

3 “Children Are the Treasure and Property of the Nation”

Demography, Eugenics, and Mothercraft

This chapter examines British and Zionist demographic anxieties and their eugenicist inflections in Mandate Palestine, which came from different places and had global precursors and diffractions. British authorities frequently expressed concern with higher Palestinian birth-rates, which they racialized from early in the occupation. These concerns were balanced by a rarely expressed calculus that recognized that limited investment in Palestinian welfare and in infant, child, and maternal healthcare produced higher mortality rates. The second section explores Jewish and British eugenicist discourse that predates and overlaps with the Mandate period and its iterations among Zionist health workers as they built a Jewish settler colony in Palestine. The final section discusses transnational maternalist and breastfeeding campaigns, which were motivated by classed and racialized eugenicist concerns to reduce infant mortality and increase fertility among “white” better-off married women, and the conditions of the appearance of these discourses in Zionist archival records in Mandate Palestine.¹

By way of introducing the argument that racialized and classed evaluations of human value were central to the decision-making of British colonial authorities, I examine two antityphoid serum trials conducted in Palestine in the mid-1930s under the auspices of the Lister Institute in England. According to the first journal article published about the Palestine study (Felix 1935) and many publications that followed, the 1934 human trial of antityphoid sera confirmed the

¹ “White” is a historically constructed sign and category the content/meaning of which has never been stable. This chapter benefited from being workshopped at the Death and Afterlives in the Middle East conference at the Watson Institute of Brown University in late September 2019. I am grateful to organizer Aslı Zengin for inviting me, Osman Balkan for his close engagement with the chapter, and other workshop participants for their suggestions and comments.

existence of a Vi (virulence) antigen that produced protective antibodies against *B. typhosus* in humans.² I analyze published medical scholarship and an electronic file of British correspondence about the trials in the Israel State Archives in Jerusalem.³

The first therapeutic trial in Palestine was conducted on patients in hospitals in Jerusalem, Jaffa, and Tel Aviv over six weeks in October and November 1934. Dr. Rudolph Reitler, a research pathologist and German settler, was the medical officer in charge of the government hospital in Jaffa and the serum trial. Palestinian Dr. N. Hamzeh was the medical officer responsible for the trial in the Jerusalem government hospital. Jewish settlers Drs. M. Levontin and W. N. Wolff were responsible for the trial in Hadassah’s Tel Aviv Municipal Hospital. Palestinian Dr. N. T. (Tawfik) Canaan was responsible for the trial at the German Deaconess Hospital in Jerusalem. Also involved in analysis was Dr. K. S. Krikorian, an Armenian Palestinian bacteriologist who worked in the central laboratories of the Government of Palestine Department of Health.

Typhoid fever, acquired by consuming food or liquid contaminated with the feces of carriers of salmonella bacteria, was a significant septicemic disease in Mandate Palestine, although the most prevalent diseases and sources of death for Palestinians were pneumonia, tuberculosis, measles, diarrhea, and malaria. In addition to high fever, typhoid symptoms include abdominal pain, skin lesions, and mental disturbances. Typhoid infection rates are higher in settings lacking safe “drinking water, food handling, and sewage disposable and isolation,” and without healthcare systems that identify and treat infected patients with antibiotics (Robbins and Robbins 1984, 436). While many anti-typhoid vaccines were developed over the twentieth century, even

² Lister scientists tested an initial serum produced from the blood of immunized rabbits by inoculating mice in laboratory conditions (Felix 1935; Felix and Pitt 1934). They concluded that a serum containing both Vi and O antibodies “will prove to be of value in the treatment of typhoid patients” (Felix and Pitt 1934, 190). They then produced two versions of antityphoid serum from two immunized horses and one control serum from a normal horse for use in the Palestine trial (Felix 1935; Felix and Pitt 1934).

³ I did not track additional information that is likely available in non-British archives or in London. GOP, Department of Health, Communicable and Other Diseases – Treatment of Typhoid by Anti-Typhoid Serum – Dr. Felix of the Lister Institute, August 1934–May 1938. File location in catalog: 00071706.81. D1.33.57. Israel State Archives.

today they are only 50–80 percent effective, and any protection they offer is temporally limited (436).⁴

In 1934, 2,002 cases of typhoid fever and 185 deaths from the disease were reported to the British colonial government in Palestine, almost double the number of cases in 1933 (1,055/107), with a 4 percent fatality rate for the 998 cases among Jews and an 11 percent fatality rate for the 1,004 cases among Palestinians.⁵ Thus typhoid fever was almost three times as likely to kill Palestinian Arabs as Jews in 1934, with those living in the Haifa District suffering the highest number of cases and those in the Nablus District experiencing the highest proportional death rate.⁶ In Palestine typhoid fever patients ranged from children to adults.⁷

Archival correspondence among high-level officials in London and Jerusalem between August 1934 and January 1935 about the antityphoid trial largely focused on permissions, expenses, access to lab facilities, and who was responsible to pay for what aspects of a research trip to Palestine by renowned bacteriologist Dr. Arthur Felix of the Lister Institute in England.⁸ Discussions involved the high

⁴ I learned about typhoid from meeting with Herman Staats, a professor of pathology at Duke University, who patiently answered my questions about the disease, contexts of prevalence, and other medical matters. I read the research of Marc Jeuland at Duke on the economics of investing in infrastructure versus typhoid vaccines in poor countries. I thank Provost Sally Kornbluth for connecting me with scholarship by Staats and Jeuland.

⁵ GOP, Department of Health, *Annual Report for the Year 1934*, 27, 28. These numbers exclude village cases because the Department of Health required cause of death to be determined by a town- or city-based medical officer.

⁶ “Case and Death Incidence of Infectious Diseases by Location for the Year 1934.” GOP, Department of Health, *Annual Report for the Year 1934*.

⁷ In contrast to other “encapsulated” bacterial infections, typhoid sufferers are infrequently children younger than two years of age. In most countries “the peak incidence” occurs “between the ages of four and 12 years” for reasons “that remain obscure” (Robbins and Robbins 1984, 442).

⁸ The Lister Institute funded serum development (trial and control), shipping and air costs of lab material, and Felix’s regular salary, whereas the Colonial Office in London funded his trip to and from Palestine (he came with five “family members”). The Government of Palestine provided facilities and funded his transportation between Jaffa and Jerusalem and his accommodations in Jerusalem (thirty-seven pounds haggled over in many memos). Felix stayed with extended family when in Tel Aviv. GOP, Department of Health, Communicable and Other Diseases – Treatment of Typhoid by Anti-Typhoid Serum – Dr. Felix of the Lister Institute, August 1934–May 1938. File location in catalog: 00071706.81.D1.33.57. Israel State Archives.

commissioner for Palestine and Trans-Jordan, the acting chief secretary of the Government of Palestine, the secretary of state in London, the chief medical officer in the Colonial Office in London, the director of the Department of Health in Palestine, the acting deputy director of medical services in Palestine, the director of the Lister Institute, and Felix.⁹ A confidential memo dated September 26, 1934, from Acting Director of Medical Services J. W. Harkness in Jerusalem asked the chief secretary of the government offices (also in Jerusalem), Sir John Stuart Macpherson, to cover Felix's local expenses. Harkness stressed the value of testing an antityphoid serum on humans and the possibility of "considerable saving in hospital accommodation and cost of treatment of typhoid fever by reducing the duration of incapacity caused by the disease. This is of very great importance in Palestine where Government hospital accommodation is taxed to its utmost during the [summer and fall] months when the disease is most prevalent."

The clinical trial, led by Felix, was run on sixty typhoid patients in four hospitals: the Jaffa Municipal Hospital (thirty-four patients),¹⁰ the Jerusalem government hospital (seven patients), the German Deaconess Hospital in Jerusalem (three patients), and the Hadassah Municipal Hospital in Tel Aviv (sixteen patients). While I found no information on

⁹ Arthur Felix (1887–1956) was born in Silesia, Galicia (later Poland), of Orthodox Jewish parents and died in London. He studied chemistry at the University of Vienna, where he became interested in Zionism, and later trained in mycology. The Austrian Army commissioned him during World War I to serve in laboratories on multiple fronts, working to develop a typhus fever serum (not typhoid) under Austrian bacteriologist Edmund Weil. When the war ended in 1918 they continued to work on serums for paratyphoid and typhus fevers in Prague. In 1920 Felix moved to Palestine, where he became the chief bacteriologist, supervising Hadassah's four laboratories. He married Leah Gluckman of Tel Aviv in 1923. He left Palestine with his family in 1927 to work at the Lister Institute in England, although he frequently returned to Palestine for visits. Felix shifted to typhoid research in earnest in the early 1930s (Wilson 1957).

¹⁰ The Jaffa Municipal Hospital was established by city officials in this busy Arab port town under Ottoman rule in approximately 1908, and was "financed (at least partly) through an increase on the fees paid by travelers alighting at Jaffa port" (personal email correspondence with Philippe Bourmaud, July 11, 2019). In 1934 three-quarters of the population of Jaffa – which attracted hundreds of (male) Palestinian laborers from villages who were compelled to live in "insanitary conditions" – did not have a "public water supply and utilize[d] easily contaminated wells, and there is no sewerage except in some of the Commercial Quarters." GOP, Department of Health, *Annual Report for the Year 1934*.

the ethnic or religious backgrounds of the typhoid trial patients at the Jaffa and Jerusalem government hospitals, Jews comprised only 6.67 percent of the 2,280 non-British patients who used the Jerusalem government hospital and 17.2 percent of the 1,928 non-British patients who used the Jaffa Municipal Hospital in 1934. The overwhelming majority of patients were Palestinians.¹¹ Given the racial geography of healthcare in Mandate Palestine, we can assume with some confidence that all three trial patients at the German Deaconess Hospital were Palestinian and all sixteen trial patients at the Hadassah Hospital were Jewish.

