

Hidden subjectivities in objective measures: Spanish perceptions of geographic space in North Africa

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Abstract

In the late fifteenth and early sixteenth centuries, Spanish forces invaded a number of coastal towns in North Africa. Historians often consider this encounter as a continuation of a familiar context of Christian-Muslim relations in the western Mediterranean. As such, Spaniards are presumed to have almost had a pre-knowledge of topography that resembled Iberian landscapes and of climates, flora, and fauna that nestle comfortably within a Braudelian belt of olive trees. How well does this characterization indicate Spanish sensory perceptions of the geographic world of North Africa? Geographic knowledge was critical for the military campaigns that sought to capture overseas territories and the gathering and representing of information overlapped with developing sciences, including engineering. Representations of such data fixated on precise measurements. At the same time, human experience of measurable quantities such as distance were conditioned by subjectivities. Human agency, sensory perception, and even imaginaries of the unknown all altered how the Spaniards encountered the geographic world of North Africa. By juxtaposing geographic perception in measurable and subjective terms, this article presents another side of Spaniards' encounters with North Africa.

Keywords: Spanish Empire, North Africa, cartography, perception, space.

Resum

A finals del segle xv i principis del xvi, les forces espanyoles van envair diverses ciutats costaneres del nord d'Àfrica. Els historiadors solen considerar aques-

ta trobada com la continuació d'una dinàmica familiar de les relacions cristianomusulmanes a la Mediterrània occidental. D'aquesta manera, es considera que els espanyols gairebé tenien un coneixement previ de la topografia, que s'assemblava als paisatges ibèrics, així com del clima, la flora i la fauna, que s'inclouen còmodament dins d'un cinturó braudelià d'oliveres. Fins a quin punt aquesta caracterització indica les percepcions sensorials espanyoles del món geogràfic del nord d'Àfrica? El coneixement geogràfic era fonamental per a les campanyes militars que pretenien capturar territoris d'ultramar i la recopilació i representació d'informació se solapava amb el desenvolupament de les ciències, inclosa l'enginyeria. Les representacions d'aquestes dades es van fixar en mesures precises. Al mateix temps, l'experiència humana de mesura, com en el cas de la distància, estava condicionada a les subjectivitats. L'agència humana, la percepció sensorial i fins i tot els imaginaris del desconegut van alterar la manera com els espanyols es van trobar amb el món geogràfic del nord d'Àfrica. Juxtaposant la percepció geogràfica en termes mesurables i subjectius, aquest article presenta una altra mirada als contactes dels espanyols amb el nord d'Àfrica.

Paraules clau: Imperi espanyol, Àfrica del Nord, cartografia, percepció, espai.

Resumen

A finales del siglo xv y principios del xvi, las fuerzas españolas invadieron varias ciudades costeras del norte de África. Los historiadores suelen considerar este encuentro como consecuencia de una dinámica familiar de las relaciones cristiano-musulmanas en el Mediterráneo occidental. De este modo, se considera que los españoles casi tenían un conocimiento previo de la topografía que se parecía a los paisajes ibéricos y de los climas, la flora y la fauna que se incluyen cómodamente dentro de un cinturón braudeliiano de olivos. ¿Hasta qué punto esta caracterización indica las percepciones sensoriales españolas del mundo geográfico del norte de África? El conocimiento geográfico era fundamental para las campañas militares que pretendían capturar territorios de ultramar y la recopilación y representación de información se solapaba con el desarrollo de las ciencias, incluida la ingeniería. Las representaciones de estos datos se fijaron en medidas precisas. Al mismo tiempo, la experiencia humana de la medida, como en el caso de la distancia, estaba condicionada a las subjetividades. La agencia humana, la percepción sensorial e incluso los imaginarios de lo desconocido alteraron la forma en que los españoles se en-

contraron con el mundo geográfico del norte de África, y este artículo, yuxtaponiendo la percepción geográfica en términos medibles y subjetivos, presenta otro aspecto de los contactos de los españoles con estos territorios.

Palabras clave: Imperio español, África del Norte, cartografía, percepción, espacio.

Miguel de Cervantes' play *The Bagnios of Algiers* begins with a raid of Algerian corsairs on a coastal community in Spain. In a typical cast of characters that includes a Muslim captain, Christian defenders, and unsuspecting villagers, the key figure driving the scene's action is a renegade named Yzuf who has returned to his birthplace to guide the raiding party. It is the protagonist's acute knowledge of the land that enables the raid:

Yzuf: Come quietly one by one, for this is the path and this is the village. Keep to the woods.

Cauralí [Captain of Algiers]: Make no mistake, Yzuf, for an error may cost you your life [...] Have you decided from where we should attack, Yzuf?

Yzuf: From the mountains, a place so impassable it is unguarded. As I said, I was born and raised in this land, and I know well its ins and outs and the best places to make war on it.¹

For the Muslim raiders, the campaign's success rests on intimacy with both natural and man-made topography. For a Christian defender, the Algerians were "truly daring" because they were «brought here by some renegade familiar with the land».² In this opening scene, it is the renegade's geographic expertise that ultimately launches a tale about prisoners captured in a foray and allows it to play out.

1. Miguel de Cervantes, *The Bagnios of Algiers and the Great Sultana: Two Plays of Captivity*, B. Fuchs, ed., and A. Ilika, trans., University of Pennsylvania Press, Philadelphia, 2012, p. 3.

2. de Cervantes, *The Bagnios of Algiers*, p. 7.

Cervantes' insistence on the importance of geographic knowledge reflects the preoccupations of Spaniards as they expanded into the Mediterranean, including North Africa, in the early modern period. In 1497, Spanish forces crossed the Strait of Gibraltar and seized the town of Melilla on the Moroccan coast. Further campaigns conquered the enclaves of Mazalquivir in 1505, Oran in 1509, Bugía, the Peñón de Argel, and Tripoli in 1510, Tunis in 1535, and many others. These expeditions established an empire that stretched at its greatest extent some 2,500 kilometers from the shores of Atlantic Morocco to the waters of western Libya. Though Spain possessed Oran for 260 years and still controls Ceuta and Melilla today, its positions were under constant threat from Muslim forces in the early modern period. At this same moment in history, the Ottoman Empire was spreading into the Mediterranean from the opposite end of the sea basin. In 1516-1517, Sultan Selim I's army took the shores of Syria, Palestine, and Egypt in the eastern Mediterranean while the renegade brothers Oruç and Khayr al-Din «Barbarossa» captured Algiers and turned it into the Sublime Porte's naval base in the west. In the ensuing clash of these two early modern superpowers, geographic knowledge of the theater of conflict was of critical importance.

