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### **The Climate Coup: An Examination of Mamluk Ascendancy in the Ayyubid period in Relation to the Medieval Climate Anomaly**

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**Abstract**

The organisation, institutionalisation and political rise of slave soldiers is traced through the history of the Muslim world and represents a recurring theme in Muslim rulers' attempts to wrest and consolidate power from the other political elite in the region. The rise of the Mamluks and the associated fall of the Ayyubid dynasty are byproducts associated with adverse and favourable climate patterns at the time. Ayyubid reign (1171-1260) directly coincided with the period called the Medieval Climate Anomaly (MCA) (900-1300), which was responsible for the varying environmental conditions under examination. A nuanced analysis of Turkic nomadic lifestyle as well as the authority held by the mamluk *emirs* in the Ayyubid period in relation to the MCA will ultimately clarify the conditions associated with mamluk ascent to power.

**Keywords:** Mamluks, Medieval Climate Anomaly, slavery

The history of the Middle East is wrought with environmental and political tribulations that can be traced back to the origins of human civilisation. As one of the main cradles of civilisation, the Tigris and Euphrates rivers gave birth to some of the oldest and most complex cultures in the world, leaving legacies and traditions that have echoed through the centuries. The Middle-East is a part of the Indian Ocean World (IOW) system and as such is affected by adverse or fluctuating climatic patterns, especially as they relate to the Indian Ocean monsoon. In addition, the Middle-East is home to three of the world's major religions, Christianity, Islam, and Judaism, contributing additional pressures to an already environmentally volatile geography. Slavery and other forms of bonded labour are historically very prevalent in the Middle-East and IOW, assuming various forms and levels of intensity. Bonded labour in the IOW system should not be conflated with Atlantic slavery, as bondage in the IOW embodies a broad spectrum of slave and master experiences, demographics, purposes and motivations.<sup>1</sup> Slaves, or bonded labourers would have been considered marketable goods. Thus, both demand and supply of slaves in the IOW follow the economic ability of the region at the time, which was often correspondent to the given climatic conditions and what they can yield. What can be deduced is that unfavourable environmental conditions and events increase the vulnerability of populations to enslavement.<sup>2</sup>

From the domination and organisation of the Achaemenid Persian empire (550-330 BCE), to the crusader wars in the Holy Land (1096-1291 CE) to the current civil war and refugee crisis in Syria (2011-present), it is apparent that the Middle-East has been a site of religious, ethnic, and political unrest for millennia. This is no exception in the case of the middle-eastern slave soldier class known as the mamluks. The mamluks, an almost exclusively ethnic Turkic-speaking nomadic

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<sup>1</sup> Watson, James L, *Asian and African Systems of Slavery*. (Oxford: Basil Blackwell, 1980). 306.

<sup>2</sup> Hopper, Matthew S. "Cyclones, Drought and Slavery: Environment and Enslavement in the Western Indian Ocean, 1870's to 1920's." *Natural Hazards and People of the Indian Ocean world* (2016), 273.

peoples of Anatolia, the Caucasus regions, and the Eurasian steppe were utilised by Islamic rulers for centuries. Due to their culturally-imbued martial and mounted prowess, the mamluks were able to rise to high-ranking stations under their Islamic rulers, and eventually overthrew the dominant powers in the region to form a dynasty under their own name.

The mamluks' rise to prominence in Egypt and Syria took place during Ayyubid rule (1171-1260 CE), a dynasty which reigned at a time coincident with what is now referred to as the Medieval Climate Anomaly.<sup>3</sup> This period from 900-1300 CE is closely associated with more temperate conditions off the north Atlantic, but also yielded a more wet/warm climate in the eastern Mediterranean and Levant.<sup>4</sup> This was responsible for increased diversity of crop types, as well as more agriculturally-favorable conditions in the region.

The Middle-East's agricultural systems are dependent on the Indian Ocean monsoon system and the seasonal rains which it provides. The Indian Ocean is capped to the north by the Asian continent and closed in from the west by Africa and to the east by the Indo-Australian landmasses. In the summer, the Asian continent heats up, creating a vacuum which funnels cool and moist air from the Indian Ocean overland, thus producing seasonal rains. In the winter months, the opposite occurs and the continent expels cool air southwards over the Ocean.<sup>5</sup> The effect of the monsoons and the reliable seasonal rains which they provide is the permanent establishment of agricultural zones throughout the Indian Ocean system. The major cultivation zones produce wet cultivation for foods like rice in Asia, semi-arid crops like barley in the Middle East and Levant and arid conditions primarily suitable for pastoralism in the Eurasian Steppe.<sup>6</sup>

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<sup>3</sup> Also known as Medieval Climate Optimum, Medieval Warm Period.

<sup>4</sup> Kaniewski, D., E. Van Campo, and H. Weiss. "Drought Is a Recurring Challenge in the Middle East." *Proceedings of the National Academy of Sciences* 109, no. 10 (2012): 3862-867.

<sup>5</sup> Gwyn Campbell, "Introduction: Bondage and the environment in the Indian Ocean World," in Gwyn Campbell (eds.), *Bondage and the Environment in the Indian Ocean World* (Cham: Palgrave, 2016), 1-2.

<sup>6</sup> Campbell, 'Introduction: Bondage,' 2.