At the government hospitals twenty-eight of the forty-one patients (68 percent) were in the trial group (receiving serum), whereas twelve of the sixteen patients (75 percent) at the Hadassah Hospital and all three patients (100 percent) at the German Deaconess Hospital were in the trial group.¹² Six of the forty-three patients in all four hospitals who received the antityphoid serum and three who received the control serum were children younger than fourteen years of age, with doses attenuated by age (Felix 1935, 800).

The two antityphoid sera seemed to work for some patients, although Felix concentrated them as results were observed during the trial. Five people in the treated group died, all in the “extremely severe” category of twelve patients (801). The published article did not share the hospital distribution of the patients who died or how many (if any) deaths occurred among patients in the control group. The scientific community deemed the results of the Palestine antityphoid trial “promising but inconclusive”; Felix admitted the serum was less likely to work on “extremely severe” cases (Wilson 1957, 288; Felix 1935, 801).

¹¹ “Table of Patients in Government, Municipal and Voluntary Hospitals – 1934,” 57. GOP, Department of Health, *Annual Report for the Year 1934*.

¹² While the control placebo serum was discontinued when patient health clearly worsened, control patients did not receive the experimental sera (Felix 1935, 800). A trial of the Lister sera in a Dublin hospital during the same period offers a comparison of trial and control group assignment and treatment. In September 1934 Dr. C. J. McSweeney, the medical superintendent of the Cork Street Hospital in Dublin, began independently testing the Lister sera on typhoid patients, systematically assigning every other case of eight patients to the trial or control group. After increasing the dosage, medical staff gave the trial serum to all subsequent severe cases when they saw “the beneficial effects” (McSweeney 1935). McSweeney continued using fifteen different batches of sera on sixty-one total “bacteriologically confirmed” typhoid cases in the Dublin hospital with “good” or “excellent” results on forty-four patients and “no effect” on ten patients who died (McSweeney 1937).

A published study based on analysis of typhoid patient blood sera from the 1934 trial in colonial laboratories in Palestine concluded that any future antityphoid serum or vaccine must have the Vi antigen to be effective and the treatment would not work with patients suffering from paratyphoid fevers A or B (Felix, Krikorian, and Reitler 1935, 424). The significance and results of the 1934 Palestine trial were discussed in optimistic terms in medical journal publications and a few positive news stories were published in Britain in 1935. Nevertheless, the Department of Health *Annual Report for the Year 1934* makes no mention of the experimental trial, despite including a section on typhoid fever and typhoid in disease tables and touting "measures" taken to ameliorate, for example, malaria and starvation.

I found no academic publication discussing an additional trial of two revised Lister antityphoid sera conducted at the Jaffa Municipal Hospital in 1935, a year later. In London Felix wrote to colonial officials repeatedly and unsuccessfully from January through May 1935 seeking support and permission to return to Palestine to oversee such a trial. A handwritten 1935 memo (whose month is indecipherable) to the director of medical services initialed by multiple colonial health officials in Palestine points to one possible reason they refused to pay for a second trip: they believed the 1934 trial results were exaggerated. Referring to an attached newspaper column from London titled "New Serum to Fight Typhoid: Striking Results," the memo's author stated: "Seems an optimistic view is taken regarding the efficacy of sero-therapy in the treatment of the Enterica. I wonder!"

The records at my disposal do not directly say that Felix did not come to Palestine to supervise the second trial because the colonial government refused permission or to pay for the trip. They do show that Felix wrote to "Sir Thomas" (Ambrose Thomas Stanton) in the London Colonial Office on July 3, 1935, this time seeking permission to send two versions of antityphoid sera "free of charge" from the Lister Institute for a second trial at the Jaffa Municipal Hospital, which he said would be supervised by Reitler. When Heron agreed, Felix sent a detailed handwritten letter to Reitler on August 9 instructing him on methodology: he wanted the two versions of sera tested on twenty each of "preferably adult patients only" and "only on selected severe cases." Heron strongly suggested to Reitler that a control group be included,

but Reitler wrote he did not think they would have enough severe typhoid cases at the hospital to conduct the experiment on two let alone three groups.

Reitler agreed to conduct the trial for Felix, but stated in advance that "he will not be in a position to see if the serum treatment is of advantage or not." Reitler's second trial at the Jaffa hospital, built slowly with typhoid patients over September and October, ultimately included twenty-four cases "over 15 years old," twelve for each anti-typhoid serum. Reitler deemed the results "good" for both sera but did not believe a general conclusion of efficacy could be made given the small number of cases. Three of the twenty-four patients in the trial died. Heron was less generous in his assessment. He considered the trial methodologically weak ("inadequate and indeed unacceptable"), with "inadmissible" conclusions made by Reitler, which is probably why no results were published.

A few issues stand out from analysis of this case. First, as shown with the smallpox story in a Hebron village in the early 1920s, Mandate Palestine was an important research laboratory used to advance colonial and settler-colonial science and the professional and economic statuses of individual scientists. Helen Tilley finds that interwar British colonial Africa was similarly used as a "medical laboratory." The Colonial Office encouraged "fieldwork" in colonial settings for biomedical experiments and interventions, as was done in "virtually every [colonial] territory" (Tilley 2011, 171, 173). Such research was viewed as necessary for "development" and assuring that colonial subjects were healthy enough to be "industrious" (172, 169). Illustrating how the colonized served as guinea pigs for advancing the health of "Man," an August 29, 1935, letter from a Palestine Department of Health official to Felix matter-of-factly shared the disappointing results of a separate government typhoid study on Palestinians:

We have now finished our vaccination of the Arab College with vaccines prepared from typhoid bacilli containing much Vi antigen. Our analysis of the resultant sera [blood whey] has been rather inconclusive so we are sending on 40 to you for disposal. If you are interested you can analyse them, if not you can return them to us or have them destroyed.

Notably the 1934 Palestine findings and the studies that followed allowed the Lister Institute, governments, and international entities to

develop multiple T.A.B.C. vaccines against typhoid and paratyphoid fevers beginning in 1938 and to use them in wartime settings.¹³

Second, although the material I analyzed did not indicate that the 1934 and 1935 antityphoid serum trials were diabolical in intent, we can ask why they were conducted in government hospitals at all given that Palestine was full of Zionist medical institutions (hospitals and laboratories) sponsored by Hadassah, Kopat Holim, and other organizations. Indeed, Felix was supervisor of all four Hadassah laboratories in Palestine before he left for England in 1927, and he had the professional relationships to acquire such access. Moreover, Jewish residents of Palestine were more likely to be infected with typhoid fever, more likely to seek hospital care, and more likely to have bed space available to them. The Lister Institute would have required colonial government approval whether the institutions chosen for the trial were Zionist, missionary, or British run.

Third, a coda to the typhoid story illuminates the persistent capitalist and austerity angles with respect to science and medicine in colonized Palestine. The Lister typhoid treatment serum was apparently greatly improved by 1938 and the institute advertised it widely for sale, including to colonial markets. Referring to a May 1938 letter from Felix to the chief secretary in Jerusalem on the "3rd instance" (third time) that expressed surprise at the Department of Health's "apparent neglect to take advantage of what is now proved to be of positive value in the treatment of typhoid fever," Macpherson wrote to another government official that the "Department's attitude . . . is one necessarily governed by financial considerations," given the serum's "almost prohibitive cost – nearly £3 per patient treated – and there seems no possibility of this cost being appreciably lowered in view of the difficulty of production and the estimation of its Vi and O antibodies." In a letter to Felix, Macpherson similarly explained the colonial calculus: it must be "borne in mind that the numbers of enteric cases in Palestine are so considerable. Thus in 1934 there were 2002 cases with 185 deaths, in 1935 there were 2060 with 204 deaths, in 1936 [there were] 1148 cases with 143 deaths and in 1937 there were 2049 cases with 194 deaths." Treating these cases at three pounds per head would be "wholly out of

¹³ Effective inoculation continued to face the problem of preserving both the O and Vi antigen components and thus was not necessarily protective against typhoid (Climie 1942; Felix 1951; Williams 1941).

the question,” he continued. The government in Palestine conceded to purchase serum for ten typhoid fever cases in 1939, at a cost of thirty pounds in total, for use in what officials described as “special” or “selected” cases.

Demographics of Life and Death

As examined in some depth in the introduction, racial-demographic anxieties were prevalent and intensified by the turn of the century among white Western imperial powers and white British dominions. Moreover, white supremacist geopolitics was a contentious topic at the 1919 Versailles Peace Conference that determined the postwar fate of Palestine and other territories. In *A Problem of Great Importance* (2013), Karl Ittmann argues that demography, also known as population science, became even more important to British colonial policy in the interwar years “as concerns mounted about the stability of imperial rule.” While colonized populations grew in some parts of the world, there was a “steep fall in British and white settler birth rates, which appeared to threaten the racial and ethnic balance of power in the empire” (1–2).

Particularly problematic were the “efforts of the colonial state to map race and ethnicity” in this process (6), which was partly done through counting and categorization. Such “recording and analyses of populations both created and measured social phenomena – whether disparities in health, differential fertility, or the status of ethnic and religious minorities ” (5). This section provides evidence of British racialized demographic anxiety regarding the higher birthrate among Palestinians, especially Muslims, in comparison to Jews, and invites us to consider healthcare austerity in Mandate Palestine in light of such concerns. It ends by examining the 1945 published report of leading demographer Frank W. Notestein on the “population problems of Palestine,” which he presented before the Anglo-American Committee in 1946 (Hourani 2005, 86).

Poor recording of vital data must be kept in mind, especially for villages and pastoral communities whose members moved seasonally for water and agricultural work. Between 1923 and 1931, for example, recorded Palestinian infant mortality, which the British estimated at “one third of total reported deaths,” “was much too low,” according to Justin McCarthy (1990, 31–32). Department of Health officials

complained until the bitter end in multiple documents of inconsistent records for births and deaths of the Palestinian population. Moreover, the colonial government recorded cause of illness or death only if it was determined by a physician and communicated to the British-appointed town medical officer. We can comfortably assume that vital numbers were most likely to be accurate for Jews given the proliferation of Zionist health and other institutions and the high use of them by Jewish people in Palestine. Zionist organizations were required to report population, health, and healthcare data to colonial offices and did so. Palestinian vital data, in contrast, were poor quality because of limited government investment.

