

Maxim Romanov

After the Classical World: The Social Geography of Islam (661–1300 CE)

A note on the transliteration: The article uses a somewhat unconventional transliteration system, which was developed to facilitate computational analysis. Unlike more traditional transliteration schemes the current one uses one-to-one letter representation, with every Arabic letter transcribed distinctively. The overall scheme should be easily recognizable to Arabists (new letters are as follows: *t* for *tā’ marbuṭat*; *ā* for dagger *alif*; and *á* for *alif maqsūrat*). The final version of the article will adopt the transliteration system of the edition where it will be published. Whenever applicable, toponyms are given in their current American spelling. Bibliographical references and quotations preserve their original transliteration schemes.

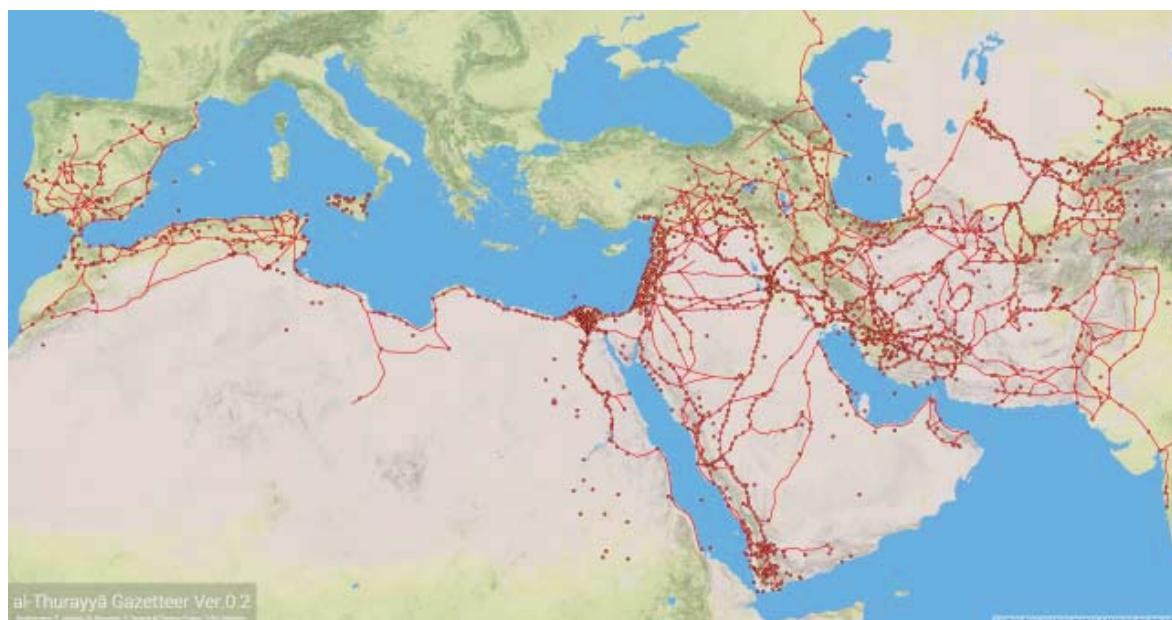
The Source and Methodology

§ 1. The main source used for this article is the *Ta’rīh al-islām* (“The History of Islam”), a 50-volume chronicle and biographical collection that was put together by al-Dahabī (d. 748/1348 CE), a Damascene historian, Šāfi‘ī jurist and Traditionist. Based on at least 40 earlier sources, this collection covers the first seven centuries of Islamic history and includes over 30,000 biographies, which makes it the largest specimen of a prominent

genre of chronicles and biographical collections¹. The current work is based on the modeling of chronological, onomastic, toponymic and some lexical data² that have been extracted computationally from this vast collection³. The inner workings of the method are described in more details in “Digital Age, Digital Methods”, included in this collection.

Introduction

§ 2. In the 7th and 8th centuries CE, a new power stretched over the territories that used to be under the control of the Roman and the Sasanian



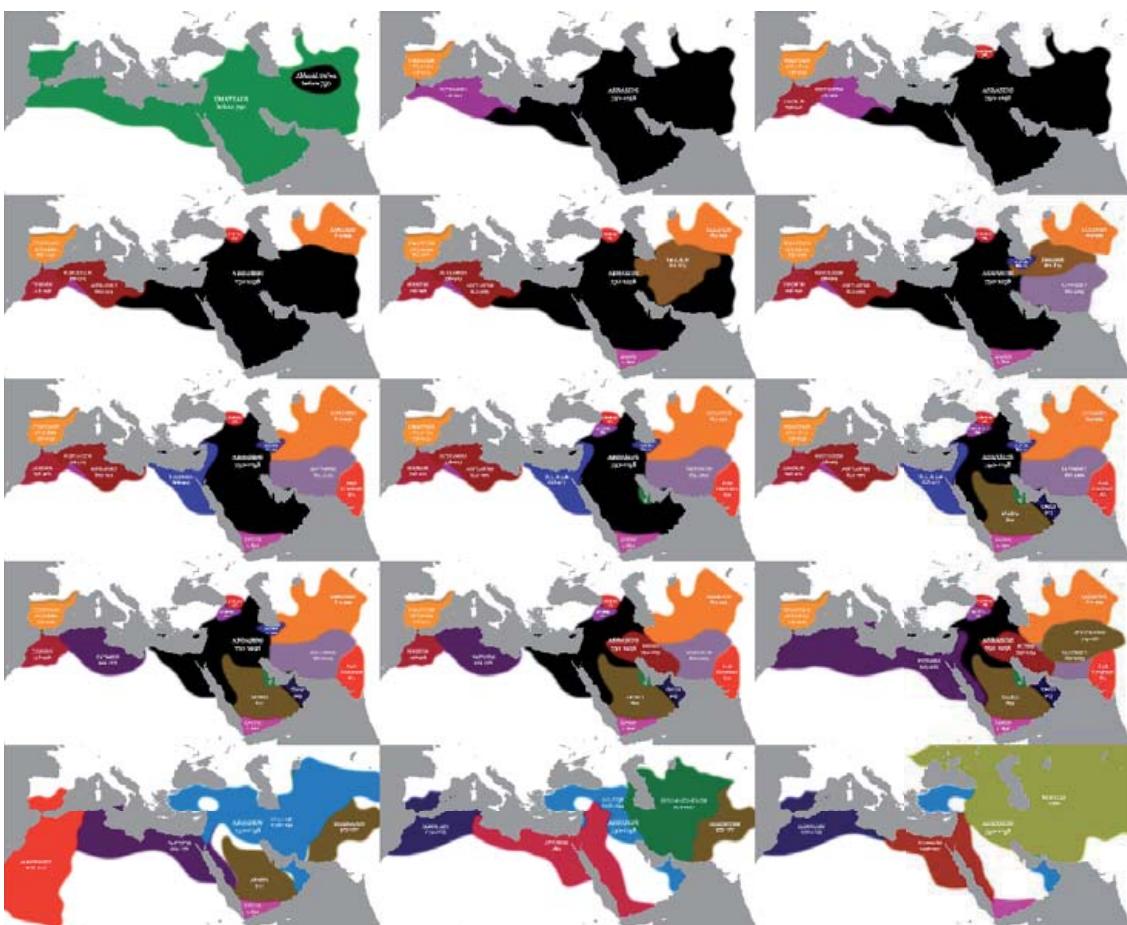
*Islamic Settlements and Trade Routes in the 9–10th centuries. The map is based on (Cornu, Georgette. *Atlas Du Monde Arabo-Islamique À L'époque Classique: IXe-Xe Siècles*. Leiden: E.J. Brill, 1983) and shows about 2,000 places and almost as many route segments that connect them. Cornu's work is based on 27 geographical treatises in Arabic and Persian (at the same time, Cornu's maps do not represent any specific treatise; for the complete list of authors and their works (see, Cornu 1983, xii–xii)*

¹ For a chronological overview of this genre, see, *Auchterlonie, Paul. Arabic Biographical Dictionaries: A Summary Guide and Bibliography*. Durham: Middle East Libraries Committee, 1987.).

² Respectively: death dates, “descriptive names” (*nisbats*), place names, and ngrams.

³ Although this piece concentrates on the social geography of the Islamic world, the data from this collection are abundant for studying any number of topics. On my modeling of Islamic élites, see: *Romanov. M. Toward Abstract Models for Islamic History*.

empires. Although in the course of their great conquests Muslims establish firm control over a number of Mediterranean provinces of the Roman Empire—stretching from Greater Syria through Egypt and North Africa to Spain—their empire moved away from the Mediterranean with its major communication arteries spanning over land, where deserts were the internal seas and caravans were the ships that kept distant provinces of this new world connected (Figure **CornuMap**).



Dynastic Geography (700–1300 CE). This cartogram is meant to illustrate the dynamics of the dynastic geography in a very suggestive manner, since boundaries between dynastic entities never clearly existed. The Voronoi diagram based on time costs of traveling may be useful to model boundaries between various dynastic entities. This approach has been suggested some time ago, but has not been fully implemented (See, Brauer, Ralph W. Boundaries and Frontiers in Medieval Muslim Geography. *Transactions of the American Philosophical Society*, v. 85, pt. 6. Philadelphia: American Philosophical Society, 1995. P. 29). NB: use controls to replay animation or/and move from one slide to another.

§ 3. The symbolical unity of the new empire was contested under the ‘Abbāsids (750–1258 CE), the second great Islamic dynasty that rules from Iraq. The earliest local dynasties get established in the most distant provinces on the margins of the empire—first in the west, and later in the east. In the west (North Africa and Spain), new dynasties were often established by messianic movements that challenged the authority of the ‘Abbāsids, the descendants of the Prophet; in the east (Iran and Central Asia) new dynasties were often established by military commanders, who took advantage of the inability of their former masters to control particular territories, but usually without challenging the symbolic significance of the ‘Abbāsids. Although it is almost impossible to establish clear geographical boundaries between these local powers, it is clear that the political and dynastic geography of the Islamic world had been constantly changing (Figure *dynasticgeography*).

Prosopographical data

§ 4. Biographical collections constitute one of the largest genres of Islamic literature which it is yet to be thoroughly studied.¹ Abundant prosopographical data from these sources strongly suggests that the social geography of the Islamic world had been constantly changing as well: each period had its own constellation of urban centers that were major producers of Muslim cultural élites,² thus determining the core of the Islamic world for each period.

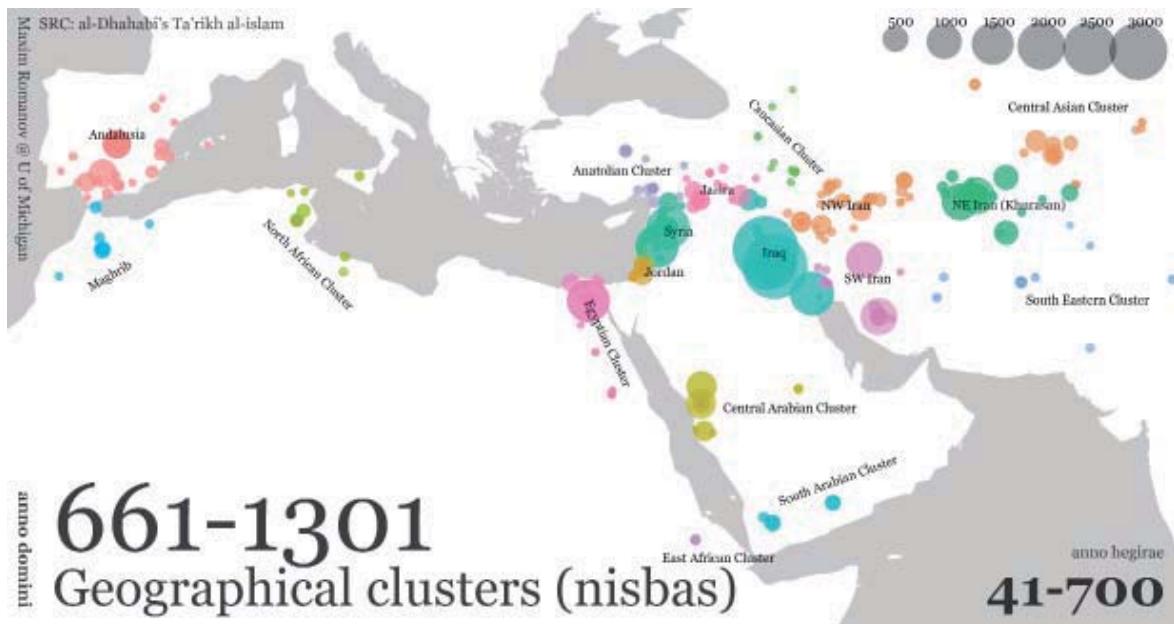
§ 5. What follows is a computational reading of the largest biographical collection of this kind: “The History of Islam” (*Ta’rīh al-islām*)³ of the Damascene historian al-Dahabī (d. 748/1347), who compiled together over 30,000 biographies of notable individuals covering the first seven centuries

¹ The number of biographies in these collections vary from dozens to tens of thousands; some 300 to 400 biographical collections have been compiled in the course of Islamic history (with about 200 digitized). For an overview of major biographical collections, see, *Auchterlonie, Paul. Arabic Biographical Dictionaries: A Summary Guide and Bibliography*. Durham [Durham]: Middle East Libraries Committee, 1987.

² These include men of learning (mostly religious scholars, ‘ulamā’), administrators, and later, increasingly, military commanders and members of their households.

³ The digital text is based on and collated with: *al-Dahabī. Ta’rīhal-islāmwa-wafayātal-maṣāḥīrwa-al-a’lām*. Edited by ‘Umar Tadmuri. 2nd ed. 52 vols. Bayrūt: Dār al-Kitāb al-‘Arabī, 1990.

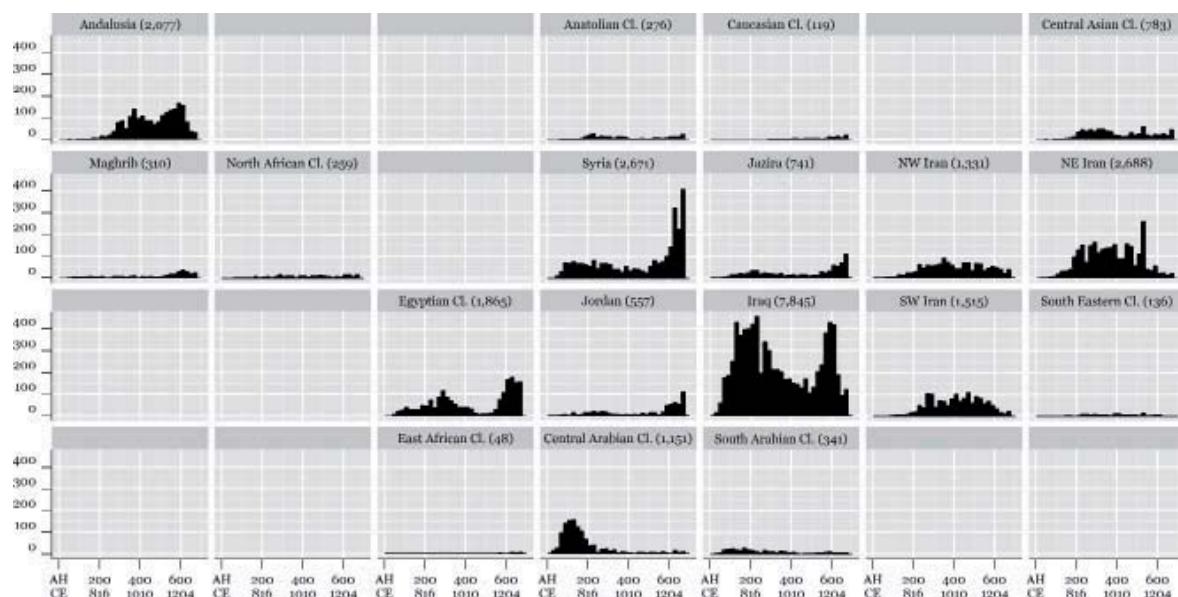
of Islamic history. Mainly for technical reasons, my current dataset includes about 29,000 biographies and covers the period 41–700/661–1301 CE, i.e. excluding the earliest period of 40 years.



*Regional Clusters in Ta'rikh al-islām. Compound clusters that include multiple provinces are explained in (Romanov, Maxim G. "Computational Reading of Arabic Biographical Collections with Special Reference to Preaching (661–1300 ce)". Ph.D., Ann Arbor, MI: University of Michigan, 2013. P. 91). The map is based on toponymic "descriptive names" (sing. *nisbat*) that describe geographical affiliations of individuals. For example, if an individual's name includes the *nisbat* "al-Baghdādī" it means that this individual is strongly associated with the city of Baghdad, usually by immediate ancestry, birth or residence*

§ 6. Visualized on a geographical map, biographical data from *Ta'rikh al-islām* offers a more informed picture of the Islamic world, highlighting the cultural and social importance of different provinces (Figure **RegionalClusters**). For analytical purposes, about 300 most frequent toponyms are grouped into geographical clusters (some represent single provinces, e.g., northeastern Iran corresponds to the province of Ḫurāsān; others group several provinces, e.g., northwestern Iran includes al-Jibāl/ Media, Jīlān, al-Daylām, Ṭabaristān, etc.).

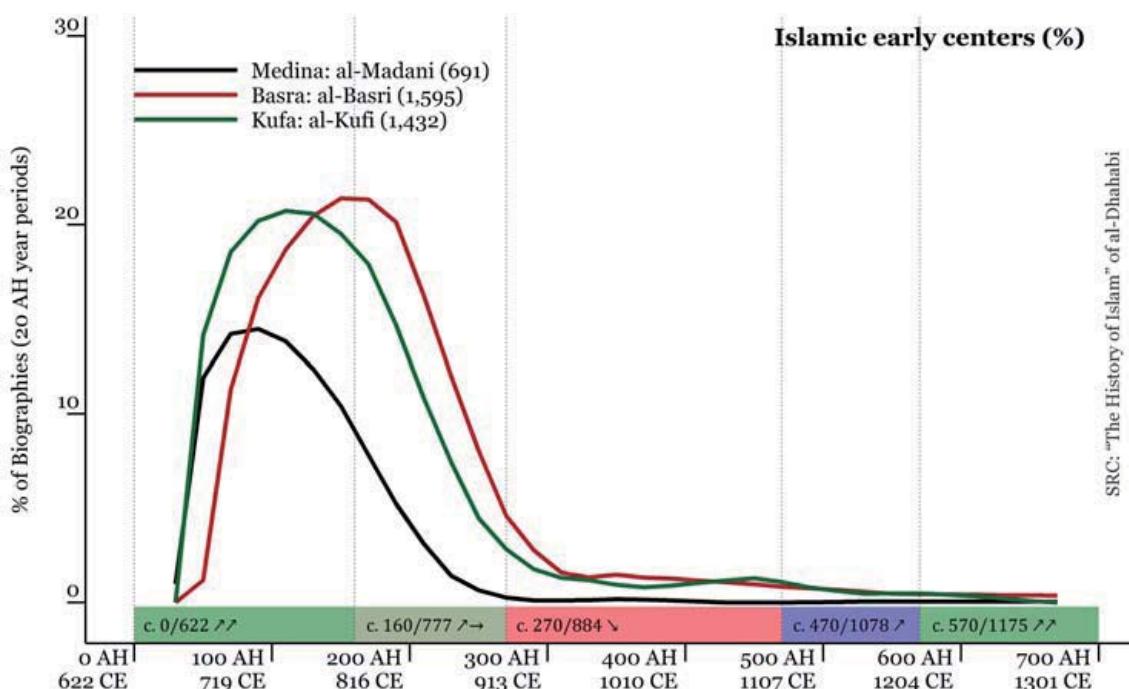
§ 7. As Figure **RegionalRepresentation** shows, the representation of some regional clusters is rather insignificant. These are mostly regions on the margins of the Islamic world during our period—the further they are from the center the less visible they are on the graph. The only exceptions are Andalusia and Central Asia. The former is well represented due to its thriving and largely independent scholarly culture, while the second is mainly due to its integration into the core through northeastern Iran (Ḩurāsān). The histograms show that different regions prosper at different periods; the well-represented clusters can be divided into early, middle and late bloomers.



*Chronological representation of geographical clusters in the *Ta'rih al-islām**

§ 8. The cradle of Islam, central Arabia is the most prominent region in the early period. Major urban centers of this region are Mecca/Makkat (269) and Medina/al-Madīnat (691), but their cultural prominence soon shifts to the main garrison cities of lower Iraq: Basra/al-Baṣrat and Kufa/al-Kūfat. The decline of central Arabia starts around 100/719 CE, and by 250/865 CE this region is diminished to a marginal province. (The south Arabian cluster displays a similar trend.)

§ 9. Iraq very quickly becomes the central region and maintains this status for the most of the period covered in the *Ta’rīh al-islām*. During the early period its prominent urban centers are Basra/al-Baṣrat (1,595) and Kufa/al-Kūfat (1,432), but the prominence of these garrison towns is soon dwarfed by Baghdad, the new capital city, and they practically disappear from the social map of the Islamic world by around 300/913 CE. Baghdad remains the dominant urban center not only for Iraq, but for the entire Islamic world until the beginning of the 13th century CE. Other major urban centers of this region are Wāsiṭ (401) and al-Anbār (83).

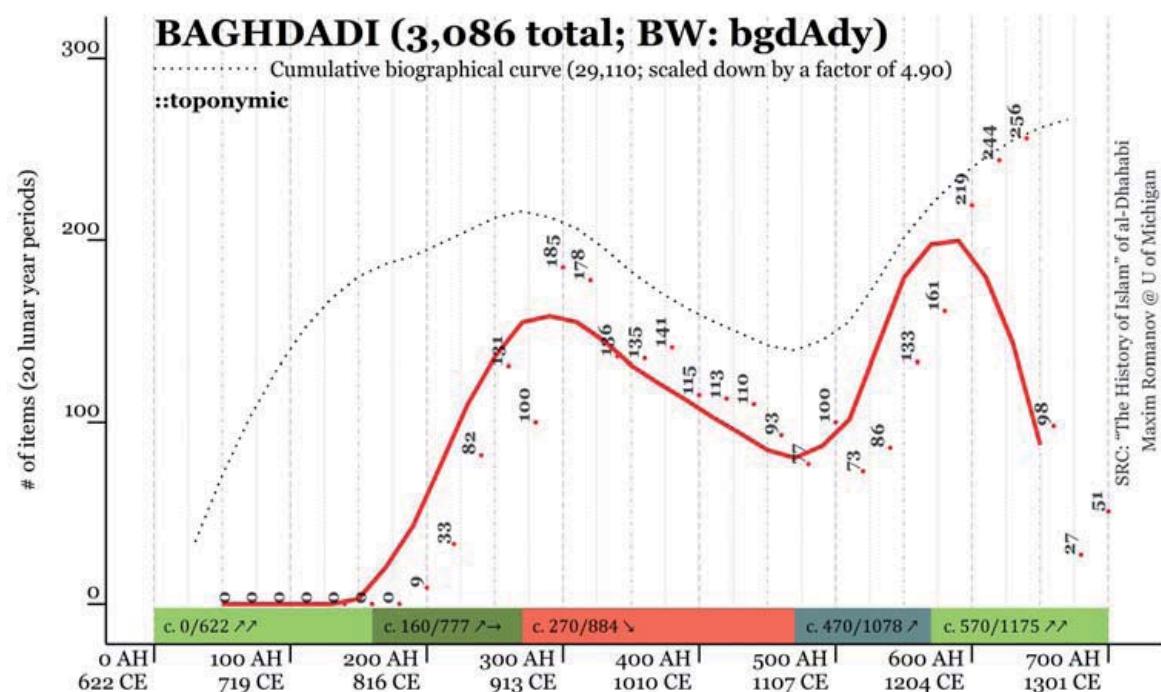


Major Early Bloomers: Medina/al-Madīnat (691); Kufa/al-Kūfat (1,432), and Basra/al-Baṣrat (1,595)

§ 10. The rapid growth of Iraq comes to a halt around 200/816 CE—at this period the Caliphate is being torn apart by the civil war between al-Amīn and al-Ma’mūn, the two sons of great Hārūn al-Rashīd (r. 786–809 CE), who decided to divide the Empire between them. The province falls into clearly visible decline. In the course of the 9th century the power slips from the ‘Abbāsid caliphs: first into the hands of the military

commanders of their slave armies, then—the Büyids (932–1055 CE) and the Saljūqs (1038–1194 CE).

§ 11. 480/1088 CE marks the beginning of a century-long recovery for Iraq—the ‘Abbāsid caliphs gradually manage to shake off the “protectorship” of the military (at this point, the Saljūq *sultāns*) and temporarily regain their independence. Caliphs, *sultāns*, and viziers (*wazīr*) vie for influence with each other, seeking the support of religious scholars and relying on various mechanisms of promoting different legal schools—respectively, the Ḥanbalīs, the Ḥanafīs, and the Ṣāfi’īs. It is during this period that these groups start growing quite noticeably.

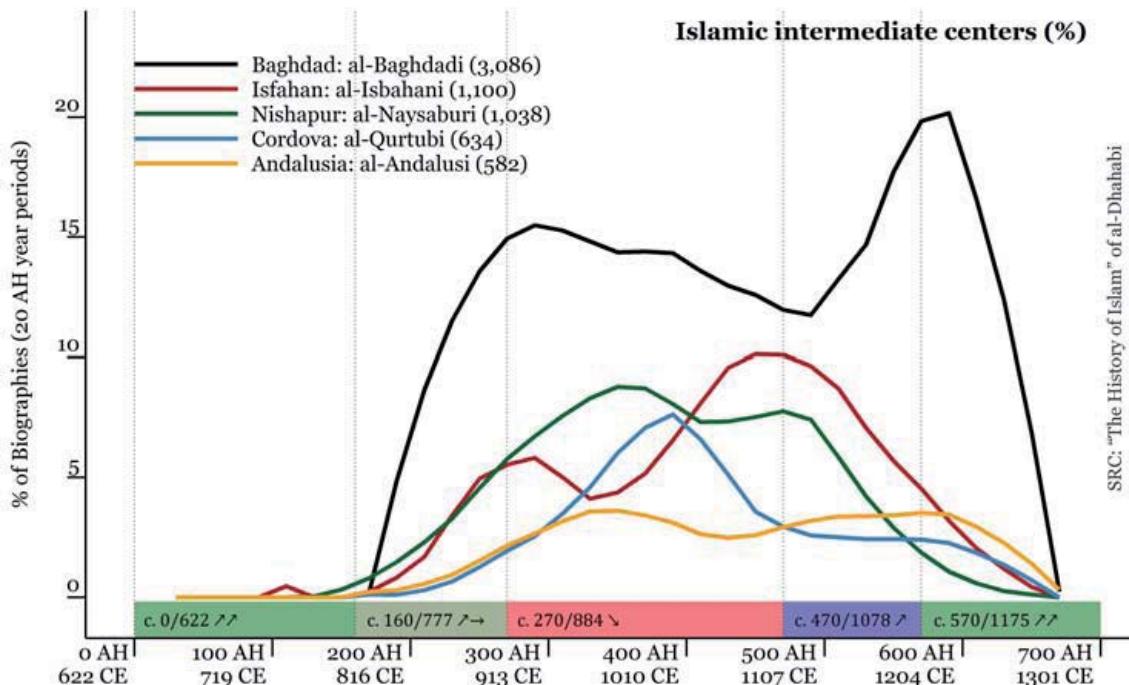


The number of *Baghdādīs* drops quite noticeably before the Mongol sack of the capital city in 656/1258 CE. Number of death reported for the 20-lunar-year periods after 600/1204 CE: 244 for 600–620/1204–1224 CE; 256 for 621–640/1225–1243 CE; 98 for 641–660/1244–1262 CE; 27 for 661–680/1263–1282 CE; 51 for 681–700/1283–1301 CE

§ 12. By the end of the period covered in the *Ta’rīh al-islām*, Iraqi élites drastically decrease in numbers, practically disappearing from the social map of the Islamic world. Although the Mongol invasion is often considered the main cause, the data from the *Ta’rīh al-islām* shows that the ranks of

Iraqi élites start dwindling well before the coming of the Mongols (see, Figure **Baghdadis**). Despite these vicissitudes, the number of notable men in Iraq remains quite significant over the most part of our period, and the prominence of Iraq is rivaled only by Iran, with all its clusters combined.

§ 13. Major “middle bloomers”, Iranian provinces gain prominence between 100/719 CE and 200/816 CE. The curve of northeastern Iran (*Hurāsān*) reaches its highest point quite quickly around 200/816 CE and remains there, fluctuating slightly, for over three centuries, and goes into a rapid decline after 520/1127 CE. It takes longer for northwestern Iran to reach its peak—around 350/962 CE—and then it slowly goes down. Unlike northeastern Iran, it is still visible on the maps of the Islamic world by the end of our period. The curve of southwestern Iran reaches its highest point around 280/894 CE, then goes into a temporary decline during the 4th/10th century, recovers by 400/1010 CE and begins to go down slowly, increasing its pace of decline around 520/1127 CE. The major urban centers are: Nishapur/Naysābūr (1,038), Merv/Marw [al-ṣāḥijān] (385), Herat/Harāt (392), Balkh/Balh (171) and Tūs (136) in northeastern Iran (*Hurāsān*); Rey/

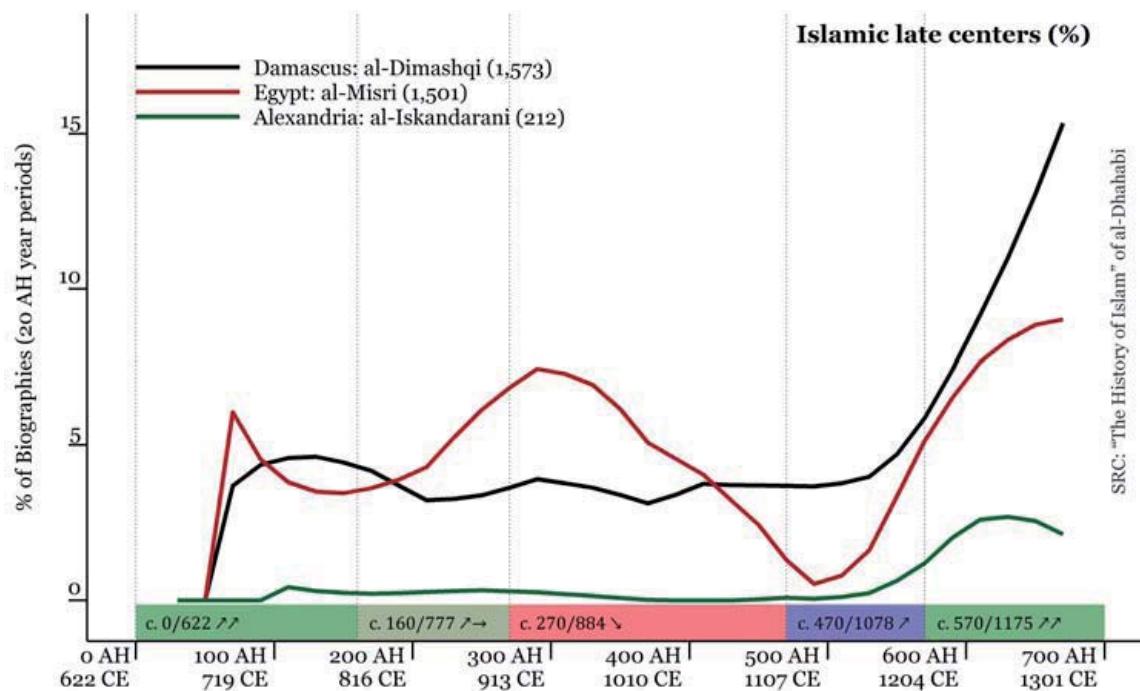


Major Middle Bloomers: Baghdað (3,086); Isfahan/Iṣbahān (1,100); Nishapur/Naysābūr (1,038); Cordova/Qurtubat (634); Andalusia/al-Andalus (582)

al-Rayy (280), Hamadān (254) and Qazwīn (118) in northwestern Iran; and Isfahan/Iṣbahān (1,124) and Shiraz/Šīrāz (100) in southwestern Iran.