The influx of Turkic slave soldiers and subsequent mamluk rise to power in the region occurs over a relatively short span of time. The fact that the MCA coincides with this paradigm shift calls for greater examination of the apparent link between the two. The purpose of this paper is therefore, to examine the relationship between the favorable environmental conditions produced by the MCA and the Turkic mamluk ascent to power in the region. The arguments for this correlation lie in factors twofold. First, is the reduced success of pastoralism in winters with heavy precipitation like those in the MCA period. This reduction in food security, and natural meagre economic state of the pastoral nomads would have increased the rates at which their children were being sold into slavery. Second, is the Ayyubid's increased capacity for new urban settlement and agriculture due to the environmental conditions produced by the MCA. This increase in urban settlement would have necessitated an increase in designation of new emir-ships, most of which would have been entrusted to mamluks in this period. Despite exerting these favourable environmental conditions as prominent guiding factors in the mamluks ascent, it remains ever-important to not discredit the human intervention and agency in the given climatic circumstances. The perceived relationship between the MCA and the mamluk rise to prominence must inevitably be examined from a point of reciprocal exchange between human activity and its effects on the environment, and conversely, the exchange between environmental pressures and human reaction to those pressures. These correlations will be made more legible through an initial contextual overview of the systems of bondage within the given period and region as well as a more nuanced analysis of these systems as they pertain to the mamluk. This overview allows for a greater understanding of the condition of bondage of the Turkic mamluk within the Ayyubid sultanate and how the climactic factors under examination were integral to their ascent. These correlations are demonstrated first through analysis of climate data from the given time and region, as well as the

effects of the Arab Agricultural Revolution in relation to mamluk ascent. These connections are made clear through analysis of the environmental pressures as well as Turkic nomadic lifestyles which contribute to the increased number of Turkic slaves being incorporated into the mamluk system at the time. Additionally, the connection is shown through an examination of the active environmental pressures in relation to Ayyubid state organisation and urban development during this period and how these systems contribute to mamluk political sovereignty. Finally, is an overview of the mamluk ascent to power under the Ayyubid leaders, highlighting the connection between political events and the environmental factors at play.

### **The Question of Slavery**

The term “slavery” is often conflated with the most terrible treatment known to human history. Commonly, this is understood as forcible removal from one`s homelands, separation from local identity and coerced unpaid labour which was often accompanied by violence and other forms of subjugation. The Atlantic model for chattel slavery from the 16th-19th centuries has set the contemporary standard connotation associated with the term “slavery”. The Atlantic slave trade is characterised by systematic racialised and gendered subjugation of African peoples. Additionally, slaves in this context were owned by a master who employed them migratorily—as disposable production workforces on plantations, farms, and mines; with a minority among them used as domestic servants. Despite this common association, slavery was prominent across the whole of the Old World and particularly the space incorporating the IOW economy. Slaves in the IOW were purchased for various purposes, a minimum of them for production and cultivation as in the Atlantic system. As a result, slavery and bonded labour in the IOW represents a broad spectrum of experiences of manumission, treatment, social mobility and personal fulfillment. Defining

slavery is exceedingly difficult in the IOW as, contrary to the Atlantic trade, slaves were taken from all available ethnicities. In addition to the racial disregard, the IOW slave trade was less likely to discriminate based on age, gender or religion. The exception to this is within Islam, in which it is illegal under Sharia law to enslave another Muslim, yet as a religion which sponsors mercantilism, there are still instances and loopholes through which this occurred.

This paper builds upon recent scholarship from the IOW which analyses the social continuum of bonded labour. It rejects the traditional Eurocentric model which holds the two terms “Freedom” and “Slavery” as binary opposites and seeks to tease out the wide range of experiences between. The mamluk experience additionally, cannot be properly described by either term and intersects what it means to be enslaved and free depending on the definition employed. It additionally builds upon recent scholarship which analyses the undeniable relationship between bondage and environmental change in the IOW.<sup>7</sup> This is seen in the historical proportionality between human/economic prosperity and favourable environmental conditions.<sup>8</sup> Moreover, it is made clear again when examining the connection between various populations’ heightened vulnerability to slavery and the unfavourable environmental conditions in which they reside.<sup>9</sup>

In order to clearly define bonded labour in the case of the Ayyubid Dynasty and particularly the mamluks, some parameters must be in place to accommodate for the uniqueness of the Islamic bondage situation. Orlando Patterson’s theory of “social death” has particular importance in the case of the mamluks as a fundamental aspect of their bondage was in relation to their alien nature. For the sake of the context under examination, it will be assumed that despite being alienated from their home societies and incorporated into a dominant kinship structure, the mamluk, as a result of

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<sup>7</sup> Campbell, ‘Introduction: Bondage,’ 32.

<sup>8</sup> Kaniewski, ‘Drought Is a Recurring.’

<sup>9</sup> Campbell, ‘Introduction: Bondage,’ 14.

the other factors of their bondage, are to be considered bonded labourers as opposed to “slaves” in the Atlantic sense.