The May 16, 1918, Public Health Ordinance No. 1, titled “Ordinance to Provide for the Registration of Births and Deaths, Vaccination, Burials, Licenses to Medical Practitioners, and Other Matters Concerning Public Health,” amplified by amendments in Public Health Ordinance No. 3 of 1920 (Bentwich 1926, 45, unnumbered footnote), was among the first acts of the British military administration in Palestine. It required “every birth” in Palestine to be notified to the “Public Health Office within fifteen days” by the “father, the mother, the midwife attending the birth, the Imam,” or “the Mukhtar of the village or quarter” (45). Deaths were required to be reported to the “Mukhtar or Imam” and the “Public Health Office” within forty-eight hours by “the head of the family” or “medical practitioner” who last attended the patient (45). The Ordinance made such registration “free of charge,” attaching a fee of P.T.1 to the issuing of a license only, and “rewarded” each notification by a *mukhtar* with P.T.1 (46). Nevertheless, the colonial government remained vexed by “under-notification” of Palestinian deaths and births throughout the Mandate to the point of seeking in 1934 to “prosecute the parents” for notifying infant deaths whose births were not recorded in the coastal town of `Acca and likely other places.¹⁴ The colonial government increased by a small amount the payment to *mukhtars* for each report of a birth or death, especially infant death, but this did not resolve the problem. It never employed staff to systematically gather and maintain such records. Registration and notification of Palestinian birth and death had political valence not only for the demography-transforming nature of the Zionist

¹⁴ GOP, Department of Health, Births, Deaths, Vaccinations and Inoculation – Regulations, 1932–1936. File location in catalog: 00071706.81.D7.1D.D5. Israel State Archives.

project but also because the data were used for budget and advancement metrics in reports produced for the London Treasury, London Colonial Office, the British Parliament, and the League of Nations Mandates Commission.

Only two censuses of Palestine were conducted during the entire Mandate. The 1922 British census was designed to enumerate “Palestine residents by religious group as the basis for proportional [notably sect-based] voting for a projected Legislative Council” that was never established (McCarthy 1990, 28). This hyperbolization of religious difference was a common European method of divisive governmentality in the colonies. In most Palestinian regions the British relied on local leaders to provide the census counts for Arabs. The weaknesses of the 1922 census included undercounting younger Palestinian women and children. The 1931 census of Palestine used similar methods, estimating “Bedouins” (pastoralists) and undercounting younger women and Muslims, who largely lived in rural areas (29–30). Selig Brodetsky, a British member of the World Zionist Executive and professor of mathematics at Leeds University, was an important member of the colonial committee that designed the 1931 census. He and other Zionist experts asserted themselves as equal to British government statisticians to assure census results did not disadvantage settler-colonial “political interests” by, for example, measuring Palestinian landlessness produced by Zionist land purchases in the previous decade (Sasson and Shamir 2020, 239, 240, 241, 242–243). No other census of Palestine was undertaken during the Mandate and all additional annual population counts *for Palestinians* were estimates.¹⁵

The British government in Palestine nevertheless produced dozens of statistical reports on population, health, mortality, disease, fertility, and morbidity based on “religion.” While the Ottomans had established religious affiliation in population registers of the *sanjak* of Jerusalem beginning in 1860, they only included citizens and differentiated between different categories of Jews, Christians, and Muslims in the city, including by regional origin if they were not Jerusalemites (Sufian 2015, 118). British authorities, in contrast, created a registration system that reduced, racialized, and essentialized religious and cultural differences, which included counting Jews in annual vital records without

¹⁵ A reviewer of the manuscript noted that this was “the situation throughout the empire in the interwar years. Several colonies canceled their 1931 censuses due to lack of funds or only took surveys.”

differentiation. British religious categorization in Department of Health tables typically relied on an "Other" category as well. Based on religious categories enumerated in the 1922 and 1931 censuses, "Other" consolidated Druze, "Metawilehs" (Shi`a), Bahais, Samaritans, Hindus, Sikhs, and "no religion" residents.¹⁶

The category of religion as a technology of colonial rule confounded Zionist with non-Zionist Jews, as well as Jewish white settlers with indigenous Jews and Jews who had migrated from Yemen and elsewhere over the decades. Such categorizations articulated "Jew" as a separate national project in legal, material, and practical terms and reinforced the divide-and-conquer logic on which the colonial and settler-colonial projects were built. Combined with the apartheid structures built by Zionist institutions in Palestine during the Mandate, these technologies consolidated the Jewish/non-Jewish divide on which Zionism is premised.

When differentials in infant mortality based on religion appeared in British health and vital reports, they were sometimes explained by cultural arguments and other times understood to be caused by poverty and lack of healthcare. A rare example of explicit prose discussing the demographic "balance" produced by high birth *and* high infant mortality rates among Palestinian Muslims, and connecting mortality levels to healthcare access, appeared in the Department of Health's *Annual Report for the Year 1931*. The author, likely George Heron or J. W. P. Harkness, commented on the high incidence of Muslim infant mortality in comparison to Jewish infant mortality, attributing the difference to "the adequate chain of [Jewish] Infant Welfare Centres" and hospital "confinements" for Jewish women giving birth in comparison to the limited number of such institutions and hospital care for Palestinian infants and mothers. The author then mentioned the differential in "natural increase of population"¹⁷ between Jews and Muslims

¹⁶ The highest numbers categorized as neither Muslim, Christian, or Jewish in the two censuses were Druze and Hindu. The number of people in these religious categories substantially differed depending on the Palestinian district because they were regionally concentrated. Hindus and Sikhs were notably all men (with exception of one woman listed in 1931), indicating they were British colonial subjects brought in as laborers. "Other" birth, illness, and infant mortality rates, then, largely referred to Palestinians of Druze religious affiliation (extracted from McCarthy 1990, appendix three).

¹⁷ In demography "natural increase" is the difference between annual births and deaths per thousand (Notestein and Jurkat 1945, 333). Immigration is a "non-natural" source of increase.

that year, describing the figure for Palestinians as “alarming in light of the apparent impossibility of providing outlet for the population which is already in a state of financial depression, and will soon be unable to feed itself. The high Moslem figure suggests that the fellaheen [peasants] are not yet feeling the pinch of hunger, but when this occurs the death rate is likely to go up and the birth-rate down.”

In a chapter focused on infant and child mortality in British colonial Egypt, Beth Baron found similar “ambivalence among colonial officials about lowering the high infant mortality rate” twenty years earlier because they were “fearful of fueling population growth.” The author of the 1910 Department of Public Health annual report explained that government efforts to address infant mortality “should be directed to avoiding any serious disturbance of the balance between the birth-rate and the death-rate.” Colonial public health investments in Egypt were mainly concerned to mitigate diseases that damaged the health of military forces and their families (Baron 2020, 199–200). British colonial governments in early twentieth-century Uganda and interwar (1925–1945) Nigeria expressed concern, in contrast, about low birth and high infant mortality rates – resulting from conquest and new labor management systems – because they threatened colonial labor needs (Summers 1991; Von Tol 2007, 114, 124, 126, 127; Lindner 2014, 210, 217). Infant mortality rates remained high in British African colonies through the 1940s (Lindner 2014, 230).

In colonial Palestine British reports often commented with trepidation on the family size of the “Arab peasant household,” especially the number of “children born per woman.” The *General Monthly Bulletin of Current Statistics* from July 1945, which relied on a study of five villages in the Ramleh area, noted the average number of persons in such households without a married child was 5.6 because of “the high fertility of the Arab family” (Waddams 1945, table 9, 434, 438). My calculations of data in table 13 of the report show that 61.9 percent of families in the five Palestinian villages studied were composed of four to eight total members. My calculations of data in table 23 indicate that Palestinian women from four age categories ranging between thirty-three and fifty-two years old averaged 7.04 pregnancies and 4.13 surviving children (445). The report’s prose amplified colonial concern with Palestinian village women’s “fertility career” of more than seven children without noting the high proportion of infant and child death. A separate item noted an infant mortality rate in villages of 35 percent

for women thirty-five years old or younger and 40 percent for women between thirty-five and fifty years old.

A few known elements of fertility the world over may be helpful for processing information on Palestine. Barring infertility or systemic use of prophylactics, number of pregnancies is negatively associated with age of marriage – the earlier a girl or woman marries, the more childbearing years and pregnancies she is likely to have. Palestinian girls and women married almost universally and did so at young ages in comparison to Jewish women in Palestine. Second, literacy and years of education are negatively associated with number of pregnancies for girls and woman because marriage is more likely to occur later and birth control methods are more likely to be used. Third, the preponderance of Christian Palestinians lived in towns and the preponderance of Muslim Palestinians lived in villages during the Mandate. Where one lived differently shaped cultural sensibilities, educational opportunities, and age of marriage – government and private elementary and secondary schools were much more available to town than to village Palestinian girls. In addition, cities and towns offered wider networks and easier access to information, pharmacies, and medical institutions.

A 1931 study of Jewish nutrition and diet in Palestine (Kligler 1931, 394) that for comparison purposes included six Arab Palestinian families *each* from a "Poor Village" (Vuzije), a "Well to do Village" (Kaabah), a "Well to do Bedouin camp" (Heb), and a "Poor Bedouin camp" (Krad) in northern Palestine offered me a serendipitous opportunity to examine fertility and family size. Table VI ("Composition of Families of the Bedouin Camps and Arab Villages") illustrated that *even in non-town settings*, Palestinian girls' and boys' age of marriage and Palestinian family size were shaped by level of wealth and type of residency and work. The poorest Arab villagers were the most likely to marry off their daughters (but not sons) before they reached fourteen years of age, and well-to-do Arab villagers were the least likely to do so. Well-to-do Palestinian village families were the largest, with an average 8.67 members per family unit ranging from 5 to 14. Poor villagers and well-to-do Bedouins averaged 6.17 members per family unit; family size ranged from 5 to 7 among poor villagers and from 4 to 10 among the well-to-do Bedouin families. Poor Bedouin families were the smallest, averaging 5.16 members in family units ranging from 3 to 7.