§ 14. The curves of Iranian clusters correspond to what scholars of Islam often refer to as “Iranian intermezzo”¹, a period of Iranian independent dynasties (roughly 750–1150 CE): the Ṭāhirids (821–873 CE), Ṣaffārids (867–903 CE) and Sāmānid(s) (875–999 CE) in the east and the Büyids (932–1055 CE) in the north and west. All Iranian clusters practically come to naught by the end of the period covered in the *Ta'rīh al-islām*.

§ 15. The two-peaked curve of the last “middle bloomer”, Andalusia/al-Andalus, seems to correspond to the zenith of the Umayyad caliphate in Spain (756–1031 CE) around 380/991 CE, followed by its disintegration and the recovery under the Almoravids/al-Murābiṭūn (1056–1147 CE) and the Almohads/al-Muwahhidūn (1130–1269 CE)—beginning around 470/1078 CE and peaking around 590/1195 CE; after that Andalusia is being gradually erased from the map of the Islamic world by the Christian Reconquista. The

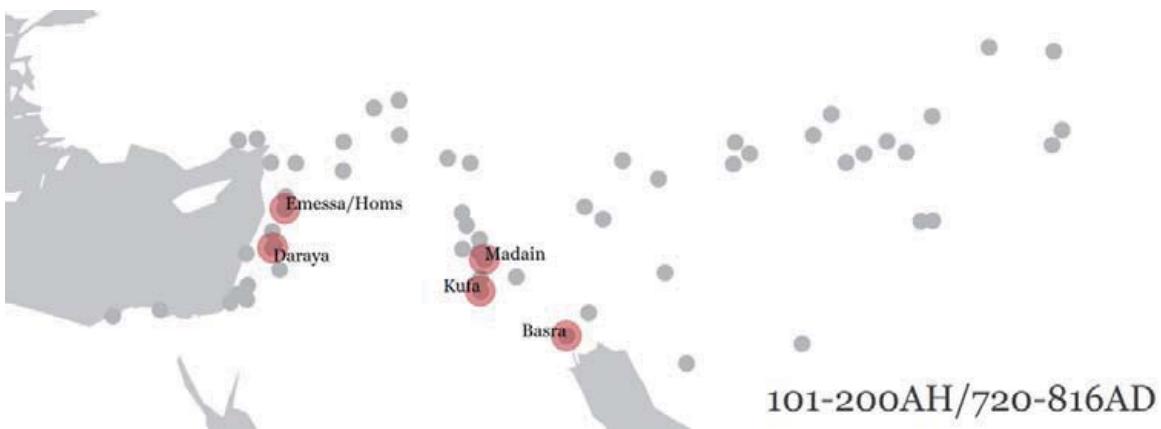


Major Late Bloomers: Damascus/Dimašq (1,573), Egypt/Miṣr (1,501), Alexandria/al-Iskandariyyat (212)

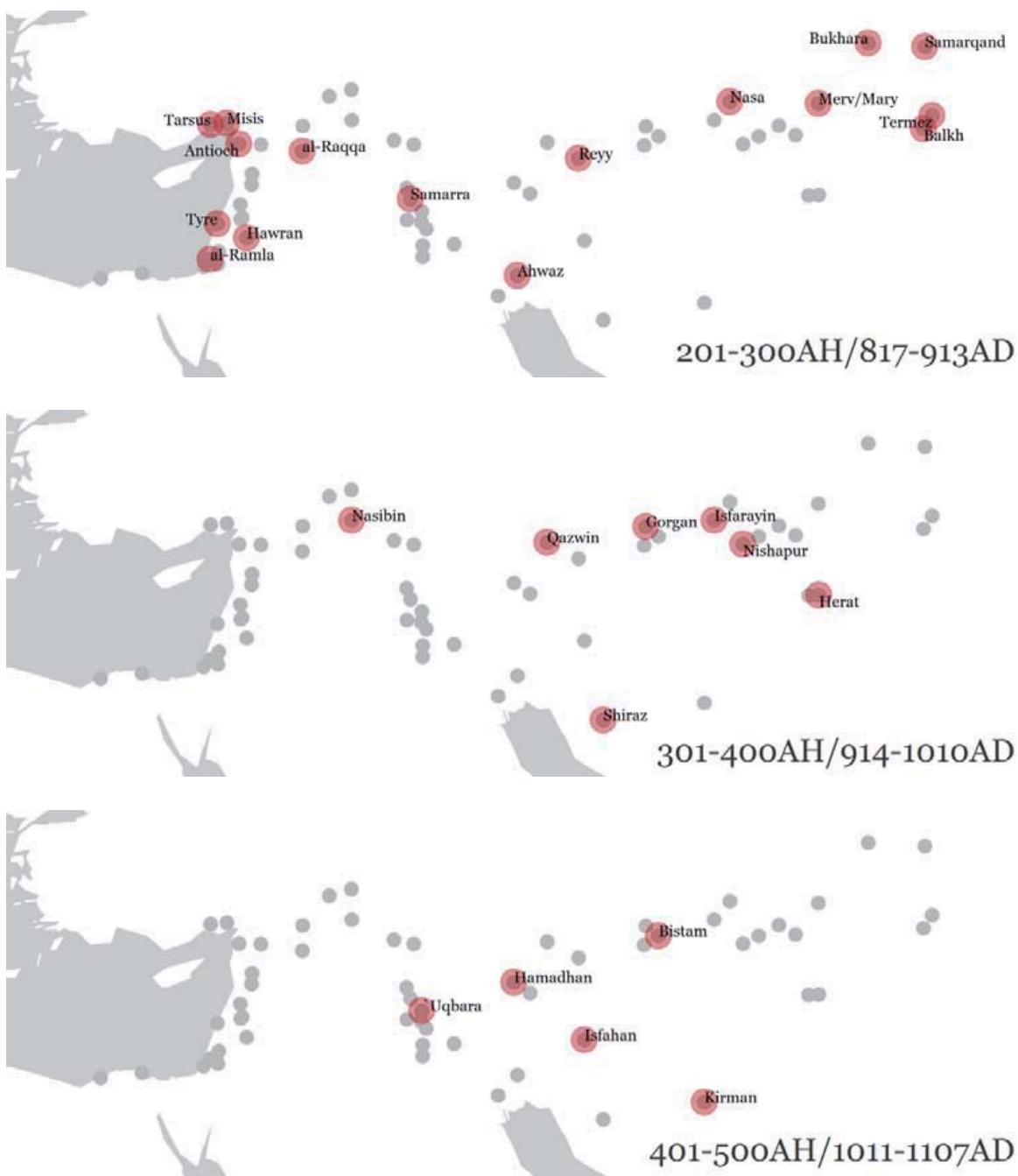
¹ The term was introduced by Vladimir Minorsky: Studies in Caucasian History. CUP Archive, 1953. P. 110–116.

major Andalusian urban centers are Cordova/Qurṭubat (633), Seville/Išbīliyat (248), Valencia/Balansiyāt (141) and Toledo/Tūlāyṭīlat (89).

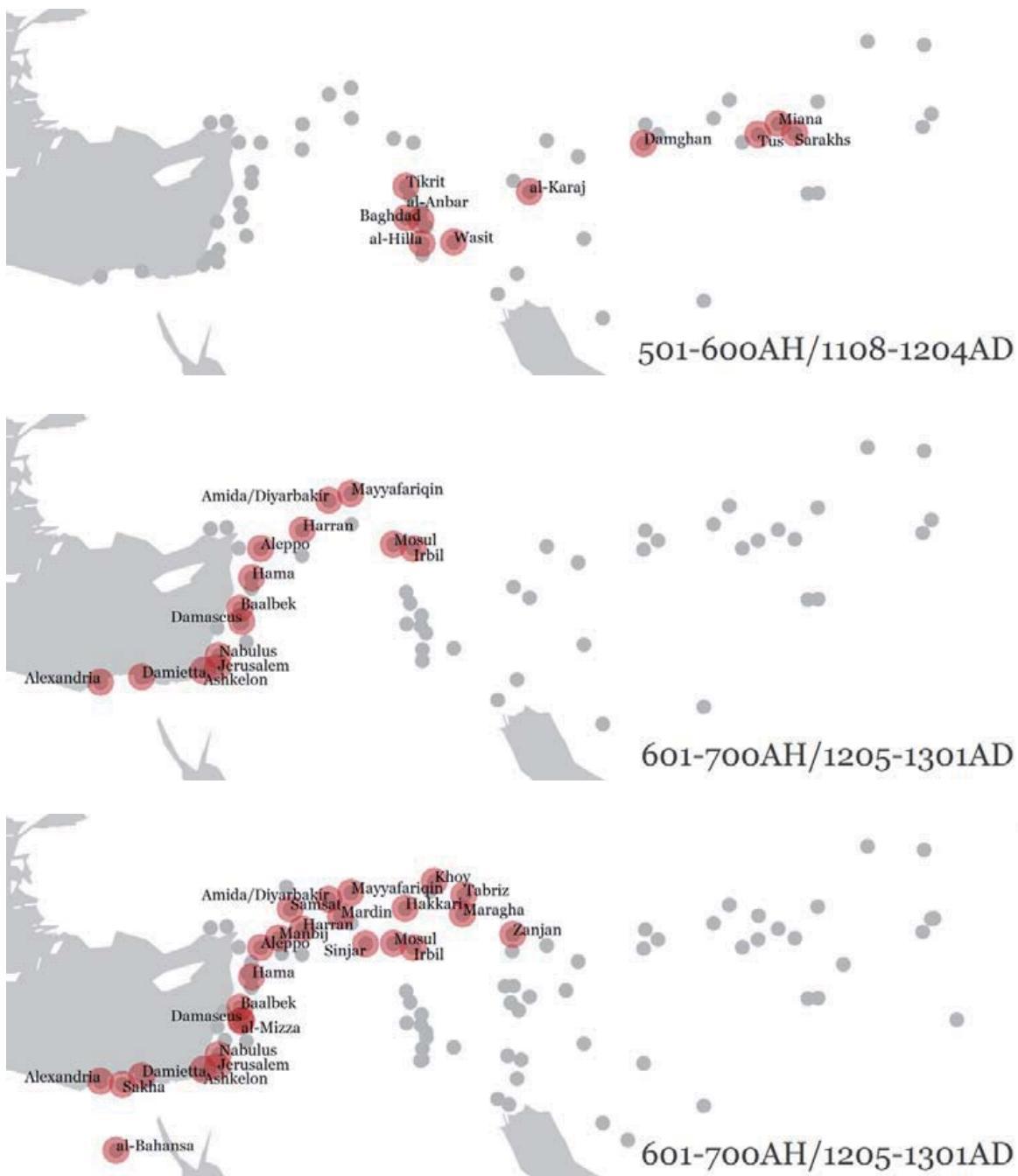
§ 16. Regional clusters that can be characterized as “late bloomers” often have earlier peaks of prominence: around 100/719 CE for Syria, when the first great Islamic dynasty, the Umayyads (661–750 CE), rules from there; around 200/816 CE for the Jazīrat and Jordan; and around 300/913 CE for Egypt—followed by equally noticeable decline until around 500/1107 CE. However, their main peaks of prominence fall on the end of the period, by which the “late bloomers” form what can be considered as one continuous crescent-shaped macro-region—Figure **UrbanCentersMashriq700**—stretching from Egypt/Miṣr in the south, through Jordan/al-Urdunn, Syria/al-Shām, Upper Mesopotamia/al-Jazīrat, the northern part of Iraq, the very south of the Caucasian cluster in the north, and reaching as far as northwestern Iran (Zanjān). The prominence of these regions rises noticeably after 500/1107 CE—right at the onset of the rule of dynasties that unify the region: the Zangids (1127–1222 CE), the Ayyūbids (1169–1250 CE), and the Mamlūks (1250–1517 CE). The major urban centers are: Mosul/al-Mawṣil (313) and Ḥarrān (224) in the Jazīrat; Damascus/Dimāšq (1,769), Homs/Ḥims (268), Aleppo/Ḥalab (231) and Hamah/Ḥamāt (103) in Syria; Jerusalem/al-Quds (315) in Jordan; and Alexandria/al-Iskandariyyat (211) in Egypt/Miṣr¹. By



¹ Cairo/al-Qāhirat is not yet identifiable through onomastic data; most individuals from Egypt have the *nisbat* al-Miṣrī (1,501) that associate them with the entire province. Although this *nisbat* may also refer to Cairo, at the moment it does not appear possible to differentiate efficiently.



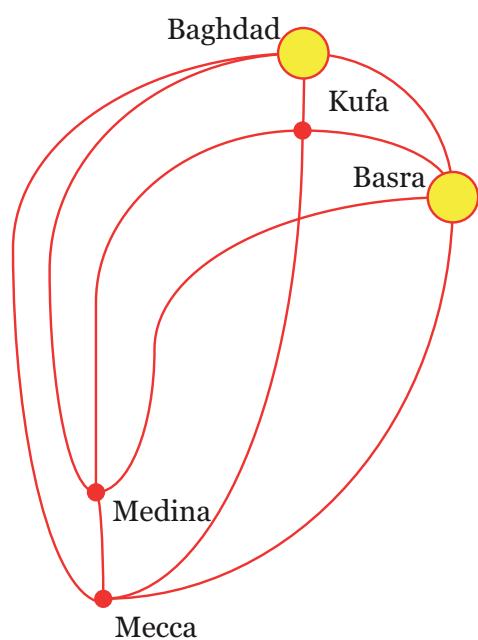
the end of the main period covered in the *Ta'rih al-islām*, Syria becomes the new center of the Islamic world, with Egypt being next in the line.



The Eastern Urban Crescent of the 7th/13th century. A similar shift toward the Mediterranean shore happens with the western urban centers a century earlier (most clearly visible in Andalusia). This return to the Mediterranean can be interpreted as a sign of the formation of the new Mediterranean commonwealth with the Italian “Maritime Republics” (Genoa, Pisa, Venice, Almalfi and others) actively trading in the region

The Core

§ 17. The prosopographical overview given above shows how the role of major regions changed over time, but overlooks the complexity of connections between these regions. Locations mentioned in biographies can be connected into a graph that will represent geographical networks of biographees. Placing such a graph on a geographical map should give a clear idea of that network. Figure **ConnectionModel** represents a model of an individual geographical network that connects all locations mentioned in a biography and marks locations referred to in onomastic data, if such are available (in our example, the biographee is both al-Baṣrī and al-Baghdādī)¹.

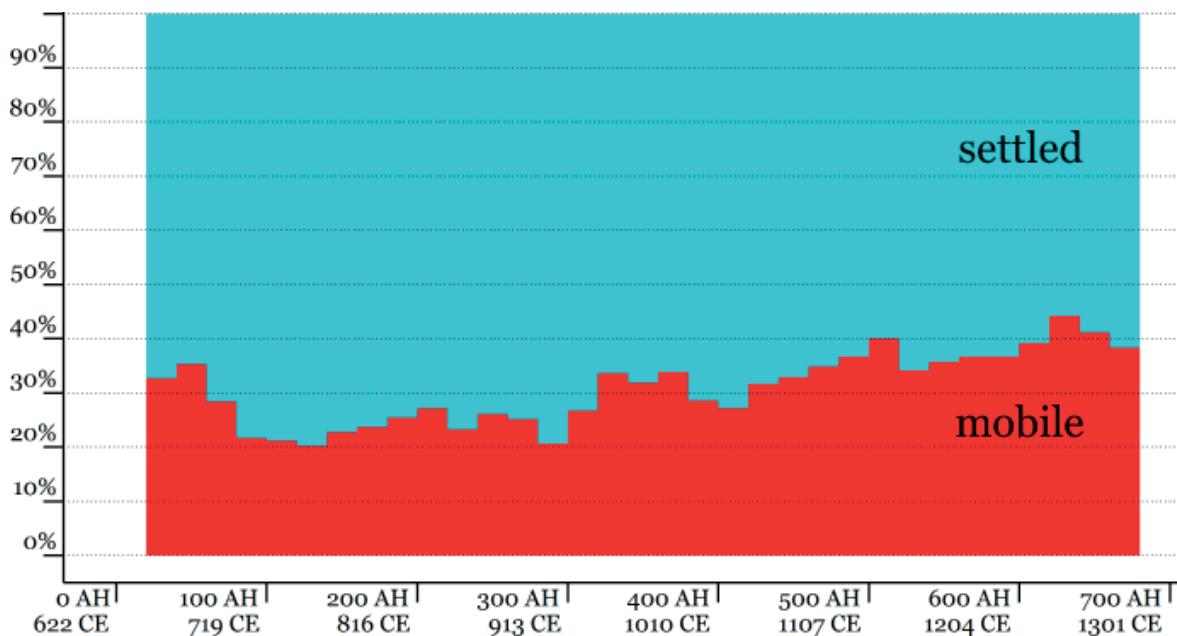


The model of an individual's geographical network

§ 18. Modeled in such a manner, geographical networks of individuals can then be aggregated into a cumulative network that will shed light on how the entire Islamic world stayed connected and how connections between regions changed over time. The compound geographical network can be further divided into subsets representing specific combinations of periods, regions and social groups. For the sake of clarity we will look into connections between regional clusters described above².

¹ *Al-Baghdādī, Ismā'īl Bāshā. Hadiyatal-'arifin Asmā' al-Mu'allifin Wa Athāral-Muṣannifin.* 6 vols. Bayrūt: Dār al-kutub al-'ilmīya, 1992.

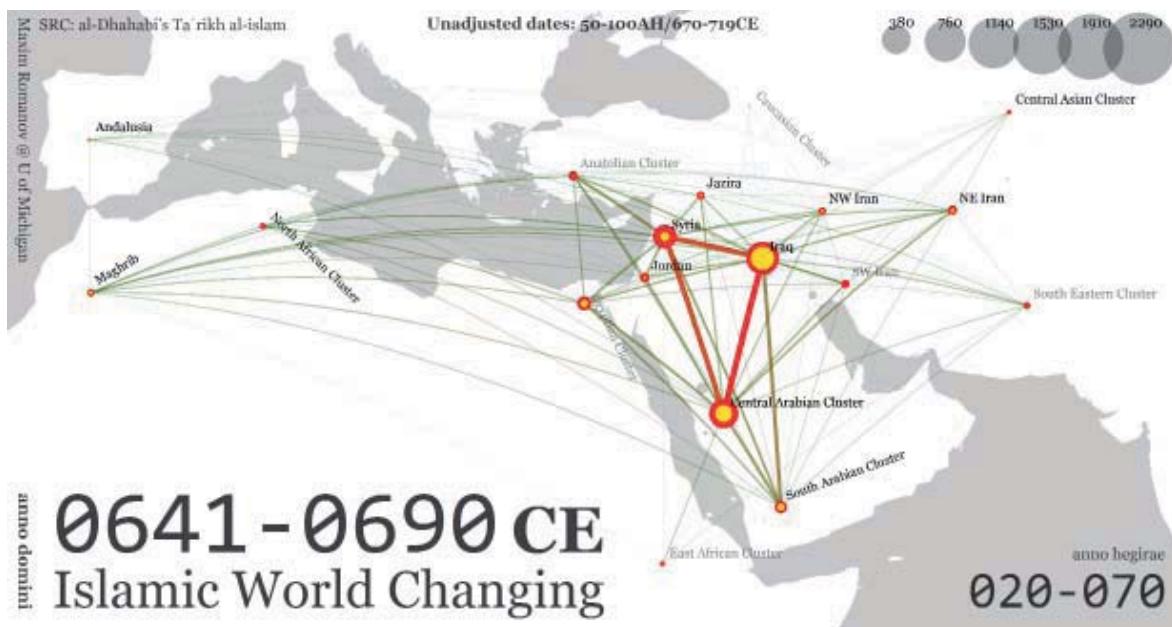
² At this point connections can be visualized only as arcs between assumed centers of regional clusters, as if individuals were traveling by air. Figure **Cornu** actually displays a dataset in the making that will allow to generate maps that will use trade routes for visualizing connections.



*Transregional Mobility in the *Ta'rih al-islām*. Individuals whose biographies mention at least two different regional clusters are considered transregionally mobile: 33% (9,697). The proportion of transregionally mobile individuals fluctuates within the range of 22–46%, growing toward the end of the period*

§ 19. The *Ta'rih al-islām* offers 25,875 biographies (89,9%) that have at least one toponymic reference; 9,697 biographies (33%) mention locations that belong to at least two different regional clusters—these individuals are considered transregionally mobile and their networks provide data for visualizing the core. The proportion of transregionally mobile individuals fluctuates within the range of 22–46%, growing toward the end of the period.

§ 20. Figures **GCcumulA**, **GCcumulB**, **GCcumulC** and **GCcumulD** show a chronological series of maps of connections based on these data. Each circle represents a regional cluster: the yellow cores visualize the number of individuals strongly associated with a regional cluster through their *nisbats*; the red “husks” show the number of individuals who most likely visited a region—one or more locations belonging to a cluster are mentioned in biographies. Arcs visualize connections between regional clusters: depending on the number of individuals with connections between two particular clusters, arcs vary in transparency, thickness and color. Bleak thin arcs of green color stand for smaller numbers of connections, while

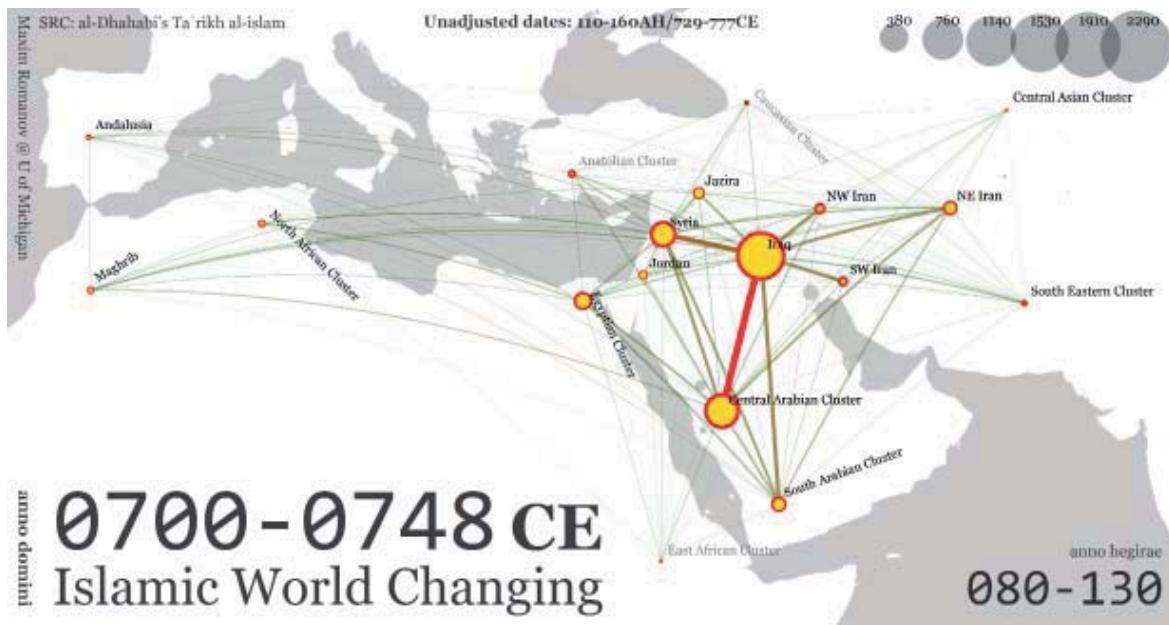


The Core in the 7th century CE

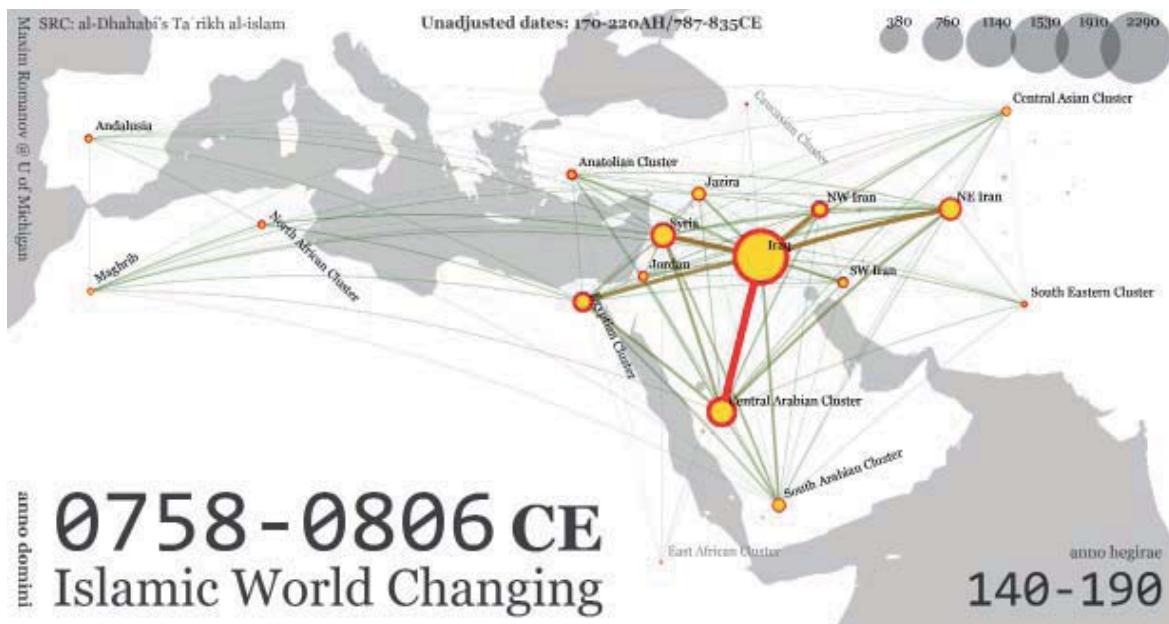
bright thick arcs of red color stand for larger numbers of connections during a given 50-lunar-year period. Combined, these properties allow for making single connections practically invisible, thus excluding irregularities that do not form patterns. Divisions into periods are based on the lunar decades used by al-Dahabī. Conversion of lunar dates into CE dates often results in numbers that are difficult to operate with. Thus, when long periods are discussed, CE dates are rounded to the closest decade (maps, however, retain original dates).

§ 21. Each mini-map shows data for a 50-lunar-year period (and adjusted 30 lunar years back in time to reflect the time of floruit). The presence of green arcs connecting together most clusters on most maps shows that, in general, the Islamic world remained interconnected through the members of its religious, military, administrative and civilian élites over almost the entire period covered in the *Ta’rīh al-islām*. At the same time, red[ish] arcs strongly suggest that the core of the Islamic world—by which we may understand the most closely connected regional clusters—had been constantly changing and shifting.

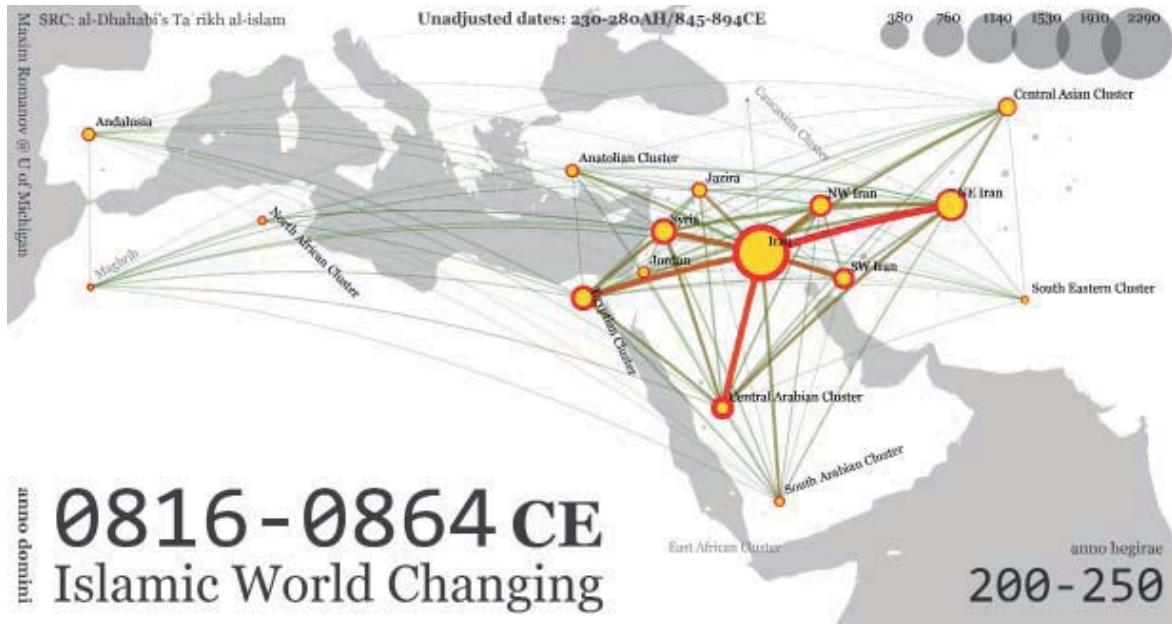
§ 22. For the earliest period 20–70/642–690 CE, the core is the triangle of Central Arabia, Syria and Iraq, where the latter is quickly outgrowing



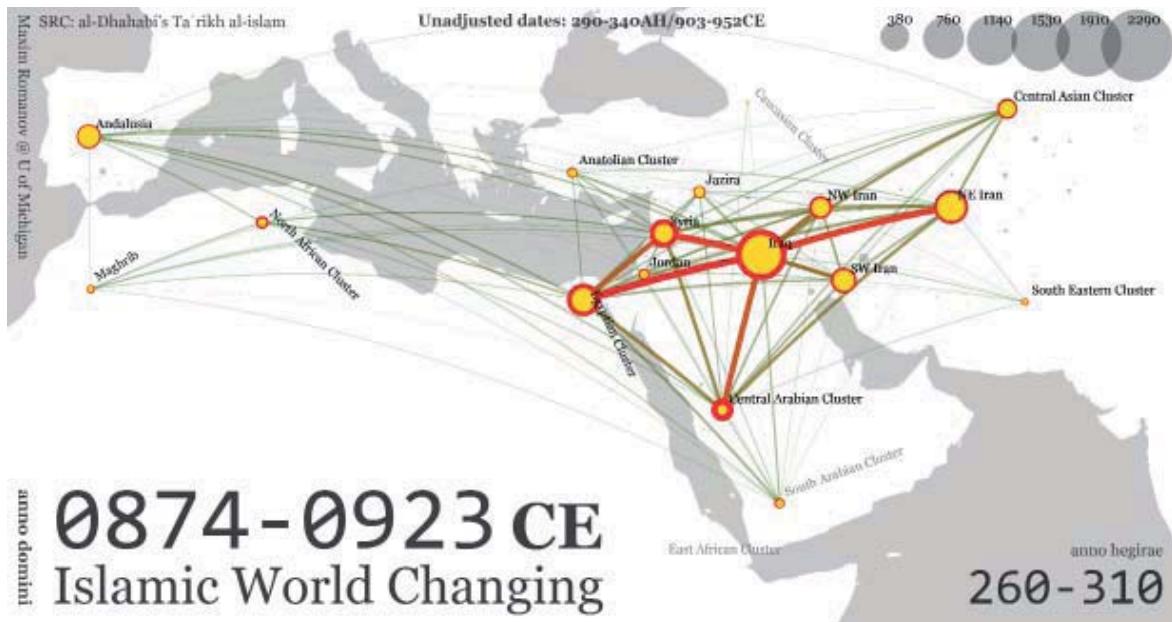
The Core in the 8–10th centuries CE



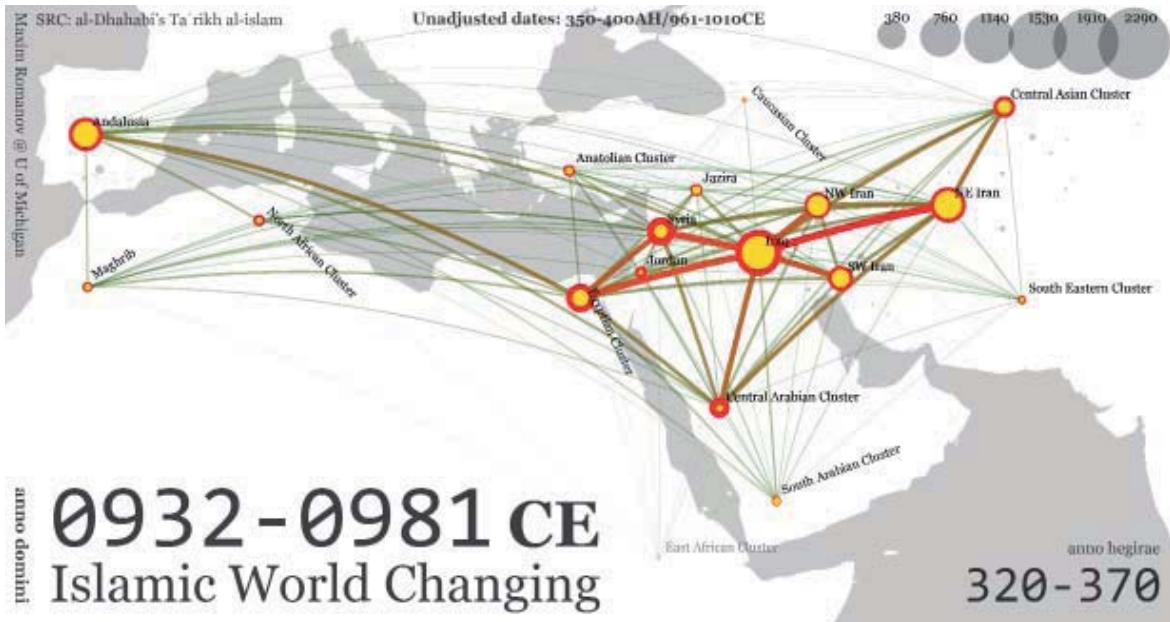
the others in importance. Unfortunately, for the early period—roughly up to 100/719 CE—toponymic *nisbats* are not as frequent as they are in later periods, and most individuals are identified primarily through tribal affiliations. This issue complicates any geospatial visualization of