### **Setting: Middle Eastern Slave systems**

Slavery in the Middle East traces its roots back to the earliest written records from the ancient civilisations of Mesopotamia. Attested among the Sumerians, Babylonians, Egyptians and other ancient peoples, slaves were a common byproduct of war and conquest.<sup>10</sup> There are a number of ways in which a person could enter into bonded labour or slavery in the Muslim world. Slaves were often recruited by sale, abandonment, indebtedness, or by the kidnapping of children. In addition, free persons could sell themselves into slavery, sell their offspring into slavery, be enslaved for insolvency, or in some cases and regions, for breaking the law.<sup>11</sup> The Qur’an acknowledges the existence of slavery, and in regulating and institutionalising it, accepts its parameters. Despite its institutionalisation, slavery under Muslim law was generally looked down upon, and thus was thought about in a different manner. As a result of the moral obligations associated with the Qur’an, Muslim slave owners were urged to act generally kindly to their slaves.<sup>12</sup> Especially if the slave is of Muslim faith, they were seen as kin in the eyes of god, often prompting the development of kinship relations and eventual manumission.<sup>13</sup> These ideas of equal treatment and manumission, as well as denouncement of cruelty, harshness and discourtesy are elaborated upon in numerous prophetic traditions.<sup>14</sup> The system embodies the idea of “open ended”

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<sup>10</sup> Mendelsohn, I. “Slavery in the Ancient Near East.” *The Biblical Archaeologist* 9, no. 4 (1946): 76.

<sup>11</sup> Humphreys, R. Stephen. *From Saladin to the Mongols: The Ayyubids of Damascus, 1193-1260* (Albany: State University of New York Press, 1977). 4.

<sup>12</sup> Afroz, Sultana. “Islam and Slavery through the Ages: Slave Sultans and Slave Mujahids,” *Journal of Islamic Law & Culture* 5, no. 2 (Fall/Winter 2000): 102.

<sup>13</sup> Esposito, John L. “Slavery.” *The Oxford Encyclopedia of the Islamic World* (2009). Afroz, “Islam and Slavery” 103.

<sup>14</sup> Humphreys, “From Saladin,” 6; Esposito, “Slavery.”



slave systems contingent on religious belief. Qur'anic legislation allowed for elaboration upon holy law and brought two major changes to the Islamic slave systems. The first, is the presumption of freedom, and the second is a ban on the enslavement of all free persons, except in strictly defined situations. Eventually the enslavement of free Muslims became strongly discouraged and prohibited.<sup>15</sup> It became the fundamental principle of Islamic jurisprudence that the natural condition and presumed status of all people was free, following the model of: what is not expressly forbidden is permitted and someone who is not known to be a slave is free. As a result of these laws, there were only three ways in which someone could legally become a slave in the Muslim world; (I) being born into a slave family, (II) as a captive of war or *jihad*, (III) or through recruitment, purchase or capture of imported or foreign demographics.<sup>16</sup>

### **Setting: The Mamluk Slave System**

The slave demographic under examination, the Turkic mamluk slave-soldier or Mamluk (Dynasty), embody one of the demographics under the third legal means of enslavement. The term mamluk is the Arabic designation for “slave” or “property”, but the term also refers to a specific class of slave-soldiers within Islamic medieval society.<sup>17</sup> The tradition of military slavery in the Middle-East goes back to the Umayyad (661-750 CE) and Abbasid (750-1258 CE) Caliphates with the enslavement of non-Muslim ethnic groups on the borderlands of Muslim expansion. During the Abbasid period, the traditional tribal Arabic Bedouin infantry began to be replaced with captured Transoxiana forces from modern day Uzbekistan. The forces from Transoxiana were

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<sup>15</sup> Esposito, “slavery.”

<sup>16</sup> Despite this, the recruitment of slaves via natural increase seems to have been small and insufficient to meet the demand in the region: Humphreys, “From Saladin,” 6-7.

<sup>17</sup> Amitai, Reuven, and Christoph Cluse, (eds.). *Slavery and the Slave Trade in the Eastern Mediterranean (c. 1000-1500 Ce)* (Turnhout, Belgium: Brepols, 2017). 190.

praised for their martial prowess as a result of having competed with Turkic nomadic tribes from the Eurasian Steppe, thus turning the heads of Muslim rulers to the east.<sup>18</sup> The first instituted regiment of mamluk was formed by Abu Ishaq al-Mu'tasim, a unique force composed of soldiers exclusively of Turkish background.<sup>19</sup> Despite other benefits which the Turkic people embodied, the most important factor in this institution is the alien nature of the imported Turks. The removal of the Turkish tribesmen and children from their homeland and local communities was fundamental to the success of the mamluk institution.<sup>20</sup> In addition the Turkic people were majority pagan, and thus could be legally enslaved and converted. The institution drew upon the various Turkic peoples north of and surrounding the Black and Caspian seas including Cuman-Kipchak from modern day Ukraine and Russia, Circassian from the north-western Caucasus region and Turkmen from modern day Turkmenistan and surrounding steppe areas.<sup>21</sup> The Turks were praised extensively for their perceived disposition as the perfect Islamic soldier.<sup>22</sup> This is related by Al-Jahiz in his essay explaining the merits and virtues associated with the Turks describing them as such: "The Turks were preserving, and did not know flattery, hypocrisy, slander, affectation, abuse or dissipation... The Turks were superior in war, and they were interested, among other things, in conquest, plunder, hunting and horseback riding".<sup>23</sup> The people of the Eurasian steppe were the heirs to millennia-old military traditions and practices specifically surrounding mounted and ranged warfare. With ancestors like the Xiongnu and Scythians, the Turks of these regions were well known for their military qualities of strength, fortitude and discipline. The focus on the

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<sup>18</sup> Amitai, Reuven, Christopher Brown and Philip Morgan (eds.). *The Mamlūk Institution, or One Thousand Years of Military Slavery in the Islamic World* (2006), 43.

<sup>19</sup> Amitai, "The Mamlūk Institution," 44-45.