Colonial vital records and health reports provide comparative snapshots of fertility, illness, and death rates for the years 1927, 1931,

1939, and 1946, which I selected to span most of the Mandate period, recognizing that crude birthrates are a “blunt instrument,” to use the words of a reviewer, without other data on age distribution and marriage rates in the different groups.

A comparative table of **birthrate** by religious category for 1927 showed the highest rate, 56.09 per thousand births, among Muslim Palestinians, 50.35 among Other Palestinians, 38.92 among Christian Palestinians, and 35.08 among Jews.¹⁸ A comparative table for 1931 showed a birthrate of 60.29 per thousand among Muslim Palestinians, 51.70 among Other Palestinians, 38.96 among Christian Palestinians, and 32.66 among Jews.¹⁹ Jumping ahead to 1939 and 1946 using an eight-year (1939–1946) table broken down by religion, birthrate increased for each group when comparing 1946 with 1939, proportionally the most for Jews and the least for Christians. Among Muslim Palestinians, the birthrate went from 46.4 per thousand in 1939 to 54.2 in 1946, a 16.8 increase; among Other Palestinians from 40.9 to 47, a 14.9 percent increase; among Christian Palestinians from 31.3 to 33.3, a 6.4 percent increase; and among Jews from 23 to 29.1, a 26.5 percent increase (Table 3.1).²⁰

Muslim Palestinians had the highest **death rate** in 1927, at 33.07 per thousand, Other Palestinians at 28.19, Christian Palestinians at 20.10, and Jews at 13.45 per thousand.²¹ In 1931 Muslim Palestinians again had the highest death rate at 29.63 per thousand, Other Palestinians at 16.53, Christian Palestinians at 15.66, and Jews at 9.72 per thousand.²² The death rate among Muslim Palestinians went from 17.4 per thousand in 1939 to 15.9 per thousand in 1946, an 8.6 percent decrease; among Other Palestinians, the death rate went from 17.6 to 17, a 3.4 percent decrease; among Christian Palestinians it went from 11.5 to 9.1, a 20.87 percent decrease; and among Jews, it went from 7.6 to 6.4, a 15.78 percent decrease (Table 3.2).²³

¹⁸ *Palestine and Transjordan Administration Reports*, Vol. 2, 404.

¹⁹ *Palestine and Transjordan Administration Reports*, Vol. 3, 664.

²⁰ GOP, Department of Health, Health and Vital Statistics, Annual Reports – Annual Report for the Year 1946. File location in catalog: 00071706.81.CF.FC. FA. Israel State Archives.

²¹ *Palestine and Transjordan Administration Reports*, Vol. 2, 404.

²² *Palestine and Transjordan Administration Reports*, Vol. 3, 664.

²³ GOP, Department of Health, Health and Vital Statistics, Annual Reports – Annual Report for the Year 1946. File location in catalog: 00071706.81.CF.FC. FA. Israel State Archives.

Table 3.1 *Palestine birthrate by religious category, 1927, 1931, 1939, 1946*

(per thousand)				
Year	Muslim	Others	Christian	Jewish
1927	56.09	50.35	38.92	35.08
1931	60.29	51.7	38.96	32.66
1939	46.4	40.9	31.3	23
1946	54.2	47	33.3	29.1

Sources: *Palestine and Transjordan Administration Reports 1918–1948*, Vols. 2 and 3. Courtesy of Bilad ash-Sham Library, University of Jordan. Department of Health Annual Report for the Year 1946. Courtesy of Israel State Archives.

Table 3.2 *Palestine death rate by religious category, 1927, 1931, 1939, 1946*

(per thousand)				
Year	Muslim	Others	Christian	Jewish
1927	33.07	28.19	20.10	13.45
1931	29.63	16.53	15.66	9.72
1939	17.4	17.6	11.5	7.6
1946	15.9	17	9.1	6.4

Sources: *Palestine and Transjordan Administration Reports 1918–1948*, Vols. 2 and 3. Courtesy of Bilad ash-Sham Library, University of Jordan. Department of Health Annual Report for the Year 1946. Courtesy of Israel State Archives.

The Muslim Palestinian **infant mortality rate** in 1927 was 216.79 (6,631 deaths), the Christian Palestinian rate was 187.22 (560 deaths), the Other Palestinian rate was 153.68 (68 deaths), and the Jewish rate was 115.79 (598 deaths) per thousand births.²⁴ In 1931 the infant mortality rate was 187.55 (6,877 deaths) among Muslim Palestinians,

²⁴ *Palestine and Transjordan Administration Reports*, Vol. 2, 404.

Table 3.3 *Palestine infant mortality rate by religious category, 1927, 1931, 1939, 1946*

(per thousand)				
Year	Muslim	Others	Christian	Jewish
1927	216.79	153.68	187.22	115.79
1931	187.55	113.36	133.27	81.60
1939	121	108	101	54
1946	91	98	56	32

Sources: Palestine and Transjordan Administration Reports 1918-1948, Vols. 2 and 3. Courtesy of Bilad ash-Sham Library, University of Jordan. Department of Health Annual Report for the Year 1946. Courtesy of Israel State Archives.

133.27 (441 deaths) among Christian Palestinians, 113.36 (56 deaths) among Other Palestinians, and 81.60 (452 deaths) among Jews.²⁵ In 1939 the infant mortality rate was highest among Muslims at 121 per thousand live births, followed by Others at 108, Christians at 101, and Jews at 54. In 1946 the infant mortality rate was 98 for Others, 91 for Muslims, 56 for Christians, and 32 for Jews.²⁶ In 1946 all four groups had lower infant mortality rates in comparison to 1939, keeping in mind the problems of birth and infant death reporting for Palestinian villagers, and the lowest rate was among Jews, which fell an impressive 40.74 percent. The Christian Palestinian infant mortality rate fell by 44.55 percent in comparison to the rate in 1939, although such infants were 75 percent more likely to die than Jewish infants in 1946.

In 1922, 1924, and 1925, measles and its attached illnesses were the primary **causes of death** in Palestine (Rosenau and Wilinsky 1928, 604, 605). With a few exceptions, most deaths each year between 1927 and 1937 were caused by measles or pneumonia, according to my analysis of annual health department reports.²⁷ In 1931 influenza was the main

²⁵ *Palestine and Transjordan Administration Reports, Vol. 3, 664.*

²⁶ GOP, Department of Health, Health and Vital Statistics, Annual Reports – Annual Report for the Year 1946. File location in catalog: 00071706.81.CF.FC. FA. Israel State Archives.

²⁷ In the 1946 annual health report the colonial government continued to deem measles “the most important cause of child morbidity and mortality in Palestine, although its notification is far from regular.”

cause of illness and death by far, while typhoid was the second most prevalent disease and pneumonia was the second most likely to kill.²⁸ In 1939 the main causes of death were "diarrhea and enteritis" (1,336 deaths), followed by pneumonia (1,258 deaths), and the main infectious diseases were typhoid (1,235 cases), followed by tuberculosis (461) and dysentery (409).²⁹

In 1946 the diseases most likely to kill fell into the categories of "pneumonia and broncho-pneumonia" (1,362 people) and "diarrhea and enteritis" (1,165 people). Of the 1,362 pneumonia and broncho-pneumonia deaths, 989 (72.6 percent) were infants or children under five years and 999 (73.3 percent) were Muslim or Other Palestinians. Of diarrhea and enteritis deaths, 1,122 (96.3 percent) were infants or children under five years.³⁰ Those who died of diarrhea and enteritis were disproportionately Muslim Palestinians: 1,005 of total reported death cases from diarrhea and enteritis were Muslim or Other Palestinians (86.27 percent). Overall in 1946, of all 8,838 deaths recorded, 2,318 were infants (26.23 percent) and 3,957 were infants or children under five years (44.77 percent).

The idea of "demographic transition" became prominent in geopolitical discourse on Palestine in the 1940s and is most associated with Frank W. Notestein, a Michigan-born demographer who oversaw the founding of the Office of Population Research at Princeton University in 1936 (Coale 1983, 3, 5). In Notestein's work on "differential fertility" at the Milbank Memorial Fund between 1928 and 1936, he "foresaw, before almost anyone else," that the "large reduction in birth and death rates that had occurred in the nineteenth and early twentieth centuries in the economically and technologically more advanced countries" would also occur "if and when the less advanced areas experienced economic and technological progress" (4). He argued that attitudes and motivations were more important than

²⁸ *Palestine and Transjordan Administration Reports, Vol. 3*, 132. This report includes a table comparing 1931 and 1932 rates.

²⁹ "Vital Statistics of Palestine 1939," 3. GOP, *Vital Statistics Bulletin (Annual)*, No. 2. Office of Statistics, Jerusalem (April 1940). GOP, Office of Statistics, Report for Office of Statistics, Jerusalem: Vital Statistics. File location in catalog: 00071706.81.D3.AA.55. Israel State Archives.

³⁰ Table 10, "Deaths of Residents in Towns, Classified According to Cause, Sex and Religion, during the Year 1946." GOP, Department of Health, Health and Vital Statistics, Annual Reports – Annual Report for the Year 1946. File location in catalog: 00071706.81.CF.FC.FA. Israel State Archives.

biology or contraceptive method to procreative and birth control practices. He concluded, however, that development lags in less advanced countries combined with improved life expectancy would produce population growth that impeded “progress” (5).

Notestein was invited to testify before the Anglo-American Committee of Inquiry on Palestine, which met in the early months of 1946, and learned years later from “the attorney for the Zionists” that “his testimony had helped the Jewish leaders decide in favor of the partition of Palestine” (5).³¹ In “Population Problems of Palestine,” Notestein analyzes the demographic past and forecasts the demographic future in Palestine, using what he recognizes as poor British data, filtered through his commitment to the Malthusian theory of “carrying capacity,” whereby population density should match economic resources and development. He defines the appeal of “small family patterns” as modern and associates such cultural desires with urbanization (Notestein and Jurkat 1945, 311, 331). He argues that in Palestine, “Modern influences introduced by Western government [i.e., British colonial] and Western immigration [i.e., Zionist settler-colonialism] in the interwar period brought a substantial decline in the death rate.” At the same time, he finds a lower birthrate among largely rural Muslim Palestinians than among Jews, although it was declining in the 1940s (307, 315, 343).