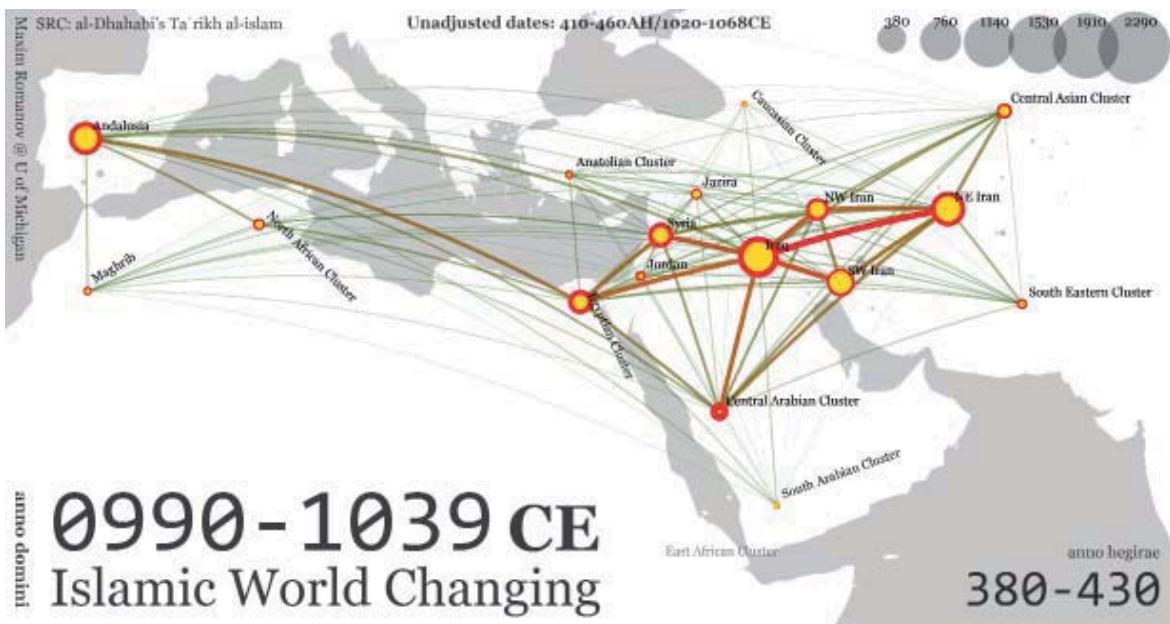
The Core in the 8–10th centuries CE



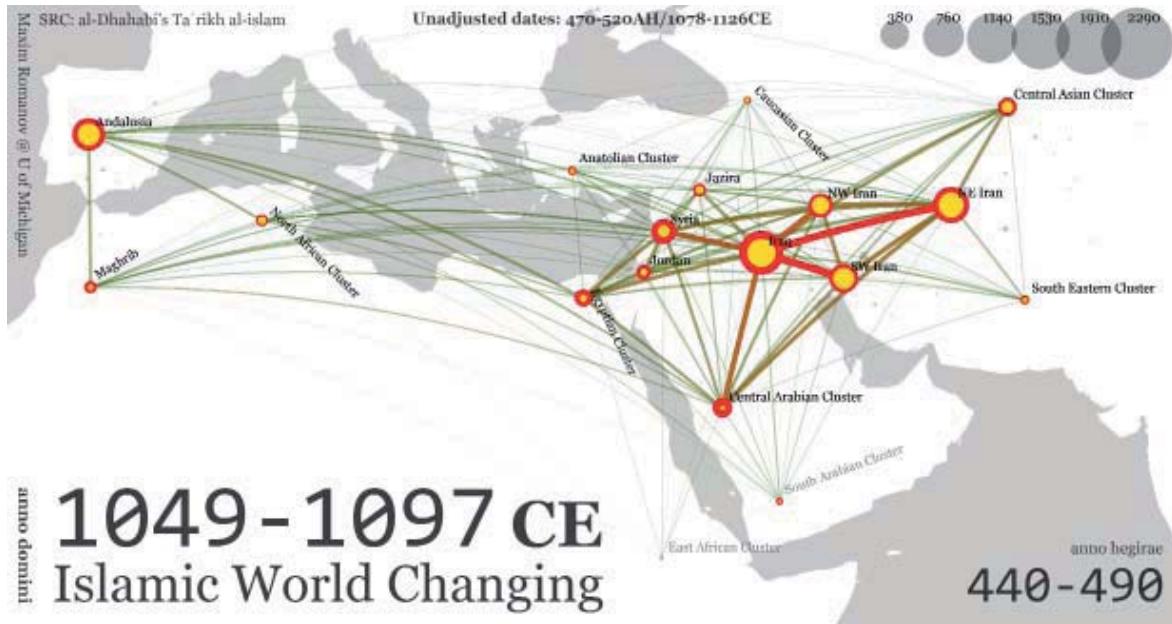
biographical data; georeferencing tribes and tribal *nisbats* may help, but at the moment it is not implemented.



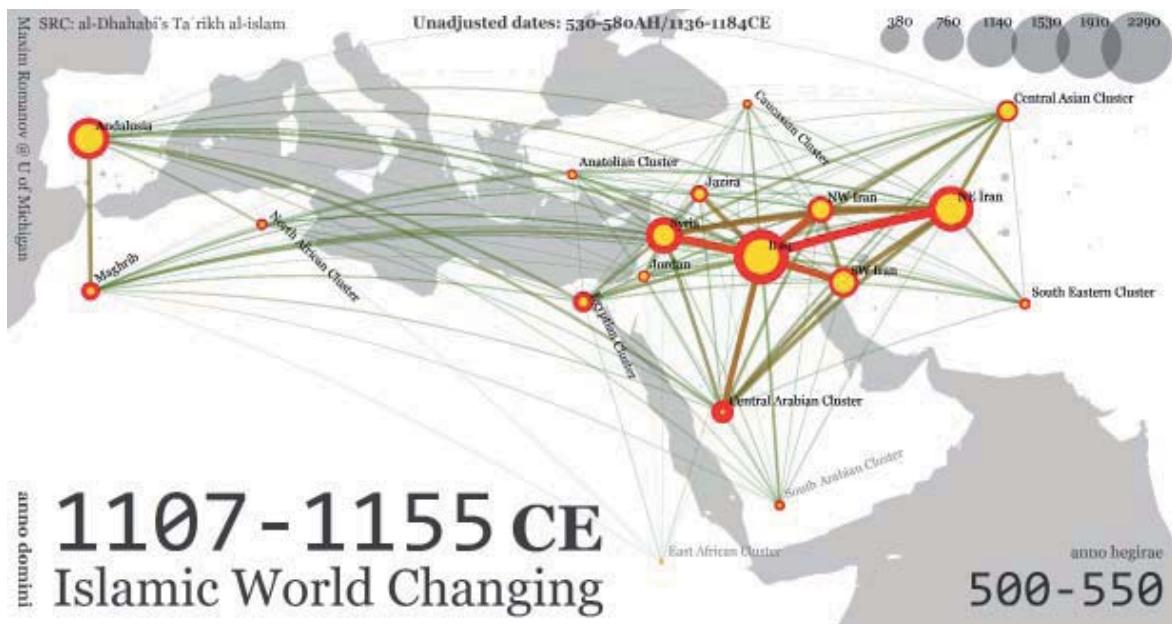
The Core in the 10–12th centuries CE



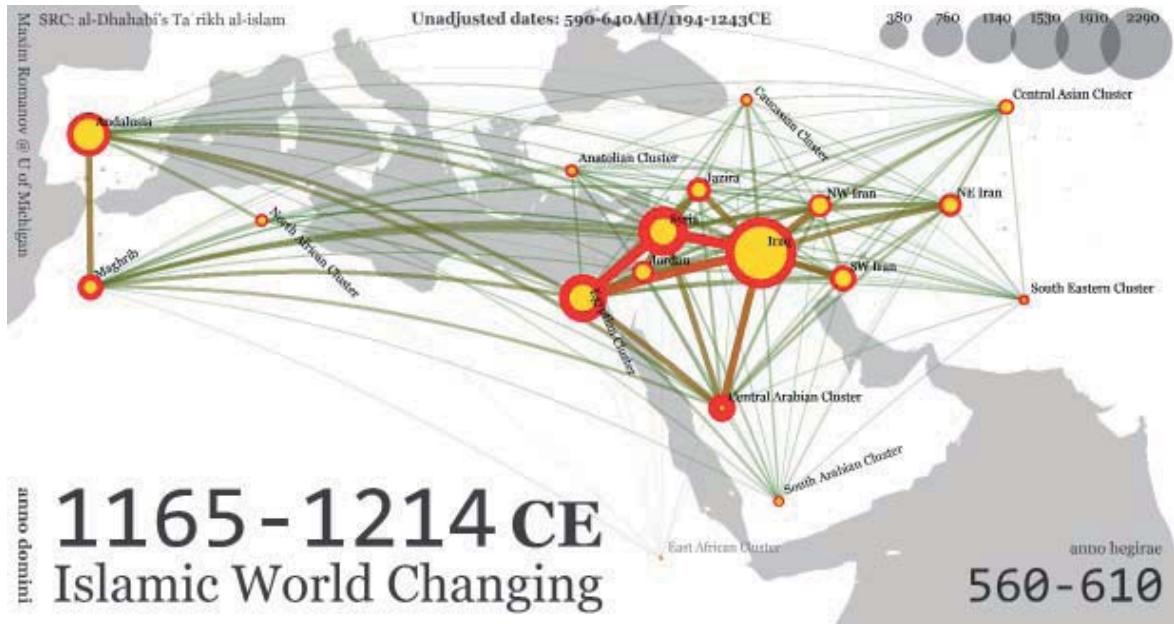
§ 23. By 80–130/700–749 CE, the core shifts away from Syria and toward Iraq, which increasingly becomes the center, maintaining strong connections with Central Arabia and Syria. Meanwhile, other regions begin to converge on Iraq as well: the Jazīrat (Upper Mesopotamia), northwestern Iran,



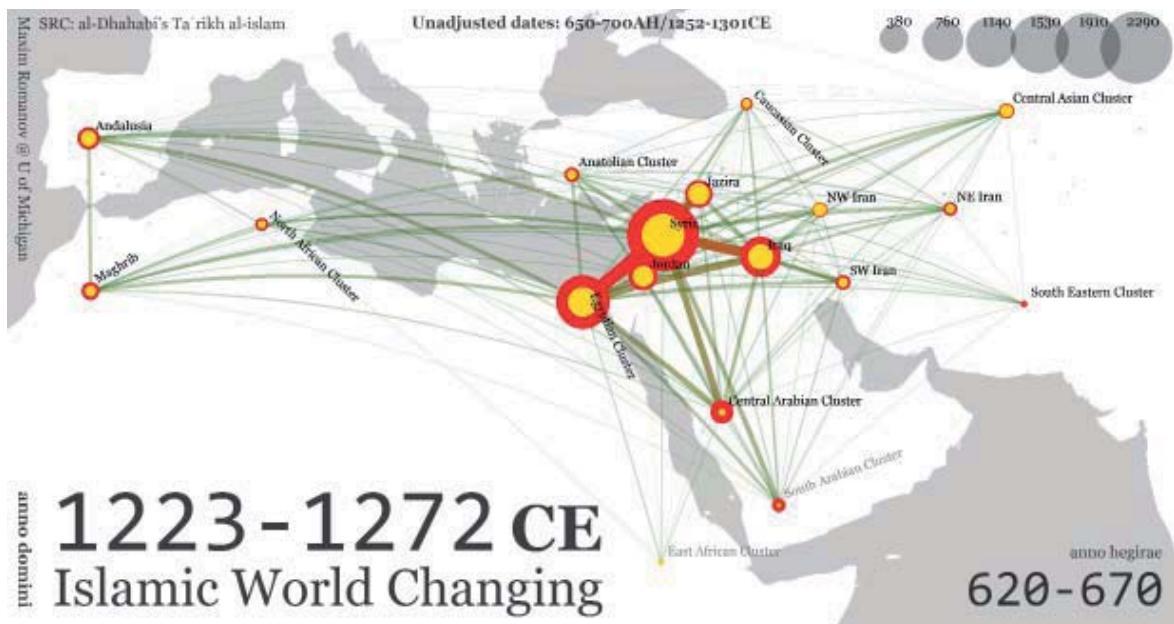
The Core in the 10–12th centuries CE



northeastern Iran, southwestern Iran and South Arabia. By 140–190/758–807 CE, connections between Iraq and Egypt become noticeably stronger, while those between Iraq, southwestern Iran and South Arabia in particular weaken. During the period 170–340/787–952 CE the core remains roughly

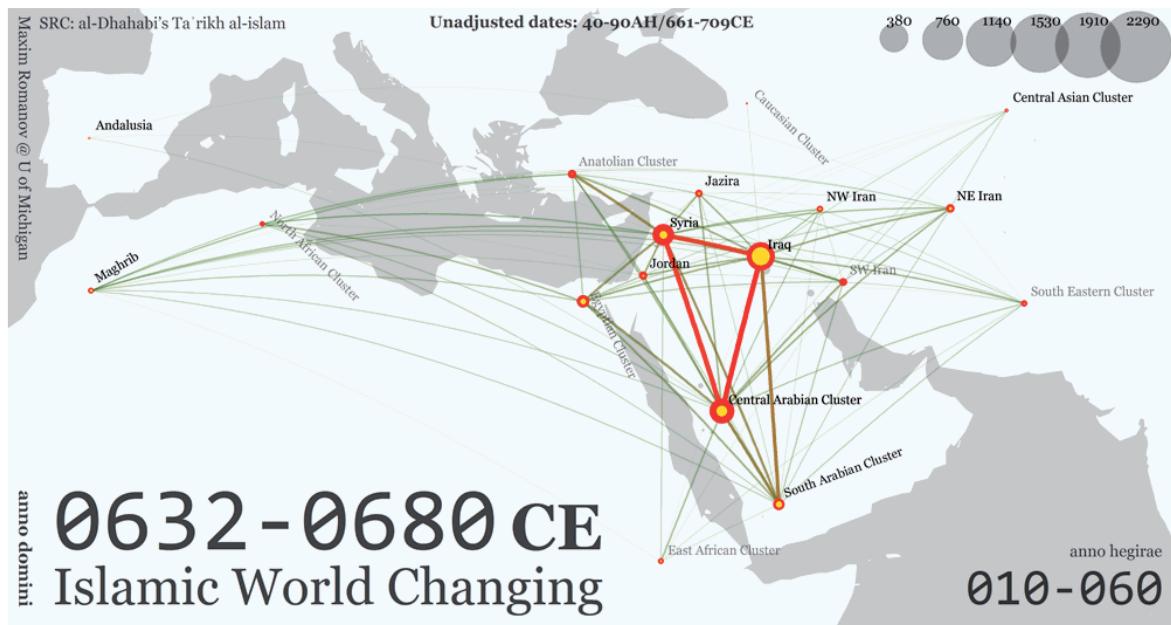


The Core in the 12–13th centuries CE

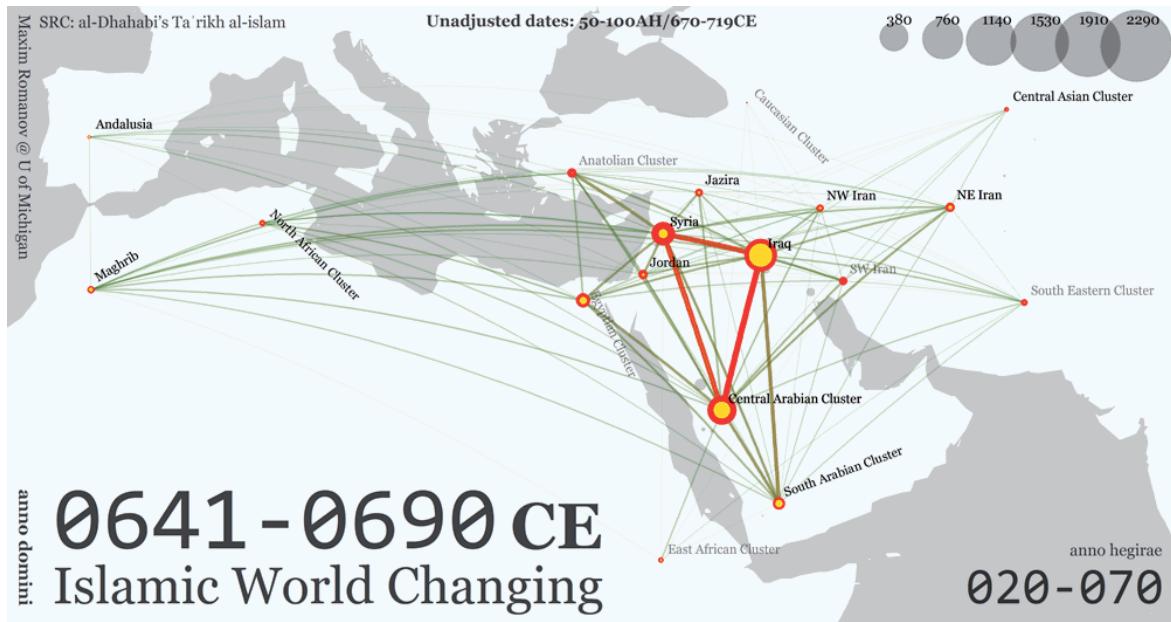


the same: with Iraq in the center, central Arabia, Egypt, Syria, and the three main Iranian clusters strongly interconnected.

§ 24. 320–430/933–1039 CE is the period when the largest number of regional clusters are brought together through transregional connections:

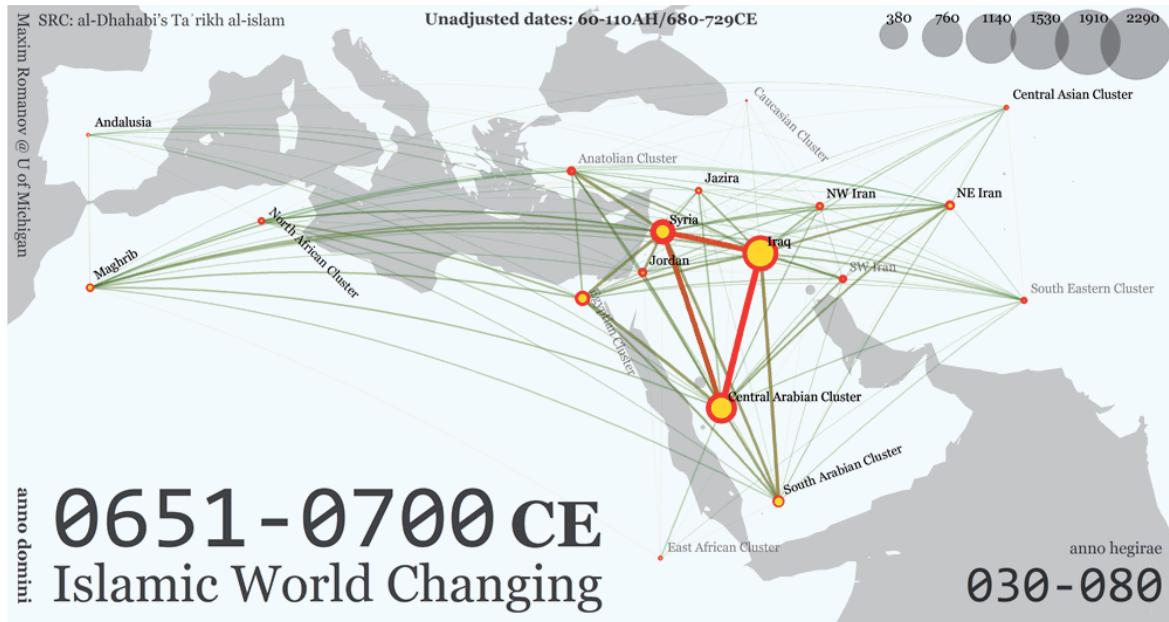


The core in the 7–13th centuries CE (animated)

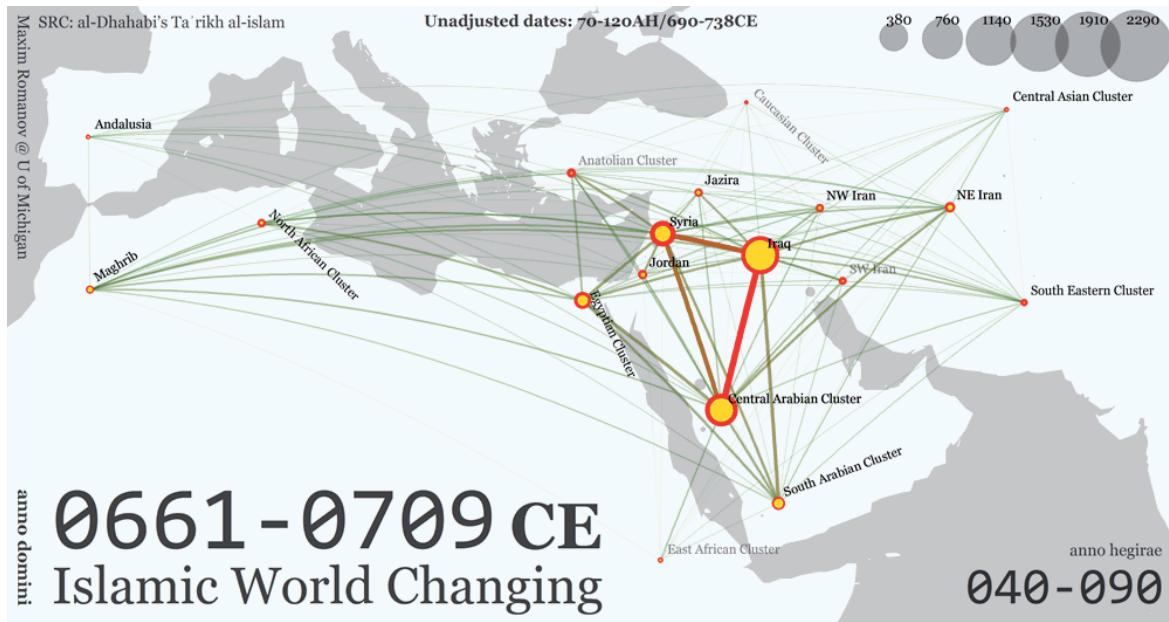


now Andalusia and Central Asia are strongly connected to the core—the former mostly through Egypt, the latter through northeastern Iran.

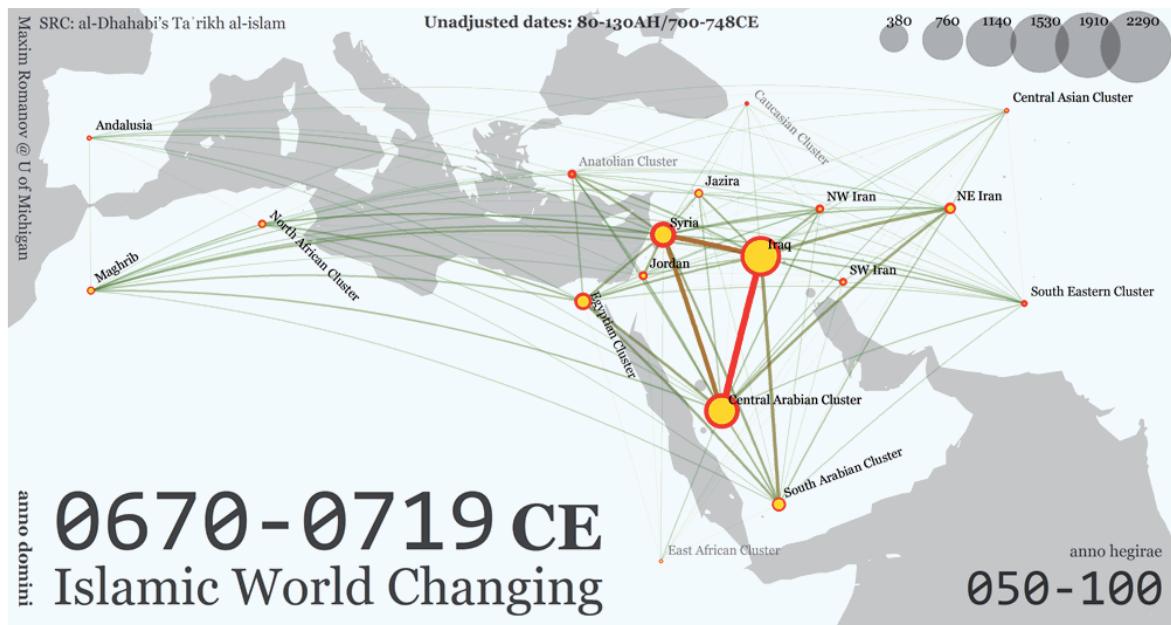
§ 25. At the same time, Syrian and Egyptian connections with Iraq start weakening as early as 380/990 CE, and by 470–520/1078–1127 CE, Egypt



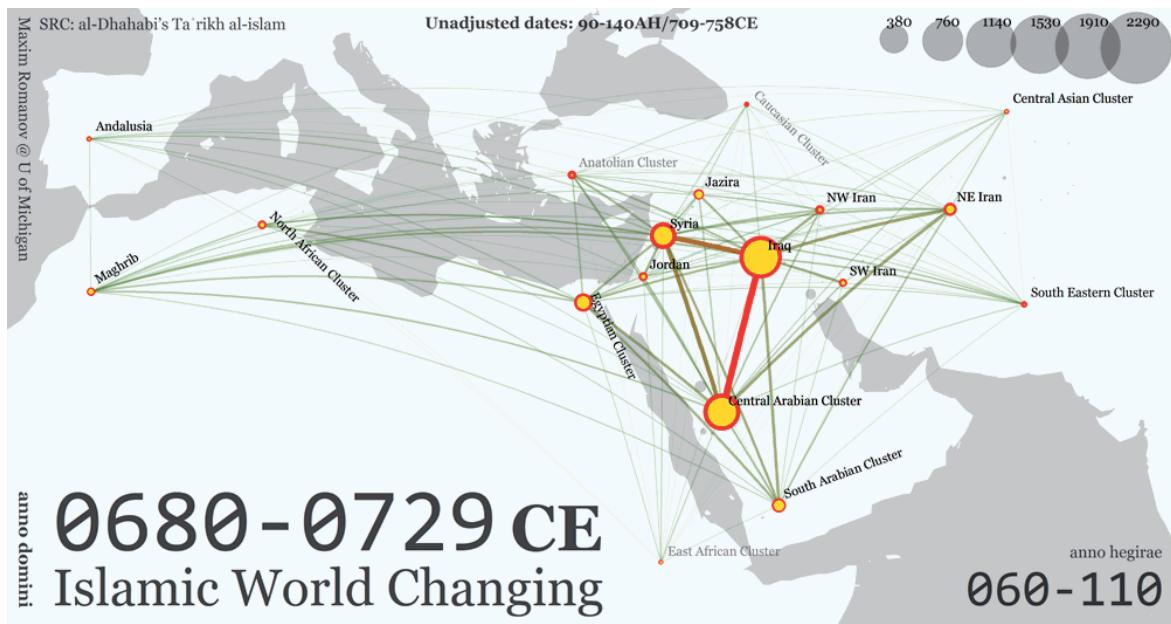
The core in the 7–13th centuries CE (animated)



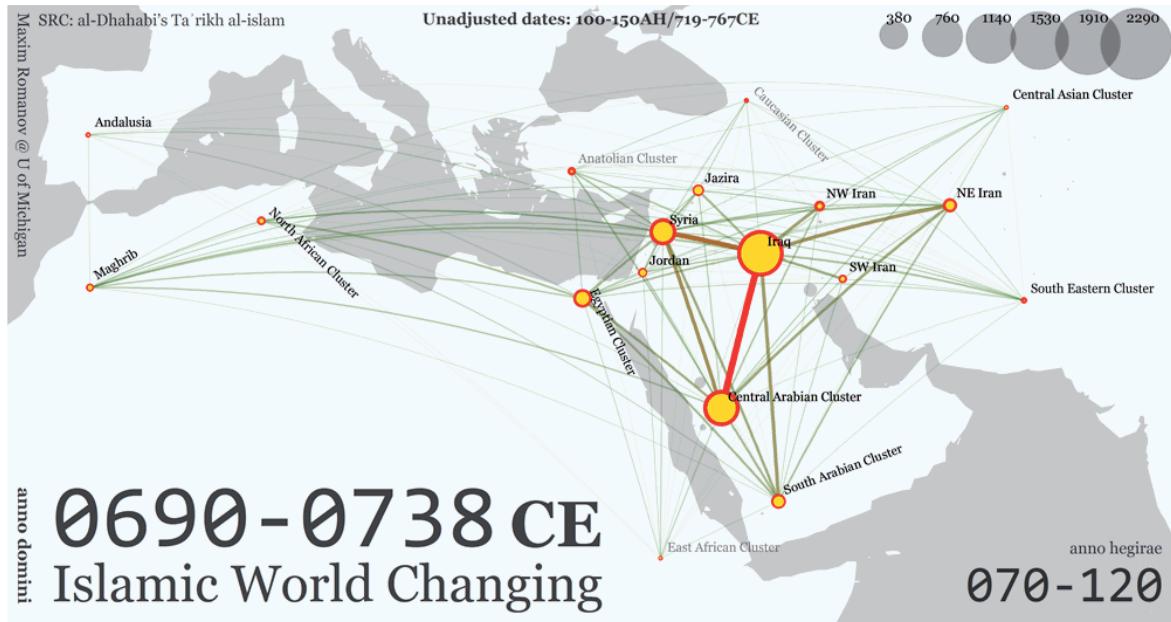
dwindles and splits from the core. Andalusia appears to begin forming its own core with the Maghrib and North Africa, particularly for the period of 500–610/1107–1214 CE. These changes make the core take a temporary shift eastward—440–550/1049–1156 CE—toward Iran. Yet another shift—