<sup>20</sup> *Ibid.*, 45.

<sup>21</sup> Amitai, *Slavery and the Slave Trade*, 195.

<sup>22</sup> *Ibid.*, 191.

<sup>23</sup> Miura Tōru and John Edward Philips *Slave Elites in the Middle East and Africa: A Comparative Study* (London: Kegan Paul International, 2000). 4-5.

combination of both mobile and ranged practice allowed for the development of deadly armies built upon “hit and run” tactics. These tactics and means of warfare are effectively representative of, and the direct product of, the domestication of the horse, and the assumption of a pastoral nomadic lifestyle.<sup>24</sup>

Turkish slaves bound for the mamluk institution were often purchased between the ages of eight to twelve.<sup>25</sup> This age was important as to not interrupt the formative years within nomadic society in which the boys would develop their culturally- and environmentally-imbued skills associated with fortitude, archery, and riding.<sup>26</sup> In addition, the boys would be taken prior to maturation to be educated in the ways of Islamic law as well as the writings and teachings of the Qur’an. It was commonly understood that they would take to the teachings and faith more strongly if introduced at a young age.<sup>27</sup> Upon maturation, the mamluk trainee would be schooled in the art of war. This is to train the mamluk in various melee weapons, as well as supplement the existing skills of horsemanship and archery.<sup>28</sup> The mamluk would then be incorporated into, given to, or purchased by a local *emir* or royal household in which he would be adopted into the mamluk social hierarchy.<sup>29</sup> The mamluk lived together in their local garrison or barracks and spent most of their time outside, conducting rigorous training for combat. The mamluk education was effectively designed for two purposes: to create a strong association with the Muslim faith, and to create a mounted soldier proficient in the art of war.<sup>30</sup>

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<sup>24</sup> Amitai, “The Mamlūk Institution,” 46.

<sup>25</sup> Afroz, “Islam and Slavery,” 110.

<sup>26</sup> Ibid.

<sup>27</sup> Amitai, *Slavery and the Slave Trade*, 191.

<sup>28</sup> Amitai, “The Mamlūk Institution,” 46.

<sup>29</sup> *Emir*: Comparable to the European knight. Owner of a fief and certain amount of land in exchange for military service.

<sup>30</sup> Afroz, “Islam and Slavery,” 110.

The nature of the mamluks relationship to their masters' is one worthy of note. Mamluks were renowned for being the most loyal institution known to Islamic society at the time, with slaves and masters alike developing strong dependence on each other.<sup>31</sup> To the master, the military advantage provided by the mamluks represented the ability to reign control over the state, to centralize power, and to stabilize a given region. To the mamluk, the master provided the sole avenue for social mobilisation - advancement based on military and political merit.<sup>32</sup> In this way, the master was more inclined to treat the mamluk in such a way as to retain their absolute loyalty, as well as maintain them a formidable fighting core.<sup>33</sup> Additionally, mamluks were often afforded positions of leadership, diplomatic importance or *iqtas*.<sup>34</sup> They also experienced a certain level of renown and social recognition, thus incentivising even greater demonstrations of bravery and martial talent. Mamluk loyalty was of particular importance, as it was not passed down hereditarily, and any mamluk who abandoned or betrayed his master would have been forever shunned.<sup>35</sup>

The mamluk institution, was as aforementioned, fundamentally reliant on Orlando Patterson's idea of "social death". While the Turkic people employed in the mamluk institution are of similar descent and ethnic groups, the removal of local identity and custom becomes essential for them to be effectively reborn into their new reality. The mamluk system was moreover, reliant on the social pressures and stresses associated with being a mamluk, and this separation of identity was essential first in converting the mamluk to Islam, and second in building the loyalty and dependence of the mamluk to the most extreme degree. Without the removal of the

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<sup>31</sup> Ibid.; Humphreys, "From Saladin," 34.

<sup>32</sup> Afroz, "Islam and Slavery," 111.

<sup>33</sup> Ibid.

<sup>34</sup> Iqta: Taxable agricultural land concession granted to high ranking individuals which is often compared to the European fief

<sup>35</sup> Afroz, "Islam and Slavery," 111.

individual associations, cultural ties and personal beliefs, the mamluks could never be reborn into the extreme self-perpetuating ethos which maintains their loyalty. The final result was a fast, effective, and extremely loyal self-perpetuating corps of elite cavalymen indoctrinated with Islamic belief.

**Setting: Egypt, Syria and the Steppe during the Ayyubid period and Medieval Climate Anomaly**

The mamluk ascent to power and prominence is directly linked to the decline of the ruling Ayyubid Dynasty from 1171-1260 CE. While military slaves and the mamluk corps had existed in small numbers, it was not until the Ayyubid reorganisation of the military that the mamluks began to experience greater political authority. During this time, the Ayyubids inherited and added to the Fatimid Caliphate's borders, encompassing lands in Egypt, Syria, Upper-Mesopotamia, the Hijaz, Yemen and the north coast of east Africa. The climate is traditionally arid to semi-arid with unstable and poor soil types, and the population at this time is supported by rain-fed agricultural systems. As a result, agricultural output in this region is particularly reliant on water availability and the seasonal monsoons for food security, making it extremely vulnerable to drought and crop failure.<sup>36</sup>

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<sup>36</sup> Barlow, Mathew, and Andrew Hoell. "Drought in the Middle East and Central–Southwest Asia During Winter 2013/14." *Bulletin of the American Meteorological Society*, 96, no. 12 (2015), 1.