Rates of “natural increase” were highest for “Moslems” and lowest for Jews in Palestine between 1922 and 1940, “a disparity increasingly favorable to Moslem growth” (335–336, 343–343). Jewish fertility could not match Palestinian fertility, Notestein found, unless immigration of Jewish women of childbearing age was continuous and indefinite (342, 344). Forecasting through 1970 (!), Notestein writes that given Palestinian Muslim age distribution, “it would be unwise to count on fewer [than 1.6 million] Moslems by 1970” (347–348). He opines in the essay that “all parties in the region have a stake in the maintenance of Jewish interest, as a means of attracting both the needed capital and skills.” Based on his Malthusian “carrying capacity”/density perspective, he writes it would be “a catastrophe of major proportions . . . if enthusiasm for a Jewish state should result in

³¹ The British Peel Commission of 1937 (Palestine Royal Commission Report), responding to the Arab Revolt, had recommended the partition of historic Palestine into an “Arab” and a “Jewish” state, with “exchanges of land and population,” divided by an internationally accessible area under British rule: <https://unispal.un.org/pdfs/Cmd5479.pdf>.

the really heavy immigration sometimes talked of" (349). Moreover, he notes "that the rigid segregation of Jews and Muslims presents difficulties if the object is to spread a Western way of life and Western fertility patterns"; among its "difficulties," segregation reduced "imitative" potential (350).

For Notestein, it was "difficult to imagine the conditions under which Jews could become and remain a majority group in Palestine" (351). He glosses further in conclusion:

Should the Jews achieve a national state, it is unlikely that in the long run it could be maintained, either as part of the region . . . or as a minority ruling group supported by outside power. Under these circumstances, the chances are great that the Jews, having made possible the development of a modern Palestine and a healthy and relatively prosperous country, would have no share in the fruits of their labors . . . The demographic and economic prospects of the region point to the need for the cooperative Jewish and Moslem development of Palestine as an integrated region – the trading and light manufacturing center of a Near East in which the process of modernization may be expected to go rapidly forward. (352)

While Notestein's demographic analysis was reportedly influential with Zionist leaders, his recommendations were not since ethnically cleansing as much of the Palestinian population as possible from the land was definitive to the establishment of Israel as a Jewish state (Pappé 2006). Racial biopolitics was clearly at the core of British colonialism and Zionist settler-colonialism in Palestine. The next section considers this matter further and explores its eugenic components using a wider historical and geographic lens.

National, Colonial, and Imperial Eugenics

In 1859 British naturalist Charles Darwin argued in *The Origin of Species by Means of Natural Selection* that all life traced to a singular biological origin and variation over generations occurred naturally by reproduction through principles of selection that facilitate adaptation and survival in different environments. "Social Darwinism," a concept whose meanings are plural, developed alongside and after Darwin's theory of evolutionary biology. It is (fairly or unfairly) most associated with nineteenth-century British inventor and philosopher Herbert Spencer, who argued against welfare interventions

by the state because they disrupted the “survival of [only] the fittest” humans (Becquemont 2011).

The term *eugenics* was coined (combining the Greek prefix *eu*, “good,” with *genesis*) in 1883 by Charles Darwin’s cousin Francis Galton “to express the science of improving stock ... to give the more suitable races or strains of blood a better chance of prevailing speedily over the less suitable” (Mukherjee 2016, 64–65). Galton’s goal was to “mimic the mechanism of natural selection,” imagining a system of “accelerating the process of refining humans via human intervention” (64, 72). On this logic, married men and women with the “best traits” from the “best families” (higher social class) would produce the “best offspring, in a manner akin to basset hounds and horses” (73). In 1909 Galton founded the *Eugenics Review*,³² “which endorsed not just selective breeding [by the strong]³³ but selective sterilization [of the weak]”³⁴ to improve “race hygiene” (76–77).

Eugenicist and social Darwinist sensibilities often came together with British economist T. R. Malthus’s late eighteenth-century theory of population. In addition to his understanding of land having a limited “carrying capacity” in its ability to grow food for promiscuous population growth, Malthus blamed the English poor for having “large families” that increased the number of laborers competing for “a limited number of jobs,” driving down wages (Ledbetter 1976, 4). One hundred years after Malthus published his work, fin de siècle worries about the racial fitness of the British poor and working classes led to the 1904 *Report of the Inter-departmental Committee on Physical Deterioration*, which, writes Richard Soloway, determined that most British children were born healthy but deteriorated from “ignorance, neglect, malnutrition, poor housing, fetid air [‘pollution of the atmosphere’], polluted water, minimal hygiene, excessive drinking, and inadequate medical care.” The report responded to long-standing anxieties that British soldiers, drawn from boys and men of the laboring classes, were of poor “quality” in terms of their physical health and anthropometric measures, which served to weaken the empire.³⁵ The 1904 report concluded that state and voluntary institutions should work on a massive

³² The journal published sixty volumes through 1968: www.ncbi.nlm.nih.gov/pmc/journals/1186/.

³³ Termed “positive eugenics.” ³⁴ Termed “negative eugenics.”

³⁵ The almost nine-hundred-page report from 1904 may be found here (accessed December 24, 2020): <https://archive.org/details/b21358916>.

scale to “preserve and improve the health of the young.” Indeed, legislation from 1906 and 1907 established feeding and medical inspection programs for schoolchildren, by 1911 Parliament passed the National Insurance Act, and the British government eventually established a welfare state (Soloway 1990, 45).

“Race degeneration” fears “chilled” members of the British elite before World War I; they were concerned about the relative strength and vitality of the white middle and upper classes. The poor and working classes, British eugenicists feared, would “produce bushels of children, dominate the gene pool, and drag the nation toward profound mediocrity” (Mukherjee 2016, 75; Soloway 1988, 370–371). By 1911 better-educated British couples were giving birth to an average of 3.4 children while “the more numerous coal miners, boiler-makers, general laborers, shipyard workers, dockers, riveters, pig iron workers, coal heavers, and scavengers” were siring an average of 6.1 children (Soloway 1990, 11). A halving of the birthrate by 1917 combined with fear of being “swamped by the socially . . . and genetically unfit” exacerbated “race suicide” discourse (xv). Birthrates actually dropped “rapidly and relentlessly virtually everywhere in Europe between 1880 and 1930,” with a later decline (by World War II) in Ireland and several countries in eastern and southern Europe (xii).

British pronatalists who campaigned for “non-selective social reform” that *overall* reduced infant mortality rates and improved health existed in “uneasy alliance” with eugenicists in the second decade of the twentieth century (Soloway 1988, 369). British eugenicist and social reformer Norah March, for example, whose name I came across in Palestine Department of Health correspondence, uses environmental rather than hereditary logic in her 1917 article “The Eugenic Aspects of National Baby Week.” She argues that factors such as “poverty, parental intemperance, poor housing, inefficient mothercraft, defective sanitation” and so on “form a vicious cycle, very complex in its balance, of detrimental influence” (March 1917, 102). The “State” should have an interest in the preservation of life, a matter made more urgent by the massive loss of British soldiers in World War I, she insists. Infant and child mortality rates were too high, as was the rate of miscarriage and the number of “seriously defective children” born that way because of malnutrition, disease, and infection produced by congested housing in British industrial cities (97, 98, 102, 103). These problems were preventable with proper “ante-natal supervision” (96) and the establishment of social

policies such as pensions to support single mothers (104). The hereditary school of eugenicists continued to argue, in contrast, that the high infant mortality rate in England was not a problem because the weak were dying.³⁶ March was appealing to them when she explains that while National Baby Week embraces the needs of all British babies and mothers, “the ultimate benefit will tend to gravitate eugenically”: “The most intelligent parents will be those most likely to avail themselves of facilities offered for their help, and the most intelligent – particularly of the mothers – be most likely to put into effective practice the teaching given them. Thus, their children will tend to survive” (107).

As the birth control movement became more successful and birth control technologies became more effective in interwar Britain, gender was brought to “the center of the debate about population and empire,” drawing on a tradition of “imperial feminism” that proclaimed “shared bonds” among women worldwide (Ittmann 2013, 38–39, 64). This feminism “coexisted with ideas about race and culture that portrayed non-European women as backward and in need of aid from their more advanced British sisters,” especially as “victims of colonial men.” Some imperial feminists saw colonized women as also punished by “poverty and poor health,” and partly blamed the situation on colonial rule, distinguishing themselves from “the patriarchal and paternalistic attitudes of the population movement, especially eugenicists” (40, 41, 46).

The ideological scaffolding of eugenics developed in the metropolises of Western colonialism, imperialism, and racism. Galton wrote that his sense of human hierarchy was strengthened by his visits to the Sudan and Egypt in the summer of 1844: “I saw enough of savage races to give me material to think about all the rest of my life” (quoted in Mukherjee 2016, 65). “Race” and “racial difference” were even more explicit in “the new imperial eugenics and the broader population movements” that emerged after World War I (Ittmann 2013, 32). Harkening to long-standing racialized demographic anxieties, British elites were especially concerned with the implications of differential world fertility rates for maintaining imperial power (32–33, 16, 37).³⁷

³⁶ “National Baby Week Council” London meeting notes in *The Lancet*, November 5, 1921, 979.

³⁷ One of the most extreme forms of interwar British scientific racism, studied by Chloe Campbell, was developed by settler-colonial psychiatrists and

As "class differentials in fertility" lessened in Britain and were "coupled with fears of depopulation," Ittman writes, concerns shifted to "the overall health and size of the [white] population," as well as its "quality" at home and in white dominions, although this school of thought "competed with environmental arguments and proposals for improved conditions" (32, 36). Given "expanding populations in Asia and elsewhere," British eugenicist activists in the interwar period promoted birth control for non-Europeans in the colonies (18). The goal was to find "a simple and cheap contraceptive that would be suitable for both colonial peoples and poor whites, who were thought to present similar problems of ignorance and improvidence" (37, 36).