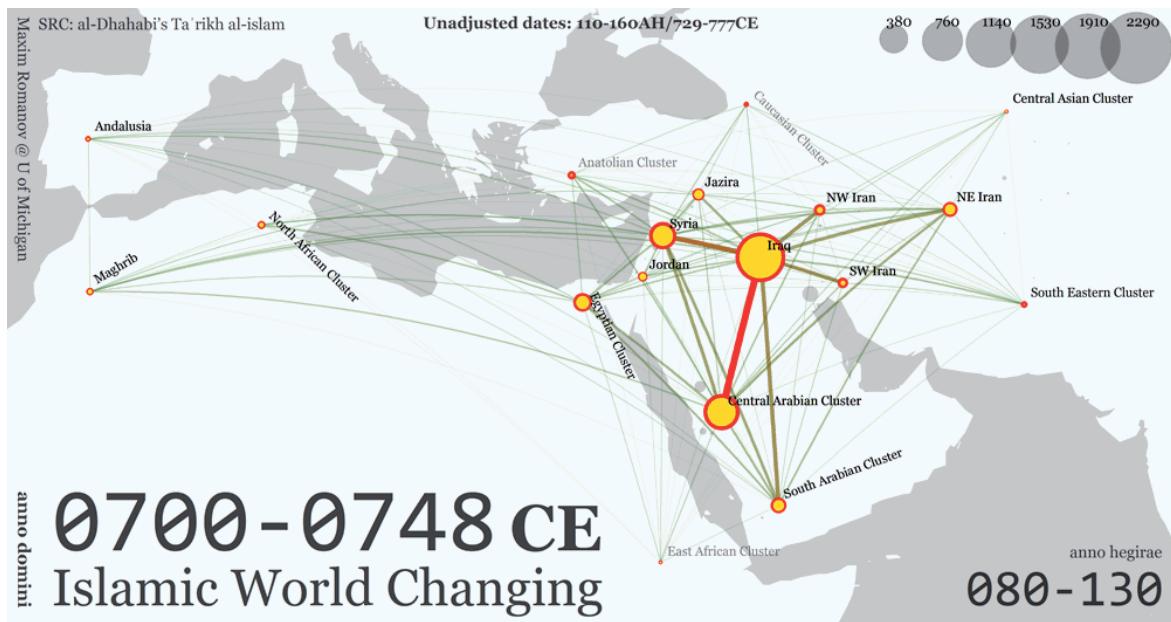
The core in the 7–13th centuries CE (animated)



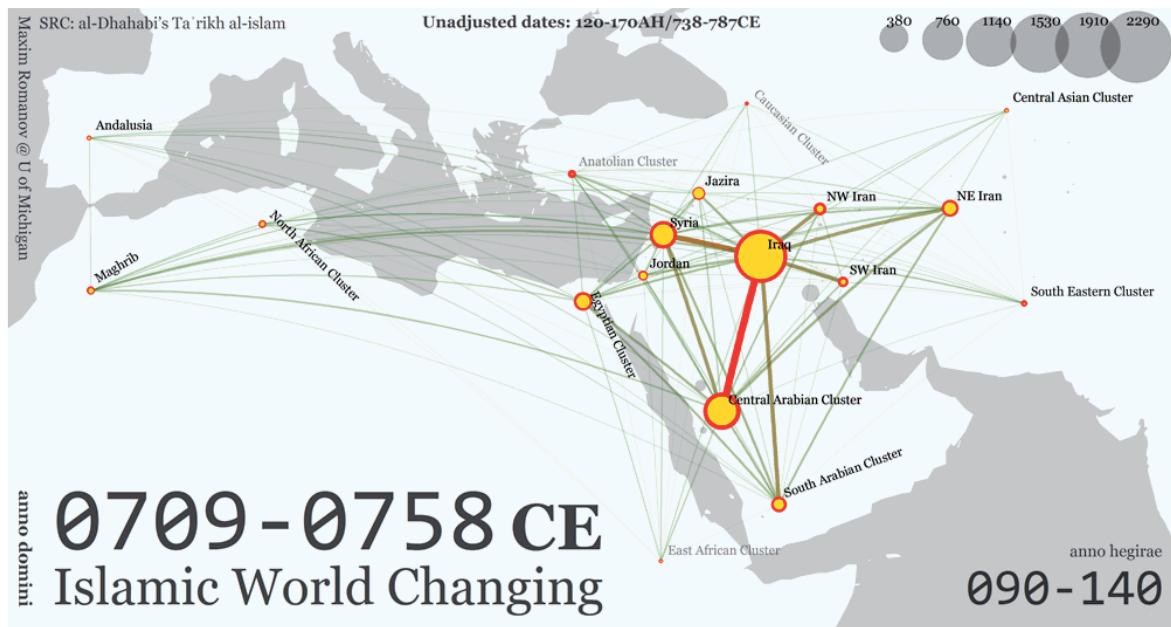
this time to the Mediterranean shore of Syria and Egypt—seems to begin as early as 530/1136 CE and by the end of the period covered in the *Ta'rih al-islām* Syria, Egypt and Iraq become the core; Iraq, however, is in continuous



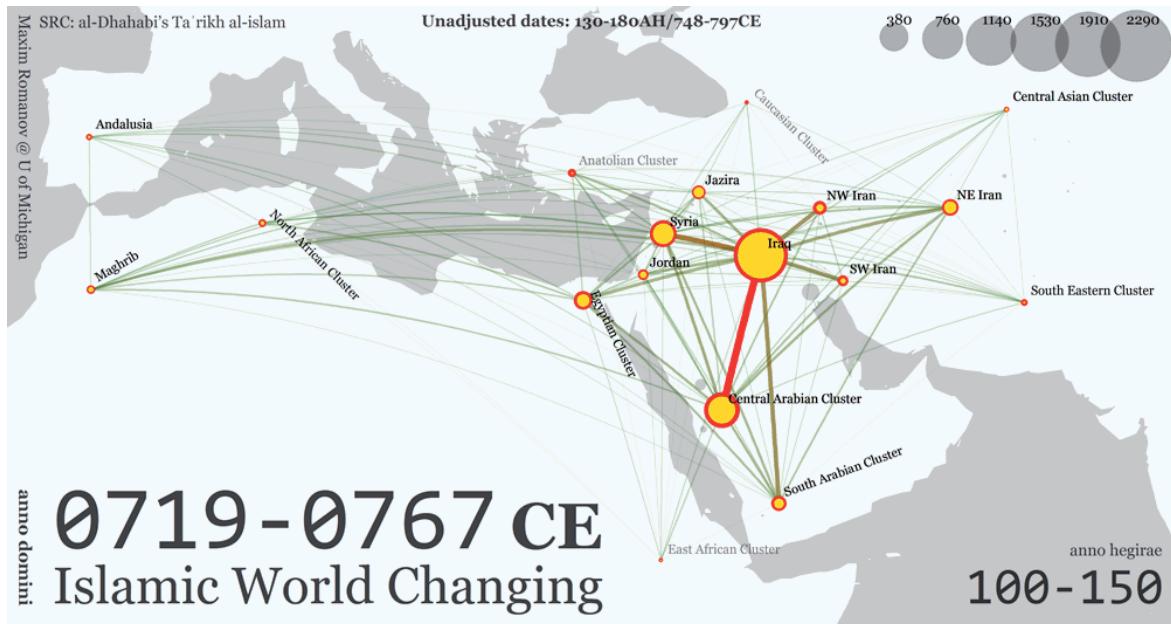
The core in the 7–13th centuries CE (animated)

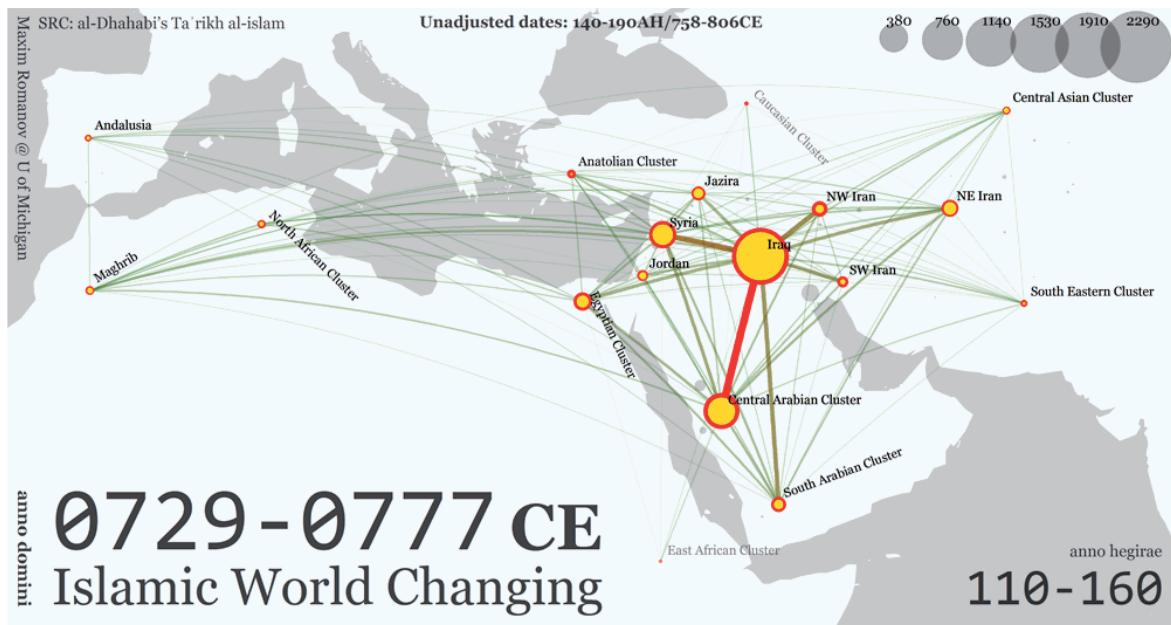


decline. Thick red “husks” of Syria and Egypt strongly imply the migrations of scholars from other regions, whose yellow cores are dwindling.

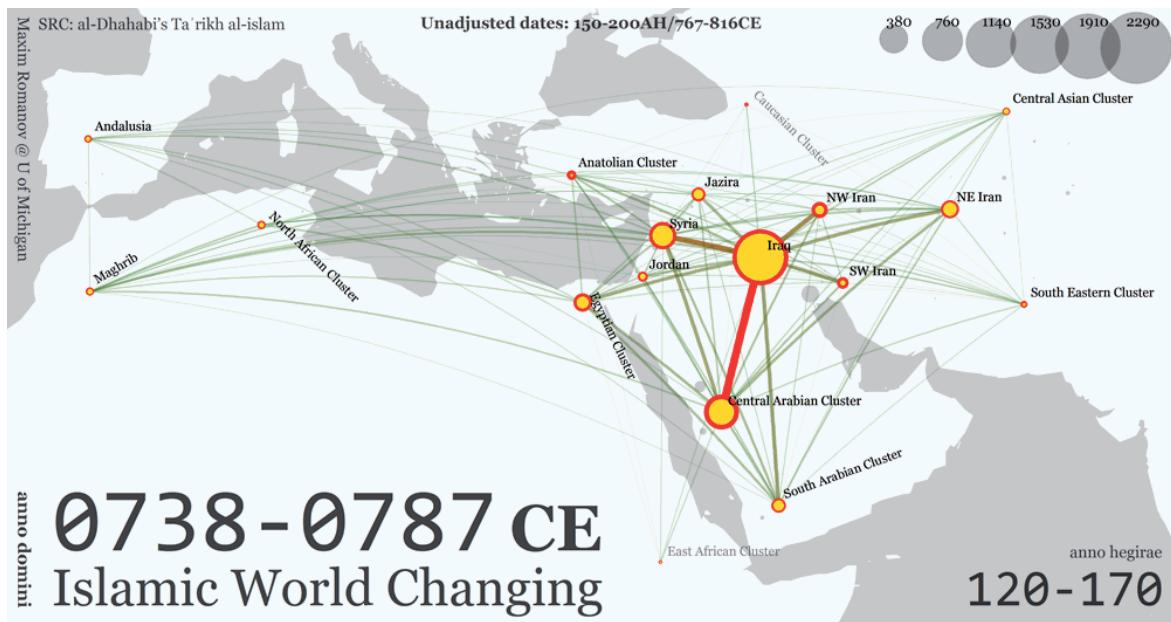


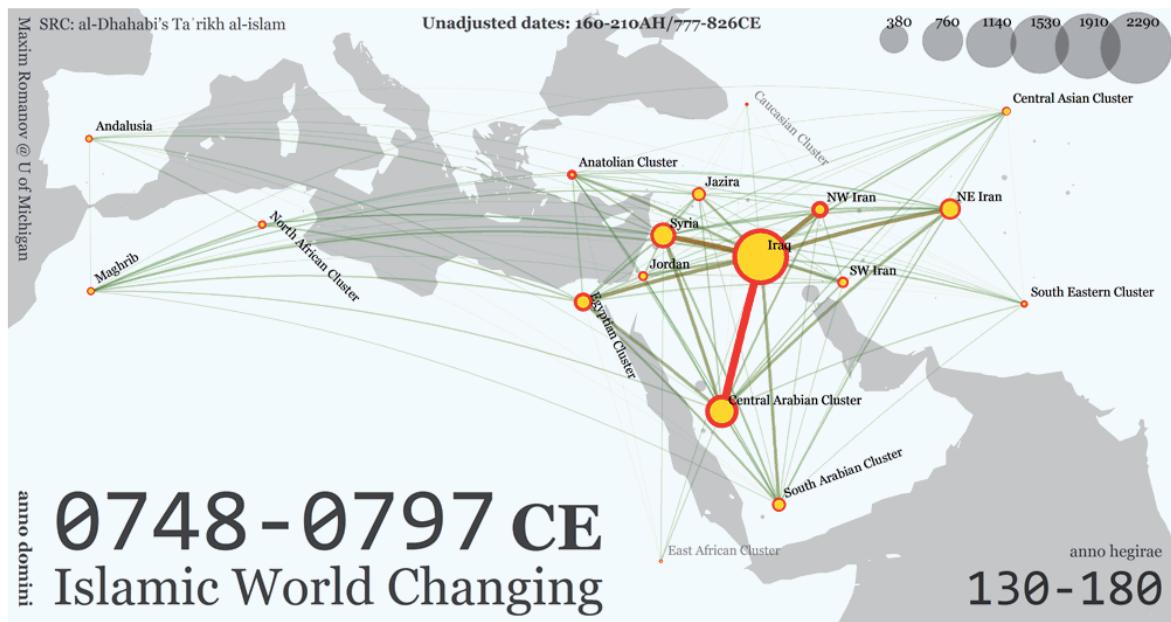
The core in the 7–13th centuries CE (animated)



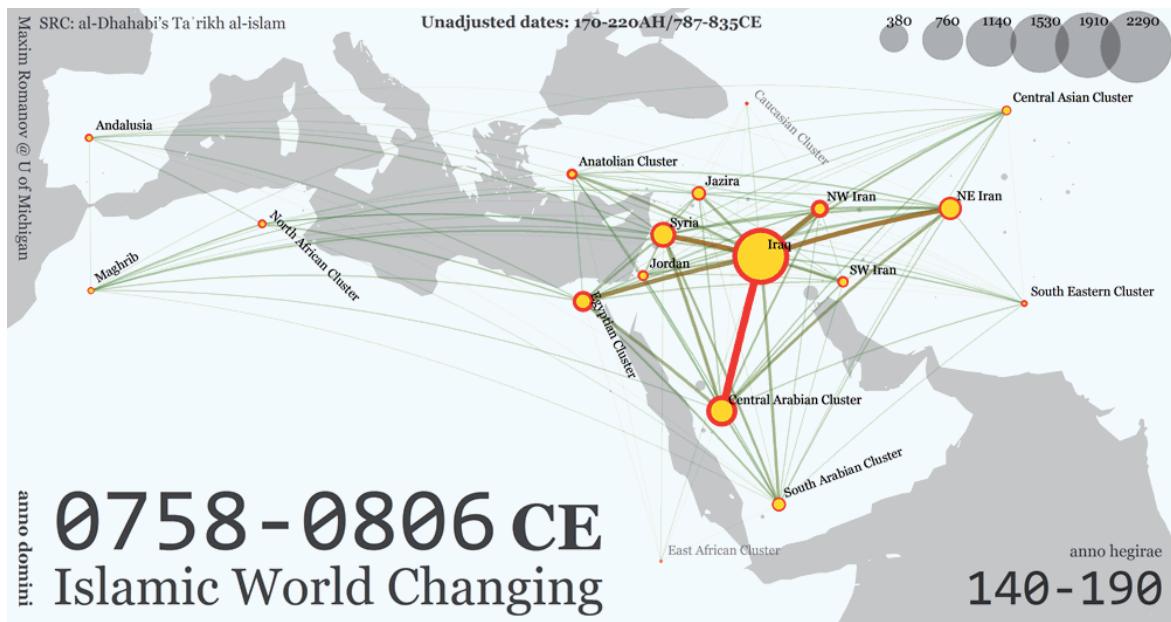


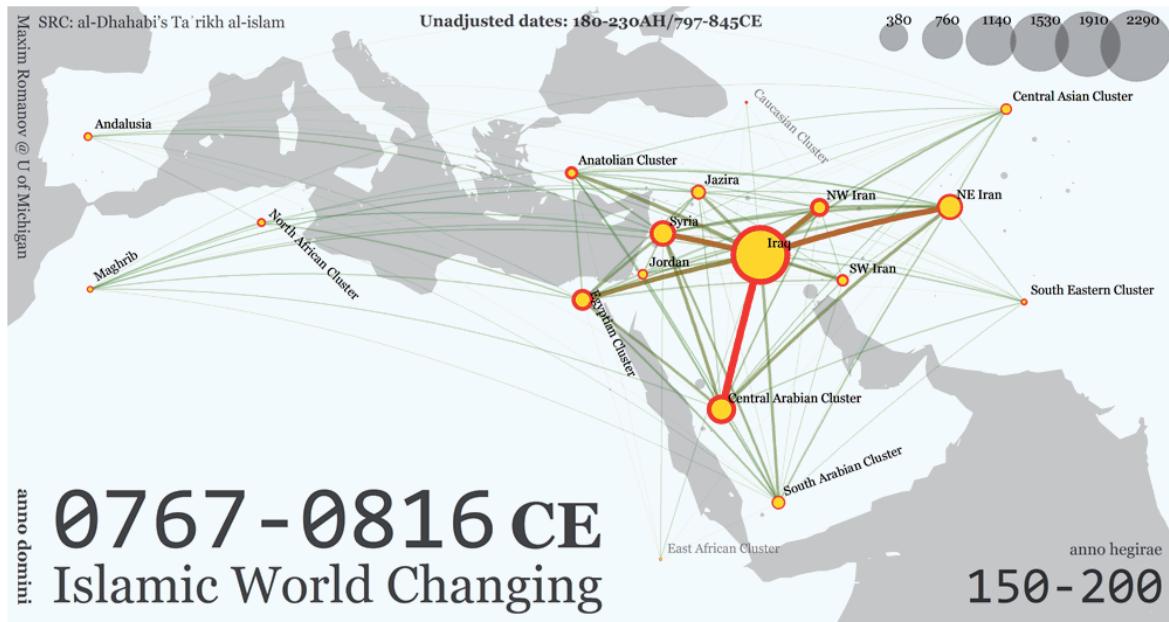
The core in the 7–13th centuries CE (animated)



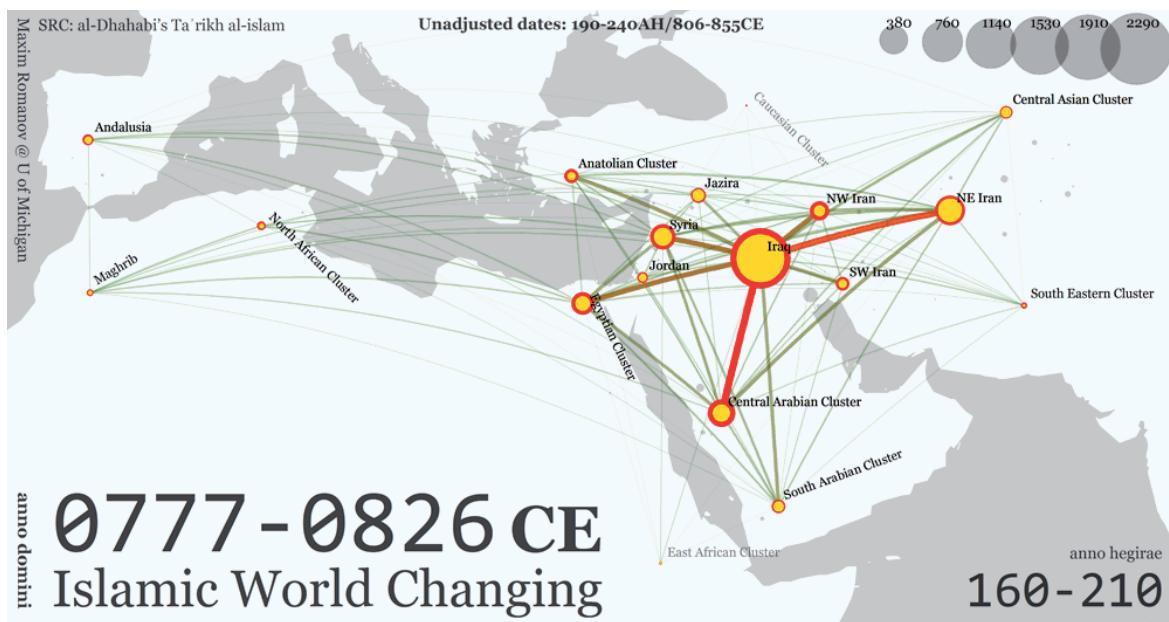


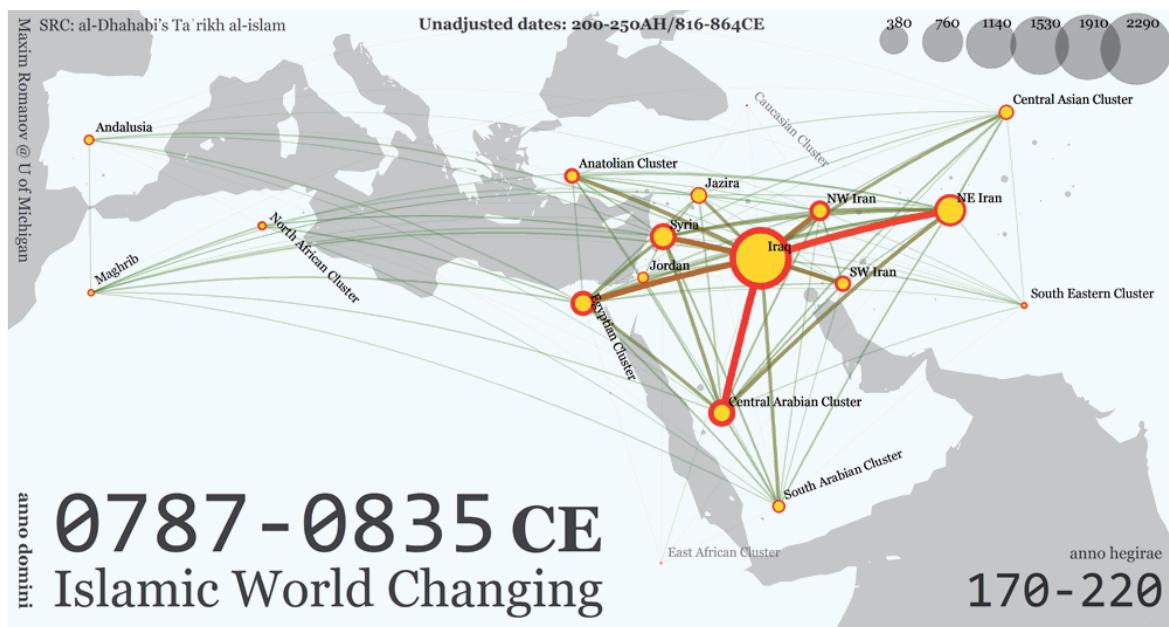
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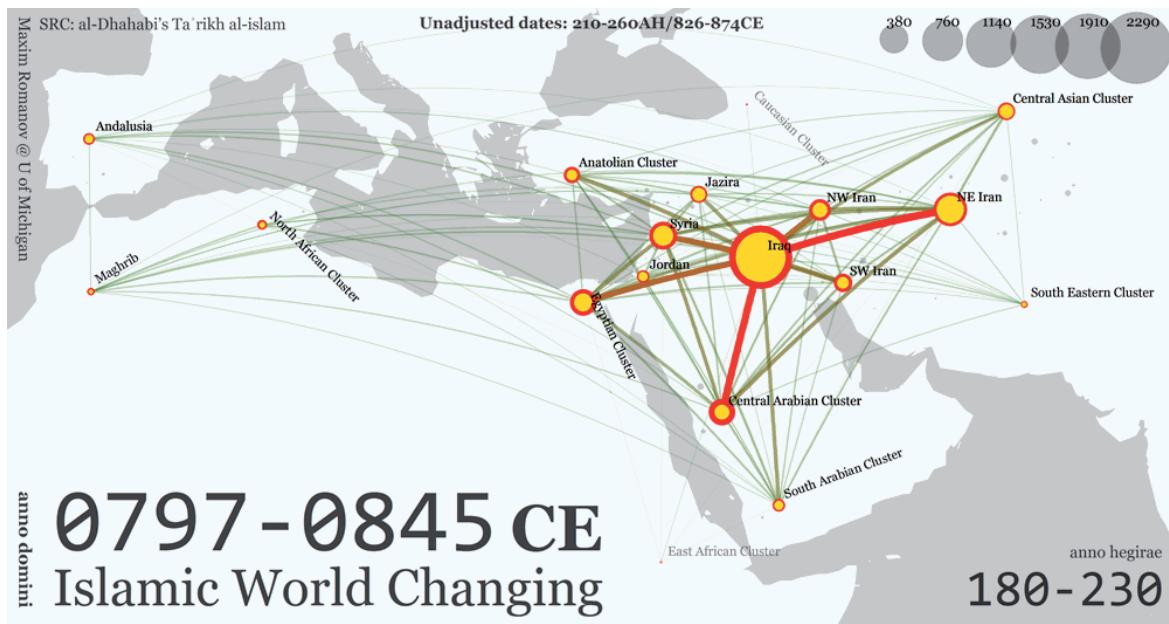


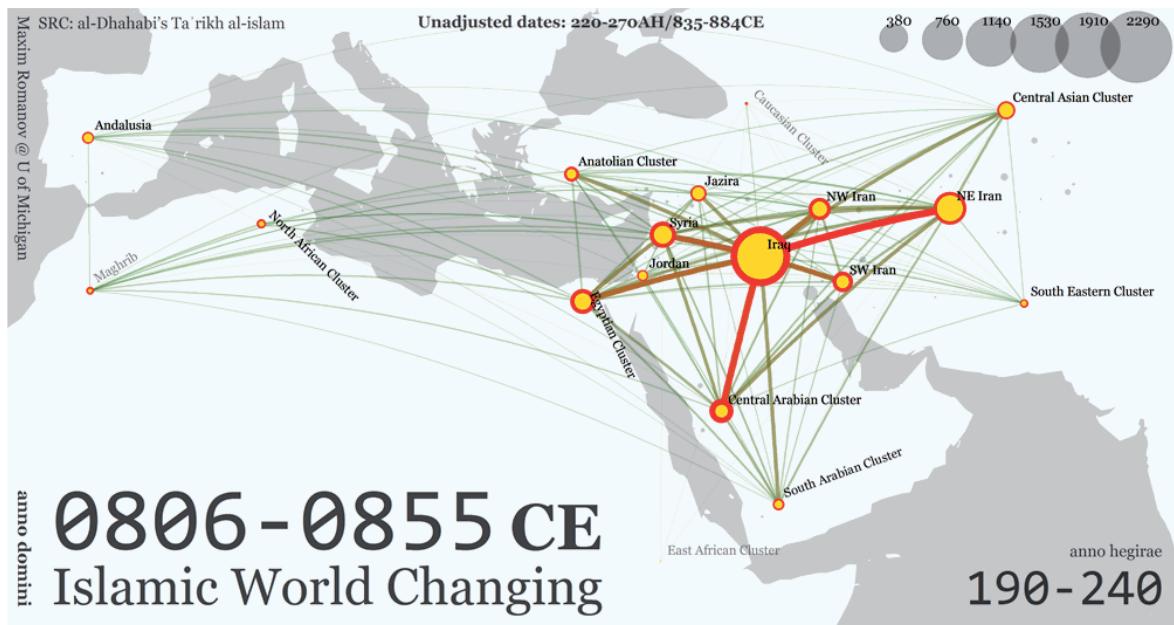
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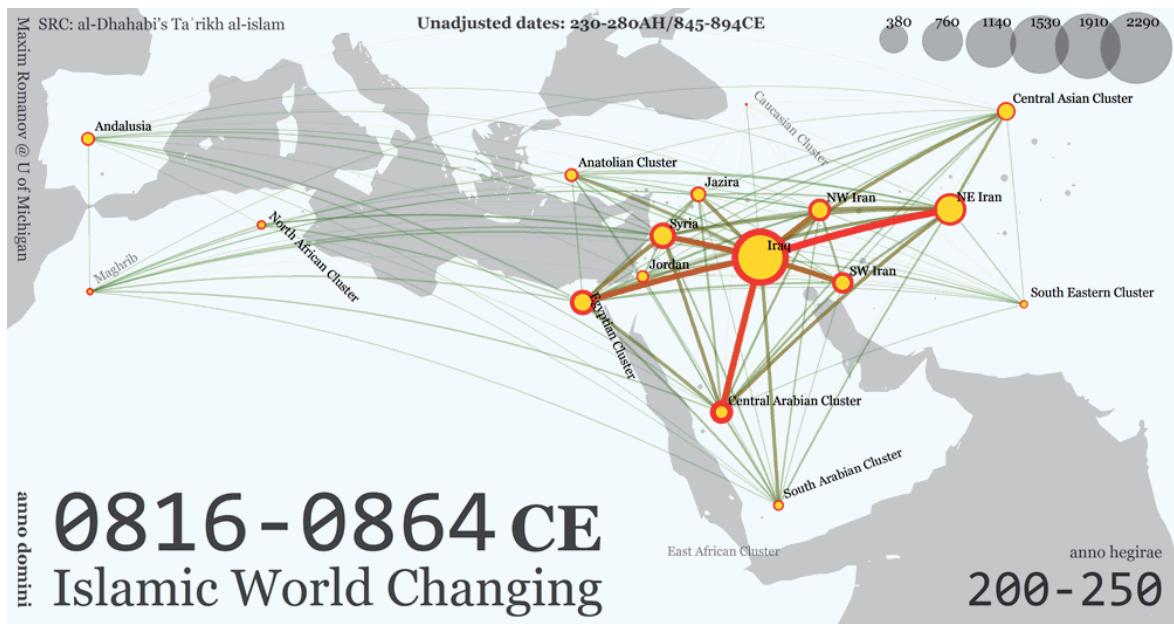