Miguel Ángel de Bunes Ibarra calls Spain's invasion and occupation a «rediscovery of Africa».³ This sobriquet may appear overstated at first since travelers had long bridged the Strait of Gibraltar and the Alboran Sea, and proponents of the expeditions viewed the Christian campaigns as a continuation of the «Reconquest». Bunes Ibarra argues, however, that these activities constituted a different phenomenon. Despite ideological preconceptions, the Spaniards were seeking to acquire territories on an overseas continent. Thus, the vast majority of soldiers disembarking on the southern shores had scant knowledge of the region. A small number of merchants had been trading in North African ports, but very few had experience of the interior. As we will see, even Span-

3. All translations mine unless otherwise noted. Miguel Ángel de BUNES IBARRA, *La imagen de los musulmanes y del Norte de África en la España de los siglos XVI y XVII*, CSIC, Madrid, 1989, p. 1.

iards who had resided for long periods in the Maghrib wrote chronicles describing geography grounded in classical authorities rather than experiential observations. In addition to novel geopolitical conditions there were other critical contextual changes that were fashioning a different kind of imperial project. Spanish expansion took place at the same time as the development of new scientific techniques that were changing the ways of perception, analysis, organization, and representation.⁴ Indeed, as many scholars have remarked, the expansion of European states and empires in the early modern period went hand-in-hand with scientific methods.⁵ As Spaniards applied these practices in their activities in North Africa, they brought about a different form of engagement with the “space” of the region.⁶

The early modern Spanish empire in North Africa has received far less attention than territories in the New World and Europe.⁷ Still, the endurance of Spanish control is a testament to the hold the region has had on geopolitical considerations and the fervor it has at times sparked. Fernand Braudel helped establish the modern study of this field, recovering the history of Spanish imperialism in the Maghrib in his first article and examining Spain’s clash with the Ottoman Empire in his towering tomes.⁸ A coterie of mostly Spanish historians have followed, including Mercedes García-Arenal, Miguel Ángel de Bunes Ibarra, Ra-

4. See Ricardo PADRÓN, *The Spacious Word: Cartography, Literature, and Empire in Early Modern Spain*, University of Chicago Press, Chicago, 2004.

5. For an introduction to this expanding field, see D. Bleichmar *et al.*, eds., *Science in the Spanish and Portuguese Empires*, Stanford University Press, Stanford, 2009; and Antonio BARRERA-OSORIO, *Experiencing Nature: The Spanish American Empire and the Early Scientific Revolution*, University of Texas Press, Austin, 2006.

6. I use the term “space” to mean constructed senses of physical surroundings. See Henri LEFEBVRE, *The Production of Space*, Blackwell, Oxford, 1991; W. J. T. Mitchell, ed., *Landscape and Power*, University of Chicago Press, Chicago, 2002.

7. The scholarship on the intersection between the Spanish Empire and science focuses on the New World.

8. Fernand BRAUDEL, «Les espagnols et l’Afrique du Nord de 1492 à 1577», *Revue Africaine*, 69 (1928), pp. 184-233 and 351-428; Fernand BRAUDEL, *La Méditerranée et le monde méditerranéen à l’époque de Philippe II*, Colin, Paris, 1949, Part III.

fael Gutiérrez Cruz, and Beatriz Alonso Acero.⁹ These groundbreaking scholars have framed the field of study by focusing on structural issues, such as relations between Muslims, Christians, and Jews; the migration of religious minorities; political and military clashes between the Spanish and Ottoman empires, and the establishment and maintenance of Spain's presidios, especially their military, administrative, and economic dimensions.¹⁰ Toward an examination of space, Juan Bautista Vilar and Mikel Epalza have published a monumental series of volumes cataloguing Spanish maps and plans of the Maghrib while the art historian Alicia Cámara Muñoz and her collaborators have studied in impressive depth the development of military engineering in the construction of the empire.¹¹ I seek to contribute to this field by exposing the ambiguities of Spanish geographic perceptions in their encounter with North Africa.

In *La imagen de los musulmanes y del Norte de África*, Bunes Ibarra studies the way that early modern Spanish chroniclers wrote about North

9. Other historians of note include the French scholars Robert Ricard, Chantal de La Véronne, and Jean-Frédéric Schaub, and the American Andrew Hess. In 2010, a new generation of scholars established the Spain-North Africa Project (www.spain-northafricaproject.org) to develop the study of these two lands as an interconnected region. See the project's publications including Y-G. Liang and B. Fuchs, eds., *A Forgotten Empire: The Spanish-North African Borderlands*, a special issue of the *Journal of Spanish Cultural Studies*, 12 (2012); Y-G. Liang, A. K. Balbale, A. Devereux, and C. Gómez-Rivas, eds., *Spanning the Strait: Studies in Unity in the Western Mediterranean*, a special issue of *Medieval Encounters*, 19 (2013); and A. Gaiser and M. Ali-de-Unzaga, eds., *Facets of Exchange between North Africa and the Iberian Peninsula*, a special issue of *The Journal of North African Studies*, 19 (2014).

10. See Mercedes GARCÍA-ARENAL and Miguel Ángel de BUNES IBARRA, *Los españoles y el norte de África: Siglos XV-XVIII*, MAPFRE, Madrid, 1992; Rafael GUTIÉRREZ CRUZ, *Los presidios españoles y el norte de África en tiempos de Reyes Católicos*, Ciudad Autónoma de Melilla, Melilla, 1997; and Beatriz ALONSO ACERO, *Orán-Mazalquivir, 1589-1639: Una sociedad española en la frontera de Berbería*, CSIC, Madrid, 2000.

11. This article will draw particularly from Mikel de EPALZA and Juan Bautista VILAR, *Planos y mapas hispánicos de Argelia siglos XVI-XVIII*, Instituto Hispano-Árabe de Cultura, Madrid, 1988. See A. Cámara Muñoz, ed., *Draughtsmen Engineers Serving the Spanish Monarchy in the Sixteenth to Eighteenth Centuries*, Fundación Juanelo Turriano, Madrid, 2016.

