

# Repurposing *Perseus*: the Herodotus Encoded Space-Text-Image Archive (HESTIA)

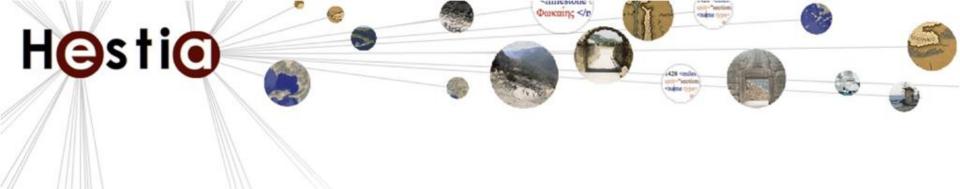
DFG-Perseus workshop on historical texts TUFTS UNIVERSITY, MEDFORD, MA, USA

13 – 14 January 2010



Elton Barker, The Open University Stefan Bouzaroski, University of Birmingham Chris Pelling, Christ Church, Oxford Leif Isaksen, University of Southampton





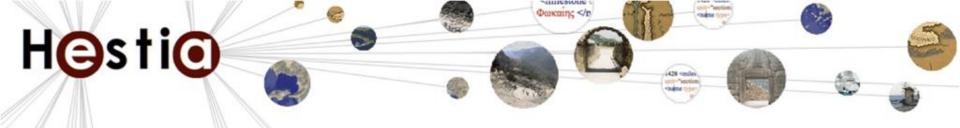
#### **HESTIA Aims**

- To identify and detail the different ways in which Herodotus refers to space in contrast to conventional approaches that seek to test the accuracy of his description alongside modern maps
- To locate Herodotus' representation of space in its cultural context, with a particular focus on the impact of writing down space on its conception
- To explore whether different peoples as represented by Herodotus conceive of space in culturally distinct ways
- To test the thesis that the ancient Greek world centered on the Mediterranean and was comprised of a series of networks

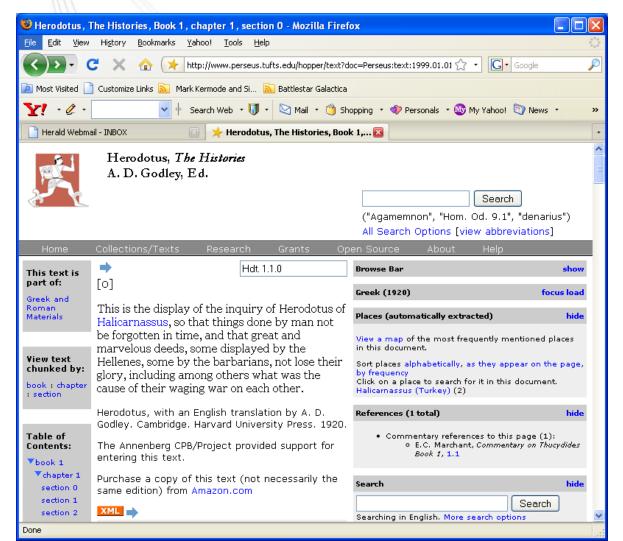


## **HESTIA Methodology**

- 1. Digital markup of Herodotus' text
- 2. Compilation of a spatial database
- 3. Database fed into different maps
- 4. Production of network graphs
- 5. Qualitative network analysis