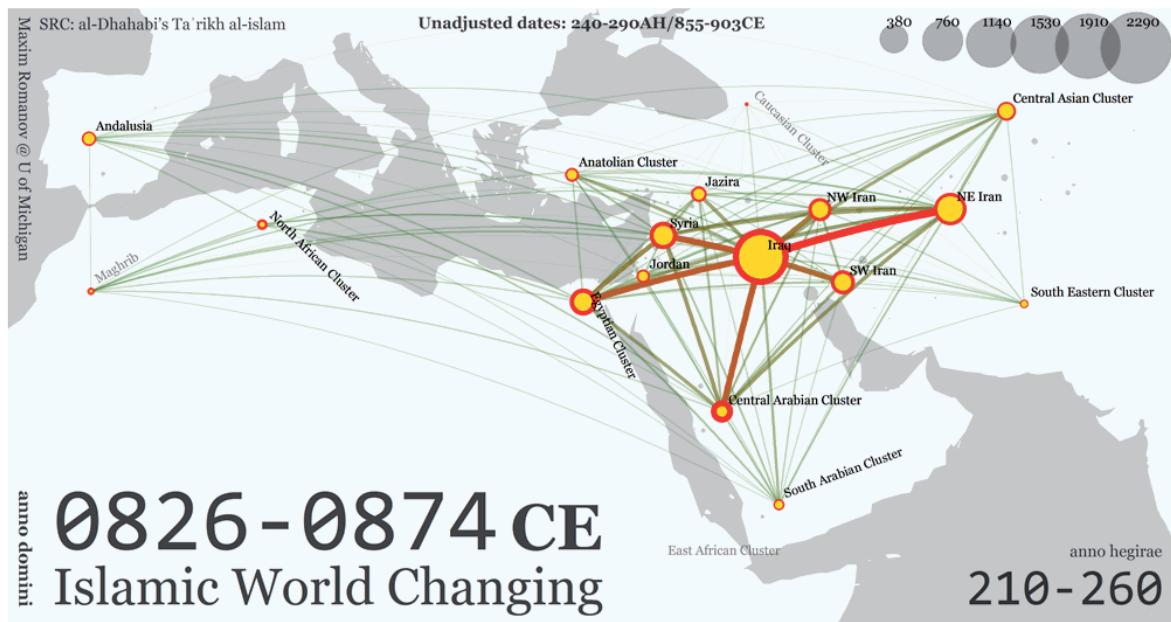
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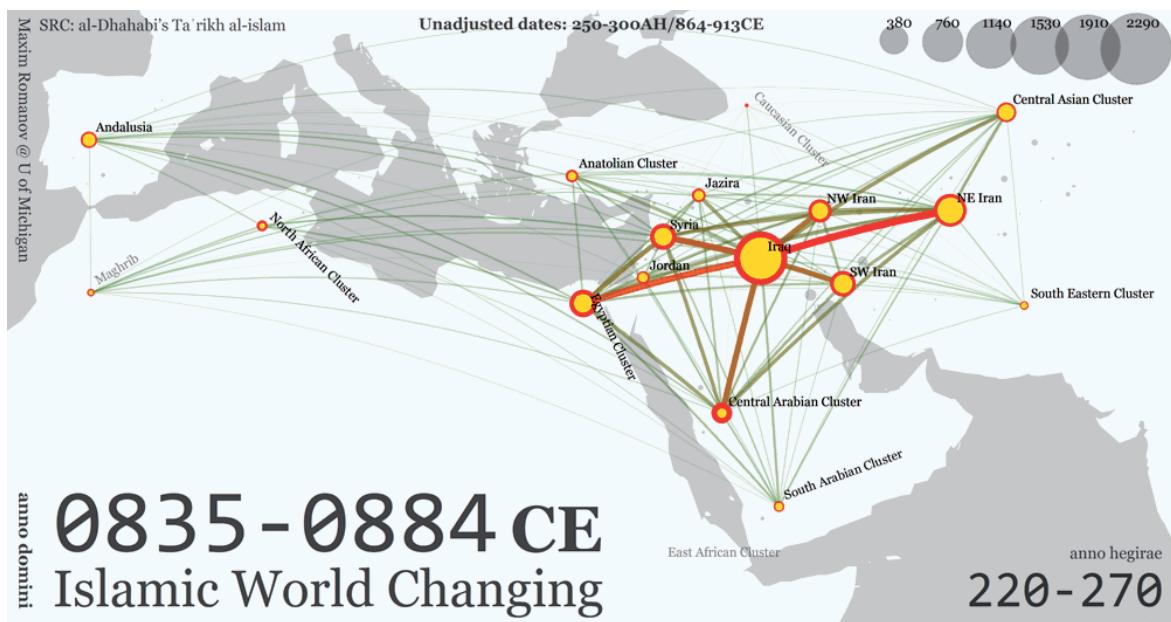


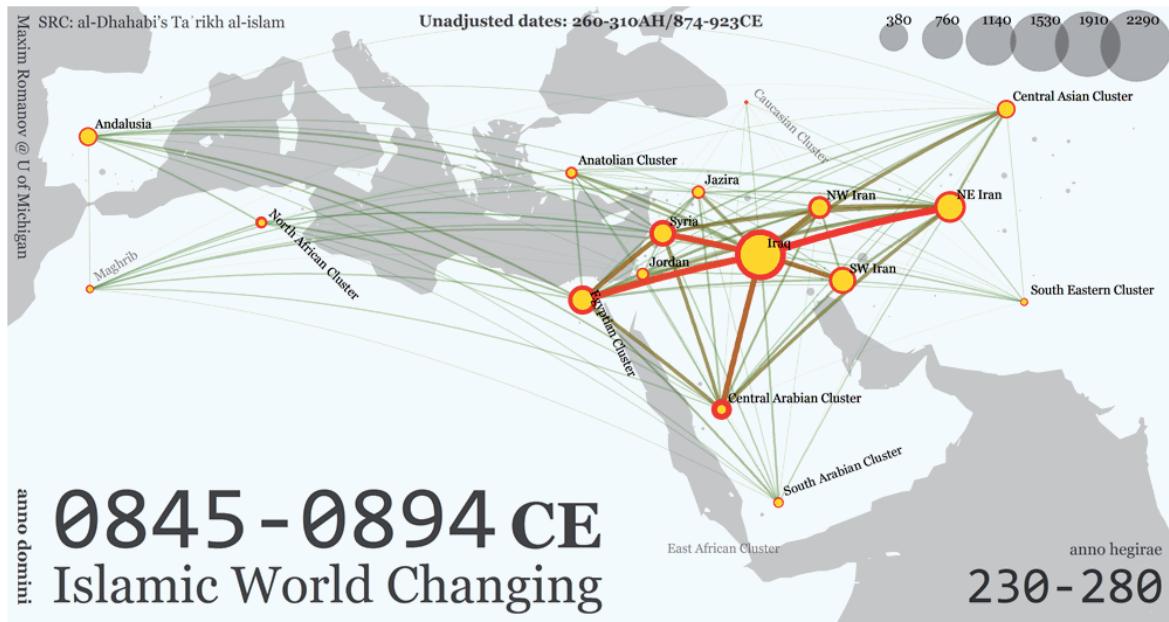
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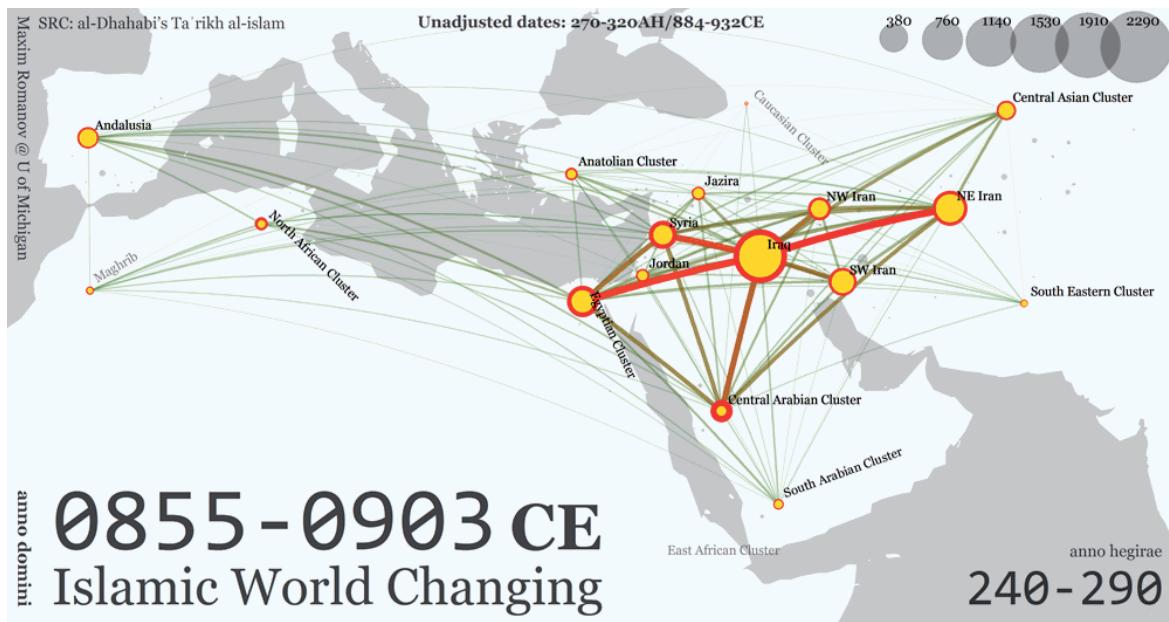


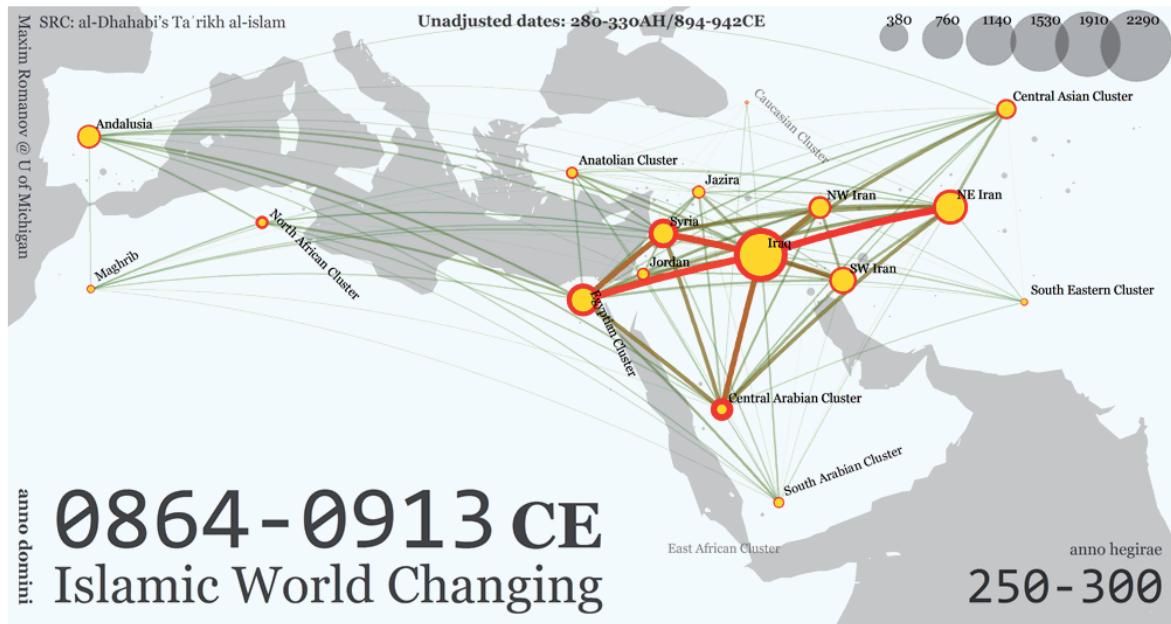
The core in the 7–13th centuries CE (animated)



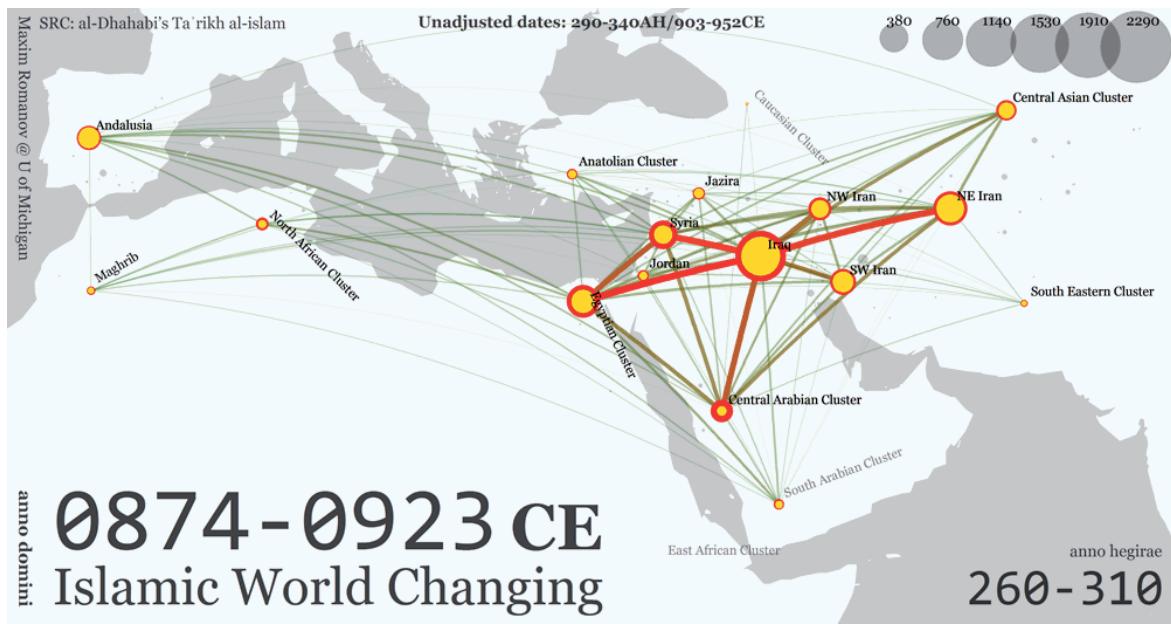


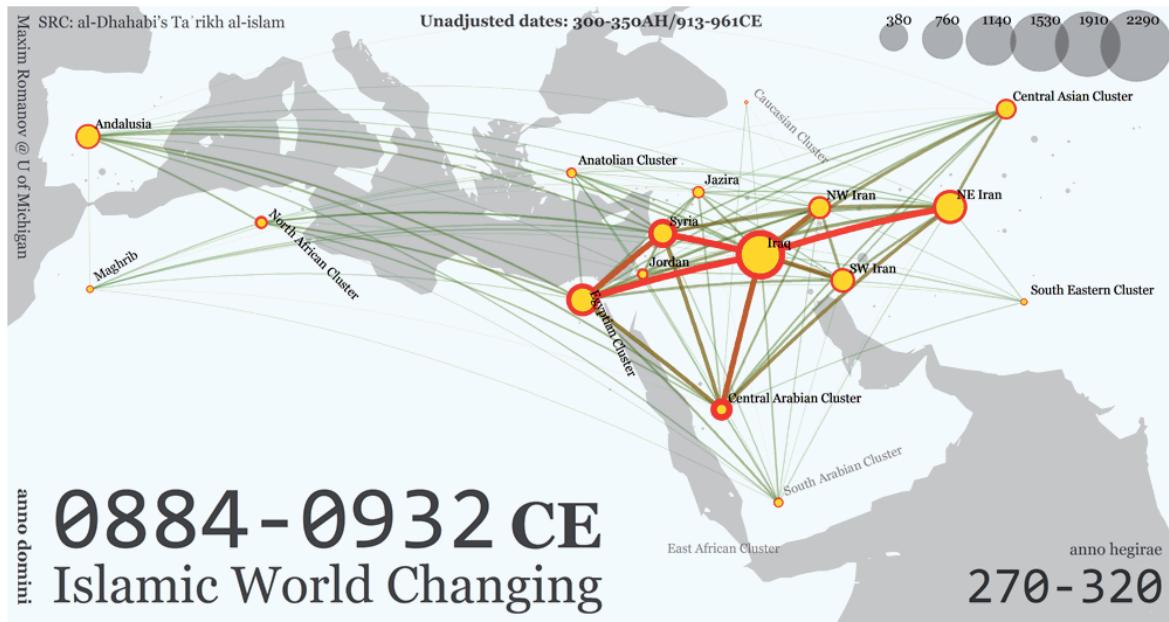
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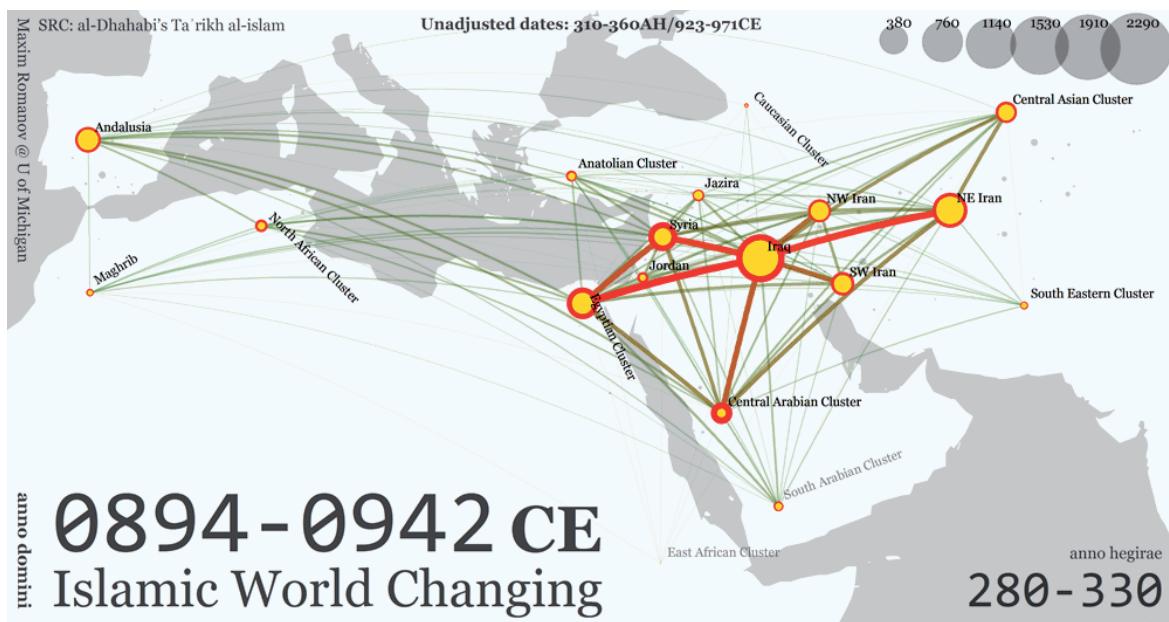


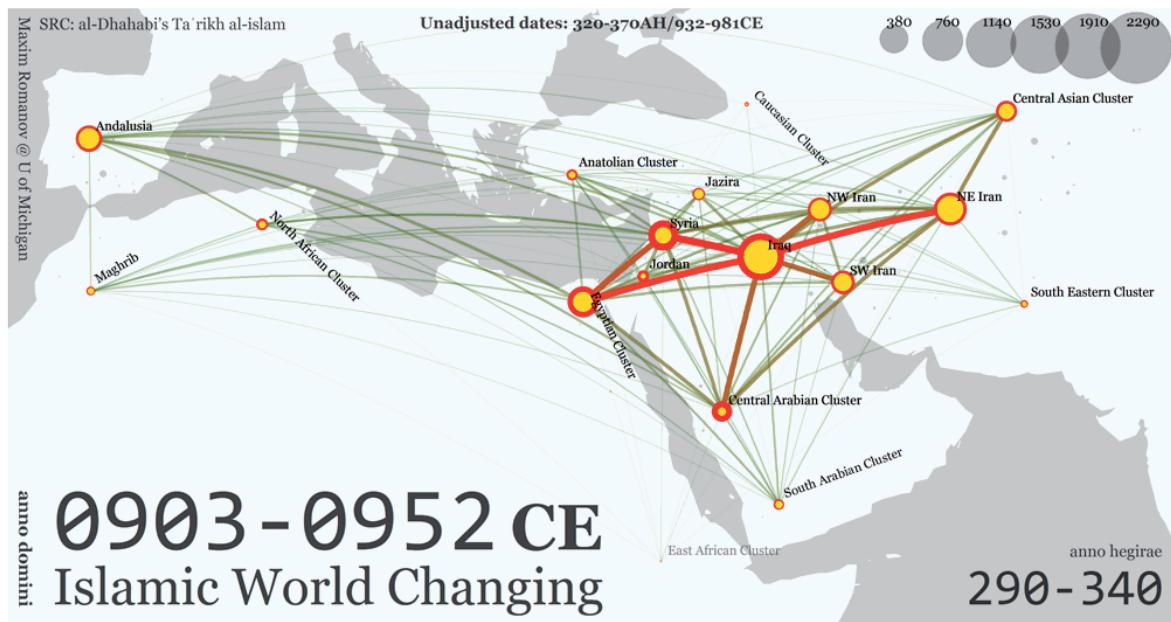
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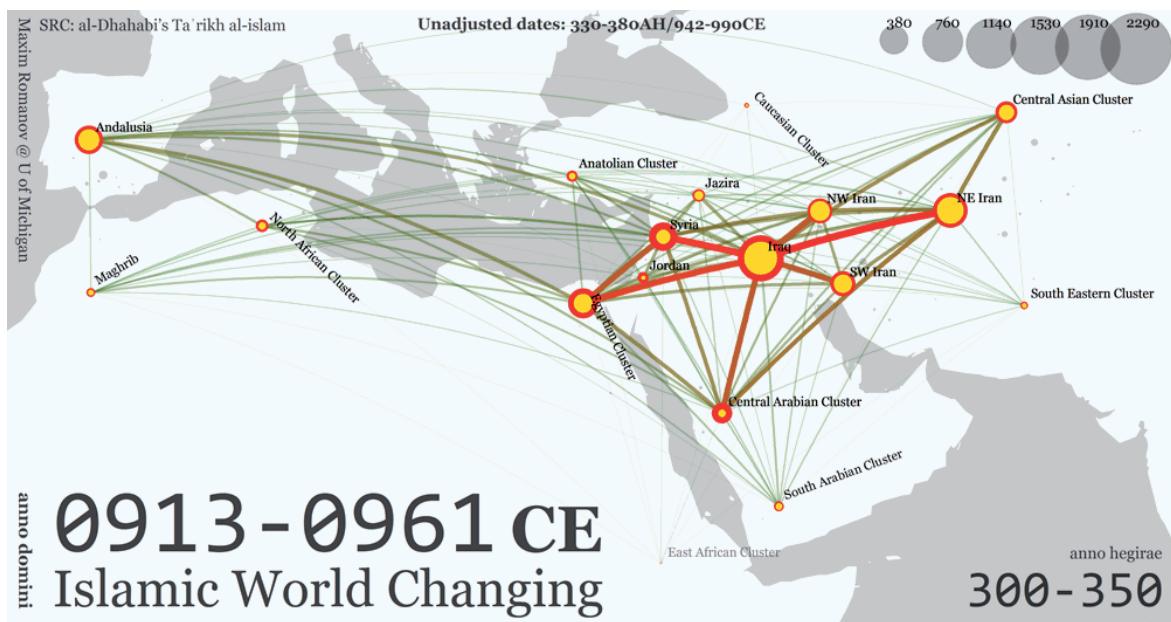


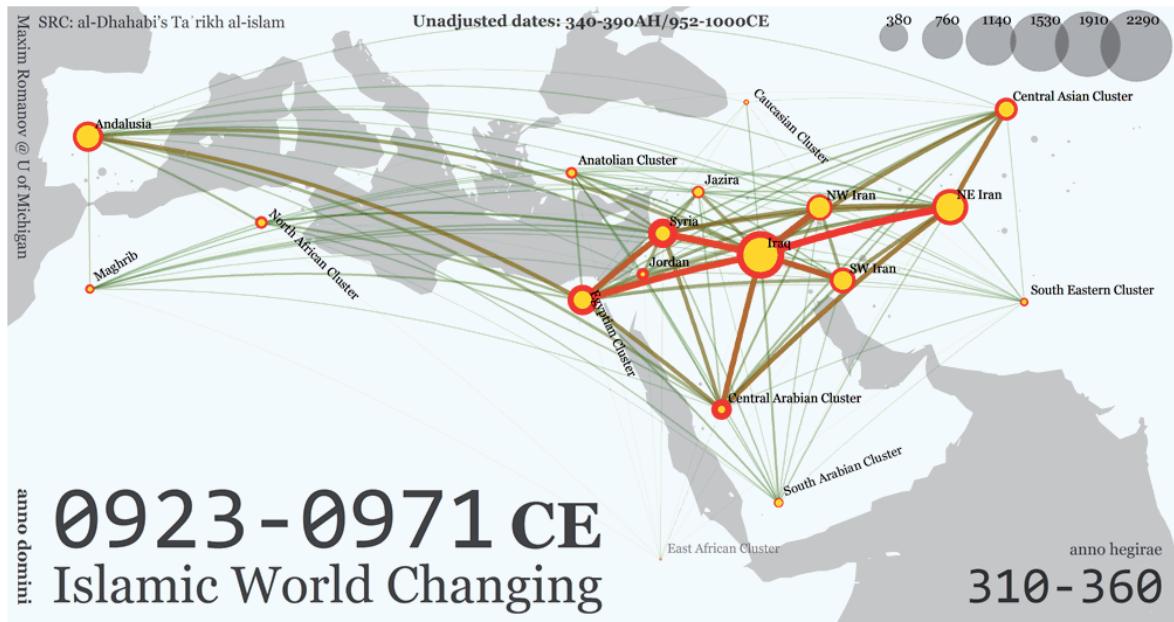
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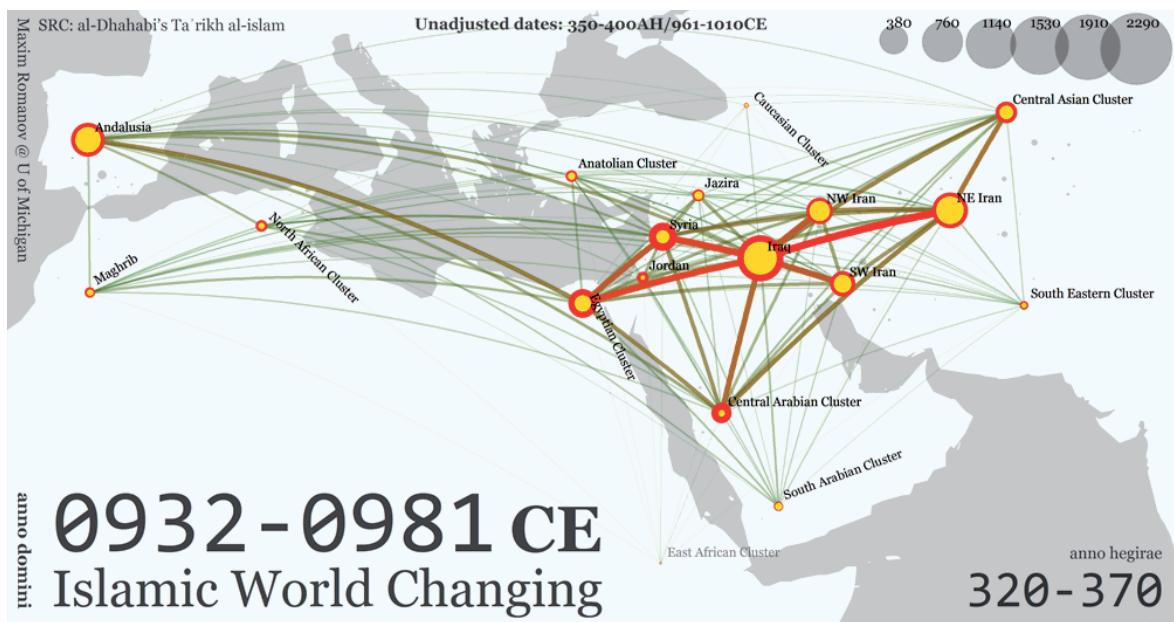


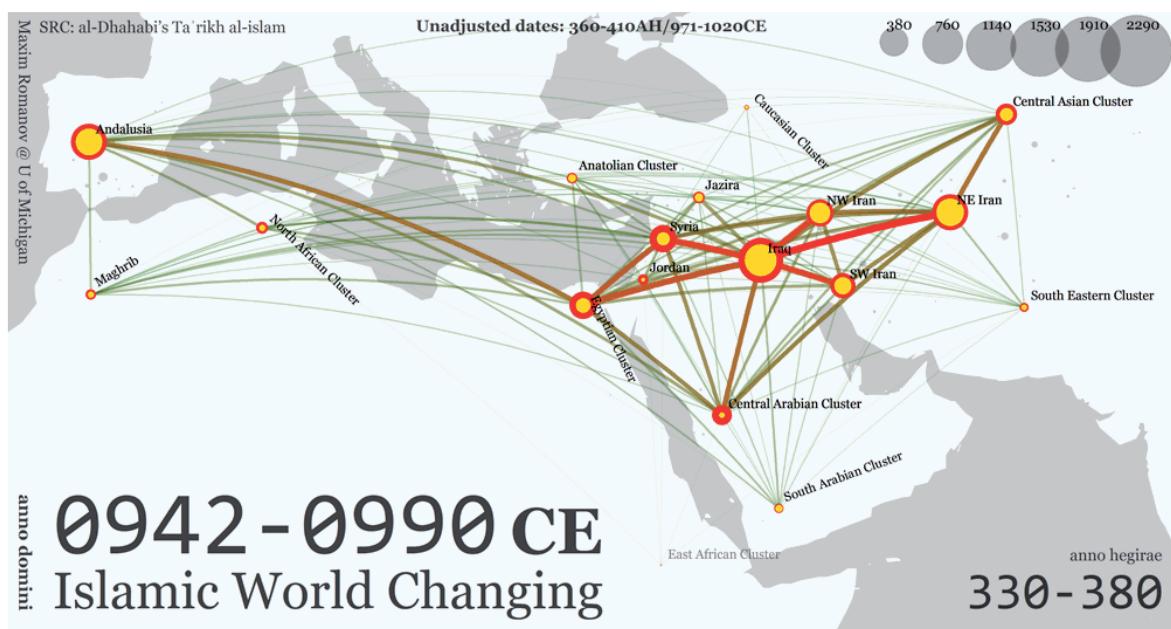
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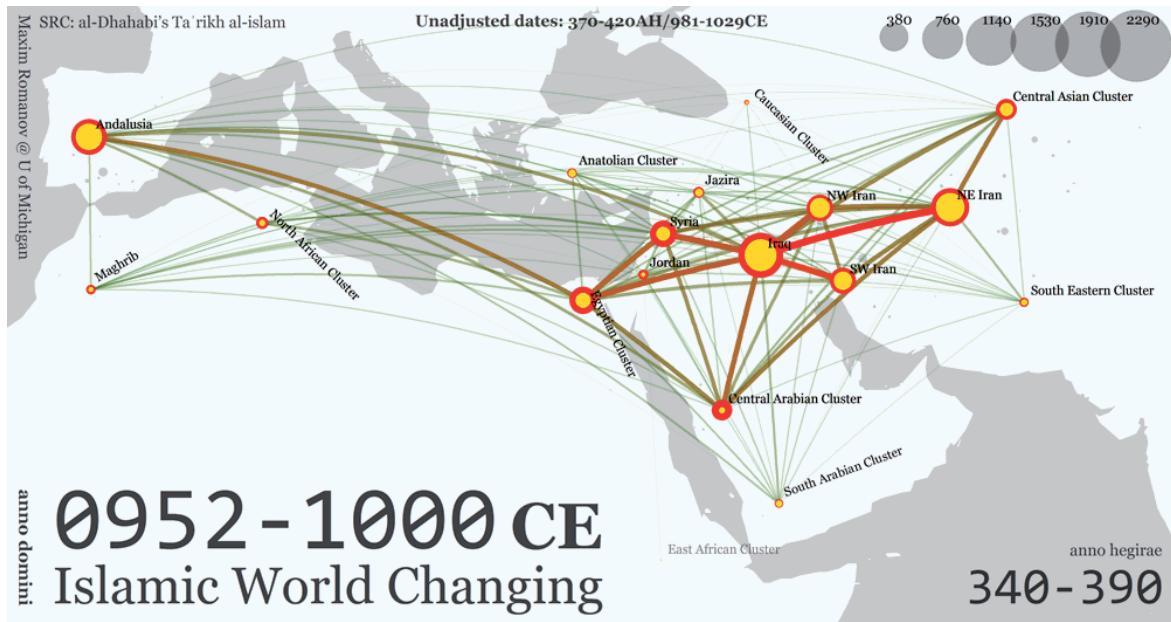


