Urbanization in Morocco by the 19th century offered functions which served the purpose of stimulating the economy, protecting the citizens, and separation. One such separation in many of the larger cities in Morocco was the mellah, which separated the Moroccan Jews from the Arabs. While this functioned originally as a means of protection centuries earlier, shifting attitudes towards the Jews changed the function of the mellah as a means of controlling and dominating the Jews, resulting in oppression and neglect. This oppression and neglect caused for the mellah to introduce poverty, over-crowdedness, and health outcomes which were devastating to the Jewish population. This paper will explore the mellah of Marrakesh, while observing models of other mellahs, and how by the end of the 19th century and into the 20th century, the urban foundations of the mellah caused for frequent epidemics of cholera, typhus and smallpox and the responses to these health outcomes on both a local and a global level.

The creation of the mellah started in Fes in the 15th century under the rule of the Marinid dynasty. Next to Fes was a section built in the first half of the 14th century allocated to Christian militia, known as the Hims. By 1438, the Jews were driven out of Fes and were required to reside in the Hims, which later transitioned to be known as the mellah, after the Arabic word "melh", meaning salt because of the salt in the ground. The purpose of this shift was to protect the Jews from attacks from intolerant Arabs. The sultan recognized that the Jews in Morocco played a vital role to the economy, and that continuous attacks against the Jews could lead to problems that would cause economic collapse. Unlike the ghettos in Europe which subjugated the Jews, Morocco, under the Islamic pact of tolerance called "dhimma", recognized the Jews as citizens and desired for there to be balance which was achieved through separation.

Like the mellah of Fes, the mellah of Marrakesh had similar origins with the intentions of balance and protection. In the 16th century, the sultan had ordered that a mellah be created for the Jews on an area that used to be his personal stables, surrounded by gates known as kasbah walls which were guarded and taxed by people appointed by the sultan. The mellah of Marrakesh was designed to occupy a few thousand inhabitants. The dwellings were large, with the intentions of
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housing single families with up to about ten people and the streets were narrow and led to many col du sacs for the purpose of protection against invasion.

By the mid-16th century, attitudes towards the Jews had completely shifted, and rather than the government recognizing how vital the Jews were towards the economy, the Jews were recognized as the minority in Morocco. When the attitude towards the Jews shifted, the role of the mellah changed from being a safeguard for the Jews to a means of isolating them and controlling them. The guards appointed by the sultan originally for the purpose of protection shifted towards overseeing how often and when the Jews were allowed to walk outside the kasbah walls. Moroccan urbanization began creating various, unconnected spaces that minimized human flow and interaction.

On a whole, the population of the Jews in Marrakesh was constantly rising, and between the years of 1875 and 1900, the population doubled from seven or eight thousand to fourteen or fifteen thousand, creating an overcrowded environment. As aforementioned, the mellah was built in the 16th century to contain a few thousand in habitants, and by the 18th century, Jews were forbidden to own land and live outside the mellah and the government was unwilling to significantly expand the foundation, which caused the overcrowding. Young marriages and the practice of polygamy in the mellah of Marrakesh resulted in high birth rates. Because of the high birth rate, the overcrowding, and the small urban space that the mellah offered, frequent epidemics of cholera, typhus, and smallpox broke out, killing people, mostly children, in very high numbers. On an expedition in 1902 of the French traveler Eugene Aubin, he explains that in the mellah of Marrakesh, there were only 600 dwellings which were narrow and did not allow for enough air or light to flow through. Of the 600 dwellings that were built to house single families originally in the 16th century, only about 100 of the dwellings had single families residing in them in the early 20th century, while the rest of the houses on average housed eight to ten families, with up to 60 people living in one dwelling. Epidemic outbreaks were easily spread throughout families because of these close quarters with poor ventilation. In the summer of 1888, 1,600 people died from a cholera outbreak and in 1899, 2,500 children died from a smallpox outbreak.