## Source of digital text: Perseus

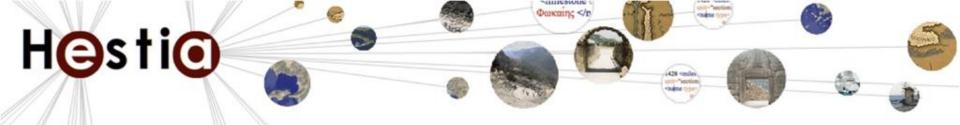


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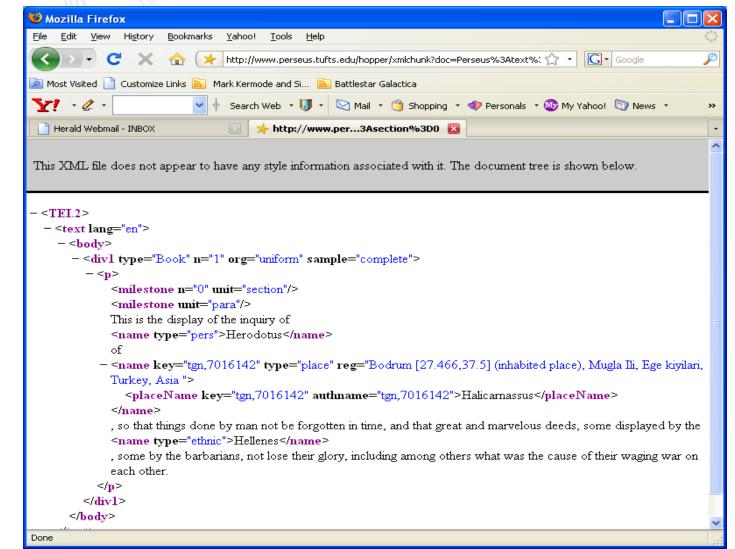
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#### **Herodotus in XML**



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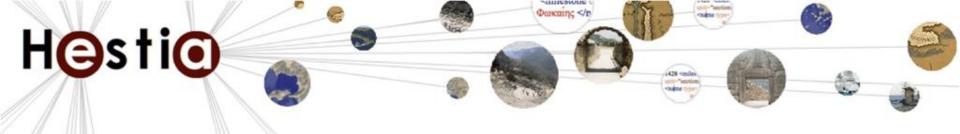
#### The HESTIA Database

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2	2	hestia	Argos	22.7333	37.6417	Argos	inhabited place	Peloponnese		01010000208
3	3	hestia	Greece	22	39	Greece	country	Europe		01010000208
4	4	hestia	Egypt	30	27	Egypt	country	Africa		0101000020
5	5	hestia	Tyre	35.183	33.266	Tyre, Al-Janub	inhabited place	Phoenicia		0101000020
6	6	hestia	Phoenicia			Phoenicia	country	Asia		
7	7	hestia	Aea			Aia/Nesos	inhabited place	Colchis		0101000020
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9	9	hestia	Asia			Asia	continent	Asia		
10	10	hestia	Europe			Europe	continent	Europe		
11	11	hestia	Troy	26.2833	39.9167	Troy	inhabited place	Troad		0101000020
12	12	hestia	Halys river			Halys River	river	Asia		
13	13	hestia	Syria	38	35	Syria	country	Asia		0101000020
14	14	hestia	Paphlagonia			Paphlagonia	region	Asia		
15	15	hestia	Black Sea	38	42	Black Sea, Euxin	sea	Asia		0101000020
16	16	hestia	Ionia			Ionia	region	Europe		
17	17	hestia	Sardis			Sardis	inhabited place	Lydia		0101000020
18	18	hestia	Lydia	27.516	38.683	Lydia	country	Asia		0101000020
19	19	hestia	Parus			Paros	island	Aegean		01010000208
20	20	hestia	Delphi	22.5167	38.4917	Delphi	oracle	Phocis, Central		0101000020

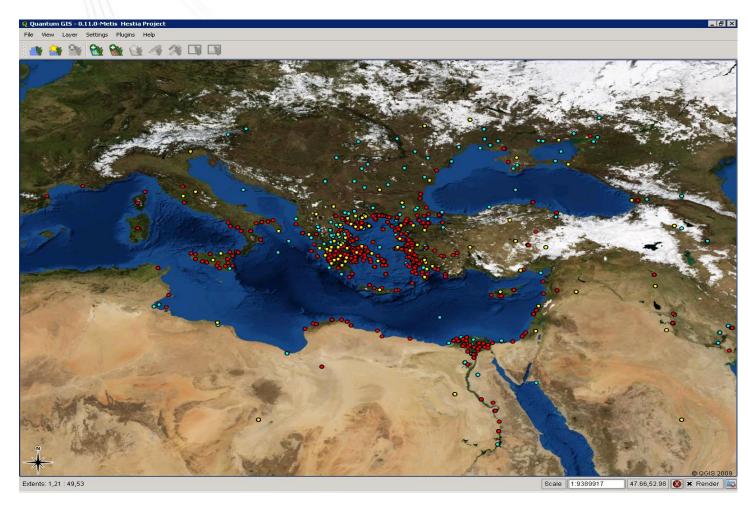
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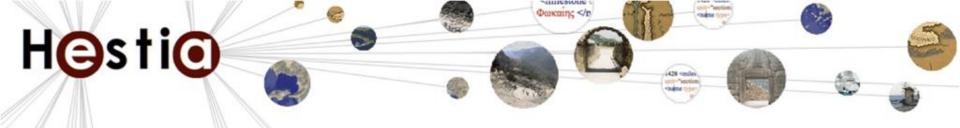
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# **HESTIA** in GIS: all places