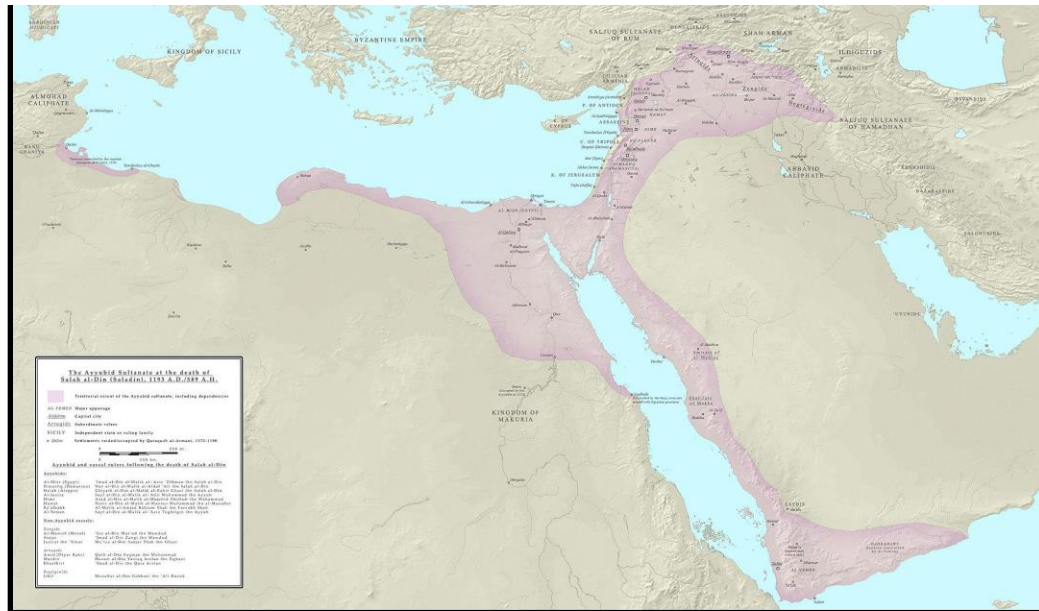


Figure 1: Map of the Ayyubid Dynasty at Salah al-Din's death in 1193, including the regions of Egypt, Syria, Upper-Mesopotamia, the Hijaz, Yemen and the north coast of East Africa.

The Medieval Climate Anomaly (MCA) was characterised by global temperature increases, and in some cases, precipitation increases, particularly in the North Atlantic. This was the result of natural shifts in the earth's orbit, carrying with it a myriad of advantages and consequences.<sup>37</sup> The ruling dynasties in this period, from 900-1300 CE, all experienced massive amounts of new settlement in the Tell Leilan and greater north Jazira area, with the Ayyubids and Mamluks establishing 30 and 20 new settlements respectively.<sup>38</sup> This increase in settlement is a measure of the number of towns and villages which were established in this period, with population growth to be an assumed by-product. Among the major settlements established in this period were centres like Gir Sikha, Shair, Sharmukh and Tell Haid.<sup>39</sup> This trend in settlement corresponds to the overall high level of water input in the area, and is subsequently indicative of increased

<sup>37</sup> Roy, Gavin. "The Medieval Climate Anomaly - IEDRO." *Saving Data, Saving Lives*. Accessed December 05, 2018. <http://iedro.org/articles/the-medieval-climate-anomaly/>.

<sup>38</sup> Kaniewski, "Drought is a Recurring," 3.

<sup>39</sup> Vezzoli, Valentina. "Islamic Period Settlement in the Tell Leilan Region (Northern Jazira): The Material Evidence from the 1995 Survey." *Levant* 40, no. 2 (2008): 189.

agricultural productivity.<sup>40</sup> Accounts from medieval geographer Ibn Shaddad support this notion as he expresses the high levels of agricultural fertility associated with Upper Mesopotamia at the time, and provides an extensive list of agricultural products and crops in the region.<sup>41</sup> The traditional agricultural model relies on rain-fed systems and gravity-based irrigation, in this way agricultural prosperity is directly connected to outside environmental factors. High levels of precipitation also contributed to increased humidity in the Levant and surrounding area. This time-period was also characterised by high scores in the warm/cool steppe ratio, which are indicative of further warming trends. Agricultural productivity and yield reach a peak during this time-period, led by staple *Poaceae cerealia*, like wheat and barley, as well as *Fabaceae*, like fava bean.<sup>42</sup> In addition, the farming of secondary or weed-like food crops is an anthropogenic indicator of abundance, and the ability to diversify crop types.<sup>43</sup>

This period was also coincident with the Arab Agricultural Revolution which occurred between the 8th and 12th centuries.<sup>44</sup> This massive growth in agricultural knowledge began in India, where soils and weather conditions were more accommodating to various crop types, and thus favourable to developing new agricultural techniques.<sup>45</sup> With the spread of Islam in the 7th and 8th centuries, Arab agricultural practitioners also spread the new techniques to conquered borderland regions. The revolution also included the introduction of numerous new crops including, rice, sorghum, sour-oranges, sugar-cane, watermelon, eggplant, cotton, artichokes and

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<sup>40</sup> Ibid.

<sup>41</sup> Ibid, 186.

<sup>42</sup> Kaniewski, "Drought is a Recurring," 3.

<sup>43</sup> Ibid.