African geography. He discovers that major figures such as Luis Mármol de Carvajal, Antonio de Sosa, Diego de Torres, and Diego Suárez Montañés relied extensively on classical authorities and ideological preconceptions to construct descriptions. These authors zoned North Africa according to Pliny's divisions, spatially located cities, mountains, and rivers using Ptolemy's descriptions, and fixated on tracing the classical origins of contemporary sites. Debating interlineally with Leo Africanus on the origins of Algiers,¹² Sosa insists that «Strabo, an author of the greatest authority, provides some knowledge from antiquity when in a discussion of the towns and cities of Caesarean Mauritania he writes about this city [Algiers] under another name: 'On this seacoast there once was a city called Iol [...]».¹³ In the age of humanism, reference to classic sources conferred an air of pedigree on the authors. At the same time, the association of North Africa with an antiquity that Spaniards laid claim to as heir helped legitimize their imperializing mission in the Mediterranean. Another maneuver elided the topography, ecology, and climate of parts of the Maghrib with those of southern Spain: «The city of Fez is the best in all of Africa and its fields and groves are similar to those of the kingdom of Granada».¹⁴ The region was also praised as productive and prosperous, with Mármol Carvajal describing the littoral from Gibraltar to Sousse as «very fertile land, abundant in grain, wheat, oat, and livestock», and the mountains running from the Rif to Tripoli as «fertile with grain and grass for livestock, abounding with water, springs, and rivers».¹⁵ These descriptions

12. Though he himself relied on Ibn Khaldun, Leo Africanus constituted another major source of geographic knowledge, particularly for Morocco. See Juan León AFRICANO, *Descripción general del África*, Junta de Andalucía, Granada, 2004; Natalie DAVIS, *Trickster Travels: A Sixteenth-Century Muslim between Worlds*, Hill and Wang, New York, 2006.

13. Antonio DE SOSA, «Topography of Algiers (1612)», in M. Antonia Garcés, ed., and D. de Armas Wilson, trans., *An Early Modern Dialogue with Islam*, University of Notre Dame Press, Notre Dame, 2011, p. 93. Also quoted in BUNES IBARRA, *La imagen*, p. 23.

14. MÁRMOL DE CARVAJAL quoted in BUNES IBARRA, *La imagen*, p. 20; see also p. 55.

15. MÁRMOL DE CARVAJAL quoted in BUNES IBARRA, *La imagen*, p. 36.

generate a sense of familiarity and of desire, as if the chroniclers are training Spanish sights onto lands worthy of possession, particularly as the authors denigrate the Muslims of the Maghrib as perfidiously and perversely usurping and abusing this bounty.¹⁶ Bunes Ibarra expresses surprise at these findings, pointing out that the majority of authors had resided in the region as captives.¹⁷ He concludes that in the rediscovery of Africa, chronicles do not objectively describe the lay of the land but rather reflect the subjective preconceptions of their authors.¹⁸

While chronicles made ideological appeals to readers, Spanish authorities had other means of taking reconnaissance of the Maghrib. Soon after the conquest of Granada in 1492, royal and seigneurial authorities sent spies to the opposite shore. Municipal officers, soldiers, ship captains, clerics, and merchants gathered information about the state of political affairs, unstable allegiances, and military forces, as well as about geographical factors such as the location and state of defensive works, suitable spots to make landings, and the availability of water.¹⁹ Intelligence-gathering targeted specific locations and concerns, but sometimes studied a region more broadly. For some at court, North Africa was a stepping-stone to the ultimate goal, the liberation of the Holy Land. As the Spaniards were preparing to launch an assault on Oran, the Italian friar Lucas de Paisano submitted a report on the geography of the eastern Mediterranean. In it the cleric lays out «the things he had seen» by describing «inhabited as well as depopulated [settlements], and the state of the inhabited ones, their population, their military forces, how many and what kind, and the depopulated ones, how

16. BUNES IBARRA, *La imagen*, pp. 32, 38.

17. BUNES IBARRA, *La imagen*, p. 31. Chroniclers did treat local subjects with more specificity. For example, see the ethnographic descriptions of Algiers in Sosa's *Topography*.

18. BUNES IBARRA, *La imagen*, p. 32.

19. See ALONSO ACERO, *Cisneros y la conquista del norte de África: Cruzada, política, y arte de guerra*, Ministerio de Defensa, Madrid, 2006, pp. 92-102; ALONSO ACERO, *España y el Norte de África en los siglos XVI y XVII*, Editorial Síntesis, Madrid, 2017, pp. 71-74.

they disappeared, and what benefits would come from taking them over». ²⁰ He then proceeds to enumerate ports and communities from northern Syria down the coast to Egypt, describing some in considerable detail.

Regarding the town of Tripoli on the coast of Lebanon, Paisano notes, «Tripoli is at the foot of Mount Lebanon, the source of a river that runs through the middle of the city. Maronites live in this mountain, of whom there are 80,000 souls. Among them are 30,000 fighting men. They desire nothing more than to see the cross and when the time comes to unite with it». ²¹ Of the town's defenses, he reports: «The lord of Tripoli has 800 Mamluks and receives aid from the Arabs in his territory [*confin*], moreover they are not armed and are very frightened of artillery». In its environs, he relates: «six miles [*millas*] away there is a protective cape behind which many ships can anchor during the summer. After that is a castle called Gibel and then another called Petrona. Next is Beirut, which is six miles from Tripoli. Damascus is three days away». ²² In his account, Paisano presents a thick description of geographic, demographic, and ethnographic information with an eye to strategic considerations. After all, he writes to entice and facilitate a potential Spanish campaign to the eastern Mediterranean, even appealing to Cisneros' «great zeal for extolling the faith». ²³ The account is not a dispassionate account but a rhetorical program that locates and praises potential allies, identifies and depreciates enemy defenses, and points out critical resources.

Still, the report seeks to help policymakers at court envision the eastern Mediterranean geography in two ways. First, Paisano lists points in linear order along the coast from north (Syria) to south (Egypt). Second, he focuses on certain points, such as Tripoli, and elaborates on the features in its vicinity. The relationships between points running north to south and between one point and the features in its vicinity are de-

20. Archivo Histórico Nacional (AHN), Sección Universidades, libro 713, f. 143r.

21. *Ibidem*, Sección Universidades, libro 713, f. 144r.

22. *Ibidem*.