Among *geneticists*, a substantive shift away from eugenics was facilitated by their increased recognition based on scientific research that:

inheritance . . . is polygenic, involving a multiplicity of genes combining in an infinite variety of unpredictable ways and interacting with environmental factors so as to muddle further the controversial relationship between nature and nurture. Not only were thoughtful eugenicists increasingly uncertain about what to breed for, or even able to agree on the relative racial value of the characteristics they wanted reproduced, but the more the most advanced students of human heredity learned about the complexity of their subject, the more doubtful they became about predicting with any accuracy the outcome of selective reproduction. (Soloway 1990, 659–660)

Nevertheless, in the decades after World War II, US and British eugenics movement leaders shifted to a "crypto-eugenics" program – that is, a focus on birth control and immigration restrictions targeting *racialized* populations, showing the degree to which racial supremacy inflects even modern forms of imperialism and capitalism; British eugenicists generally remained committed to Galtonian principles, however (Ramsden 2009, 861, 875n19; Schenk and Parkes 1968, 154–155). Eugenics in Britain was a "social ideology with eclectic appeal that cut more widely across the social and political spectrum than has been appreciated" (Soloway 1988, 370, 371).

Before exploring eugenics in Zionist settler-colonial health projects in Palestine I discuss nineteenth- and early twentieth-century European

dermatologists in 1930s Kenya who were determined to "prove" the hereditary failings of Africans. They studied Kenyan patients in mental health institutions and prisons in collaboration with eugenicist colleagues in London to "fortify the ideology of imperialism" (Campbell 2007, 3, 6, 7, 26).

and US eugenic discourses in relation to Jews by engaging with Mitchell Hart's *The Healthy Jew: The Symbiosis of Judaism and Modern Medicine* (2007). Hart attests to "the power that science, including racial, evolutionary, and eugenics-based science, possessed for Jews and non-Jews alike" (118). The Jewish and non-Jewish theologians, physicians, and scientists whose writings Hart examines deployed Social Darwinism and eugenics in multiple, partial, and inconsistent ways in relation to Jews. They combined hereditary, environmental, and personal agency to explain "aspects of Jewish history and Jewish collective behavior and traits" (106). Studying their popular and academic writings from the nineteenth century, Hart makes the case for two underestimated and understudied eugenic strands regarding Jewishness. The first position, held by "Gentiles" and "a significant proportion of Jewish elites" in the nineteenth century, promoted Jewish emancipation and integration into European societies in order to "free the Jews of the negative influences of both rabbinism and Christian oppression," a "transcendence" they believed "would produce a healthy Jew" (3–4). The second position, "rendered through the prism of Darwinism," held that "the historical experience of isolation and oppression, suffering, violence and death could be seen to act as a natural selection process, removing the weak and leaving a stronger, more vital Jewish people" (6, 11).

Both strands responded to nineteenth-century medical, racial, and nationalist anti-Semitic ideologies that constructed Jews "as essentially different from and dangerous to civilization and culture," using images and language that pathologized them as diseased "in body and soul." Jewish elites were especially likely to internalize and reproduce such understandings, and sought to "reform and regenerate Jewry" (7, 3). An "effort to represent Judaism and Jewry as healthy, and linked in multiple ways to the history of western medicine and science," was an alternative "response to a medicalized and racialized anti-Semitism" (7). This Jewish literature, which Hart terms "apologetic," celebrated Jewish "racial hygiene" and hygienic principles and traced such projects back to "the ancient Jewish authorities – the patriarchs, Moses, and the rabbis" (10, 106). These biblical figures, the authors Hart studied maintained, were "racial hygienists" and "sex hygienists" concerned with "judicious selective mating" and "intelligent antenatal and postnatal care." Jews, they argued, were a "virile race" because they survived "persecution and physical as well as mental stress."

William Feldman, a lecturer in hygiene and pediatric physiology in London, went further, stating that Judaism permits the sterilization of a woman "if she is likely to bear children who are going to be tainted with physical or mental disease" (107, 108, 109, 112–123).

This apologetic school of thought claimed that European Jews were more committed than their "Aryan" compatriots to marriage, motherhood, and breastfeeding, and had lower infant mortality rates as a result (135, 141). On this logic, "Jews had been healthy and civilized since long ago," well before European and US societies, and Western civilization owes its existence to such Jewish ethics and practices (10). These findings support Hart's contention that "narratives of medicine, of health, and of hygiene were always also about civilization. Where did it originate? Who contributed to it? Who is capable of shaping and being shaped by it? Who, today, upholds its standards, embodies its ideals?" (34).

Eugenicist impulses of the biological and environmental varieties were important to the Zionist settler-colonial movement from the late nineteenth century, as Nadia Abu El-Haj explores in *The Genealogical Science: The Search for Jewish Origins and the Politics of Epistemology* (2012) and Israeli geneticist Raphael Falk examines in some depth in *Zionism and the Biology of the Jews* (2017), a book whose initial Hebrew version was published in 2006. Abu El-Haj examines the writings of late nineteenth-century and twentieth-century Jewish physicians and social scientists in the United States and Europe who studied "disease and pathology . . . within the parameters of the scientific study of race." These scientists were invested in the idea of Jewish "biological difference" in light of their commitments "to improving the status and health of Jewish communities in the diaspora and/or realizing the nationalist cause" (Abu El-Haj 2012, 15–16). Falk contends that "Jewish identity became 'biological' only in the last decades of the nineteenth century," as essentialist arguments were used to rationalize discrimination against Jews (Falk 2017, xi, 4–5). By the "end of the [nineteenth] century . . . Zionists-to-be stressed that Jews were not merely members of a cultural or a religious entity, but an integral biological entity," thereby adopting a "Blood and Soil" notion common in central Europe (4–5, 49–50). Within this frame, "national variation is founded on racial differences" (Nathan Birnbaum quoted in Falk 2017, 50; also 52, 57–58). Community "self-studies" by Jewish intellectuals served as "biological projects of Jewish self-fashioning"

preoccupied with establishing and bolstering origin stories of Jewish coherence and relatedness in relation to Palestine (Abu El-Haj 2012, 5, 14).

Postulating Jewish biological coherence and difference came to be connected by the turn of the century with the strains of Zionist ideology that advocated for and established Jewish settler-colonialism in Palestine, even as other Jewish scholars “made enormous efforts to deny any racial or national distinctness of Jews” (Falk 2017, 29–30; Abu El-Haj 2012, 18). The definition of Jewishness as a racial category was integral to affirming a biological distinction “between Jew and Arab in the Israeli imagination” (Abu El-Haj 2012, 19). After 1948, argues Falk, “genetics, it was hoped, would uphold not only the historical evidence [of Jewish diasporic connection to Zion], but would also provide biological evidence” that dispersed Jewish groups “are indeed one people whose roots trace back to Eretz-Israel” (Falk 2017, 3).

As scholars of Palestine know all too well, Zionist intellectuals in the late nineteenth and early twentieth centuries widely pitched Jewish settler-colonialism as an opportunity to undertake Jewish regeneration while building a Jewish state. Abu El-Haj contends that the Jewish intellectuals she studied embraced a “Lamarckian perspective on the inheritance of racial traits” with the aim of resolving the perceived problem of Jewish “degeneration,” which they explained to be the “consequence of historical and environmental circumstances.”³⁸ European Zionist and physician Max Nordau (1849–1923), Falk writes, was an “avid supporter” of Social Darwinism and convinced by biological rather than anthropological explanations for culture. He believed in “neo-Lamarckian evolution,” or that characteristics could be inherited or reshaped relatively quickly (Falk 2017, 57–59). Informed by German nationalism, Nordau was deeply concerned about “degeneration” based on poverty, nonnormative sexuality, and the social transformations produced by capitalism,

³⁸ French naturalist Jean-Baptiste Lamarck (1744–1829), who began his career as a botanist and became an expert on invertebrates, developed an evolutionary theory that organisms that change their behaviors to adapt to shifts in their environment during their lifetimes end up using a “given structure or organ” more or less, changing its size and significance and passing such changes onto offspring. “Jean-Baptiste Lamarck (1744–1829),” University of California Berkeley, Museum of Paleontology: <https://ucmp.berkeley.edu/history/lamarck.html>. “Early Concepts of Evolution: Jean Baptiste Lamarck,” University of California Berkeley, Understanding Evolution: https://evolution.berkeley.edu/volibrary/article/history_09; Mukherjee 2016 (399, 400–401).

especially Jewish biological degeneration resulting from living as a “persecuted community” in European contexts (58–59). For Zionists such as Nordau, only “reconnecting with the soil” in Palestine “would rejuvenate the Jewish race” (Abu El-Haj 2012, 49, 68; Falk 2017, 59 and 62–63 on Zeev Jabotinsky). These activists:

aimed to cultivate a “new Hebrew” who would be radically different – biologically and not just culturally – from the “diaspora Jews.” And they took the biological piece of that regeneration seriously: the Jewish *body* had to be rejuvenated; Jewish degeneration had to be countered, even as who it was who qualified as the most degenerate Jew would shift over time. (Abu El-Haj 2012, 67)

While the Zionist movement primarily lobbied for and facilitated Jewish immigration to a land populated by people they aimed to remove, displace, and contain using every means at their disposal, its activists and workers were also concerned to reshape especially European Jewish bodies and psyches to fortify a Jewish settler-colonial body politic in Palestine. For the Zionist “pioneers who settled Palestine,” an essential goal was “revival” of “the physical health of the younger generation and that of future generations.” From the 1920s Zionist leaders, “primarily the physicians and the educators among them, emphasized the eugenic aspects of their responsibility to improve the hygiene of the race,” which included “the need to control the immigration of persons with hereditary and other diseases” through the 1930s and 1940s (Falk 2017, 12).³⁹

The Hadassah Medical Organization was established in Palestine by Jewish public health nurses from cities that included Baltimore and New York. These Zionist medical professionals were socialized in the eugenicist orientations of their times and places. Hadassah’s Nathan and Lina Straus Health Centre in Jerusalem was the engine of the annual Palestine-wide Health Week festivals discussed in Chapter 1. Health Week curriculums illustrated the centrality of Zionist environmental eugenics, even as investments in healthcare and health education were also motivated by the salutary goals of improving Jewish health and wellbeing. The May 1933 “Programme for Health Week” was typical

³⁹ I am not concerned with determining genetic or biological bases of belonging, or the “Who is a Jew?” debate (Kahn 2013). Research by geneticists undermines biological bases for “natural” belonging and exclusion, I am not a geneticist, and the debate is ideologically saturated given its political stakes.

of this complex and labor-intensive occasion and demonstrates a Lamarckian approach oriented to fulfilling Zionist settler-colonial aims.