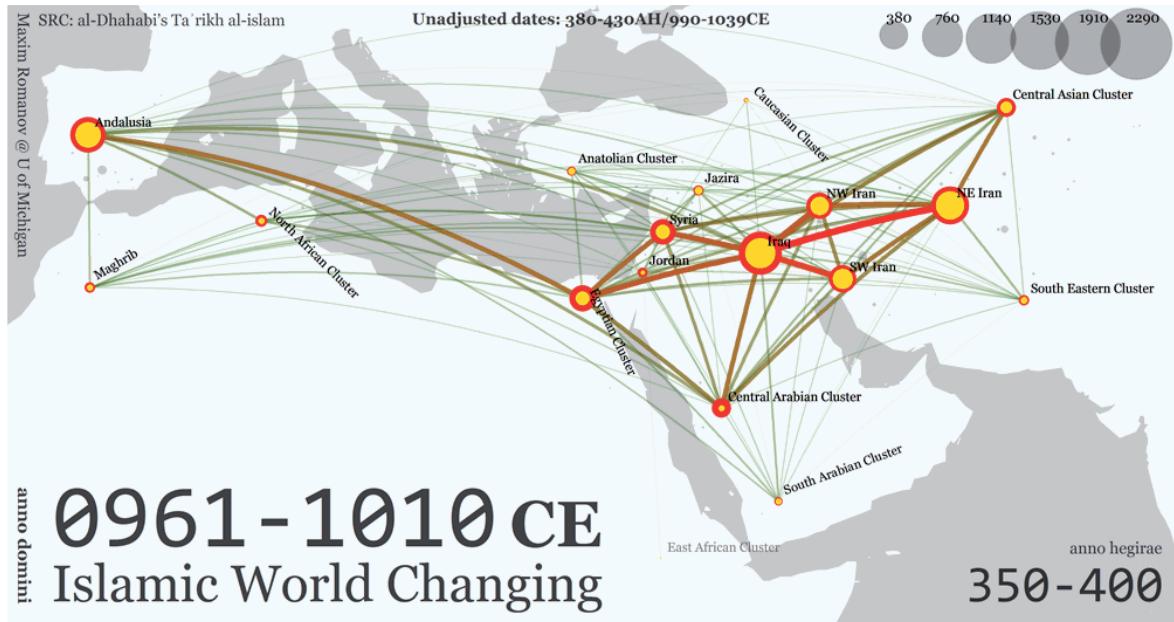
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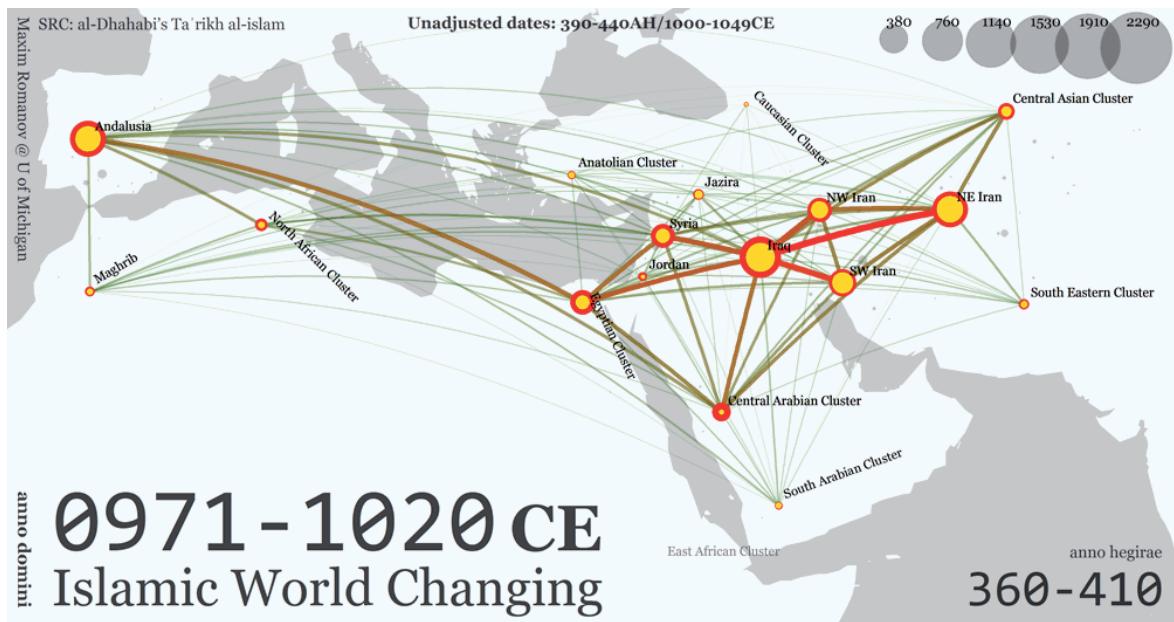


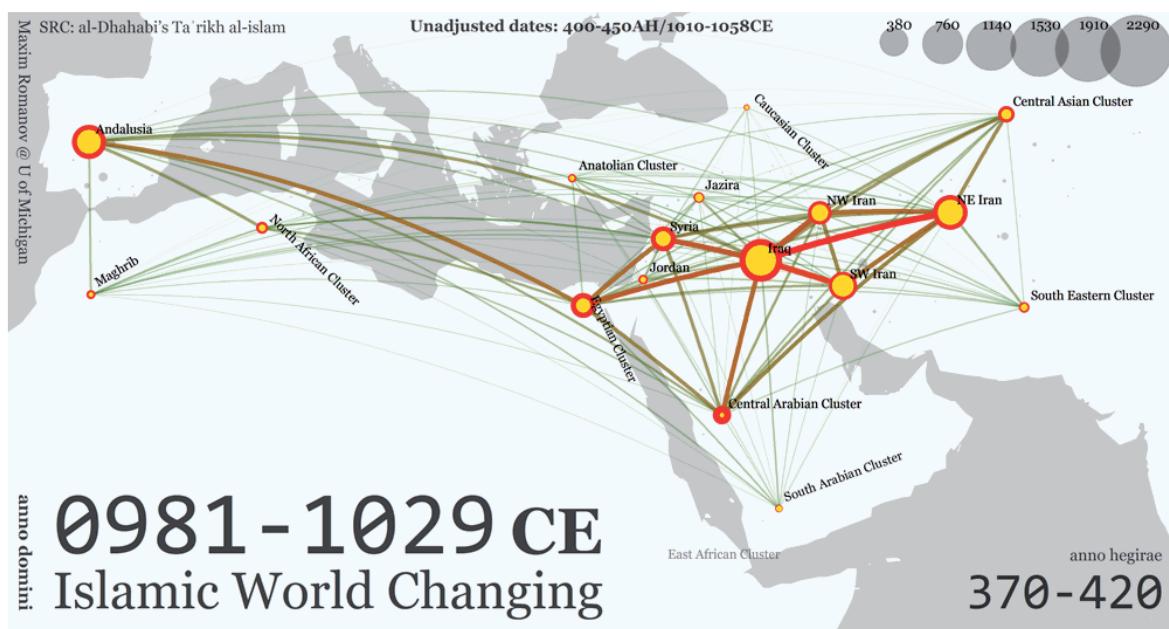
The core in the 7–13th centuries CE (animated)



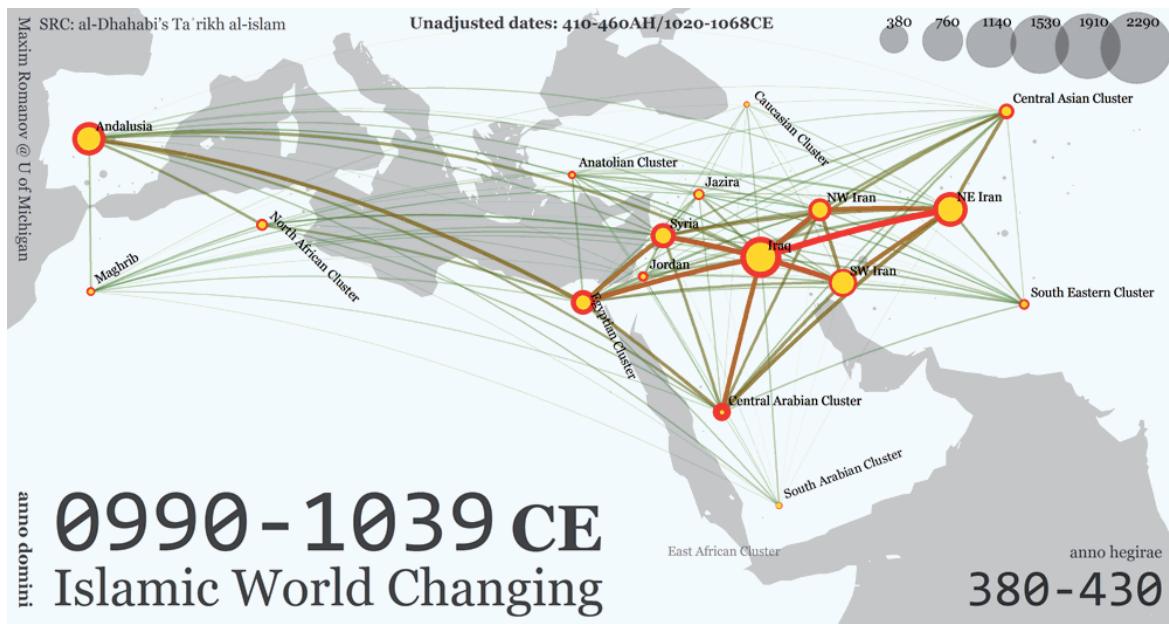


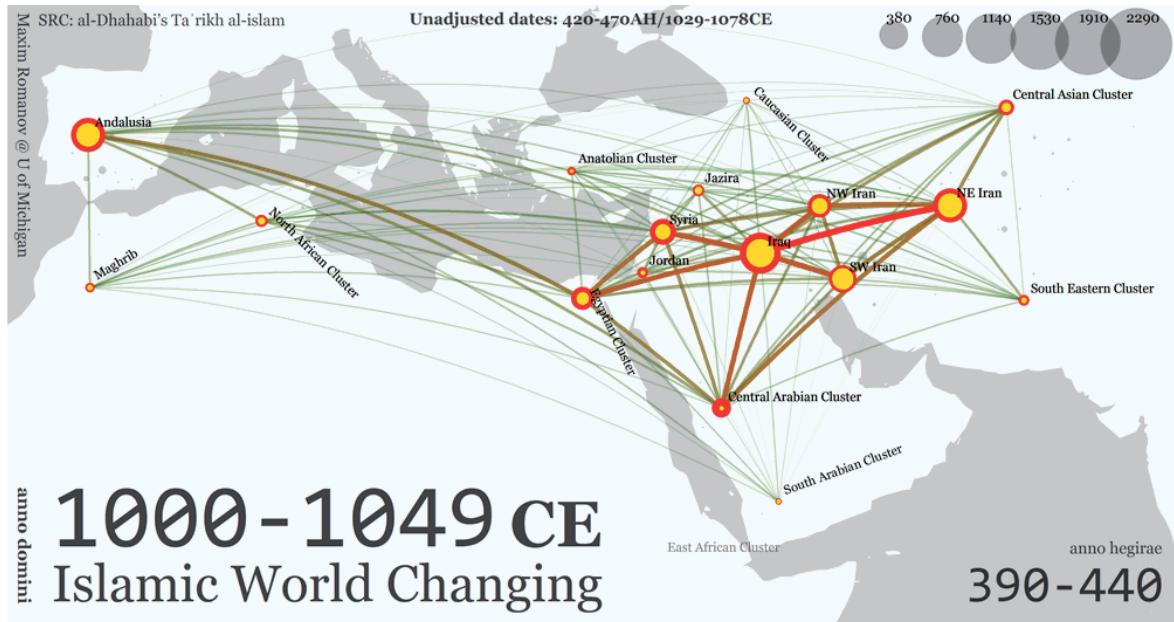
The core in the 7–13th centuries CE (animated)



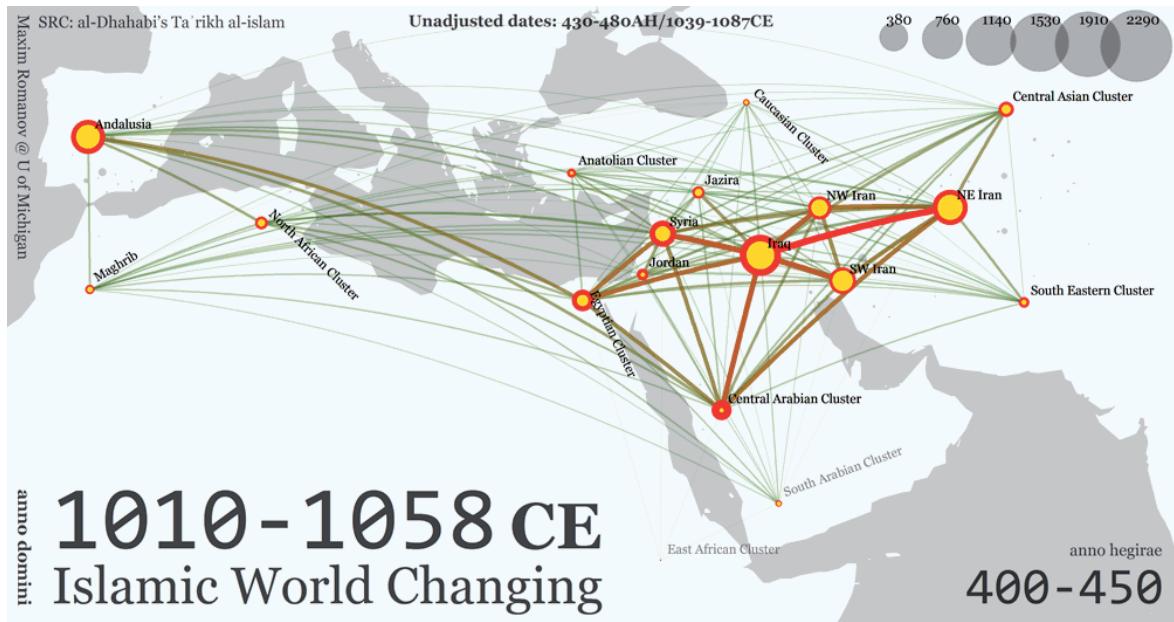


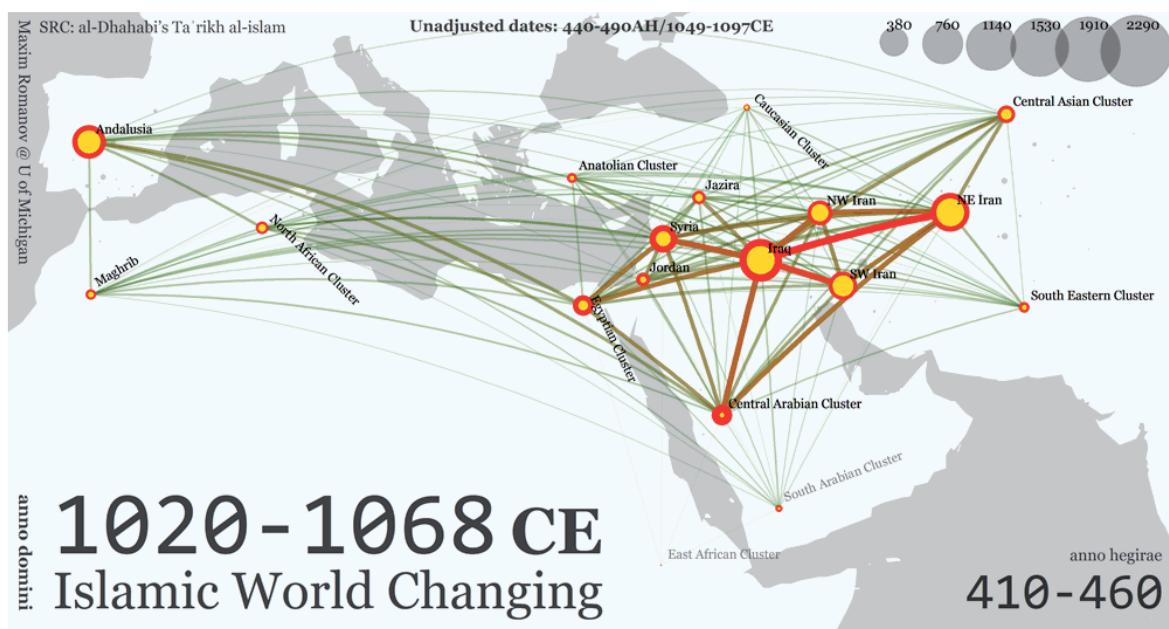
The core in the 7–13th centuries CE (animated)



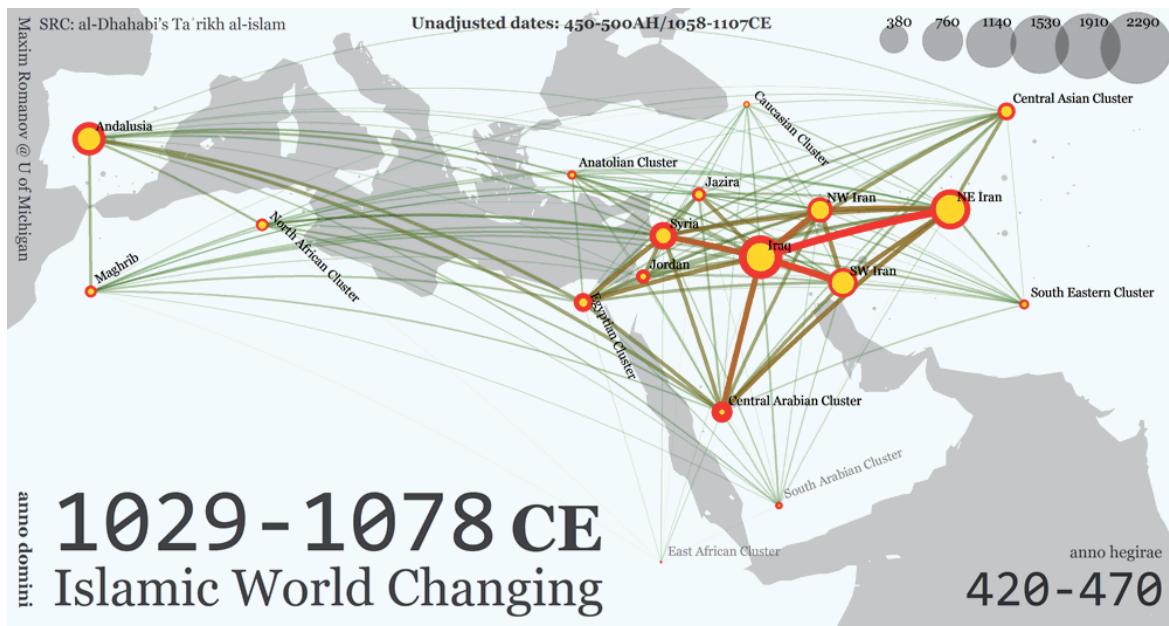


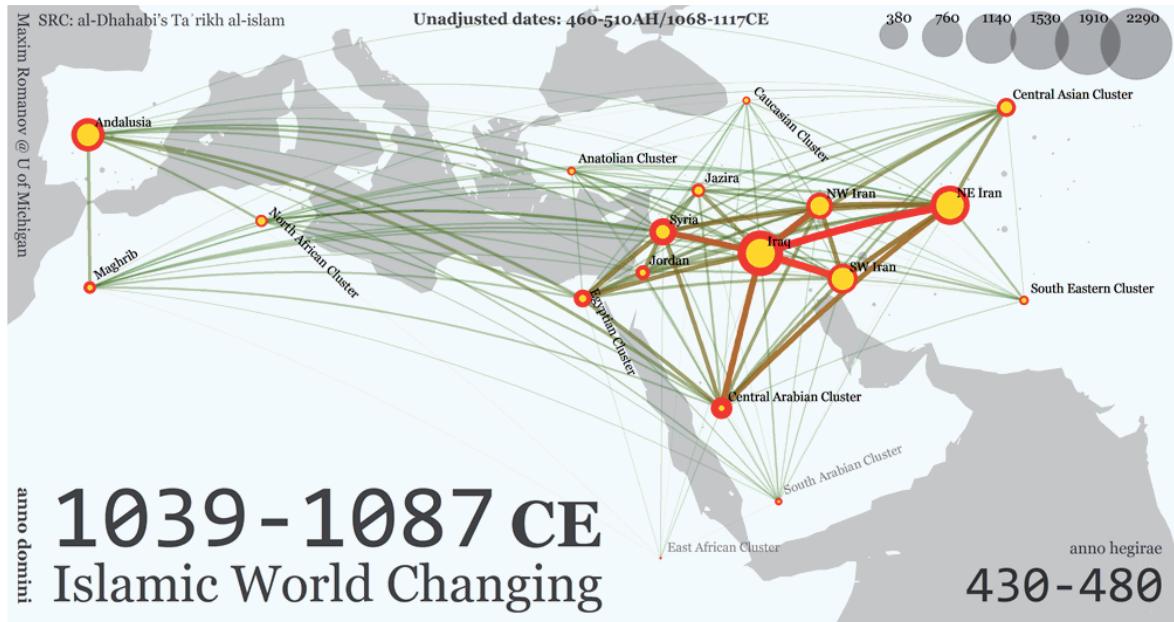
The core in the 7–13th centuries CE (animated)



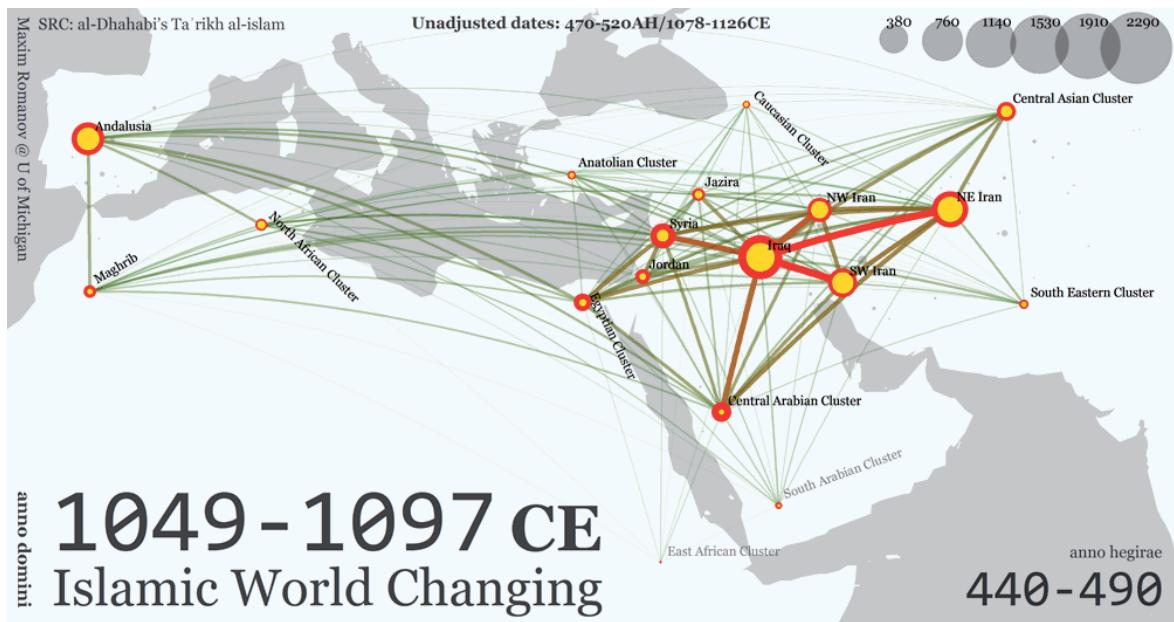


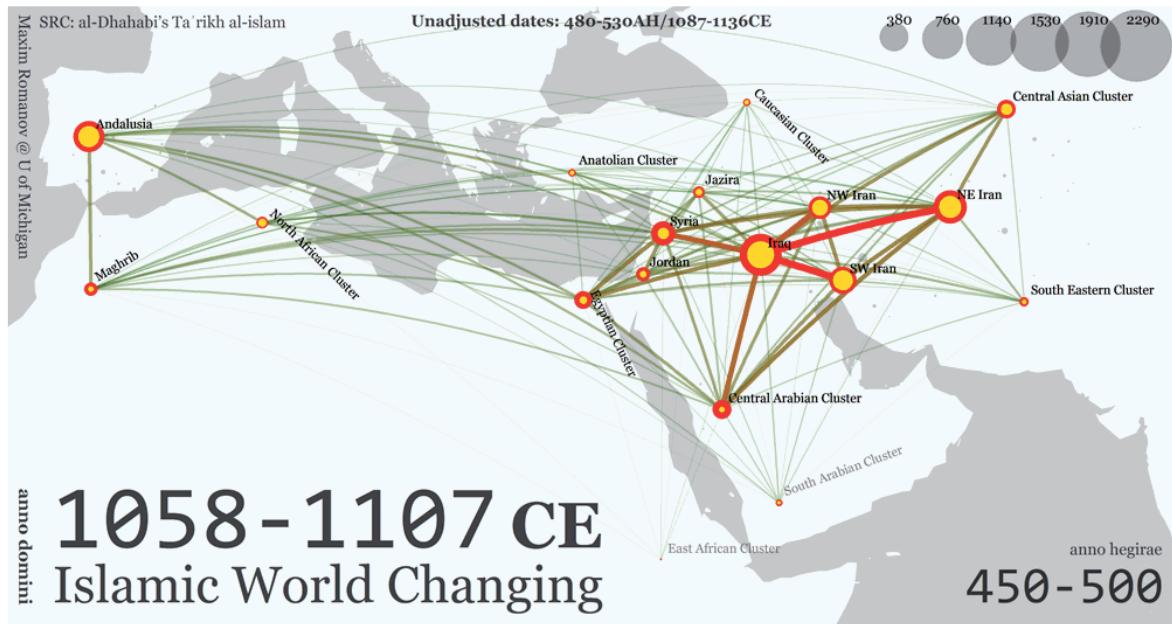
The core in the 7–13th centuries CE (animated)



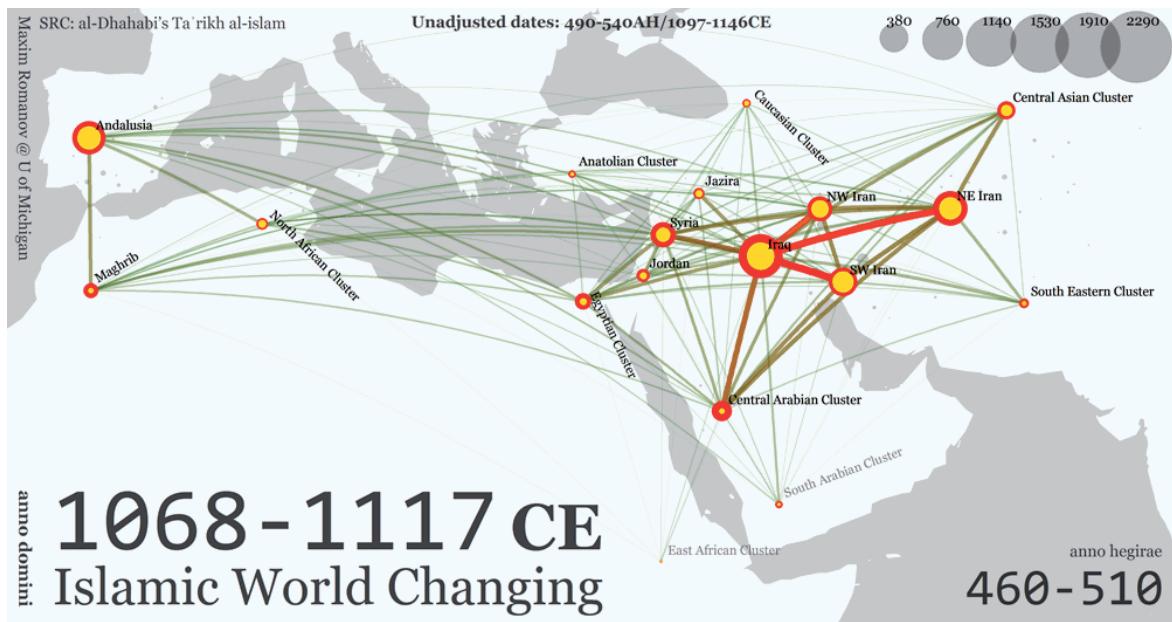


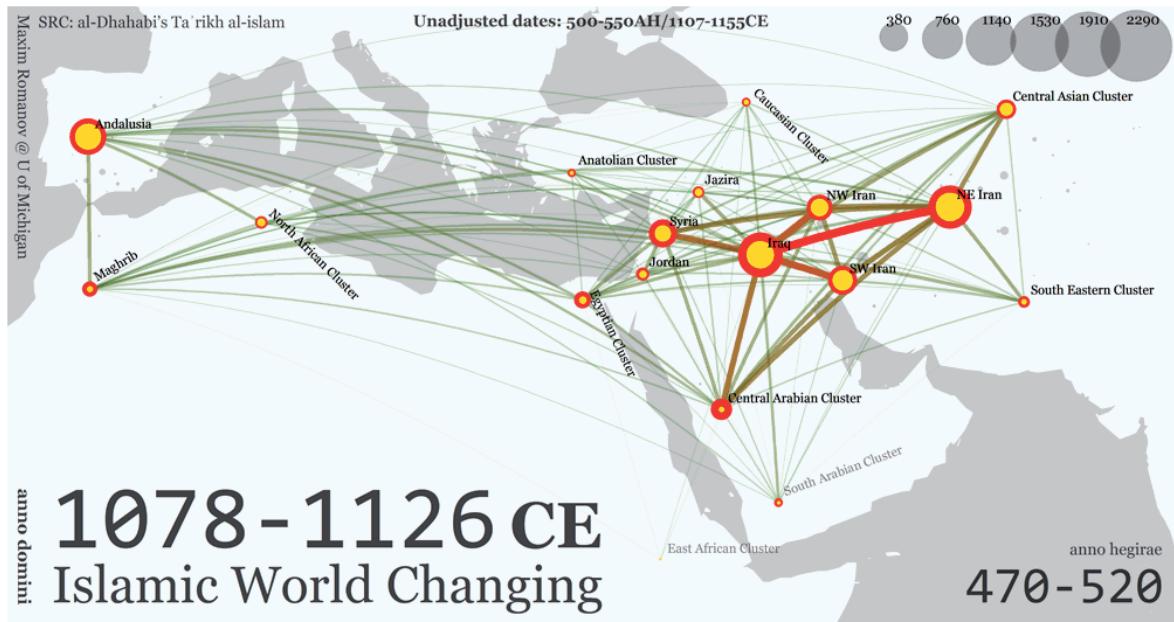
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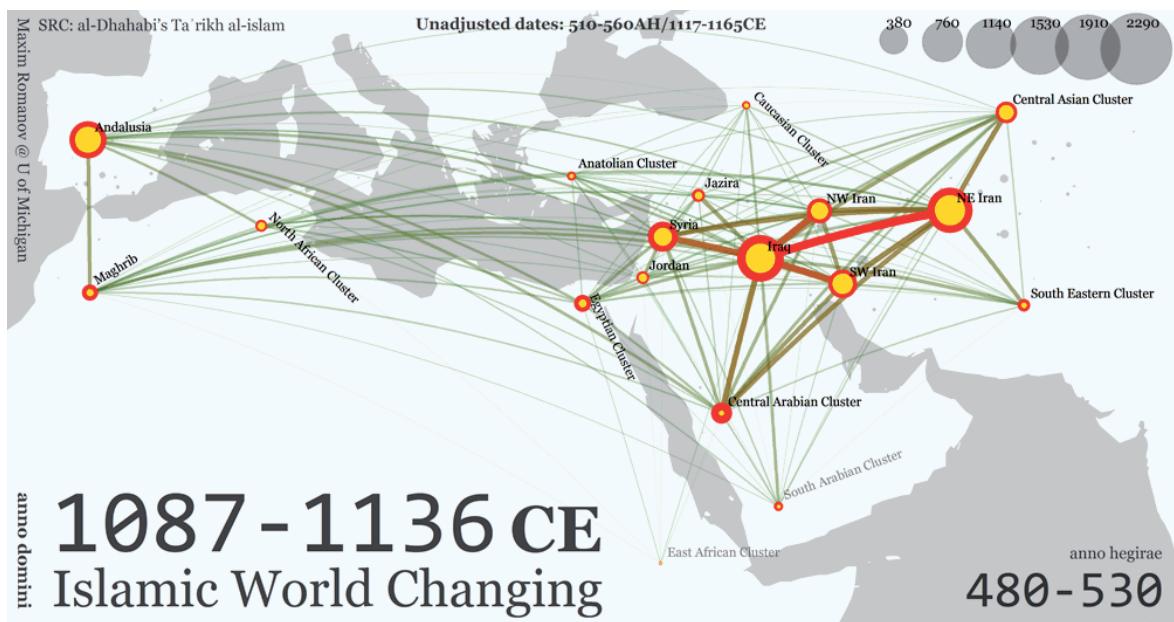