<sup>44</sup> LaBianca, Øystein Sakala, Lori A Haynes, Lorita E Hubbard, and Leona Glidden Running, *Sedentarization and Nomadization : Food System Cycles at Hesban and Vicinity in Transjordan* (Berrien Springs, MI: Institute of Archaeology, 1990). 204.

<sup>45</sup> Watson, Andrew M. "The Arab Agricultural Revolution and Its Diffusion, 700–1100." *The Journal of Economic History* 34, no. 1 (1974), 8.

many others.<sup>46</sup> Many of these regions had far colder and drier conditions, making the new techniques naturally more difficult to adopt. Despite the difficulty of implementation in some regions, by the 11th century, the new techniques and crops associated with the revolution had been spread to the majority of the Muslim world.<sup>47</sup> The consequences of this revolution reach far beyond agricultural prosperity, and mark a high point of urban development, population growth, and industrial and economic prosperity as well.<sup>48</sup>

The Turkish tribes of the Eurasian steppe and Caspian Sea area are a predominantly nomadic peoples, relying primarily on pastoralism rather than agriculture for sustenance. This lifestyle involves the constant migration of herded animals to regions of appropriate grazing plants and densities. The steppe is broken into two distinct climatic regions, the western steppe (west of the Ural Mountains) and the eastern, continental steppe.<sup>49</sup> The Turks employed as mamluk were predominantly from the regions within the western steppe. In this region, the Turks were allowed to practice their pastoralism in typically warmer and wetter conditions than those of the eastern steppe. This had various regional consequences, notably, that most western Turks enjoyed the status of permanent nomad, whereas many nomadic cultures in the eastern steppe adopted some form of cultivated agriculture to supplement their food shortages.<sup>50</sup>

Western Turks were more commonly faced with life or death decisions related to food shortages, migration, and economic exchange as a result of variable weather conditions and the nature of their reliance on herded animals. Beyond starvation, adverse weather conditions posed

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<sup>46</sup> Andrew Watson, "The Arab Agricultural," 9.; LaBianca, "Sedentarization and Nomadization," 205.

<sup>47</sup> Andrew Watson, "The Arab Agricultural," 8.

<sup>48</sup> *Ibid.*, 9.

<sup>49</sup> Bendrey, Robin. "Some like It Hot: Environmental Determinism and the Pastoral Economies of the Later Prehistoric Eurasian Steppe." *Pastoralism: Research, Policy and Practice 1*, no. 1 (2011), 2.

<sup>50</sup> *Ibid.*, 2.



direct threats to the safety of pastoral herds. Herded livestock's reproductive habits as well as mortality trends are often strongly effected by or contingent on variable climactic factors, such as temperature, precipitation, humidity, hours of daylight, nutrition, water availability, and disease.<sup>51</sup> Additionally, livestock bone fragment analysis and historic reconstruction of herd compositions indicate a strong influence of the environment on pastoral nomad economies and their necessary migratory patterns.<sup>52</sup> Cattle, for example, are the predominant herded animal in the Western steppe and require grazing and water rich diets to survive. Cattle retain water less effectively than other herded animals more suited to arid environments, and require water every 3 days at minimum, making them more vulnerable to dehydration both via evaporation as well as freezing over.<sup>53</sup> The horses of this region are supposedly accustomed to grazing in ground snow coverage of about 40 centimetres, but cattle, goats, and sheep will die in extended periods with 20 centimetres or more.<sup>54</sup> Thus in winters with heavy precipitation, the western nomads probably experienced greater instances of food shortage and insecurity in relation to the environmental factors at hand.

The MCA is responsible for bringing more humid conditions to the Levant and surrounding area. This increase in humidity is also tied to an increase in winter precipitation in the surrounding area, and particularly in upper Anatolia and the Caucasus region.<sup>55</sup> Analysis of climate data collected from sediment at the bottom of Lake Saki in Crimea revealed a period of relative humidity and wetness from between 1090-1280 CE.<sup>56</sup> Additionally, pollen sample analysis indicates an increase in development of cultivated and aquatic taxa in this setting, further indicating

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<sup>51</sup> Ibid.

<sup>52</sup> Ibid., 13.

<sup>53</sup> Ibid., 10.

<sup>54</sup> Schamiloglu, Uli. "Climate change in Central Eurasia and the Golden Horde" // Золотоордынское обозрение. (2016) URL: <https://cyberleninka.ru/article/n/climate-change-in-central-eurasia-and-the-golden-horde> (Accessed: 06.12.2018).

<sup>55</sup> Kaniewski D, "Drought is a Recurring,"; Vogt, Steffen et al. "Assessing the Medieval Climate Anomaly in the Middle East: The Potential of Arabic Documentary Sources." *Quaternary International* (2012), 28-29.

<sup>56</sup> Schamiloglu, "Climate Change."

these wet/warm trends. Both these data coincide with the examined increase in precipitation associated with the MCA, necessitating this idea of increased winter precipitation as fundamental to this time and region.