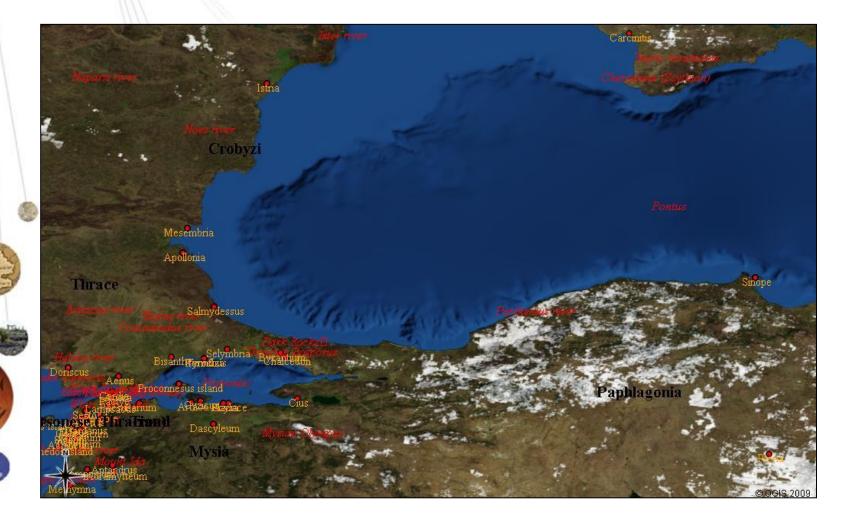


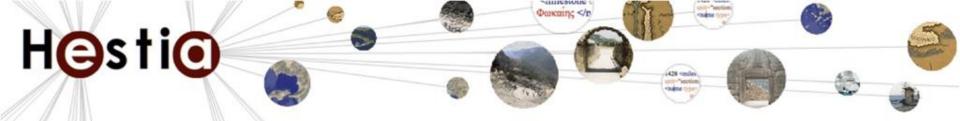




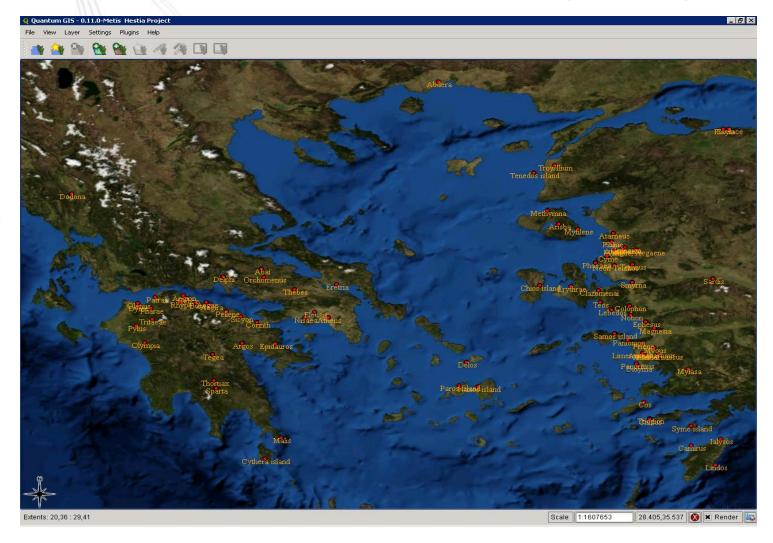
# **GIS:** all placenames (Pontus region)

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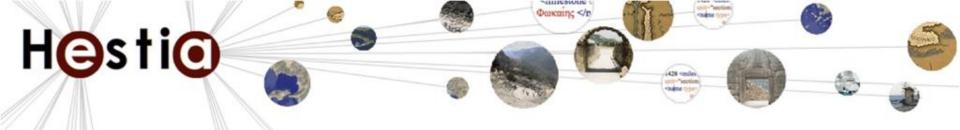