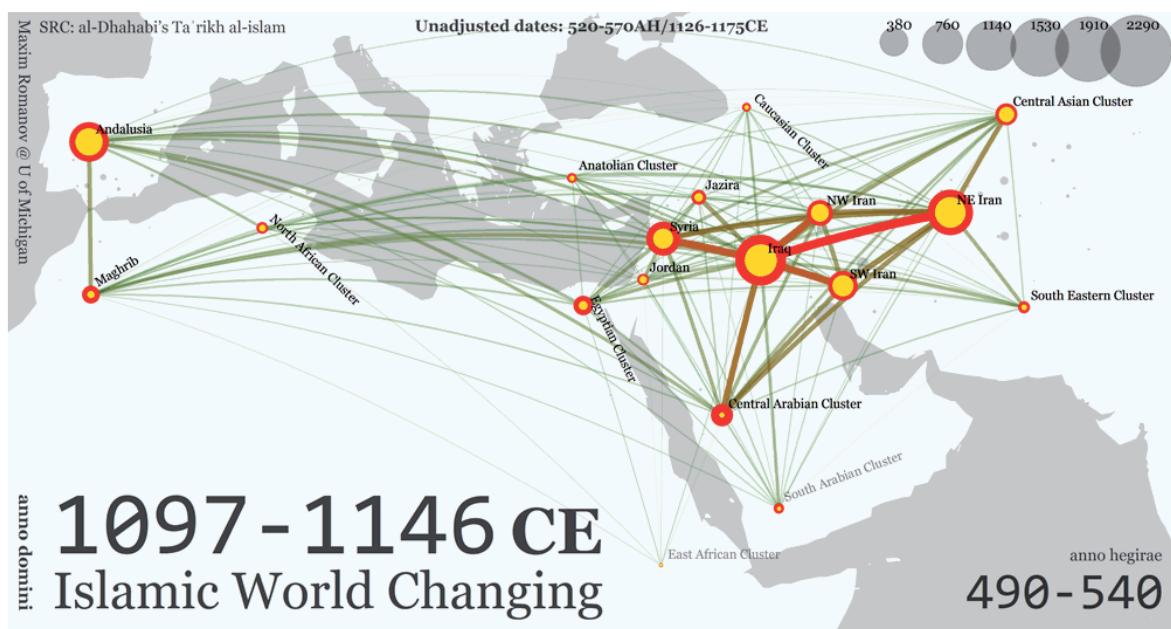
The core in the 7–13th centuries CE (animated)



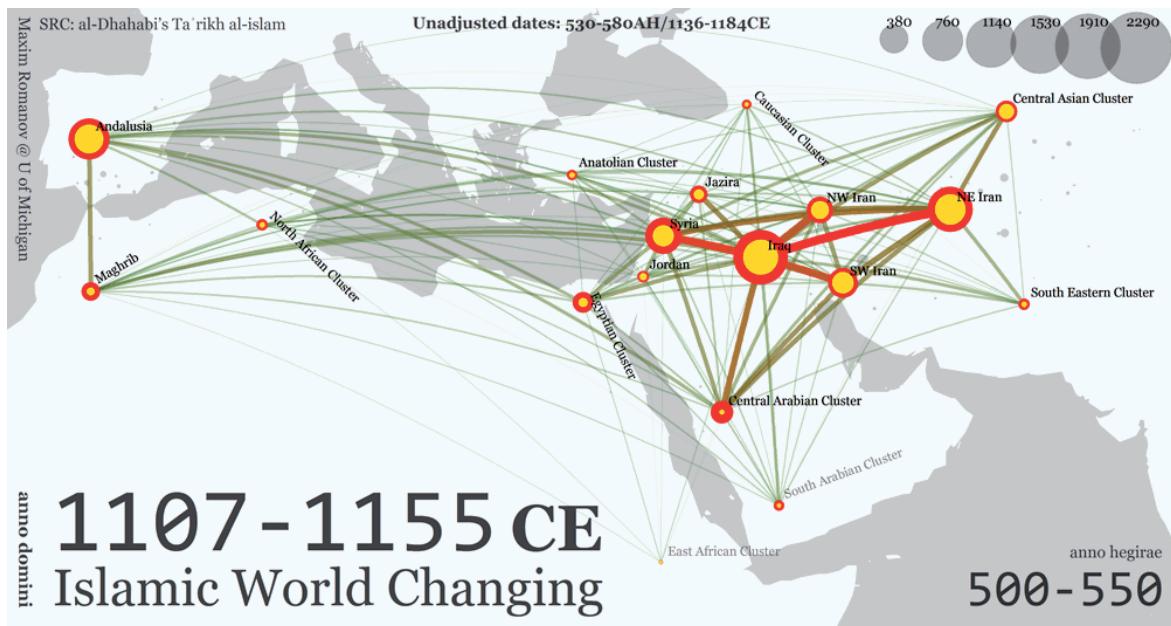


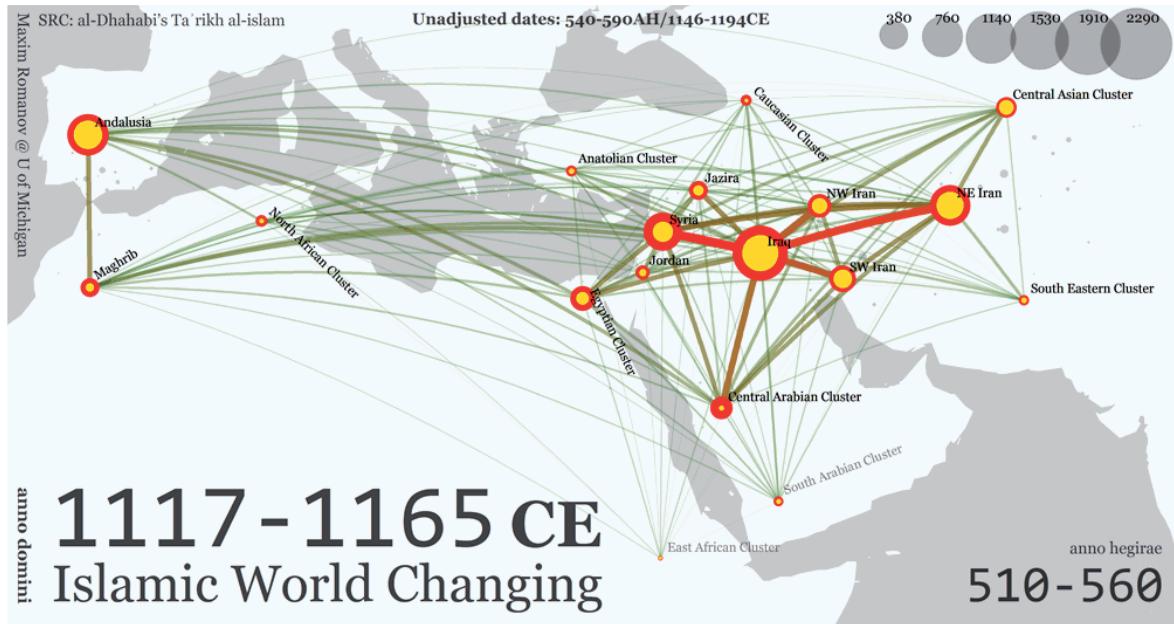
The core in the 7–13th centuries CE (animated)



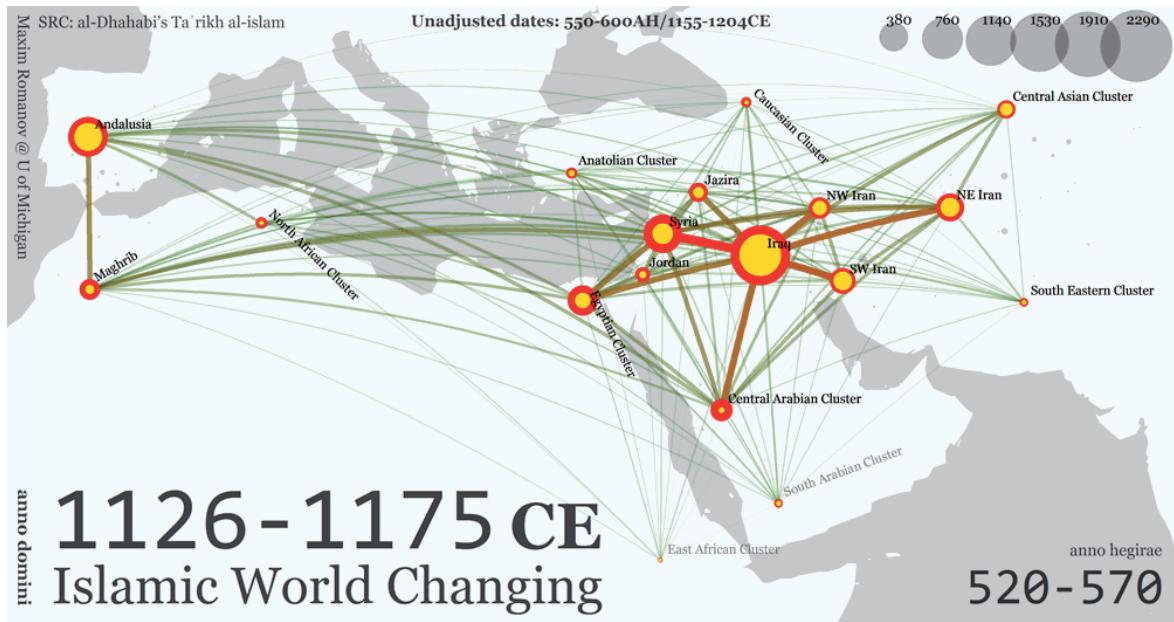


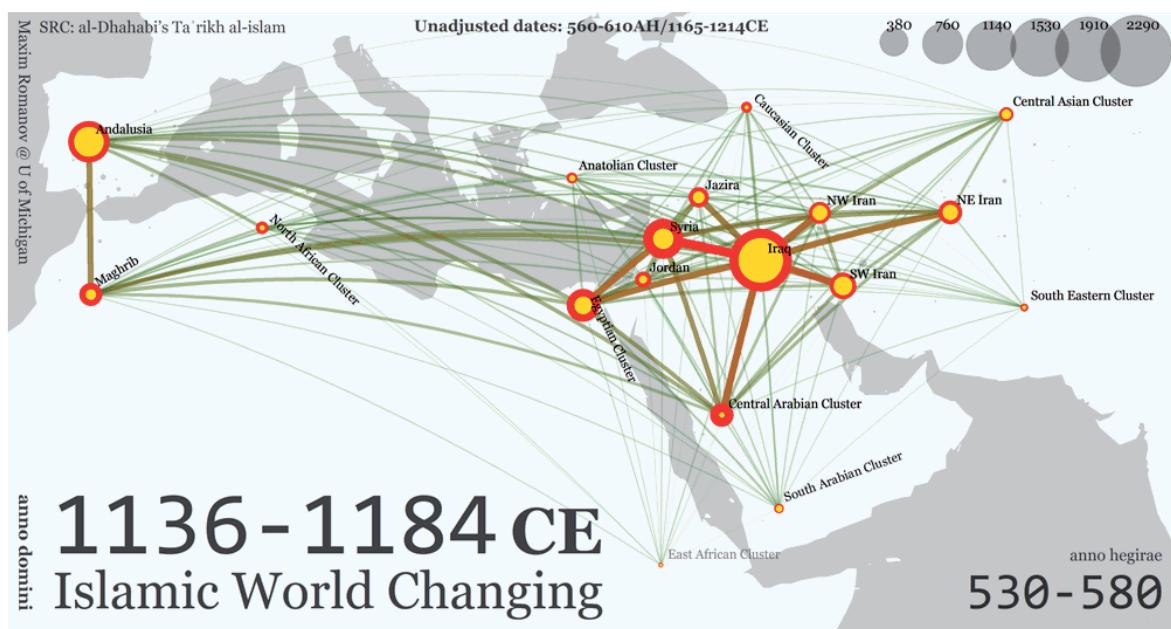
The core in the 7–13th centuries CE (animated)



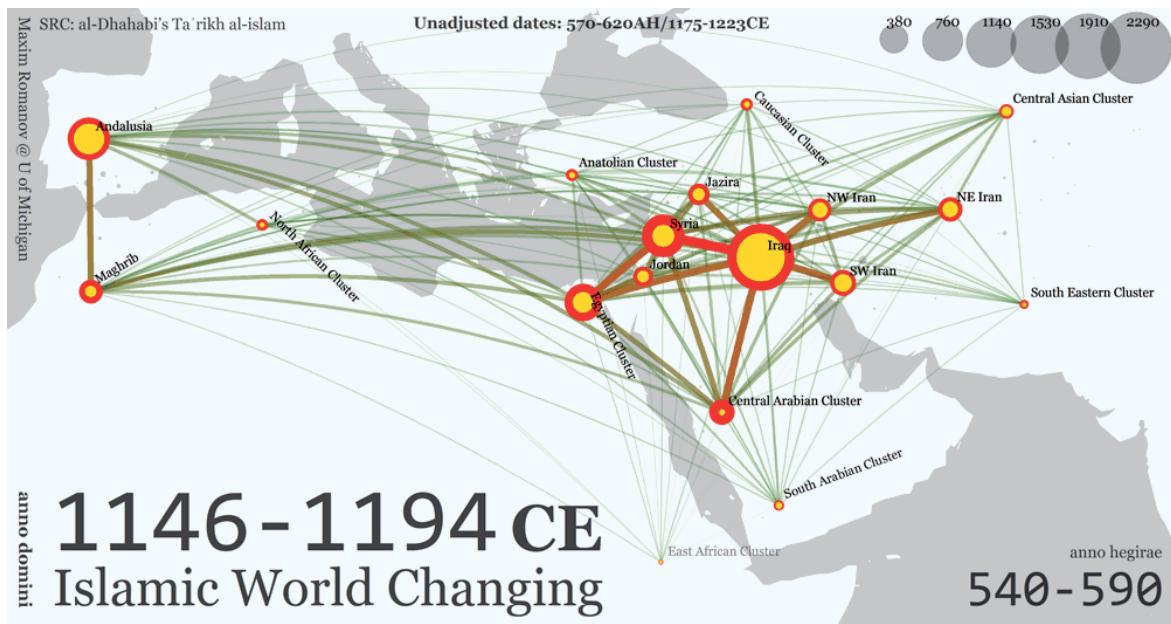


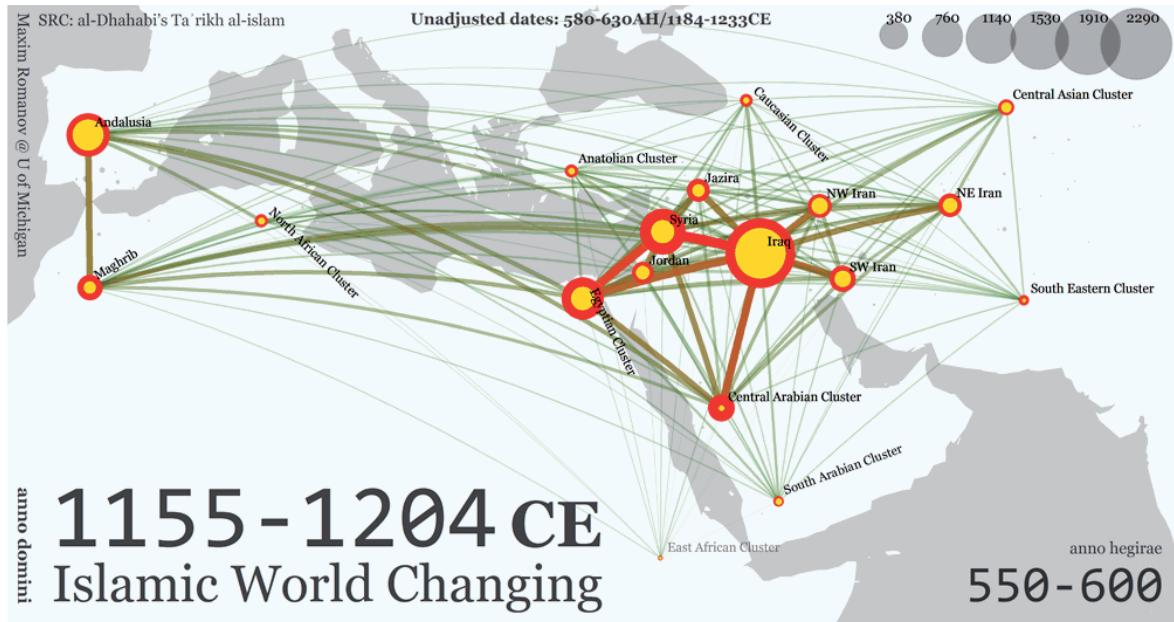
The core in the 7–13th centuries CE (animated)



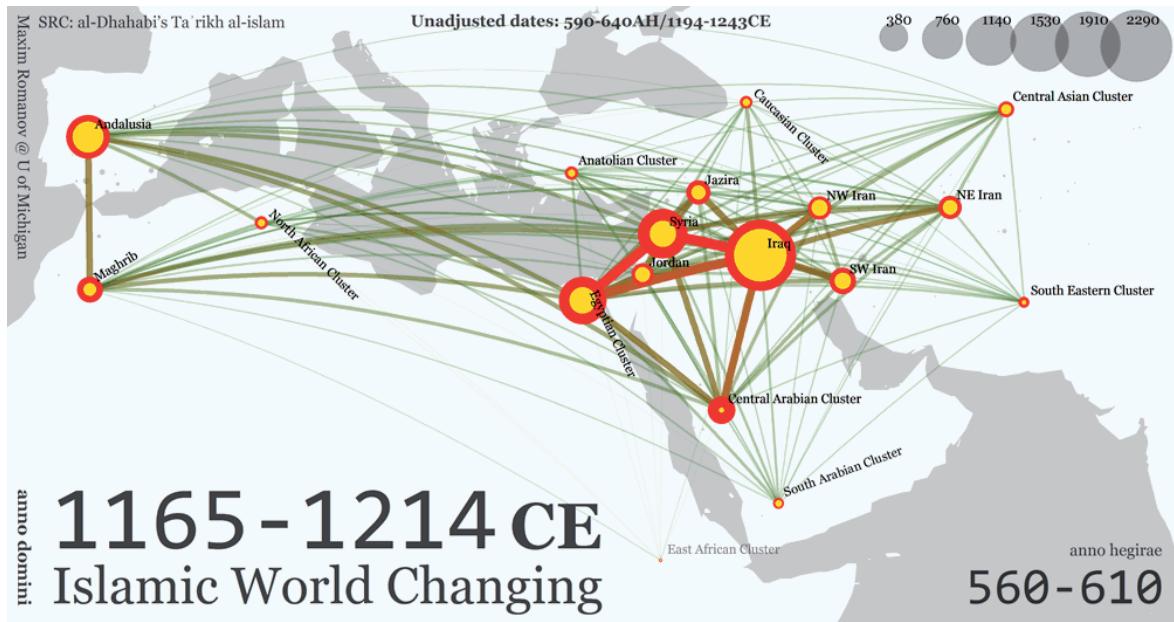


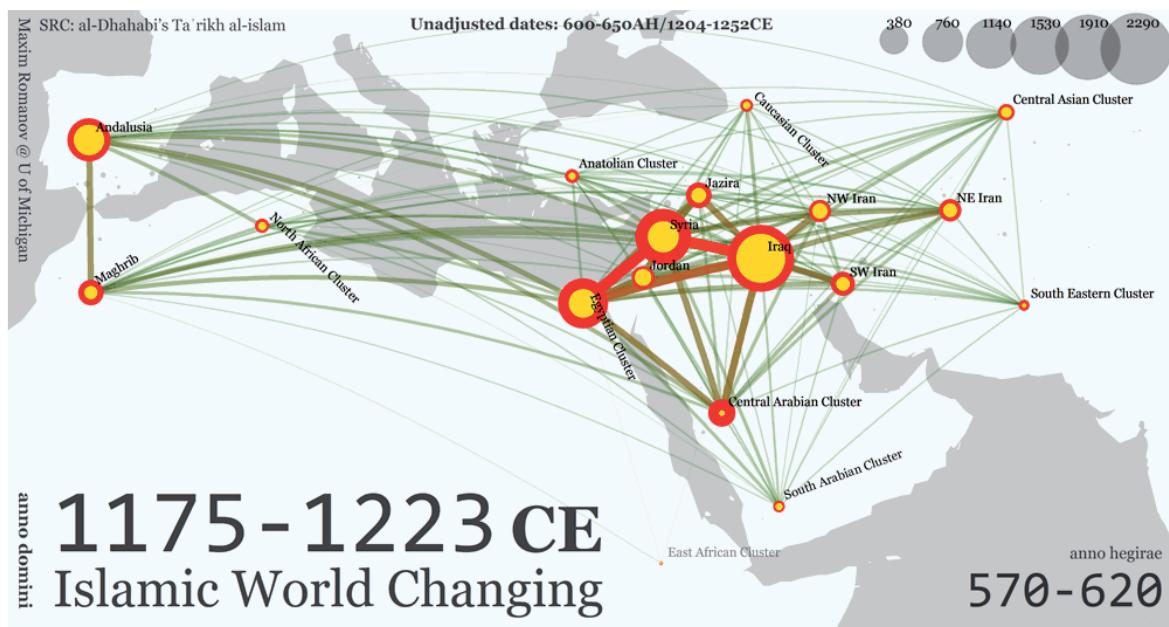
The core in the 7–13th centuries CE (animated)



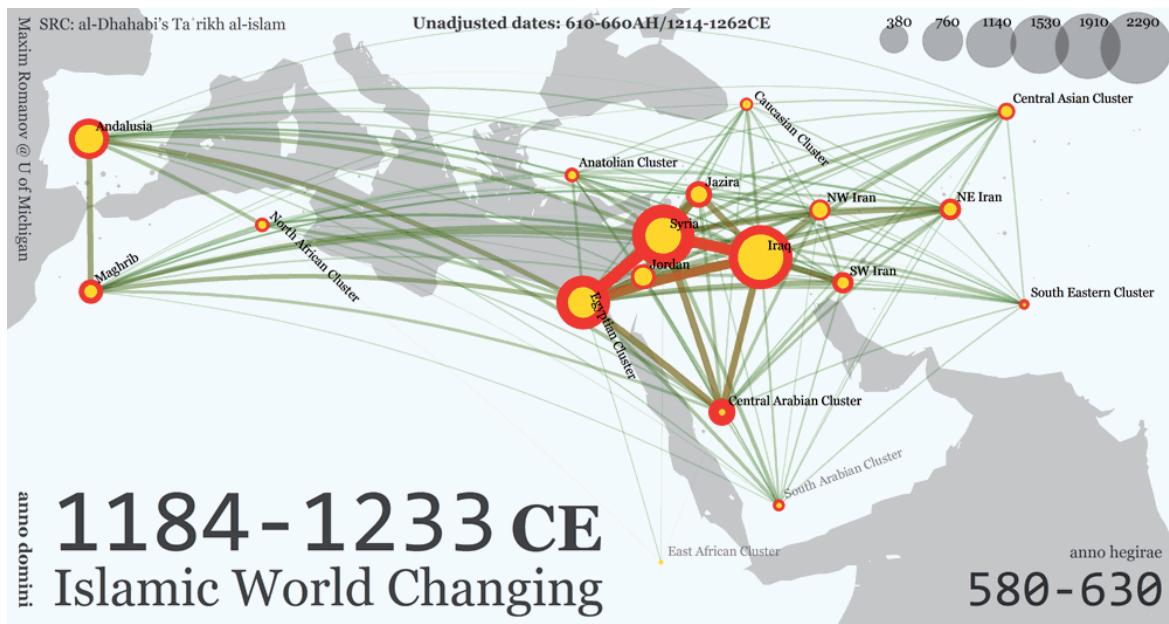


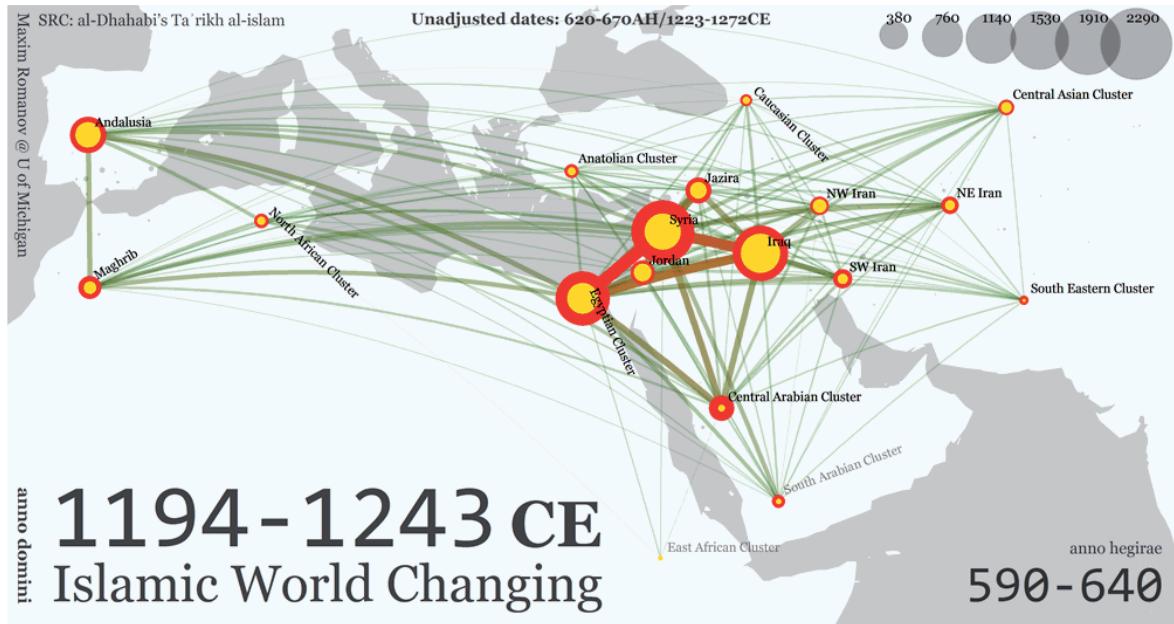
The core in the 7–13th centuries CE (animated)



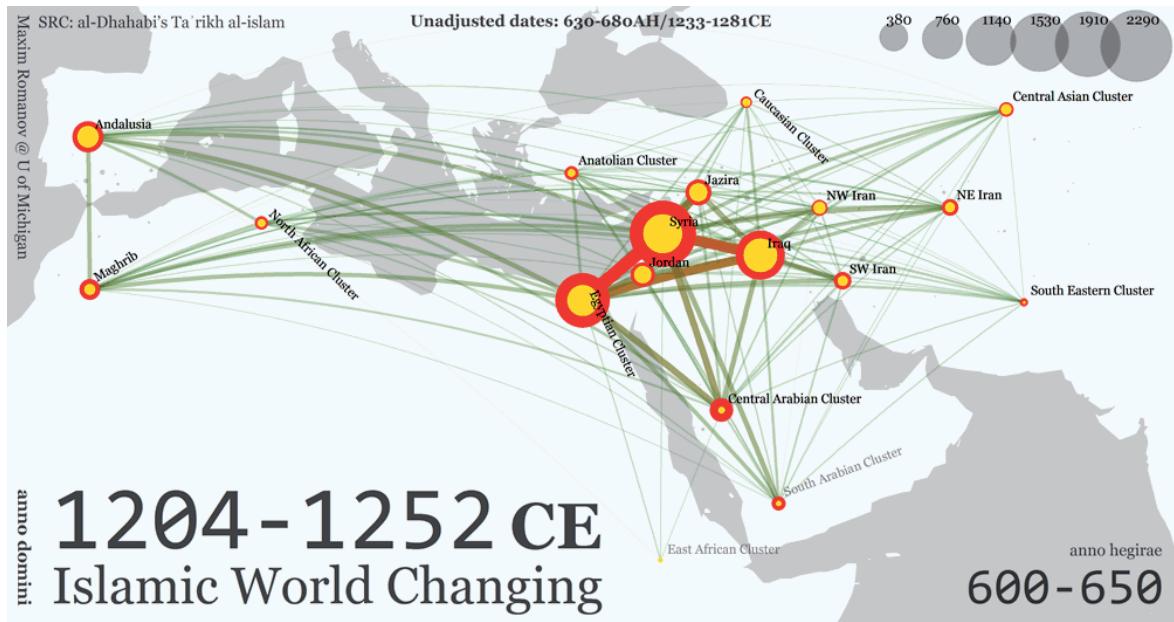


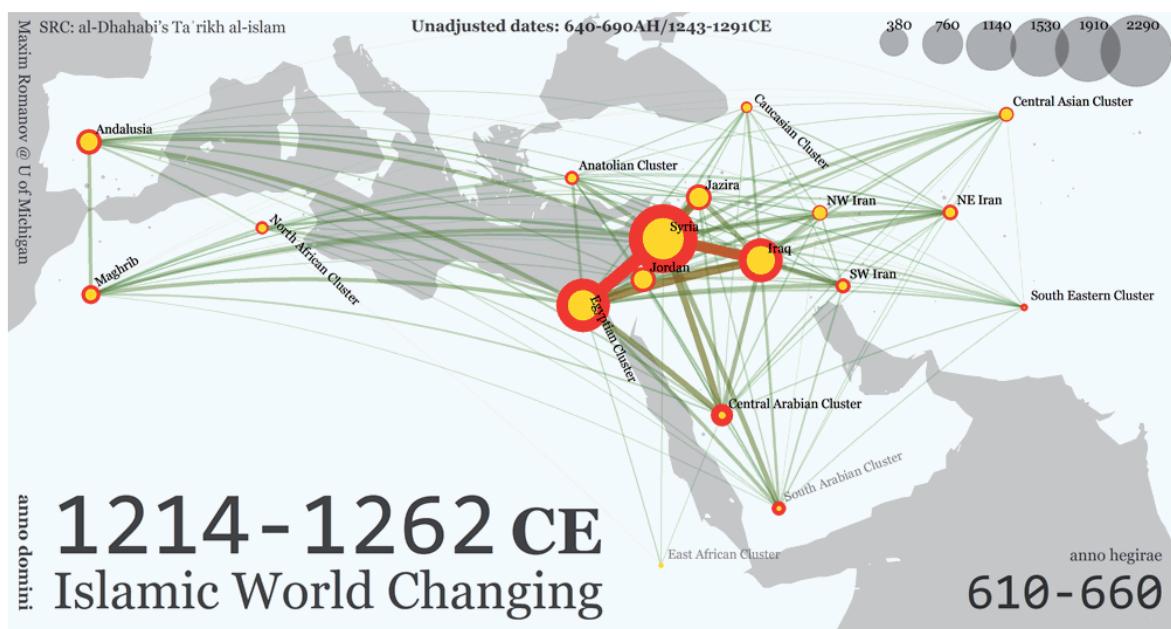
The core in the 7–13th centuries CE (animated)



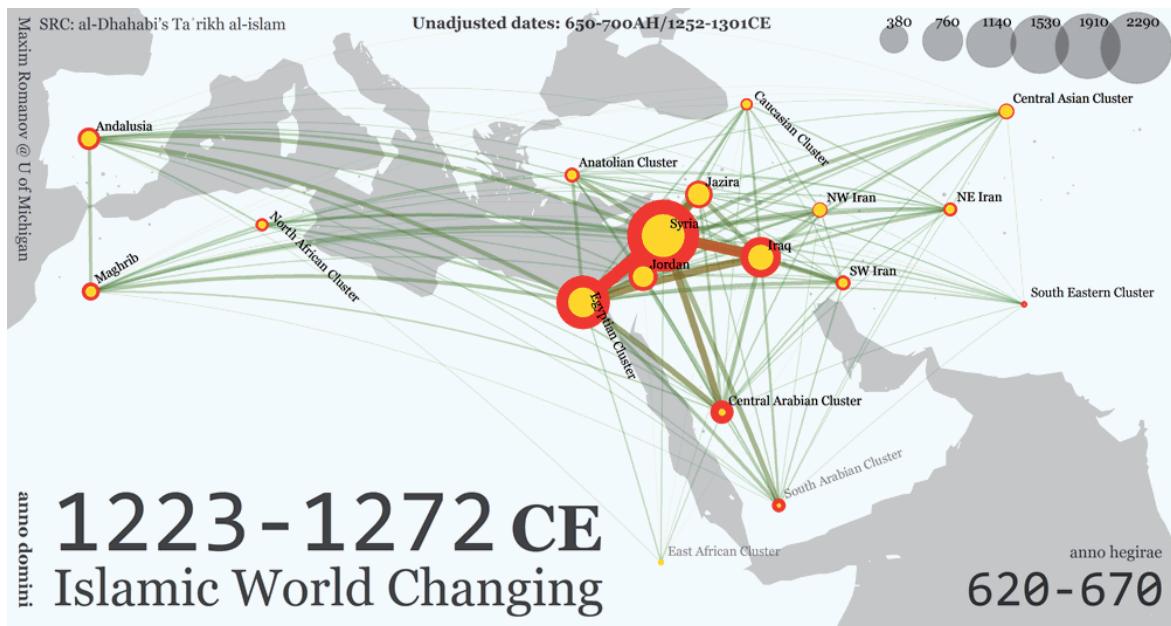


The core in the 7–13th centuries CE (animated)





The core in the 7–13th centuries CE (animated)



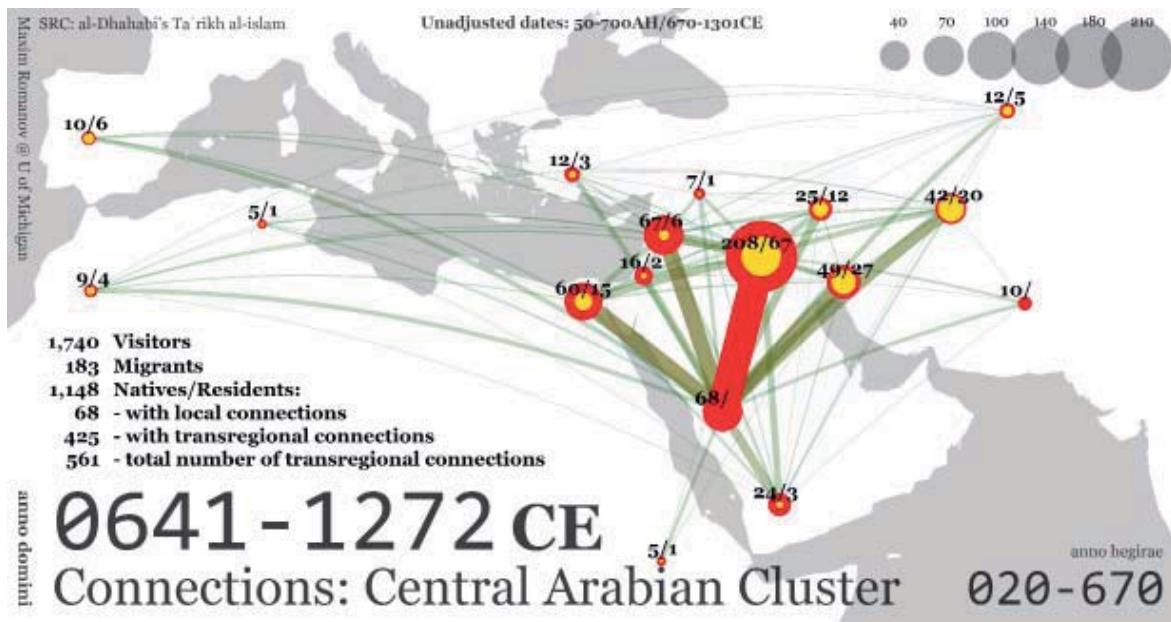
Transregional Connections

§ 26. Maps of connections for individual clusters show that regions are connected with each other in accordance with what can be called “the proximity principle”: each regional cluster is most densely connected with its closest neighbors, while the density of connections with the most remote clusters is usually the lowest. At the same time, adjustments for the core should always be taken into consideration: each “mini-period” — a 50-lunar-year period displayed on mini-maps—has its own constellations of connections, but they seem to always gravitate toward what constitutes the core during this period.