As aforementioned, Turkish boys would often be purchased or kidnapped from groups of nomadic pastoralists and were acquired in greater and greater number through the development of the Ayyubid Dynasty. The various Turkish steppe peoples and their nomadic nature would have suffered during this period's winters due to issues of food security. Without favourable conditions for the husbandry and maintenance of the livestock herds, the nomadic peoples would have been forced towards urban centres, relying upon sedentary communities for agricultural surplus and exchange.<sup>57</sup> The western cattle-breeding nomadic steppe people are traditionally quite poor, and often face issues of food security related to livestock disease, even in environmentally stable conditions.<sup>58</sup> This natural limit on their cattle-breeding capacity hindered their ability to develop economically or socially, forcing them to create social systems which could accommodate the projected deficits.<sup>59</sup> These strategies often involve wars over pastoral grounds and animals, high levels of community mobility, including year round migration and the maintenance of good relations with neighbouring agricultural settlements. These factors allowed the Steppe nomads of this region to develop systems of sustenance which go beyond food production, and encourage solutions involving martial, political, and economic versatility.<sup>60</sup> This calls into question the form of payment which the nomads would have used in exchange for food in desperate times of life and death. While direct connections between these weather conditions and an influx of and rise to

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<sup>57</sup> Amitai, Reuven, and Michal Biran. *Mongols, Turks, and Others: Eurasian Nomads and the Sedentary World* (Leiden: Brill, 2005) 203.

<sup>58</sup> Weissleder, Wolfgang. "The Nomadic Alternative: Modes and Models of Interaction in the African-Asian Deserts and Steppes." *World Anthology* (The Hague: Mouton, 1978), 121.

<sup>59</sup> Weissleder, "The Nomadic," 122.

<sup>60</sup> *Ibid.*

prominence of the mamluk slave class are unavailable, there is an undeniable connection between unfavourable environmental conditions on the Eurasian Steppe and increased prominence of the mamluk soldiers (ethnic Turkish nomads).

### **Mamluk Ascension in the Ayyubid period**

The mamluk ascent to power is also tied to the immediate political dealings of the Ayyubid state, and the political reactions to active environmental factors at the time. To better understand the connection between Ayyubid politics, environmental conditions, and mamluk ascent, this section will examine two Ayyubid Sultans and their policy of action and reaction to political and environmental pressures.

The first ruler under examination is the great Kurdish sultan Salah al-Din or Saladin (1137-1193 CE). Saladin rose to prominence by studying under his uncle Shirkuh, who was employed as a general for the Fatimid Caliphate by Egyptian vizier Shawar ibn Mujir al-Sa'di, the *de facto* leader of Egypt at the time. Pressures from the European and Byzantine crusaders as well as from Zengid forces led Nur ad-Din and Shirkuh, left Shawar and Cairo surrounded without substantial military support. In 1169, Shawar was assassinated and replaced with Shirkuh who died not two months after he assumed the position, thus leaving Saladin the opportunity to claim power. As vizier, Saladin began undermining the stability of the Fatimid Caliphate by neglecting Nur ad-Din's wishes to distribute propaganda relating the change in power.<sup>61</sup> Asserting himself as a seasoned general and unrelenting politician, Saladin assumed responsibility over all of Nur ad-Din's legacy, and upon the death of Nur ad-Din's child son Al-Salih Ismael in 1171, questions of

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<sup>61</sup> Bauer, Susan Wise. *The History of the Renaissance World: From the Rediscovery of Aristotle to the Conquest of Constantinople* (New York: W.W. Norton & Company, 2013). 105.

legitimacy were settled.<sup>62</sup> By 1175, Saladin had been appointed sultan of the Ayyubids, and began conducting large scale reorganisations of the recently acquired Fatimid state. The most notable changes under Saladin was the shift from Shi'a to Sunni practice of Islam, the reorganisation of the military, and the redistribution and appointment of *iqtas* and *emirs*. In terms of military organisation, Saladin did away with Arab *emirs*, and use of sub-Saharan African and tribal Bedouin infantry.<sup>63</sup> Saladin broke his chain of command into three sections; free-born *emirs*, likely the offspring of manumitted mamluks, mamluk *emirs*, and relatives to Saladin. In this way each *emir* was a trusted member of his kinship group, allowing him to have organised the state in such a way that each of the local rulers was effectively a direct relative to the Sultan.<sup>64</sup> This was meant to keep local landlords and people of interest close to the ruling body as well as dissuade the local *emirs* from revolt or political dissidence.<sup>65</sup> The army was replaced with a substantially smaller force of mounted Kurds and Turks from Saladin's own retinue. His recognition of the steppe soldiers as dominant in this time-period marks the beginnings of the mamluk institution.<sup>66</sup> Despite this first step, the mamluk saw limited political authority during Saladin's reign.

The next prominent ruler in the history of mamluk ascent is Al-salih Ayyub, ruling sultan from 1240-1249 CE.<sup>67</sup> Ayyub inherited this organisational structure, but was unable to maintain close kinship ties to the local *emirs*. In an attempt to centralise power, and reduce that of the local *emirs*, Ayyub purchased as many mamluks as were available.<sup>68</sup> Over time, he developed a domineering and suspicious personality, purchasing further mamluks each time his suspicions

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<sup>62</sup> *Ibid.*, 157.

<sup>63</sup> Humphreys, "From Saladin," 34.

<sup>64</sup> Raphael, Kate. *Muslim fortresses in the Levant: between crusaders and Mongols*. (Routledge, 2010), 5.

<sup>65</sup> Humphreys, "From Saladin," 27.

<sup>66</sup> Humphreys, "From Saladin," 29.

<sup>67</sup> *Ibid.*, 299-301.