23. *Ibidem*, Sección Universidades, libro 713, f. 146r.

fined by measures both of physical distance and of time to travel from one point to another. As such, the account constitutes a “discursive” itinerary, a textual description of a route and the features along it. This type of narrative has graphical equivalents in medieval itinerary maps and in some ways Portolan charts that also emphasize point-to-point travel along linear routes.²⁴ Paisano’s text and Portolan charts were typical forms of geographical representation in the Middle Ages and were still common and served needs in the early modern period.

Though a traditional form of mapping, Paisano’s concern for measurements in the eastern Mediterranean represents a coming intersection of Spanish expansion with the development of scientific techniques (this article will consider cartography and military engineering, in particular).²⁵ As the empire mobilized, explored, conquered, colonized, provisioned, and managed new communities and territories, new capabilities to organize these endeavors on a global scale emerged.²⁶ Mathematical measurement, including the articulation of mapping and techniques, contributed to this drive. Expansion across first the Atlantic then the Pacific made it ever more urgent to not only be able to sail from one point to another but also to accurately locate (and relocate) a place. At this time, western Europeans were also recovering Ptolemy’s *Geography*, including its mathematically-calculated mapping system built on a coordinate grid of latitudinal and longitudinal lines.²⁷ Europeans, including Spaniards, increasingly adopted this form of astro-

24. PADRÓN, *The Spacious Word*, pp. 21, 53-55, 61-62.

25. For the confluence of the two, see Martha POLLAK, «Military Architecture and Cartography in the Design of the Early Modern City», in D. Buisseret, ed., *Envisioning the City: Six Studies in Urban Cartography*, University of Chicago Press, Chicago, 1998, pp. 109-143.

26. For example, King Philip II’s *Relaciones geográficas* survey of New Spain. See Barbara MUNDY, *The Mapping of New Spain: Indigenous Cartography and the Maps of the Relaciones Geográficas*, University of Chicago Press, Chicago, 1996.

27. Naomi MILLER, *Mapping the City: The Language and Culture of Cartography in the Renaissance*, Continuum, London, 2003.

nominally based cartography.²⁸ This new perspective on geography contributed a new ideological concept of space.²⁹

No longer driven to depict linear routes connecting one point to another, cartographers faced the question of what elements to include on maps.³⁰ On depictions of borderlands between Christian states and the Ottoman Empire, fortresses became key features. As Palmira Brummett argues: «The fortress... was the emblem of possession par excellence. It was an enduring presence in the narratives, imagery, and maps of the early modern era, standing in for states, rulers, and peoples».³¹ Like these new maps, Paisano had also directed attention toward fortifications, like the castles of Gibel and Petrona, that a hypothetical Spanish campaign would have had to engage.³² In the North African expeditions that were actually undertaken, the immediate repair of captured fortifications was of paramount importance. The Spaniards amphibious assault on Melilla in 1497 took place during nighttime. Under the cover of darkness, the invaders unloaded construction materials and began repairs on decayed walls. By sunrise, they presented the surrounding hostile hinterland with the *fait accompli* of a secured site.³³ To hold down enclaves in the contested borderlands of the Maghrib,

28. See María PORTUONDO, «Cosmography at the *Casa*, *Consejo*, and *Corte* During the Century of Discovery», in D. Bleichmar *et al.*, eds., *Science*, pp. 57-77.

29. The theoretical and historical scholarship is considerable. For masterful study of the Spanish case, see PADRÓN, *The Spacious Word*.

30. Portuondo asks these associated questions: «How do you describe a new world? ... What did this world contain? Where did these lands lie in relation to Europe? Who lived there? Were they like us?» She points out that these questions were one of the greatest challenges of the early modern period and that Spanish cosmographers were critical in trying to explain new lands and peoples. PORTUONDO, «Cosmography», p. 57.

31. Palmira BRUMMETT, *Mapping the Ottomans: Sovereignty, Territory, and Identity in the Early Modern Mediterranean*, Cambridge University Press, Cambridge, 2015, p. 128.

32. Others included Aleppo, Acre, and Caesarea. AHN, Universidades, libro 713, ff. 143v.-145r.

33. ALONSO ACERO, *Cisneros*, pp. 110; GUTIÉRREZ CRUZ, *Los presidios*, pp. 118-123.

the crown hired Italian military engineers to erect the latest in defensive innovations. Oran's five fortresses, bastions, advance towers, curtain walls, and double-thick city walls constituted the most formidable complex perhaps on the entire African coast. Indeed, in a new age of empire and "military revolution", fortresses defined territory and sense of territoriality. As King Philip II found out in the Dutch Revolt, dominating large tracts of countryside was not enough without occupying fortified towns.³⁴ Brummett further notes, «focus on individual fortresses emphasizes the notion that frontiers are measured in the points where armies meet, not in blocks of territory».³⁵ In parts of the Spanish Empire, like in the Low Countries, Central Europe and, indeed, North Africa, boundary lines were not "natural"; that is, they did not run along mountain chains, bodies of water, or deserts. Instead, it was fortifications that constructed the artifice of borders.³⁶

Fortifications played such pivotal roles because improvements enabled them to better withstand enhanced cannon fire and consequently rendered them very difficult to besiege. To erect these structures required a new class of military engineers capable of carefully drafting blueprints after detailed assessment of strategic needs, surveys of topography, and calculations of complex variables. The calculations determined how to angle bastions to provide better flanking fire and to prevent "dead spaces";³⁷ to build walls of a particular height, slope, and material to absorb the force of incoming artillery, and to raise cavaliers (*cavalleros*) on top of bastions that could extend the range and angle of fire to protect but not interfere with bastions. The manuscript from the

34. Geoffrey PARKER, *The Grand Strategy of Philip II*, Yale University Press, New Haven, 1998, pp. 115-146. The Habsburgs themselves erected some of the most iconic fortresses in Europe, the Americas, Asia, and North Africa.

