sephardi or Mizrahi heritage. Second, more work on the experiences of b’nei anusim needs to be done. A focus on their encounters with gatekeeping or the struggles they face while attempting to enter digital Jewish communities would be particularly pertinent. Social media as a whole likely should become the focal point of more Jewish studies ethnographies, especially considering current events and the fact that new groups relating to DTC DNA testing and Jewish identity emerge daily. Finally, in recent years, people who identify as “NPEs” and who are the result of non-parental events have coalesced into online communities. Many of these individuals have discovered their NPE status through DTC DNA testing, and I am curious about the experiences of (1) those who are not raised Jewish but learn that one biological parent is/was Jewish, and (2) those who are raised Jewish but learn that one caring parent (assuming they are/were Jewish) is/was in actuality not their biological parent. The opportunities for future research are numerous and exciting.

Summary

It is my hope that this thesis will serve as a jumping-off point for subsequent work involving Sephardi identity and DTC DNA testing. Although it is far from exhaustive, this study did yield several interesting results that may be indicative of broader trends. First, there seemed to be an inherent understanding among Jewish-identifying
respondents that Jewish identity is complex, indicating an unsurprising but still notable level of self-awareness. Respondents’ ideas about what it means to be Sephardi reflect older, Iberian Peninsula-centric definitions of the term as opposed to newer, all-encompassing ones. Third, DTC DNA tests are speculative and DTC DNA testing companies overpromise. They also perpetuate Ashkenormativity through a lack of Sephardi reference populations and thus unintentionally reflect the complexity of the term “Sephardi.” Ancestry composition results also vary across testing companies, and respondents who tested with only one company that does not have a Sephardi reference population tended to find those results more impactful. This speaks not only to the diversity exhibited by testing companies’ practices and the services they offer, but also to the fact that limited reference populations have the potential to influence how people negotiate their identities. Even though the individuals I spoke to for the most part were well aware of how the tests work, not seeing certain words (especially “Spanish,” “Portuguese,” “Iberian,” or “Sephardi”) pop up on their ancestry composition results did seem to have an impact.

Likewise, for tests that do not include a Sephardi reference population, participants tended to consider “Iberian” or “Spanish” as results that affirmed their Sephardi origins; this indicates a possible general understanding that Spanish and Portuguese heritage is what makes someone’s roots truly Sephardi. In affirmation of the belongingness theory, participants’ motivations for taking a DTC DNA test and for joining social media groups related to Sephardi identity and genetics appeared to be relational. Interviewees were curious about their heritage and their DNA relatives because they sought to somehow make connections with those groups and people, even in
the abstract. Based on the data collected, identity construction seems to be a process as well as the product of a person’s life experiences. Furthermore, identities can and often do coexist, and it is entirely possible for someone to feel secure about one identity and ambiguous about another. Finally, in cases of identity ambiguity, people may assign more importance to their DTC DNA test results. Conversely, in cases of strongly felt identity, DTC DNA test results, be they affirming or non-affirming, appeared to have little to no impact on test takers’ identity negotiation. For Jewish people, this ambiguity may be informed by a sense of “motleyness,” which some might believe DTC DNA testing can resolve. On a separate but equally salient note, “feelings” emerged as an important theme throughout my research. This suggests that analysis of sometimes-inexplicable emotional connections may be essential to studies centering on identity and genetic testing.

Gil Atzmon et al. open their 2010 study report with a brief background on historical Jewish migrations, in which an interesting statement appears: “…The issue of how to characterize Jewish people as mere coreligionists or as genetic isolates that may be closely or loosely related remains unsolved.” It will likely stay this way, because identity—be it cultural, religious, ethnic, or a mix of all three—is not solvable, only negotiable. Problems of Jewish identity and Sephardi identity will likely always be present, and each individual is responsible for their contributions to these issues. Some may situate their conclusions in emotion or tradition or in the spirals of their DNA, but none is objectively more correct than the other. Moreover, the impact of genetic testing on the contemporary world has yet to be fully revealed. Indeed, the question with innumerable answers is not just “Who is a Jew?” or “What makes a person legitimately

Sephardi?,” but also “As a species, what are we to make of DNA, and how much will we allow our interpretations to guide us?” Whether the legacy of genetic testing is one of division—sowed in invented hierarchies and categories meant to subjugate—or unity, realized in the fact that, as one respondent put it, “we’re all connected, we’re all related,”\textsuperscript{227} is ultimately up to us.

\textsuperscript{227} Respondent 15, interview by author, November 2020.