<sup>68</sup> At this point, many of the local *emirs* were likely mamluk or of mamluk descent.

rose.<sup>69</sup> Using his army of mamluks, Ayyub wrested control over Syria and effectively ended all ideas of Ayyubid collective sovereignty. Without any clear heir, the mamluks effectively fulfilled the roles of local *emirs* and became Ayyub's political heirs.<sup>70</sup> It is in this period that the mamluk institution and the large-scale training of mamluks was particularly expedited and formalized.<sup>71</sup> After Ayyub's death, his son Al-Mu'azzan would alienate Ayyub's mamluks likely over issues of loyalty and would be assassinated by the mamluks who began the Mamluk sultanate in Cairo.<sup>72</sup>

The conditions of mamluk ascent were specifically tied to the nature of Ayyubid state organisation and the authority held by the *iqta* ruling *emirs*. The longstanding tradition of distributing *iqtas* and emir-ships to trusted members of the aristocracy and next of kin was carried through the Ayyubid sultanate from the days of the Fatimid Caliphate. *Iqtas* were middle eastern forms of agricultural land concessions often compared to that of a European land fief. *Iqtas* were often placed under the governance of trusted *emirs* for agricultural production and tax farming purposes.<sup>73</sup> Emir-ships were traditionally passed on hereditarily, and while an appointed *emir* was not formally associated with ownership, control or organisation of the land and residents, this type of authority was commonplace.<sup>74</sup>

Under the rule of Al-Salih Ayyub the mamluks underwent the transformations necessary for them to claim their own political sovereignty. The political climate during Al-Salih Ayyub's reign led him to alienate the existing aristocracy and to greatly increase the number of mamluks within his personal retinue, contributing to a dominant martial and ethnic identity within his dynasty. Additionally, Ayyub's suspicious personality led him to incorporate his trusted mamluk

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<sup>69</sup> Humphreys, "From Saladin," 299-301.

<sup>70</sup> Ibid.

<sup>71</sup> Raphael, "Muslim Fortresses," 6.

<sup>72</sup> Humphreys, "From Saladin," 361.

<sup>73</sup> "Iqta." *The Oxford Dictionary of Islam*: <http://www.oxfordislamicstudies.com/article/opr/t125/e1061> (accessed 16-Jun-2019).

Ibid.

into his next of kin, releasing the existing aristocracy of the emir-ships and *iqtas*. The increased amounts of urban settlement which occurred during Ayyubid reign as a result of the MCA would have necessitated additional appointment of emir-ships and granting of *iqtas* to trusted individuals. In the case of Al-Salih Ayyub, his most trusted subjects were his mamluk, ultimately prompting the distribution of these new settlements to mamluk *emirs* from his retinue.

In the case of both Saladin and Al-Salih Ayyub, their reign was undoubtedly characterised by a tricky balance between pleasing local *emirs*, expanding the borders through conquest, and centralising power all at once. The urban development associated with the conditions produced by the MCA was key to the mamluk's increased political sovereignty. Under early Ayyubid rulers mamluk were afforded the opportunity to ascend through the political ranks of the Ayyubid court to eventually claim emir-ships. This is due to the nature of mamluk hierarchies and merit-based mobility as well as the presence of additional settlement which required governing *emirs*. Additionally, this benefit was compounded by the increased acquisition and formation of mamluk during Ayyub's reign. The connection between the increase of new settlement as produced by the MCA and the political climate during Ayyubid reign is responsible for the increased presence of mamluk *emirs* acting with political authority at this time.

## **Conclusion**

The development of mamluk political authority and eventual legitimate dynasty is inherently associated with the environmental factors which prevail in the given context. The Medieval Climate Anomaly (900-1300 CE) is responsible for a period of warm and wet conditions, particularly favourable to traditionally arid land as found in the Middle East. These conditions were improved again by the advent of the Arab Agricultural Revolution, making the land in the

Levant and the surrounding region particularly fertile. This new level of fertility contributed to the creation and expansion of new urban settlements during the Ayyubid and Mamluk periods. By contrast, the cooler steppe regions experienced greater precipitation and snowfall, potentially driving Steppe nomads towards urban centres, which could provide agriculture.

The connections between environmental conditions in this time and place and the mamluk ascent to power are twofold. First, is the reduced success of pastoralism in winters with heavy precipitation like those in the MCA period. This reduction in food security, and natural meagre economic state of the pastoral nomads would have increased the rates at which their children were being sold into slavery. Second is the designation of large amounts of new settlement and territory to the mamluk *emirs*. The settlements founded in the wake of the MCA took on the provincial or municipal status associated with a local *emir* and *iqta*. At points during the Ayyubid period, the vast majority of local *emirs* were mamluk or of mamluk descent. While this may have been a sound move in utilising the incredibly loyal qualities of the mamluk, the over-distribution of power, and delegation of bureaucratic and political duty to the mamluk class ultimately culminated in their overwhelmingly politically dominant ethnic identity.

The rise of the Mamluks is traditionally accredited the actions and reactions of political agents in the region and fails to accommodate factors beyond supposed political agency. This paper offers a marriage of both political and environmental factors to create a better understanding of the context surrounding mamluk political ascent. As presented in the analysis of the climate produced by the MCA, the bonded demographics, and the political context in the Ayyubid Sultanate, there is a clear connection between environmental pressures and the series of political events leading to mamluk ascent. What can be deduced is that there is a more nuanced explanation for historic political agency, especially as it pertains to the natural environment in which peoples have resided.

In this case, Mamluk ascent was fundamentally intertwined with historical environmental conditions that prompted necessary action.

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