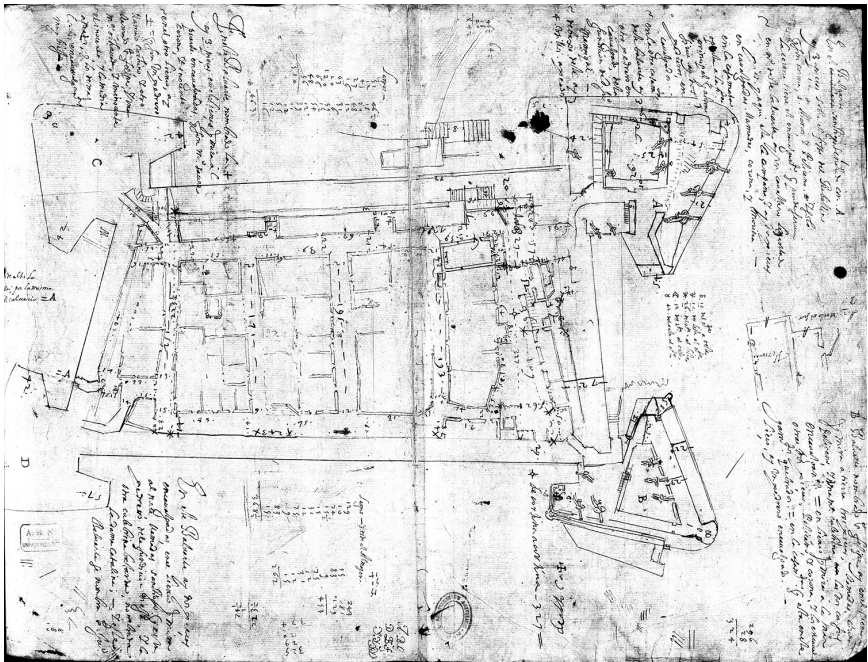
35. BRUMMETT, *Mapping*, p.146.

36. Carlos José HERNANDO SÁNCHEZ, «Keeping Secrets and Mapping Frontiers: Government and Image in the Spanish Monarchy», in A. Cámara Muñoz, ed., *Draughtsman Engineers Serving the Spanish Monarchy in the Sixteenth to Eighteenth Centuries*, Fundación Juanelo Turriano, Madrid, 2016, p. 149.

37. Zones adjoining certain parts of the fortress that defensive fire is unable to reach because of the angles or curvature of structures.

Archivo Histórico Nacional binding Paisano's report also contains a remarkable set of drawings penned by the Italian military engineer Bautista Antonelli as he planned out the renovation of the fortress of Mazalquivir in the 1570s.³⁸ Many of the intricate plans are covered with numbers, measurements, and calculations of various kinds, including the angles of five faces of a nook in the cavalier, presumably arranged in such a way as to help defend the bastions (Fig. 1).³⁹

Figure 1. Plan of the Castle of Mazalquivir (sixteenth century)



Source: «PLANO de castillo de Mazalquivir (siglo XVI)»,
AHN, Universidades, libro 713, no. 68r.

38. Bautista and other members of the Antonelli family served as military engineers building fortifications across North Africa, Europe, and the Americas during the reigns of Philip II and Philip III. EPALZA and VILAR, *Planos*, pp. 91-92.

39. The fortress is described and the drawing is catalogued in EPALZA and VILAR, *Planos*, pp. 93-97 and 197-199.

The production of cartography focusing on fortresses and the creation of blueprints of these structures involved intensive surveying, measuring, and calculating, and affected Spanish perceptions of geography in North Africa in the process. A series of maps of Algiers from 1603 illustrates this dynamic⁴⁰ Algiers served as the Ottoman Empire's base in the western Mediterranean, home to both the fictional Muslim captain in Cervantes' play and very real fleets that raided shipping and coastal communities throughout the sea basin. The Spanish crown attacked the city numerous times in the sixteenth and seventeenth centuries, each time ending in failure. Shortly after succeeding to the throne in 1598, King Philip III launched expeditions in 1601, 1603, and 1604. Preparations for the first campaign revealed a «notable lack of information about Algerian defense systems».⁴¹ This series of maps may have served to orient Spaniards in later campaigns.⁴²

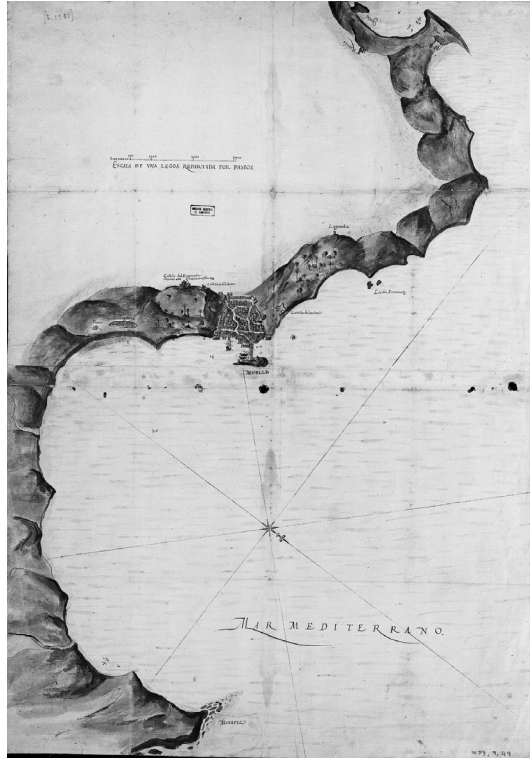
A panoramic view of the city of Algiers (Fig. 2) opens the series. The city sits at the center of a thick band in the shape of an inverted «S» representing the shoreline. The band is formed by interlocking concave and convex shapes shaded green and brown that stand in for slopes rising up from the waterline. Faint, consistent horizontal brushstrokes elegantly convey the sense of water. A scale showing measures of 500, 1000, 2000, and 3000 paces (*passos*) occupies part of the blank hinterland space in the top half of the image. The label «Mar Mediterráneo» is placed in the water that fills the bottom half, gracefully set off against the scale. Though small in size, the city of Algiers, with distinguishable city walls, a few major arteries, a jetty (the former *peñón*), and some neighborhoods, features at the center of the image. Altogether, these elements betray the balanced sensibility of an engineer, whose eye for symmetry helped create the plan. Three more images in this series take the general contours and details of the city of Algiers and magnify parts of them. Figure 3