## **GIS:** all settlements in book 1 (Aegean region)

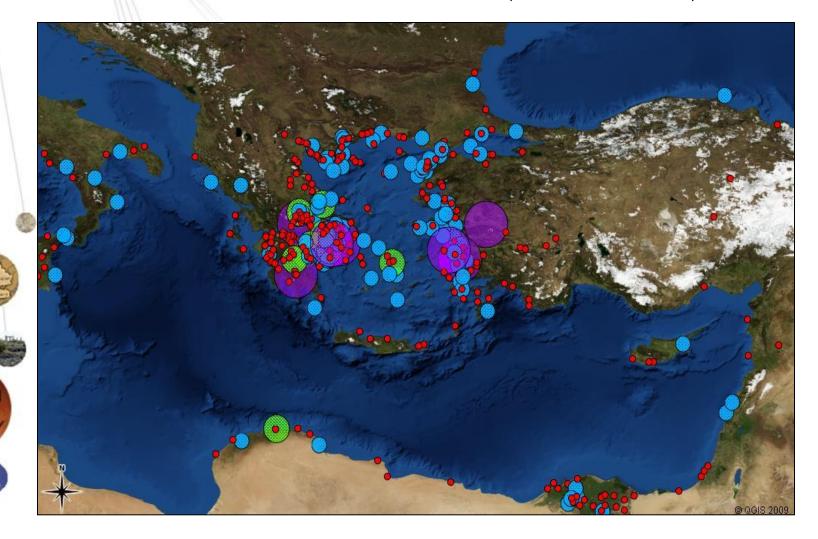


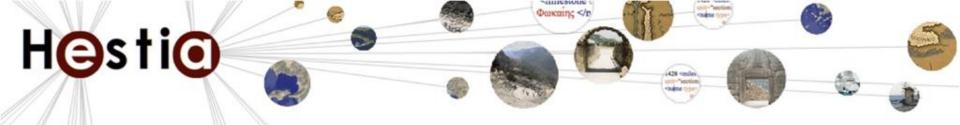
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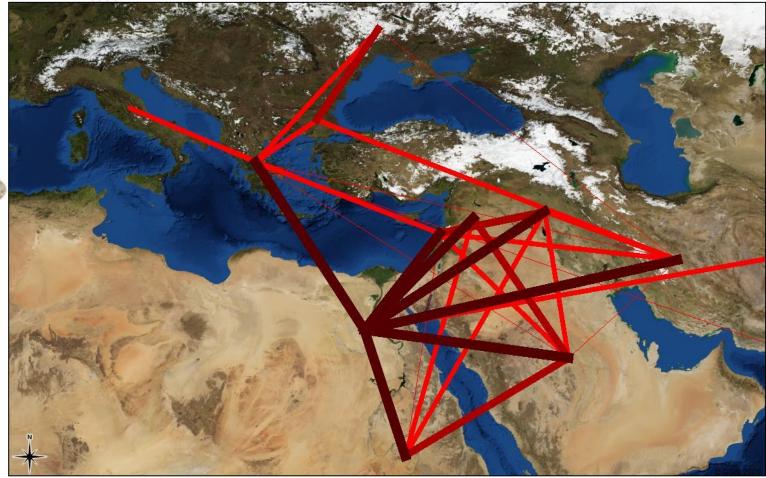