The foundation of the mellah of Marrakesh is one of the most important factors when addressing the health outcomes, but is not the sole reason for frequent epidemics. Mass poverty amongst Jews, along with the devastations that poverty brings, can be considered the second most important factor when addressing frequent epidemics and health concerns amongst the Jews. Between the years of 1878 and 1884, Morocco was overcome by "The Great Famine," which devastated the Jewish quarters more than the Muslim quarters. Following "The Great Famine" was fifteen years of on and off drought, which did not cause a famine per se, but food became of short supply, which resulted in malnutrition for many Moroccan Jews, who were living in extreme poverty and could not afford to purchase meat or enough grain when it was doubled in price due to shortage. While malnutrition was the reality for one third of Moroccan Jews living in Marrakesh, it was most devastating to younger women going through pregnancy. When a woman cannot receive proper nutrition during pregnancy, the baby has higher risks of having health complications or birth defects. An unhealthy baby or child becomes more susceptible to disease spread through frequent epidemics, which becomes the reason why children become more likely to be most affected during outbreaks.

The third most important factor when addressing these health outcomes in the mellah is pollution. Because of overcrowding, narrow streets, and high population, pollution is very high, which introduces disease and odor. Europeans traveling through Morocco, either for work or
pleasure, write extensively about the waste in the streets of the mellah. One such traveler on an expedition, Major Albert Gybson-Spillbury from London, explains that when he visited the mellah of Merrakesh in the summer of 1906, the streets were littered with animal carcasses and animal waste, which created very pungent odors. Men out in the streets would sit amongst the waste while sitting down to lunch or snacks. Disease could either be directly ingested by eating near the waste, or disease could be carried through hands or feet and continually passed along because people live in such close quarters.

By the late 18th century, taking all the health risk factors into account, it became clear that the function of the mellah and its urban layout was detrimental to the overall health of the Jews and that there needed to be some responses to eliminate these issues. From a governmental level, under the rule of Mawlay al-Hasan, a new form of tax was introduced to butchers in 1879, known as the guerjouma, which would be used to offer social programs to those living in extreme poverty and clean the streets to prevent the spread of disease for all Moroccans. The program proved to be difficult to maintain because the butchers did not want to pay the tax, so butchers would either offer poorer qualities of meat or be deceptive about what product they were offering. Ultimately, the program did little to improve the overall health for the Jews.

The most effective response came from the establishment of a school which opened in Merrakesh in 1900 by the Alliance Israelite Universelle which offered aid through education and social programs. Briefly, the AIU was first established in France in 1860 to provide assistance to Jews through supporting the poor, offering political support, helping with immigration, and educational programs. Eventually, the AIU branched out and opened educational facilities in Eastern Europe, North Africa, and the Middle East. In Merrakesh, frequent smallpox epidemics were recognized, so vaccinations to prevent the disease was introduced, which had significant impact on lowering the death rate during an outbreak. In the school that children attended, health and hygiene was a major contribution to the education system, and in 1904 under the direction of Nissim Falcon, children were taught the importance of how to properly use a toilette and the importance of hot, running water to cleanse oneself. Teachers at the AIU began advocating for the Moroccan government to implement a waste disposal system in Merrakesh to eliminate waste build up on the streets, but this ended unsuccessfully. Most of the programs and education offered through the AIU helped make significant and consistent improvements in the health of the Jews in Merrakesh.

Doctors from Europe also made significant contributions to the overall health of the Jews. Two doctors, Emile Mauchamp and Francoise Legey, helped introduce hospitals into not only Morocco, but into the mellahs as well. In Merrakesh, a clinic was opened in 1891 for the promotion of Jewish health. The clinic provided both health care and a training program which taught Jewish women European techniques in midwifery to assure better health outcomes for pregnant women and newborn babies.

By the end of the 19th century until the beginning of the 20th century, health outcomes for the Jews living in Merrakesh had become increasingly devastating because of inadequate urban foundations and space, overcrowding, and poverty. With responses from European sources, health concerns were able to be addressed to provide a better environment and consistent improvements in the overall health outcomes for the Jews inhabiting the mellah of Merrakesh.
3 *Ibid*.
4 *Ibid*.
5 Amster, 410.
10 Amster, 410.
12 Miller, 318.
17 Aubin, 291.
19 Holden, 159.