40. Archivo General de Simancas (AGS), Sección Estado, Mapas, Planos, y Dibujos, nos. 09-049, 19-149, 19-150, 19-151.

41. ALONSO ACERO, *España y el Norte de África*, p. 164.

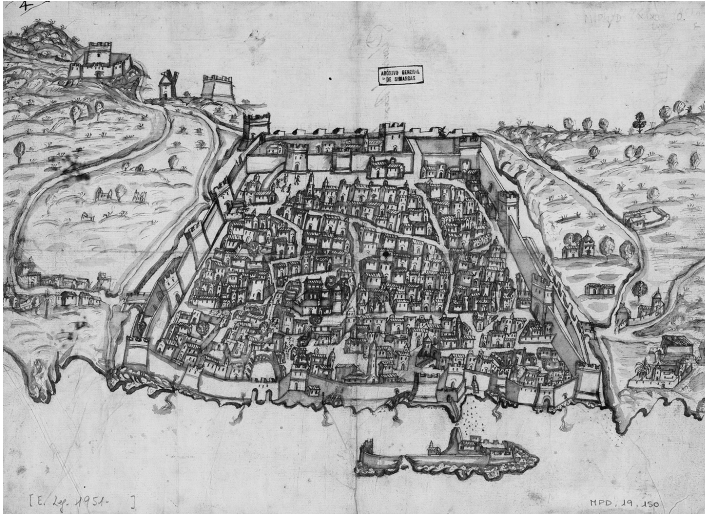
42. These maps are featured in catalogs such as Epalza and Vilar and other publications but they have not been closely analyzed or theorized.

Figure 2. Plan of Algiers including the city and the coast of its bay

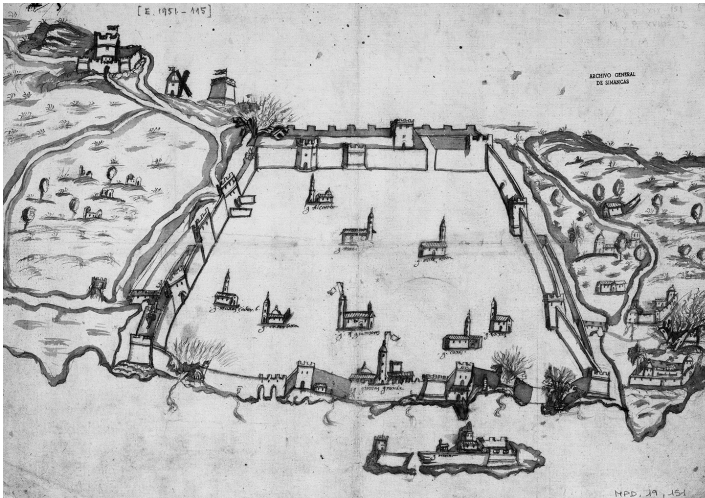


Source: «PLANTA de Argel que comprende la ciudad y la costa de su bahia», AGS, MPD, no. 09-049 (1603).

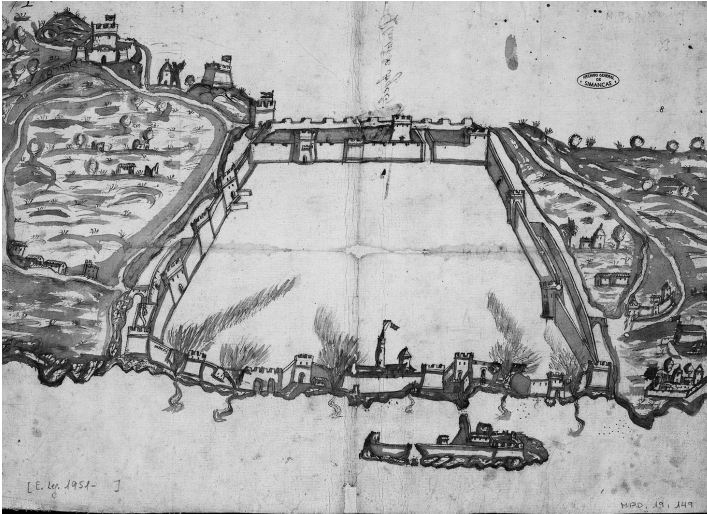
shows the most fully fleshed-out version of Algiers with what are now constant features, especially the city walls, fortresses, towers, gates, and the jetty prominent in the foreground. Other elements fill out the cityscape, including a warren of streets and clusters of homes, mosques, other structures, and plazas. The next illustration (Fig. 4) preserves the constant defensive structures but has largely emptied out the cityscape, leaving only mosques standing in a blank space. The final image (Fig. 5) completely denudes the urban fabric, with only purpose-built defensive structures remaining as the ever-present constant.

Figure 3. Plan of Algiers

Source: «PLANTA de Arxel», AGS, MPD, no. 19-150 (1603).

Figure 4. Plan of the city of Algiers with its fortifications and open breaches

Source: «PLANO de la ciudad de Argel con sus fortificaciones y brechas abiertas en ella», AGS, MPD, no. 19-151 (1603).

Figure 5. Plan of Algiers

Source: «PLANTA de Arxel», AGS, MPD, no. 19-149 (1603).

In a brief analysis of the series, Alicia Cámara Muñoz argues that an engineer created the plans to direct attention to Algiers' strong points.⁴³ By removing the distraction of winding alleys and homes, these installations became more visible as targets. Indeed, Spanish invaders had to first breach these defenses in order to take the rest of the city. The depiction of blasts that have damaged parts of the walls in Figures 4 and 5 (but do not appear in Figure 3) may indicate a possible plan of attack.⁴⁴ There are other examples of what Richard Kagan calls city views portraying a "void". He points to a 1630 map of the Granadan town of Andújar that shows the perimeter wall and parochial churches but leaves

43. Large and sturdily built mosques could serve as gathering points for defenders or even storage facilities. Defenders could also perch on top of minarets to fire down on invaders.

44. Another city view magnifies the waterfront to show what appears to be a cave at the water's edge just outside the city walls and a tunnel with an outlet in the center of the city. AGS, Sección Estado, Mapas, Planos, y Dibujos, no. 07-164.

out other urban elements. According to Kagan, this particular illustration expresses «the theme of the city as a spiritual community united by faith».⁴⁵ Maps of this kind may not have been uncommon. However, the Algiers maps stands apart in a number of ways. First, Algiers was a target of assault, not a city already in the Spanish realm. Next, though the content of Figure 4 bears a resemblance to that of the Andújar plan, the engineer created another iteration that completely empties out the Algerian urban landscape. Lastly, the Algiers maps were created as a series. It is the combination of these three factors that reveals the Spanish imperial enterprise's production of "space".