# **GIS:** total reference count (settlements)

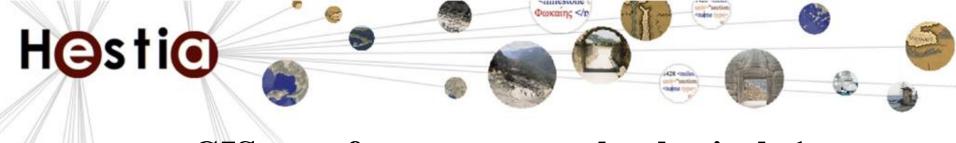




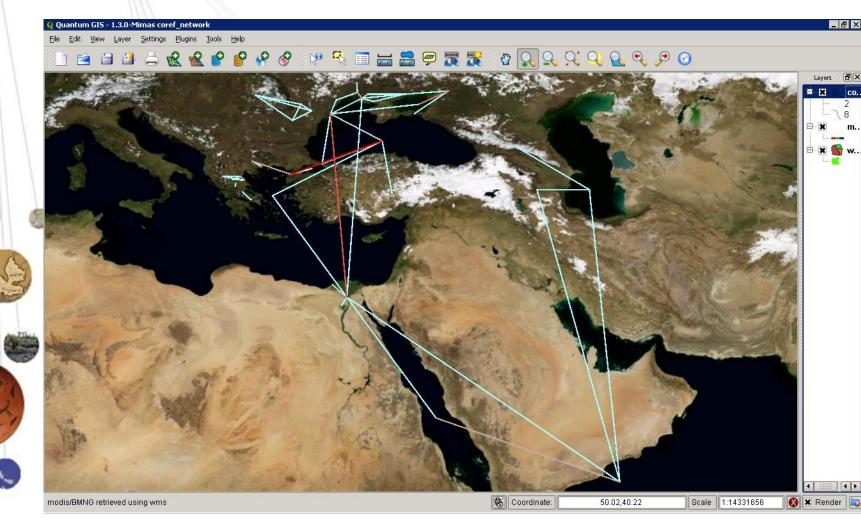
#### **GIS:** co-reference network density (country)







# **GIS:** coref\_count\_network\_physical>1

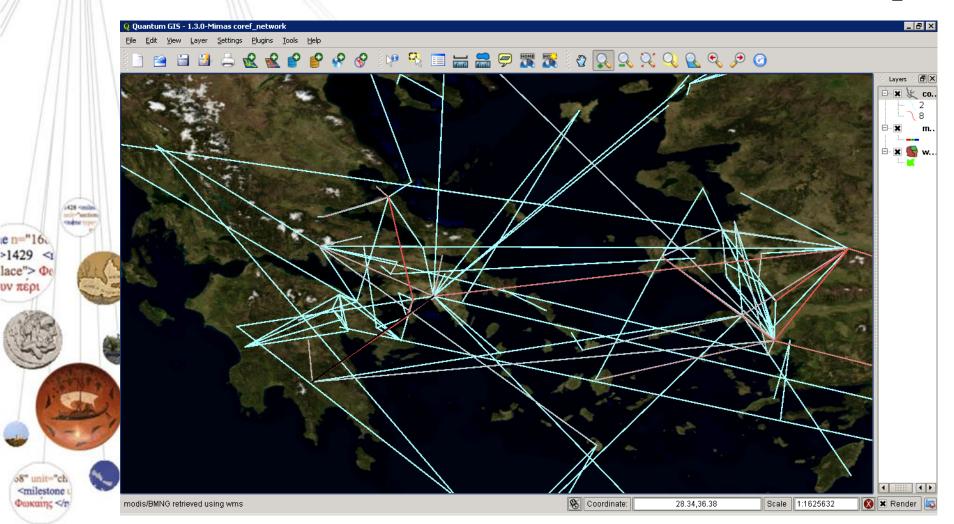


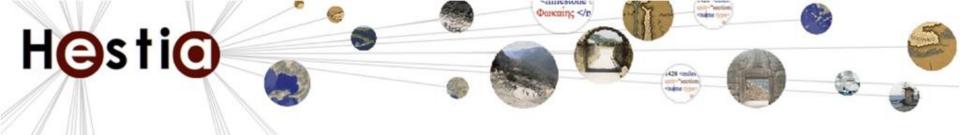
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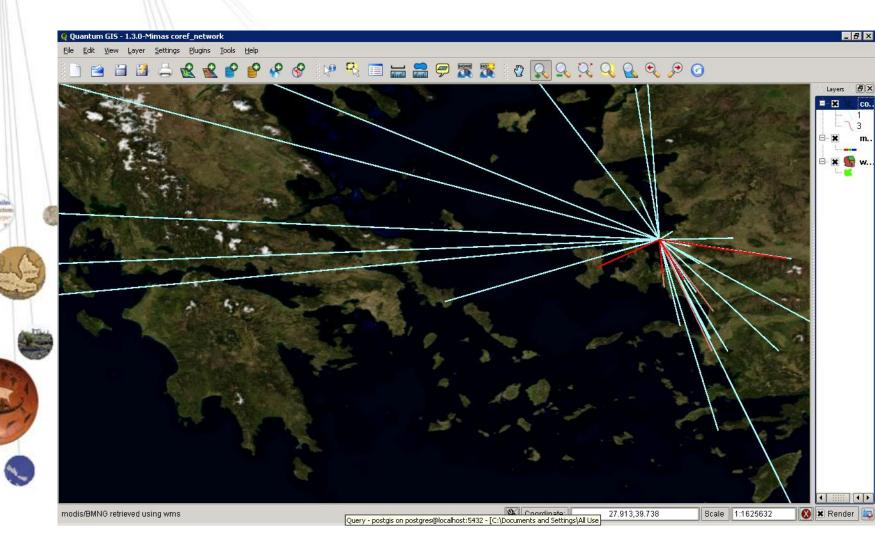