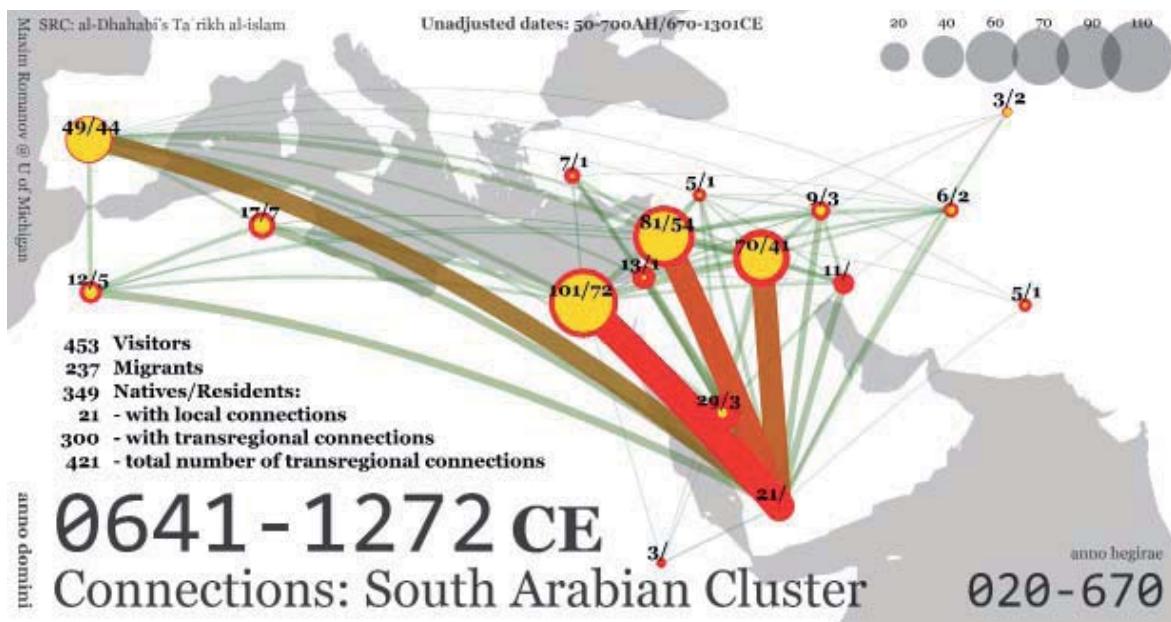
§ 27. An analysis of transregional connections shows that the Islamic world was a commonwealth of commonwealths, where the most remote regions were connected with each other through the proxy of other regions; moreover, each region displays a rather specific orientation toward other regional clusters, which often persists for extended periods of time. The example of the Arabian clusters is quite vivid: the central Arabian cluster displays a very strong northeastern orientation, predominantly toward Iraq, while the south Arabian cluster has more northwestern orientation, toward Egypt, Syria, and even Andalusia (Figure **orientation**).

§ 28. If we treat any region as the center of a commonwealth, its boundaries extend into the neighboring regions. Never crisp and clear, these boundaries are more like a drop of India ink on wet rice paper—their intensity fades as they bleed further and further into neighboring regions. These boundaries were not constant either, and the extent of each commonwealth shifted over time. For example, the commonwealth of northeastern Iran first extended to Arabia (20–130/642–749 CE), then it started shifting toward Iraq (as early as 110/729 CE), gradually extending toward northwestern Iran, the Central Asian cluster and Syria; around 500/1107 CE, when its own center started dwindling, it began shifting more and more toward Syria. The commonwealth of northeastern Iran barely touched Egypt at the end of the period and never extended as far as the North African cluster, the Maghrib and Andalusia, although their fading boundaries brushed against each other for short periods.

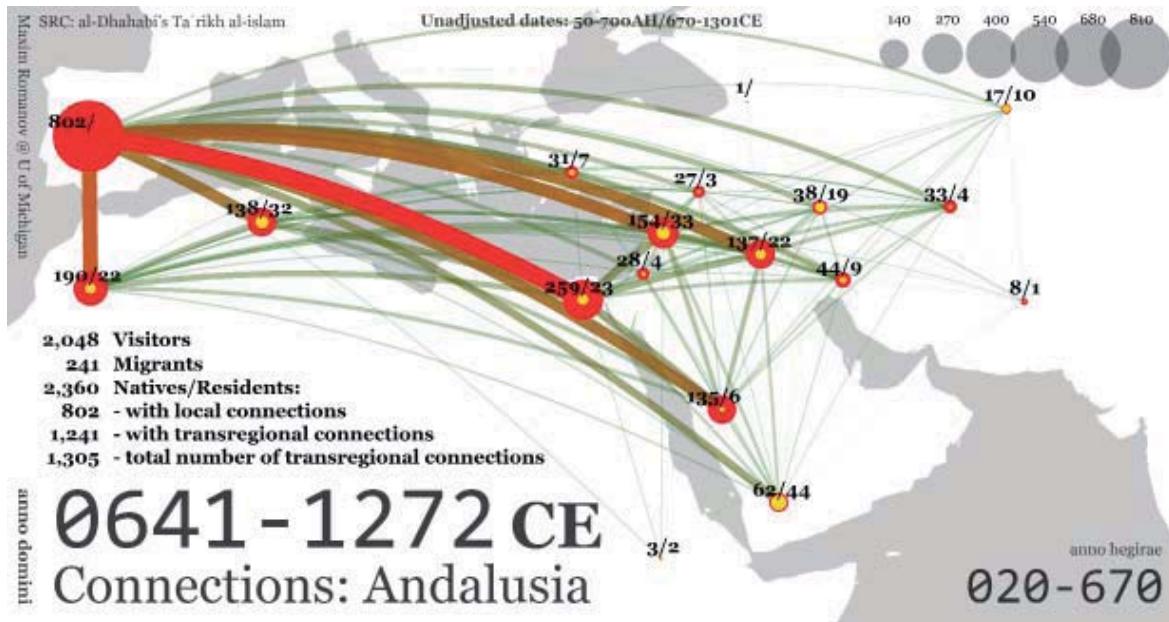
§ 29. If we were to map these commonwealths, they would look like overlapping “shingles” of irregular shapes with their boundaries fading



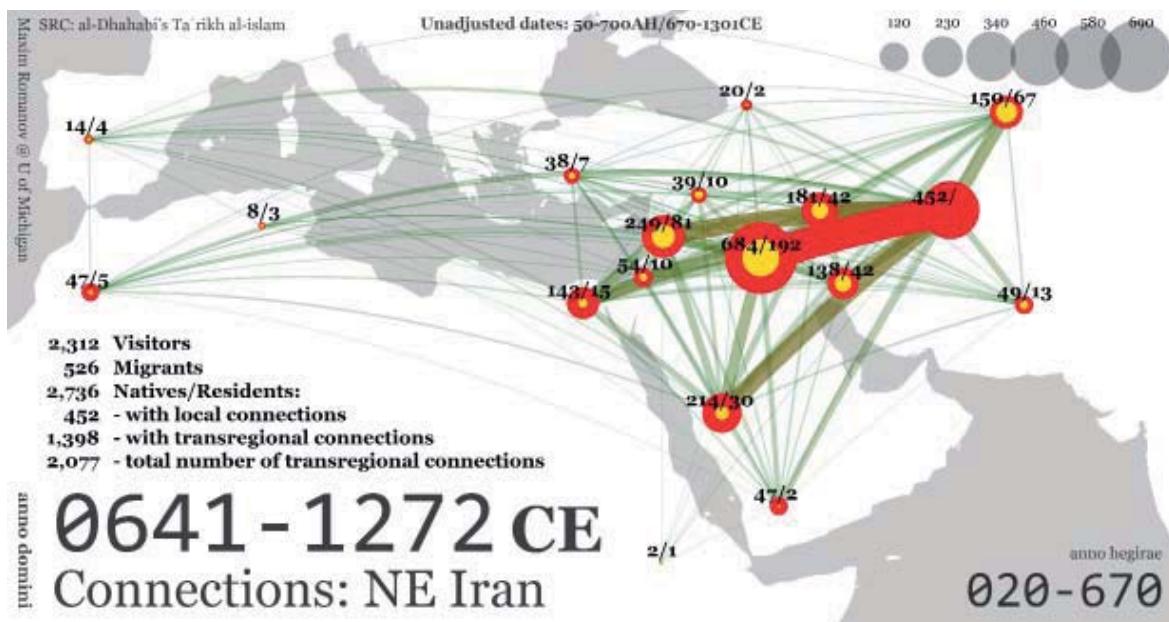
Orientation of Regional Clusters: the Central Arabian and South Arabian Clusters



into other shingles. Until the middle of the 7th/13th century, Iraq was the place where the boundaries of most Islamic commonwealths overlapped. However, Iraq was too remote for the western regions, as the boundaries of their commonwealths reached Egypt and Syria, and only marginally Iraq



Examples of regional integration: Andalusia/al-Andalus and northeastern Iran/Hurāsān



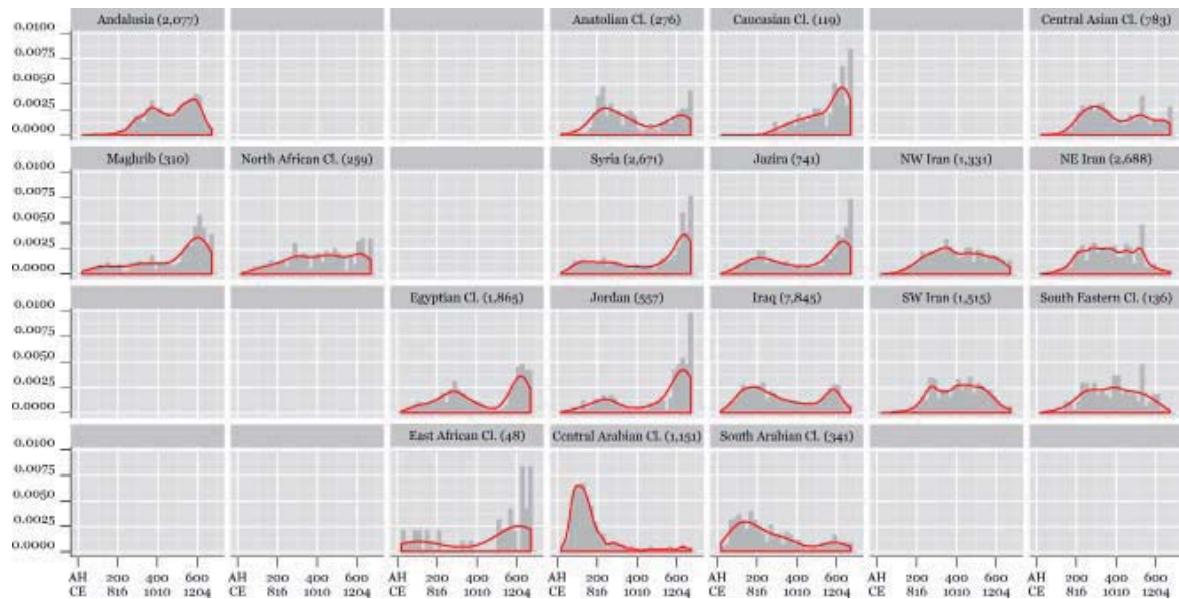
(not to mention that the ‘Abbāsids never had control over the Maghrib and Andalusia). It seems that with the end of the “Iranian intermezzo”, which marks the decline of the Iranian provinces, the “gravitational pull” of the core naturally shifted toward Syria and Egypt.

§ 30. There is no doubt that significant volumes of migration contributed to creating and maintaining the sense of one shared space—geographically, culturally, religiously, and, occasionally, politically. However, the proximity principle is not always at play when it comes to transregional migrants. Although the patterns of transregional migrations often mirror those of transregional connections—especially in cases of well-represented regions, we can often see significant numbers of transregional migrations between rather distant regions, in terms of the ratio between regional connections and regional migrants (the South Arabian Cluster is the most interesting example of this). In some cases, these distant migrations may have resulted from the mere inability of an individual to return home, since travels in this period would cost a fortune and last for years. Such migrations, however, would most likely be sporadic and not form distinctive patterns. When, on the other hand, migrations form uninterrupted blocks with discernible spikes, this must point to some significant changes—be they of social, religious, economic or political nature. We should keep in mind that some migrations could have been based on connections which are not reflected in biographical sources (or, not extractable with the current iteration of my method).

§ 31. Although the described “proximity principle” seems rather simple and intuitive, the ability to actually demonstrate it on a large data set may have significant implications for our understanding of how ideas (disembodied practices) and practices (embodied ideas) could have been spreading within the Islamic world. The “shingles” of commonwealths definitely offered plenty of opportunities for ideas to travel among the farthest reaches of the Islamic world, but they must have imposed rather strict limitations for the spread of practices¹.

¹ “Public preaching” (*wa’z*) is often considered a universal practice throughout the premodern Islamic world, however, my analysis of biographical data shows that it was in fact confined to the extents of the Iranian commonwealth, the region where it originated see, Romanov, Maxim G. “Computational Reading of Arabic Biographical Collections with Special Reference to Preaching (661–1300 CE)”. Ph.D., Ann Arbor, MI: University of Michigan, 2013. Chapter III, particularly 206–227.

Reading Regional Curves



*Chronological representation of geographical clusters in the *Ta'rīh al-islām* (density curves)*

§ 32. Figure **RegionalRepresentationDensity** shows density curves of all regional clusters. Similarities between curves imply that similar processes took place in those regions. Several groups can be singled out, but we'll dwell only on the central regions—Egypt, Greater Syria, the Jazīrat and Iraq—that share similar periods of decline (after 270/884 CE) and recovery (after 470/1078 CE) during roughly the same middle period.

§ 33. The ebb and flow of Sunnī élites—and the absolute majority of individuals in the *Ta'rīh al-islām* are Sunnīs—mirror dynastic developments in practically every region. Although, this should not be taken as a direct relationship between the two¹, the lasting rule of any dynasty would bring

¹ In all likelihood, both dynastic shifts and prosopographical shifts point to the same profound social and economic changes. For a great discussion of connections between dynastic shifts and economic factors, see, Kennedy, Hugh. “The Late ‘Abbāsid Pattern, 945–1050”. In *The Formation of the Islamic World Sixthto Eleventh Centuries*, edited by Chase F. Robinson, 360–94. Cambridge: Cambridge University Press, 2010. Unlike social and prosopographical shifts, however, dynastic shifts are much easier to detect. And if we can establish that they reflect the same processes, dynastic shifts may fill in the blanks where prosopographical data are lacking.

a period of stability: new patterns of social relations would begin to form and possible career paths would emerge; soon individuals begin to take advantage of these developments, and the more individuals join this game, the more social groups form and grow. The policies of ruling dynasties contribute to the overall social climate, whether they openly support particular groups, or [do not] leave them enough social space to develop. As a result some groups flourish, while some go into decline.

§ 34. The so-called “Šī’ite century” (10th century CE)¹ falls entirely on the downward slope of the density curves of the central regions. The Šī’ite dynasties—most notably the Fātimids of North Africa and Egypt and the Būyids of Iraq and Iran—did not cause the decline, but they both came to power during a period of turmoil: dearth and famine in Egypt² and the military “junta” in Iraq. The Fātimids declare their caliphate in 909 CE, conquer Egypt in 969 CE and stay there until 1171 CE. The Būyids come to Baghdad in 946 CE and carry on their “guardianship” until the Saljūqs come to claim their place in 1055 CE. The social climate of the prolonged rule of these two regimes could not have possibly fostered the growth of scholarly communities of Sunnī persuasion.

§ 35. The Būyids and Fātimids had different perspectives on Shī’ism: the former supported Twelver Shī’ism, while the latter professed Sevener, Ismā’īlī Shī’ism. This factor profoundly affected how Šī’ite learned communities could develop in their respective domains. With the Fātimids, who claimed the ultimate authority in religious matters, there was not much social space for the development of a thriving scholarly community that would be comparable—at least in numbers—to those of the Sunnīs in other regions of the Islamic world. After all, why have dozens of squabbling scholars when the Imām has all the answers?

§ 36. It is not to say that there was no learned Ismā’īlī community, but it was hierarchical and incorporated into the administrative apparatus of the Fātimid state. Practically no quantitative data are available on the Ismā’īlī scholars of Fātimid Egypt. The only exception is, Poonawala’s

¹ See, for example, Hodgson, Marshall G.S. The Venture of Islam: Conscience and History in a World Civilization. Vol. 2. The Expansion of Islam in the Middle Periods. Vol. 2. 3 vols. Chicago: University of Chicago Press, 1974. 2:36.

² Ellenblum, Ronnie. The Collapse of the Eastern Mediterranean: Climate Change and the Decline of the East, 950–1072. Cambridge University Press, 2012.

“Biobibliography”¹ which lists 51 Ismā’īlī author from the pre-Fātimid and Fātimid periods (250–524/865–1131 CE). It is hard to say to what extent this number characterizes the learned Ismā’īlī community in Fātimid Egypt, but for comparison a classical Sunnī biobibliography lists about 1,650 authors for the same period². As to the Sunnī presence in Egypt during the Fātimid period, it is clearly in decline—numbers of individuals with Egyptian nisbats go down starting around 300/913 CE and reach their lowest point around 500/1107 CE, when connections between Egypt and other regions practically get severed³.

§ 37. Unlike the Fātimids, the Būyids claimed no religious authority for themselves, nor did they want to remove the ‘Abbāsid caliphs entirely from the historical scene. They supported Shī‘ism, but more on a popular level by restoring and building Šī‘ite shrines and instituting Šī‘ite commemorations. Although they only marginally supported Šī‘ite scholars, the Būyids managed to create a socio-political climate in which a Twelver learned community could develop: quantitative data from the Šī‘ite biographical collections suggests that the learned community of the Twelver Šī‘ites begins to grow rapidly in the Būyid period and within their domain, peaking during the 11th century CE⁴. According to the *Ta’rīh al-islām*, the peak of individuals with Šī‘ite names (about 500 total) falls on 470/1078 CE, when the Sunnī community—the cumulative biographical curve of this source—hits the lowest point of its decline. Geographically, this Šī‘ite spike is most visible in Iraq and Iran.

§ 38. Additionally, the beginning of the Būyid period coincides with the “Greater Occultation” (*gaybat*) that began in 329/942 CE. Now, with no ways to reach their Imām, the Twelver Šī‘ite community was ready for—and was

¹ For the list of authors, see, Poonawala, Ismail K., and Teresa Joseph. Biobibliography of Ismā’īlī Literature. Studies in Near Eastern Culture and Society. Malibu, Calif.: Undena Publications, 1977. P. 467–468.

² See, *al-Baghdādī, Ismā’īl Bāshā*. Hadīyat al-‘arifīn Asmā’ al-Mu’allifīn Wa Athāral-Muṣannifīn. 6 vols. Bayrūt: Dār al-kutub al-‘ilmīya, 1992. The number of biographies in the *Ta’rīh al-islām* for the same period is about 12,170.

³ There clearly were cases of conversion of Sunnī scholars to Ismā’īlism. The most striking example is the *qāḍī al-Nu’mān* (d. 351/963 CE), one of the most prominent scholars of the Fātimid state, who used to be a Mālikī jurist. At the moment, however, I have no means to estimate the rates of such conversions.

⁴ Momen, Moojan. An Introduction to Shi‘i Islam: The History and Doctrines of Twelver Shi‘ism. Oxford: G. Ronald, 1985. P. 83, 84, 91, 97.

in a desperate need of—a community of scholars who would interpret their sacred texts in a way similar to that of the Sunnī scholars.

§ 39. In his comprehensive introduction to Šī'ite Islam, Momen provides quantitative summaries of data on Twelver Šī'ite 'ulamā': 302 individuals in the period up to 400/1010 CE, 146 during 401–500/1011–1107 CE, 395 during 501–600/1108–1204 CE, and 170 during 601–700/1205–1301 CE. Although such a crude grouping does not allow for any nuanced trend tracing, I should not be too far off in pointing out that the Twelver learned community peaks sometime during 400–600/1010–1204 CE¹. According to the *Ta'rīh al-islām*, the peak of individuals with the Šī'ite *nisbats* is around 470/1078 CE—when the Sunnī community hits the lowest point of its decline (more details below).

§ 40. Prozorov's study of the historical writings² of the early Šī'ites also suggests a very small learned community during the pre-Būyid period. Prozorov collected biographies of 70 early authors with Šī'ite affiliations—all the authors that he could excavate from the Šī'ite and major Sunnī biographical collections. Together, these authors could have written up to 1,500 books and epistles of varying volume—according to biographical collections whose authors listed their titles, or gave a lump sum of their literary output. However, even if the books were actually written, only few of them survived. Prozorov quotes al-Najāšī (d. 450/1059 CE) whose decision to put together a biographical collection of Šī'ite luminaries, *Kitāb al-rijāl*, was driven by people saying that “the Šī'ites do not have their own books”³.

§ 41. Biographical data from the *Ta'rīh al-islām* are not particularly rich for the Šī'ites, but some 500 individuals may be identified by their *nisbats* as belonging to different Šī'ite groups. The most frequent *nisbats* are: al-

¹ **Footnote:** These summaries are based on the Šī'ite biographical collections: Momen collected the data for the first four centuries from *al-Fihrist* of Muḥammad al-Ṭūsī (d. 460/1069 CE, known under the honorific *Šayh al-tā'ifat*), and then—lumped into century-long periods—from the *Tabaqāt a'lām al-šī'at* of Āḡā Buzurg Ṭihrānī (d. 1389/1969 CE), “one of the most meticulous of modern Shī'ī scholars”, as Momen himself characterizes him (See, Momen, Moojan. An Introduction to Shi'i Islam: The History and Doctrines of Twelver Shi'ism. P. 83,84,91,97).

² Арабская историческая литература в Ираке, Иране и Средней Азии в VII — середине X в. М.: Наука. ГРВЛ, 1980. “Historical writings” are defined rather broadly here, and the term itself was used largely to avoid ideological complications within Soviet academia of the late 1970s.

³ Там же. Р. 7.

‘Alawī (221), al-Ḥusaynī (135), al-Šī‘ī (91), al-Rāfiḍī (56), al-Ḥasanī (56), al-Zaydī (28), al-Isma‘īlī (25), al-Ja‘fārī (21), al-Mūsawī, al-Bāṭinī (18), al-Imāmī (10). Arguably, some of these can be “ancestral” *nisbats*, that is they go back to the name of one’s father or grandfather who does not necessarily have anything to do with Šī‘īsm. However, keeping in mind the very strong Šī‘īte connotations of these names, the number of false positives in this set should be insignificant. The curve of individuals with these names is rather interesting and shows that while the absolute numbers of these individuals steadily grow throughout the entire period, there is a clearly visible “bump” of growth during 350–570/962–1175 CE with the peak around 470/1078 CE—the lowest point of the cumulative biographical curve. After 470/1078 CE, when the cumulative curve begins its recovery, the Šī‘īte curve goes down, returning to its earlier rate of growth. The percentile curve shows this spike even more vividly, although it suggests that the period of this spike starts earlier and lasts longer. Geographically, this Šī‘īte spike is most visible in Iraq and Iran¹.

§ 42. The size of the prosopographical dataset makes it tempting to consider that fluctuations of élites reflect the overall demographic changes within the Islamic society of our period. Ellenblum’s latest study² argues that 950–1072 CE was the period of almost pan-Islamic dearth: agricultural crisis (in Iran, Iraq and, most importantly, Egypt—“the granary of the ancient Mediterranean”), nomadization, and population decline—all caused by the climate change directly or indirectly through “domino effects”. Unfortunately, testing such a relation is extremely difficult, since demographic data on the pre-modern Islamic world are practically non-existent³; this, however, is also a methodological issue, as very few attempts have been made to model demographic processes using statistical models⁴.

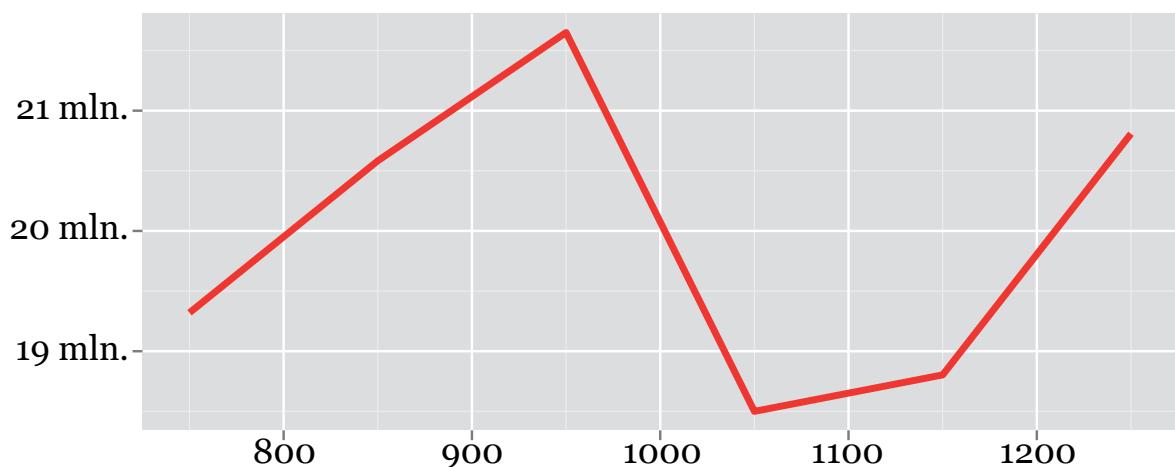
¹ Discussions of Šī‘īte leanings are also rekindled during the “Šī‘īte century”: for example, the frequency of the word *taṣayyu'*, “Šī‘īte leaning”, and its forms spike during the period of decline of the cumulative curve between 270/884 CE and 470/1078 CE.

² Ellenblum, Ronnie. *The Collapse of the Eastern Mediterranean: Climate Change and the Decline of the East*.

³ A famous scholar lamented that Islamicists can only envy the Roman historians who have a significant number of original censuses. *al-Qādī, Wadād*. “Population Census and Land Surveys under the Umayyads (41–132/661–750)”. *Der Islam*. 2006. 83 (2). P. 341–416.

⁴ A notable exception is a study that estimates the Arab population relying on demographical “dependency ratios” Agha, Saleh Said. 1999. “The Arab Population in Ḥurāṣān during the Umayyad Period”. *Arabica*, 1999. 46 (2): 211–29.

§ 43. The only attempt at estimating the population of the pre-modern Islamic world has been undertaken by European economists and historians (lands east of Iraq and Andalusia are not covered in these estimates)¹: 8th century 19,320 mln.; 9th century 20,583 mln.; 10th century 21,650; 11th century 18,500; 12th century 18,803; 13th century 20,808 (Figure **BoskerMENApopulation**). These data demonstrates the decline of the population curve during the 11th century and recovery in the 12th century: something Ellenblum's study argues and the biographical curves of the *Ta'rih al-islām* may suggest.



Estimates of the Population of the Middle East and North Africa (800–1400 CE). The graph is based on the dataset used in (Bosker, Buringh, and van Zanden 2012); I am grateful to the authors for sharing their data and explaining how the information was collected

Concluding Remark

§ 44. Digital methods allowed to extract meaningful data from unstructured text of the largest biographical collection in Arabic and to

¹ See, Bosker, Maarten, Eltjo Buringh, and Jan Luiten van Zanden. "From Baghdad to London: Unraveling Urban Development in Europe, the Middle East, and North Africa, 800–1800". *Review of Economics and Statistics*, May. 2012. The fact that a prominent economic historian uses their data in her research attests that nothing comparable has been done by scholars who are trained to work with Islamic primary sources see, Shatz miller, Maya. 2011. "Economic Performance and Economic Growth in the Early Islamic World". *Journal of the Economic and Social History of the Orient*. 2011. 54 (2). P. 132–84.

visualize long-term trends in the social geography of the Islamic world: even though the Muslims conquered and controlled major Mediterranean provinces, the initial core of the Islamic empire shifted away from the Mediterranean; but with the decline of Iraq and Iran, which had been playing central role for centuries, the core of the Islamic world shifted to Syria and Egypt—back to the Roman lake.

§ 45. Large scale analysis of biographical collections poses a number of methodological and historiographical problems that are yet to be solved. This study is a test run for a new method of computational reading of Arabic sources that, with further improvements, will allow to study the entire corpus of Islamic biographical sources and advance our understanding of the social history of the Islamic world to a new level.