As a series, the maps deliberately deploy a progressive narrowing of views from the panoramic down to the elemental. The progression mimics a quasi-scientific, mathematical, and calculative function: it atomizes. This reduction represents the state seeking ever clearer legibility.⁴⁶ Yet the atomizing process also erases human elements. Algiers in the early seventeenth century was perhaps the Mediterranean city *par excellence*. It was teeming with peoples from all over the sea basin and beyond —Muslims of course, but also Christians who, according to Cervantes' account, were surprisingly free to practice their faith, and Jews, who occupied positions of power in both government institutions and corsairing enterprises. Moreover, the city was packed with marginalized and subversive elements, including slaves and renegades. The maps therefore not only erase the diverse dynamics of the city; they dismiss additional geographic features. The emptying of the city extends to the topography of the interior hinterland of Algeria. Where steep hills should rise up behind the city, there is nothing more than blankness this time in all four maps of the series.⁴⁷ Yet this blankness

45. Richard KAGAN, «Urbs and Civitas in Sixteenth- and Seventeenth-Century Spain», in Buisseret, ed., *Envisioning the City*, p. 98.

46. For this concept and process, see James C. SCOTT, *Seeing Like a State: How Certain Schemes to Improve the Human Condition have Failed*, Yale University Press, New Haven, 2008.

47. In contrast, the lavish map of Algiers in *Civitates orbis terrarum* includes a richly textured cityscape, the ethnography of local clothing, a fully-realized hinter-

does not represent a void; rather, it is a “space” upon which to project the orientalist tropes of “inscrutability” and “mystery” and to deny the existence of native inhabitants and their livelihoods. The blank space empowers the subjectivities of desire and dispossession.⁴⁸ The early modern state’s compulsion to map focused attention on fortifications. Both maps of fortifications like the 1603 series and blueprints of fortresses like Mazalquivir are denuded of the life that abounded in them. The visibility of life has been reduced to the abstractions of calculations. But whether coordinate mapping, fortress plans, or city views, what has been presented as objective renderings are in fact spaces filled with hidden subjectivities.

For an example of the subjective experiences lurking in objective measurements, we consider the Count of Alcaudete’s account of his journey across the Alboran Sea. Vessels often plied this route to carry essential provisions from southern Spain to the North African presidios. In 1537, Count Martín de Córdoba y de Velasco set sail from Málaga in central Andalusia to Oran in western Algeria.⁴⁹ The distance that separates the two cities measures 350 kilometers, a span that could be traversed in about one and a half days by an early modern ship.⁵⁰ But what might have been a routine embarkation turned into a lesson in patience. In a report to the royal secretary Juan Vázquez de Molina, the captain-general of Oran related:

land, and a legend identifying 47 different military, municipal, religious, aristocratic, and penitentiary institutions, and even a tomb. Georg BRAUN and Franz HOGENBERG, *Civitates orbis terrarum*, Taschen, Cologne, 2011, pp. 200-201.

48. See Edward SAID, *Orientalism*, Vintage Books, New York, 1979, especially ch. 2, «Imaginative Geography and Its Representations: *Orientalizing the Oriental*».

49. The count belonged to the Fernández de Córdoba lineage whose members dominated the government and institutions of Oran during the sixteenth century. See Yuen-Gen LIANG, *Family and Empire: The Fernández de Córdoba and the Spanish Realm*, University of Pennsylvania Press, Philadelphia, 2011.

50. Alonso Acero observes that under the right conditions, a sixteenth-century vessel could sail the 200 kilometers between Cartagena and Oran in sixteen hours. ALONSO ACERO, *Orán-Mazalquivir*, p. 8.

My voyage [to Oran] has taken as long as the King of Tlemcen to fulfill his terms [...] I set sail from Málaga and the weather held up until we put into the Cape of Falcon three leagues from Oran. There, we met a contrary wind which sent me back eight leagues to the Cape of Figal, a port on the coast although I am not sure where, but I was there for seven days. The ship was overloaded so I had to send away some unnecessary people and other things when it was possible for four brigantines to depart. And although I was advised to leave with them, those staying behind were so frightened of the weather and enemy ships that I didn't dare abandon them since any enemy ship passing by would have had no trouble seizing them [...] From there [Figal], with little wind and a strong current, we were taken to Risgol where we passed Saturday, the first of this month. Picture it Your Honor, how would you have felt to see me with my one ship just sitting there in Risgol?⁵¹

Alcaudete's account begins straightforwardly enough, indicating objective measurements such as location, weather conditions, and distance. Nevertheless, it rapidly spirals into a frustrated lament that only a few leagues away from his destination, winds and currents swept his fleet off course not once, but three times. To make matters worse, corsairs from Algiers routinely patrolled these waters, provoking an oppressive fear among the soldiers. The captain general faced an additional hardship: a man used to battlefield action, he was forced to sit idly by, waiting for the winds to shift. According to the timetable provided in the complete letter, Alcaudete's journey from Málaga to Oran took a full month in the end.

Premodern travelers expected the vagaries of nature to make journeys unpredictable, and physical forces of winds and currents often swept vessels off course. External human factors also contributed to unexpected experiences of geographic space, and an Ottoman fleet on patrol could have made Spanish soldiers wary of sailing in the Alboran Sea. However, in this case, it was not the presence of corsairs that pro-

51. AGS, Estado, legajo 466, unnumbered (25 September 1537). Alcaudete sarcastically compared his voyage to what he perceived as the King of Tlemcen's lengthy delays in fulfilling the terms of agreements with the Spanish monarchy.

voked the men's emotional response; it was their absence. In Alcaudete's account, no Algerian foray actually took place. Rather, it was the expectation of the enemy presence, or the conjuring of their imagined arrival in the soldiers' minds, or the unknown whereabouts of the corsairs that agitated the soldiers. It was absence—akin to blank space in mapping—that conditioned the subjective experience of geographic space.

In fact, Spanish imperial officers all over the Mediterranean were addressing this uncertainty in the 1520s and 1530s, noting one conspicuous absence in particular. Countless documents from the *Estado and Guerra Antigua* sections of the *Archivo General de Simancas* ask a pressing but recurring question: «where is Barbarossa»? Khayr al-Din, the admiral who had helped turn Algiers into a corsair capital and the Ottoman Empire's western Mediterranean base, was perhaps the bogeyman of the times for Spanish and allied forces in the sea basin. The fact that his fleet could appear seemingly out of nowhere and threaten raids on the coasts of Spain and Italy made pinpointing his location of critical importance. It was a question that preoccupied Don Álvaro de Bazán, commander of Spain's Mediterranean fleet, when he interrogated Xaba Arraez, an Ottoman captain who served in Barbarossa's fleet, in April 1534. Figure 6 provides a partial, paraphrased transcription of Bazán's questions and Xaba's responses.