#### **GIS:** coref\_count\_network\_settlement>1 (close-up)



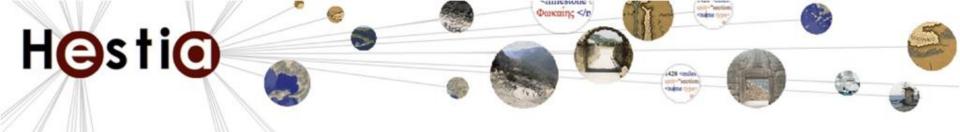


#### **GIS:** coref\_count\_network\_Phocaea (close-up)

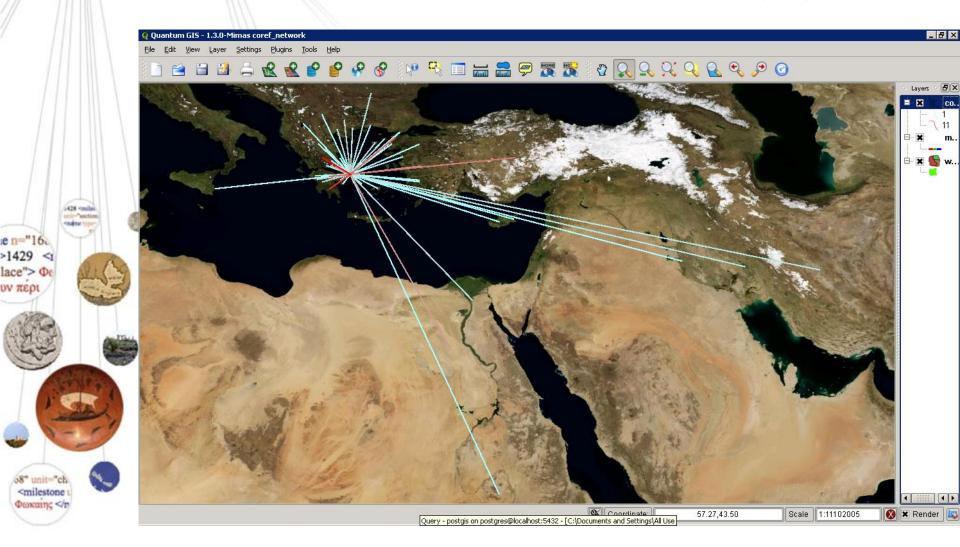


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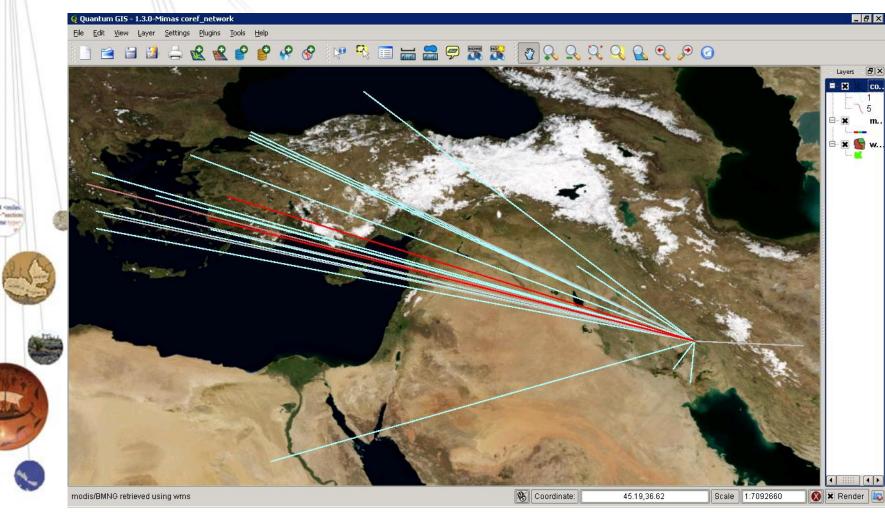