Harkening to similar public hygiene events in Western and colonial settings in the twentieth century, Health Week exhibits included “welfare stations” where experts examined infants between 10 and 15 months and awarded “prizes to mothers rearing their babies best.” Hygiene was the focus of lectures and visual presentations as well, which among other things instructed mothers to schedule the feeding of infants and “the necessity of giving water between feedings.” The curriculum encouraged reproductive “maxims,” many of biblical provenance revised to serve Zionist purposes, although the translations from Hebrew were occasionally awkward: “1. Children are the treasure and property of the nation.” “8. Blessed is the man who filled his yard of them,” presumably referring to Psalm 127:5, which blesses men whose “quivers” are full of children when enemies are at the gate. “9. Your sons are as the seedlings of olive around your table,” referring to Psalm 128:3. “10. Healthy children are the elements of a healthy nation” (Figure 3.1).

There is no doubt that health activists viewed their work as an important element in a Jewish demographic competition with Palestinians over racial-national fitness as reflected in comparative birthrates and maternal and infant mortality rates. The 1933 “Child Hygiene Exhibit” in the Straus Centre included “charts” that compared Jewish and non-Jewish infant mortality “curves,” Jewish and non-Jewish births, and Jewish and non-Jewish “maternal mortality” over the previous ten years.⁴⁰ The next section examines mothercraft and breastfeeding pedagogical discourse to further substantiate my point that transnational racialized demographic concerns were relevant to Zionist health projects in Mandate Palestine.

Mothers and Their Milk As Transnational Eugenic Concerns

Concerns about infant mortality in the nineteenth and twentieth centuries were linked to class and racial anxieties in metropolitan and colonial settings, and were invariably worked out on women’s bodies

⁴⁰ GOP, Department of Health, Hygiene – Health Propaganda – Nathan and Lina Straus Health Centre, Jerusalem. January 1933–December 1937. File location in catalog: 00071706.81.D0.97.44. Israel State Archives.

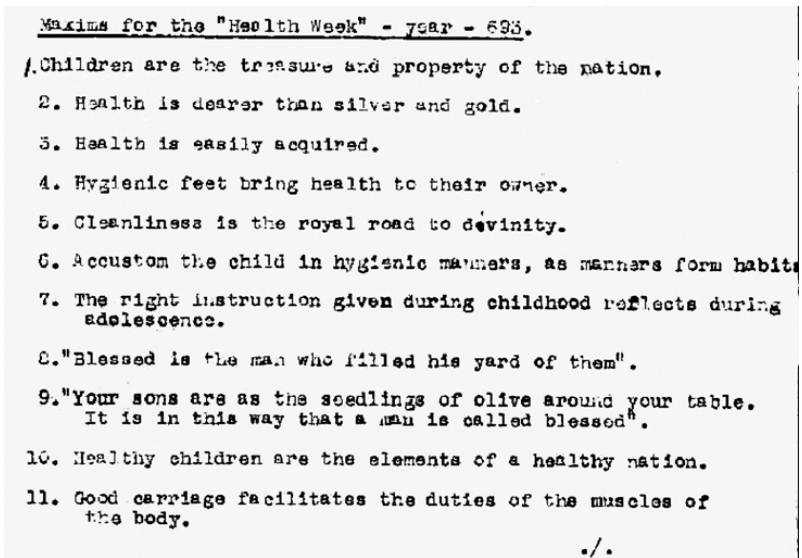


Figure 3.1 First eleven "maxims" from "Programme for Health Week, 693," Nathan and Lina Straus Health Centre, Hadassah Medical Organization (translated into English for British authorities). Hygiene – Health Propaganda – Nathan and Lina Straus Health Centre, Jerusalem. January 1933 to December 1937. Courtesy of Israel State Archives. I am grateful to Eeyi Oon for technical assistance that significantly improved the legibility of the clip.

and sexual and mothering practices, as indicated by Hadassah Health Week curricula in Palestine. Mothering, as well as human, cow, powdered, and "tinned" milk, made repeated appearances in British colonial and Zionist archival discussions of health and hygiene during the Mandate. These transnational projects were eugenicist insofar as they were concerned to reduce infant mortality rates and improve the health of only some children.

The National Baby Week Council in London, whose secretary for many years was eugenicist Norah H. March, discussed earlier, repeatedly wrote to the director of the Department of Health in Palestine from 1926 through 1938 begging for their participation in the "Imperial Baby Week Challenge Shield."⁴¹ While the reigning British director of

⁴¹ March authored the book *Towards Racial Health: A Handbook on the Training of Boys and Girls, Parents, Teachers & Social Workers* (1919), which argued

health dutifully distributed the brochure and application to medical officers each year throughout Palestine, including to the Hadassah Medical Organization and the American Colony Aid Association, no infant welfare centre or clinic ever agreed to participate, as far as I could tell. Many health officials who received the request wrote back to the Department of Health in Jerusalem that they lacked staff resources and doubted “people here would really appreciate such a competition.” In a 1933 handwritten note, Vena Rogers obliquely communicated the problem at least for the Palestinian subject population: “I do not think Jerusalem with its mixed population – particularly its Moslem section – ready for a public demonstration in the above,” predictably suggesting that a midwifery demonstration would be more useful.⁴² Muslim or not, most Palestinians would have considered showing off children in public displays to make them vulnerable to illness and death.

Baby week competitions, “largely a propaganda effort” focused on “the needs of child life and maternal well-being” (March 1917, 101), began in English towns before World War I. The first *national* Baby Week in 1917 was cosponsored by ninety British pronatalist and eugenicist organizations, although individuals in the latter groups were against “indiscriminate” welfare activity that encouraged the health and reproduction of the lower classes (Soloway 1988, 373). Colonial officials encouraged the competitions as inexpensive health propaganda in Lagos, Nigeria, in the early 1920s. The Lagos Baby Week festival included displays of housing deemed fit and unfit, posters illustrating appropriate antenatal and birthing conditions and practices, talks against “native superstitions and practices,” and a “Baby Show” for the healthiest infants and children in three age categories up to five years old.⁴³ The 1920s (and even earlier) saw the development of

for eugenic sex and parenthood instruction for children and advocated barrier contraception by women as a “social hygiene” tool against venereal disease given the promiscuity of men (4, 6). The text aimed to instill in children self-control and “a keen sense of racial responsibility” to avoid “race decay” (7).

⁴² GOP, Department of Health, Infant Welfare – Imperial Baby Week. File location in catalog: 00071706.81.D1.32.BA. Israel State Archive.

⁴³ In Lagos, Baby Week included no “regular follow-up treatment” if infants were treated for an illness and was not attached to the development of substantial services. The “best babies,” evaluated by white Europeans, were “well-fed toddlers in European baby clothes” (Lindner 2014, 222–223; Von Tol 2007, 113).

similar competitions at US agricultural fairs, where "the public encountered Better Babies Contests, in which children, often as young as one or two years old, were proudly displayed on tables and pedestals, like dogs or cattle, as physicians, psychiatrists, dentists, and nurses in white coats examined their eyes and teeth, prodded their skin, and measured heights, skull sizes, and temperaments to select the healthiest and fittest variants" as winners (Mukherjee 2016, 84–85).

Tracing the genealogy of promotional materials for films advocating breastfeeding in Palestine Department of Health folders took me to a leading public health advocate and eugenicist, physician John N. Hurty, who was the secretary of the Indiana State Board of Health from 1896 to 1922 and "an outspoken supporter of the sterilization and marriage laws" (Stern 2002, 746; Reilly 2015). In 1931 the National Motion Pictures Company, an Indianapolis corporation that produced and distributed "Educational Motion Picture Films," as well as "slides and machines," promoted to the director of the Department of Health two films on the benefits of breastfeeding over artificial feeding. One of them, *The Long vs. The Short Haul or Mother's Milk Best for Baby*, was produced in collaboration with Hurty.⁴⁴ These materials cultivated mothering that reduced white infant mortality rates and increased "racial" fitness.

Debates regarding "natural" versus "artificial" feeding, timed feeding, and the weaning of babies in Palestine were most relevant to Zionist health practitioners in their work with Jewish women, infants, and children, which was guided by the logic of improving the racial fitness of the Jewish "nation." I ventured into colonial and settler-colonial discourse on mothering by startling references to massage of women's breasts in letters dated May 31, 1925, and September 21, 1926, from Hadassah's Bertha Landesman (then the chief nurse) in Jerusalem to, respectively, Mabel Liddiard, a nurse midwife who was the matron of the Mothercraft Training Society in London (which applied Truby King's methods), and Truby King, the director of child

⁴⁴ The film brochure warned that "Over 1,500 Babies Die Annually of Summer Diarrhea in Indiana | When Baby Has Diarrhea Take No Chances But Send for Doctor." The synopsis for the second film, *The Best-Fed Baby*, included a mother telling another that "the breast-fed baby has four times the chance to live than the artificially-fed baby has and that the problem of nursing her baby lies largely in her hands." GOP, Department of Health, Health and Hygiene – Health Educational Films, January 1931–January 1933. File location: 00071706.81.D0.97.42. Israel State Archives.

welfare in Wellington and the founder of the Plunket Society of New Zealand.⁴⁵

A series of letters between Landesman and Liddiard from May to June 1925 followed a visit by Landesman to the Mothercraft Training Society in December of the previous year. Landesman asked Liddiard whether “massage of the breast” was King’s “special method” and sought information about nurse midwife training expectations in London. Landesman explained that only “the Plunket Centre” followed “Sir Truby King’s method of feeding” in Palestine. A branch of the Plunket Society was indeed established in Tel Aviv (Burdon 1945, 49) and apparently more than one existed. The branches were affiliated with the British Zionist women’s organization, WIZO, and funded by Jewish women in Dunedin, New Zealand, “with the aim of introducing and supporting Plunket societies in Palestine” (Baumberg 1998, 53). The white settler men and women who organized Plunket committees in New Zealand hoped to improve “racial fitness” and increase “demographic advantage” against the “Asian hordes,” who they feared would rise up against the British Empire (Olssen 1981, 10).