Bazán's document does not proffer any information about how the interrogation was carried out, where it was conducted, what kind of power dynamics affected the proceedings, or how the responses were recorded. Nevertheless, what stands out, particularly in relationship to sources examined earlier in this article, is a preoccupation with measures. Bazan wanted to know how many galleys, heavy galiots, lighter galiots, weapons, soldiers, etc. were part of Barbarossa's fleet. Knowledge of these numbers would certainly help the Spaniards assess and counter the enemy.

Running side-by-side with a preoccupation for numbers, however, is a question repeated in various forms: where is Barbarossa? It is explicit in the demand, «Where was Barbarossa's fleet»? It is also implied in the questions, when did the fleet depart? What does the Ottoman

captain want to do with the fleet? And, will he pass by Algiers? Xaba Arraez's responses, noted by a Spanish scribe, stand out. The transcript does record the Ottoman captain reporting specific figures in answer to questions regarding the number of vessels and men. In contrast, Xaba's responses as to the whereabouts of Barbarossa are more circumspect and possibly misleading. After all, under what circumstances did the captive come to state that his commander would «raid the coast of Calabria and then sail on to Tunis»? As the interrogation goes on, Xaba seems to introduce even more existential uncertainty with «if Barbarossa is still alive», and also the apparent offhandedness of, «they say if he does not [pass by Algiers]». The captain's unknown intentions and the nature of the transcription already add a degree of tenuousness to his answers. But the responses regarding Barbarossa's location are seemingly indeterminate. Bazán's insistent search for location comes up against a human agency that may be seeking to dissimulate information or may just as well not know the Ottoman admiral's location or even if he was still alive.

In this geopolitical context, the Spaniards were aware that a constant quest for exact geographic information might face challenges related to the precarious circumstances of an inquiry, the agency of an Ottoman admiral of exceptional qualities, and even the absurdity of expecting an accurate answer that would reflect real-time changes in an age before global positioning technology. The preoccupation with determining Barbarossa's location coupled with these limitations turned the question into an off-color joke. In Don Bernardino de Mendoza's report to Francisco de los Cobos from August 1536, the governor of La Goleta, Spain's presidio on the outskirts of Tunis, drily quipped, «There hasn't been any news in La Goleta since the last time I wrote Your Lordship except for daily predictions of the coming of Barbarossa. It's like Jews waiting for the coming of the Messiah. Neither one nor the other has shown up yet».⁵² By comparing Barbarossa's impending arrival to that of the Jewish messiah, we have now traversed the full spec-

52. AGS, Estado, legajo 463, no. 96.

trum of existential states of being, with Barbarossa's possible demise on one end and his (re)appearance as savior on the other, all in an attempt to answer the seemingly basic question: where was he?

We return to *The Bagnios of Algiers* to tease out some final thoughts regarding geographic perception. At the start of the play, Cervantes underscores the importance of accurate geographic knowledge in a contested Mediterranean. He deliberately chooses Yzuf, a renegade, to embody this expertise. That the guide of the raiders should be a native son who has turned the other way makes literary—and for that matter, tactical—sense. Still, it is worth reiterating that Yzuf represents a particular figure, one that has forsaken the fundamental norms of his home; it is this type of individual who possesses critical information about the lay of enemy land. In some ways, renegades reflect the ambiguous nature of geographic perception discussed in this article. The corsair capital was teeming with people of all kinds of ethnic, religious, national, and sexual backgrounds and allegiances. These were very much the lives the 1603 series of maps sought to erase from the cityscape. It was one renegade—Barbarossa—that was raiding across the western sea basin.⁵³ Álvaro de Bazán's interrogation of Xaba Arraez was a desperate attempt to gather intelligence on his location. Scientific methods of surveying, measurement, quantification, and calculation were under development to enhance geographic perception. Yet these techniques were unwilling or had difficulty spotting renegades and others like them.

Cervantes does not reveal why the formerly Christian Yzuf took the radical step to convert to Islam. Still, someone going renegade had to be keenly aware of the challenges of entering another religious community; convincing others of the sincerity of his or her belief; learning new rituals, customs, behaviors, and tongues; and reconciling his or her past life with a newly fashioned identity. It may be too much to say that by turning, Yzuf embraced his subjectivity. Still, he certainly had to face and learn to live with the ambiguities of his situation. The at-

53. There are conflicting stories about the origins of Barbarossa, though several claim his father was a renegade. See, Miguel Ángel de BUNES IBARRA, *Los Barbarroja*, Alderabán, Madrid, 2004.

omizing drive to legibility in the 1603 series of maps ultimately did not result in the conquest of Algiers. Álvaro de Bazán's compulsion to locate Barbarossa ended up having to query if he was even still alive. In such a context, it is ironic that a person like Yzuf is the one who possesses geographic knowledge.

Figure 6. Redaction of the confession of Captain Xaba Arraez and what he declared

Álvaro de Bazán's questions	Xaba Arraez's responses
When did Barbarossa's fleet depart?	May 5 [1534].
Where was Barbarossa's fleet?	Half in Gallipoli, half in Constantinople.
How many galleys does Barbarossa have?	Eighty from the Grand Turk, six of his own.
How many heavy galiots like the one carrying Barbarossa?	Four.
How many lighter galiots?	Five of Barbarossa's, four of the Grand Turk's.
Do the galleys need to be greased with tallow?	A part of the fleet does, it's being done in haste, food and supplies are being loaded.
What does Barbarossa want to do with the fleet?	Raid the coast of Calabria and then sail on to Tunis.
Where is Barbarossa currently located?	If Barbarossa is alive, he's now in Tunis.
Will Barbarossa pass by Algiers?	They say if he does not, then he'll send Hasan Aga and Tabaq Arraez with thirty galleys that will be based in Algiers.
How does Barbarossa come with the fleet and if it's fully and partially paid for?	The Grand Turk has paid for three years of salary.

Source: «Se tomo la confisyon a xaba arraez capitan y lo que declaro», AGS, Estado, legajo 461, no. 175.