#### **GIS:** coref\_count\_network\_Athens (>1)



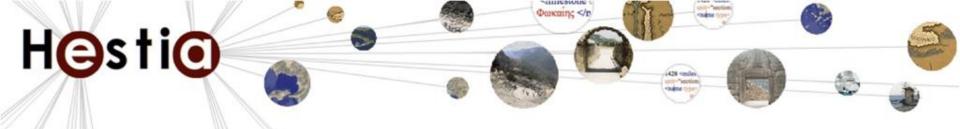


#### **GIS:** coref\_count\_network\_Susa



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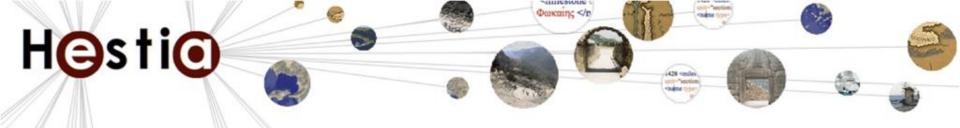
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## Some problems with the database-generated maps

- The connections
  - Is Herodotus drawing a relationship between the two entities?
  - If so, what are they?
- The English text
  - Broad translation questions
  - Specific problem of proxies
- Syntactical issues
  - Focalisation
  - Unreal clauses (negative, hypothetical)
  - Time (past/future)





# **Typology for a Qualitative Analysis**

- Passive, spatially static ('positioning')
  - E.g. inclusion; proximity; comparison; origin
- Passive, spatially fluid: ('movement')
  - E.g. movement terminating in, through, away from
- Active, spatially static ('intervention without movement')
  - E.g. awareness, dominance, alliance, insurgency, commemoration
- Active, spatially fluid ('intervention with movement')
  - E.g. conflict, invasion, communication



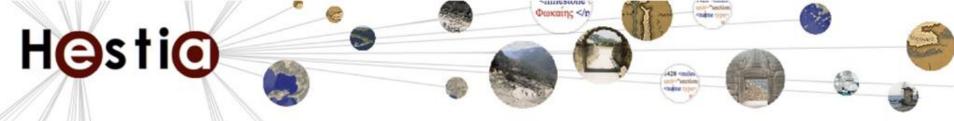


#### **Google Earth**

 $(http://hestia-geo.open.ac.uk: 8080/geoserver/wms/kml?layers=hestia:google\_earth)\\$ 







#### **Google Timeline**

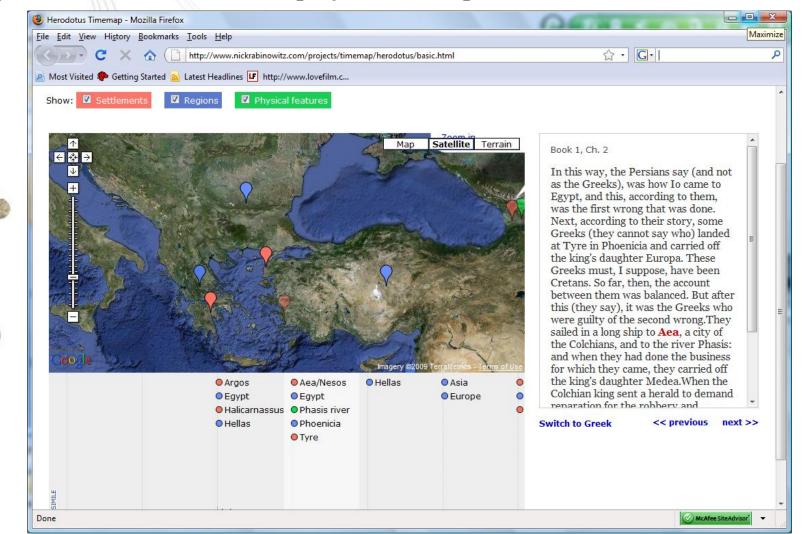
(http://www.nickrabinowitz.com/projects/timemap/herodotus/basic.html)

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• End of project conference: 'Imagining space in texts: developing new analytical techniques for classicists and geographers', 1-3 July 2010