Liddiard responded to Landesman that “massage of the breasts” “has been used since the beginning of the Plunket system,” and insisted that Palestine was not dramatically different from other parts of the world in terms of successful applicability of King’s methods.⁴⁶ In a letter from Landesman to King the following year, a subsection titled BREAST MASSAGE began:

May I ask, whether this is your special method and whether you believe this is the old method of producing milk. There is of course great differences of opinions among the doctors with regard to the methods. In New York City, where I conducted the Infant Welfare work for the Health Department, breast massage was not recommended. Proper diet, proper hygiene, and living conditions for the mother, expression of the milks, (emptying of the breasts) recommended etc. Our doctors here in Palestine do not recommend breast massage, except in perhaps very specific cases of a primipara, with undeveloped milk glands.

⁴⁵ The Society for Promoting the Health of Women and Children was renamed for the British governor-general of New Zealand and his wife, Lord and Lady Plunket, when they became its patrons (Olssen 1981, 7–8).

⁴⁶ May 31, 1925, letter from Landesman to Liddiard in London and June 11, 1925, letter from Liddiard to Landesman in Jerusalem. Central Zionist Archives 1925, Folder J113/6738.

Landesman continued that Hadassah nurses in Palestine followed the "system" of the German settler "Dr. [Benno] Gruenfelder," including in how to prepare nonhuman milk to feed infants. She elaborated: "In Palestine there is not a single doctor who is specially trained in the Plunket method of feedings" and the climate was less temperate and housing more overcrowded than in New Zealand. She proudly listed the decreasing annual Jewish infant mortality rate in Jerusalem: 151 per thousand births in 1922, 141 per thousand in 1923, and 137 per thousand in 1924.⁴⁷

Research and writing on breastfeeding versus bottle-feeding in relation to infant mortality was incubated in the late nineteenth and early twentieth centuries. King wrote the widely read and multiply reprinted pedagogical texts *Feeding and Care of Baby* (1913)⁴⁸ and *Natural Feeding of Infants* (1918). With the increasing "acceptance of germ theory," King was part of a turn-of-the-century reorienting of physicians' focus from the "environment" to "humans as agents of disease" (Beattie 2011, 297; Burdon 1945). King believed motherhood is learned and mothers should be responsible for regulating and managing children's feeding, sleeping, clothing, discharge of bodily waste, and stimulation for the "sake of permanent health and happiness" (King 1913, 122, 123; Liddiard 1925, 146–147). In addition to the Plunket Society in New Zealand, King established the Mothercraft Training Society and was the medical director of the Babies of the Empire Society, both in London.⁴⁹ He interacted with health researchers and practitioners working to reduce white infant mortality and increase fertility among white middle and upper-class women in late nineteenth- and early twentieth-century Germany, France, Austria, Hungary, and the United States, as well as British sites of white colonial settlement (King 1918, 10–25).

⁴⁷ September 21, 1926, letter to Dr. Truby King. Central Zionist Archives 1925, Folder J113/6738.

⁴⁸ The manual I read was reprinted seventeen times through 1928 by MacMillan and Company, and listed publishing offices in London, Bombay, Calcutta, Madras, Melbourne, New York, Boston, Chicago, Dallas, San Francisco, and Toronto.

⁴⁹ James Beattie argues that Scottish-educated physicians (at Edinburgh and Glasgow universities) played important roles in developing "imperial science" for the "rational and systematic exploitation of colonial resources" in New Zealand and elsewhere (Beattie 2011, 281–282).

Pedagogical material in the mothercraft genre insisted that “Mother’s milk” is a “birthright” for the infant and a “maternal duty” for the first nine to twelve months, but must be timed to avoid overfeeding and digestive problems (King 1913, 10, 11, 30; King 1918, 9, 10, 18–20; Liddiard 1925, 50–51). King minutely instructed girls and women on how to prepare and tend to their bodies during pregnancy and afterward through healthy diet, exercise, sufficient sleep, cleanliness, “regular solicitation of bowels,” and avoiding alcohol and overeating. Women were told how to undertake “hygiene” of their breasts using cold and hot sponging baths and massage during pregnancy and nursing (King 1913, 6–7, 8, 9, 11; King 1918, 12; Liddiard 1925, 10). King was against unnecessary education for girls, as well as women’s employment, to assure their physical and mental orientation toward maternity and domesticity (Olssen 1981, 15–19). His concern was to stem white racial and national “deterioration” and gendered forms of “social disorder” (4, 6).

In the wake of World War I, a substantial circle of eugenicist pediatricians, obstetricians, and nurse matrons linked breastfeeding to “the need for a strong and sturdy population for a nation that is to survive in the struggle for existence, and especially for a nation like ours with all its daughter-nations [white British colonies] calling for children of the parent-stock” (Fairbairn quoted in King 1918, 5). The copyright page of *Feeding and Care* (1913) emphasizes that King’s concerns were for more and “fitter” white babies, with illustrative images of light-skinned mothers, nurses, and babies. The final section is unambiguously titled “Parenthood and Race Culture,” and drew on quotes from “Dr. C. W. Saleeby” (1878–1940), a widely followed British eugenicist whose last name indicates the Christian Arab origins of his father (Elias Saleeby).⁵⁰ King discussed the importance of “MOTHERHOOD,” not only “inheritance,” for determining “the character of the individual,” since babies only have “potentialities” even in the “most perfect system

⁵⁰ Saleeby, a “charter member of the Eugenics Education Society,” became annoyed with colleagues in the “better-dead” school of “class eugenics” who “condemned the infant and maternal welfare movement for interfering in natural selection” (Soloway 1988, 372). He was “aware of the importance of prenatal care in reducing the high rates of miscarriage, stillbirth and infant mortality,” which “cost the nation millions of potential [male] recruits who were now desperately needed” for the war, but made little headway influencing his colleagues (379, 380). After 1918, he “withdrew from the [Eugenics Education] Society’s affairs” (382).

of selection of the finest and highest individuals for parenthood" (King 1913, 152). To secure "nations" required not only guns, "but also the man behind the gun, and he is mainly the resultant of the grit and self-sacrifice of his mother. If we lack noble mothers we lack the first element of racial success and national greatness," which depended on white women breastfeeding (King 1913, 153). Indeed, King opposed "Chinese wet-nursing, or bottle-feeding" of white infants in colonial Hong Kong unless absolutely necessary because breast milk was understood to shape character (156).⁵¹

In *Natural Feeding of Infants* (1918), a shorter manual published five years later, King drew on research on breastfeeding in Germany "by the leading authorities" whose goal was "to fight the death rate of infants in the German Empire" (14–15, 17), which from 1871 to 1918 spanned much of central and eastern Europe. He again linked breastfeeding with baby health: "The death rate among artificially fed babies is seven times as great as among those who are breast-fed" (17). The eugenicist impulses were clear in his conclusion, which warned about "race suicide" by drawing on recently published US "Birth Statistics Reports" that found "native born Americans contributed at the rate of only about 16 births per 1,000, whereas the immigrant population shows over 40 per 1,000" (32). King stressed: "In all civilized countries a smaller and smaller percentage of new population is being derived from the best sources, and from quarters where there would be ample to provide for larger families if they were desired" (32).

Manuals repeatedly discussed the necessity of nursing a baby and food, housing, and regular healthcare for pregnant women, new mothers, infants, and children. Research and pedagogical manuals on mothercraft were attached to policies when it came to the mothers and children eugenicists considered worthy. In comparison, while Palestinian women widely breastfed their children and neighbors'

⁵¹ Ranjana Saha's work (2017) on breastfeeding, milk, and race in late nineteenth-century and early twentieth-century British colonial Bengal finds similar white racial anxieties as *memsahibs* (white colonial women in India) turned to native wet nurses, since their breast milk was deemed to impinge on the shape of "British character" (149–150). She shows, in turn, how the most popular early twentieth-century childcare manual in Bengal, written by nationalist Bengali physician Sundarimohan Das and published in nine editions, was influenced by King's lectures and writings combined with "Ayurvedic sources" (155–156). The Bengali middle-class nationalist project "championed motherhood" and lactation as a defense against "disease and colonialism" (155, 151).

children as necessary, British and Zionist experts often judged them as dirty and ignorant for nursing on demand or beyond a child's infancy. As in other colonial contexts, Palestinian girls and women received lectures and judgments but little to no resources and care for themselves and their children.



It is widely accepted that Zionist settler-colonialism was and is a demographic project oriented to displacing the native Palestinian population. British colonial interests in Palestine, by comparison, are largely understood to have been demographic only to the degree they facilitated Jewish immigration to Palestine. This chapter shows corollaries between British and Zionist demographic priorities in Mandate Palestine as well as the importance of eugenics to both projects. It further builds the argument that British healthcare austerity *toward Palestinians* was underlined by racialized calculations that balanced birth against death rates. Despite their variety, eugenics projects evaluated some human life as more valuable “to the state, the nation, the race, future generations – than other human life” (Levine and Bashford 2010, 3–4). The next chapter shifts the focus of the book to *the desire not to reproduce*. It examines religious (Islamic, Jewish, and Christian) legal traditions, as well as Ottoman, British colonial, Israeli, Jordanian, and Palestinian National Authority laws on birth control. If law is diagnostic of social practices, the chapter shows that anti-reproductive desire was always a prominent yet vexed matter for elites and regular people, including Palestinians.