# LITERARY GEOGRAPHIES

# Journeying through Space and Time with Pausanias's *Description of Greece*

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**Abstract:**

Sometime in the second century CE, Pausanias of Magnesia (modern-day Turkey) wrote the *Description of Greece*. Ostensibly a tour of the places to see on the Greek mainland, the *Description* also provides historical accounts related to the topography through which Pausanias moves. Little attention has been given to how these building blocks of narrative, the entities of place and time, relate to and intersect with each other. In this article, we establish a framework for systematically investigating Pausanias's chronotopes through a process of semantic annotation. We describe our typology for categorizing place and time, with the aim of enabling this text's database of information — the descriptions of the built environment, its temples, statues, etc. — to be mapped and analysed. Our emphasis, however, is on how the technology equally facilitates close reading, as we trace how individual locations, objects and people relate to each other through the unfolding of chronotopes, and examine how in turn these chronotopes transform our understanding of

the spaces of Greece and Greece as a place. We conclude by offering reflections on the potential for semantic annotation of the kind documented here not only for conducting chronotopic investigations of literary geographies, but also for bringing the textualization of space into direct dialogue with the material culture on the ground.

**Keywords:** place; semantic annotation; literary geography; mapping; spatial humanities; ancient Greece.

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> That completes the remarkable story of Davidson's eyes. It's perhaps the best authenticated case in existence of real vision at a distance. Explanation there is none forthcoming, except what Professor Wade has thrown out. But his explanation invokes the Fourth Dimension, and a dissertation on theoretical kinds of space. To talk of there being 'a kink in space' seems mere nonsense to me; it may be because I am no mathematician. When I said that nothing would alter the fact that the place is eight thousand miles away, he answered that two points might be a yard away on a sheet of paper, and yet be brought together by bending the paper round. The reader may grasp his argument, but I certainly do not.
> (H. G. Wells, *The Remarkable Case of Davidson's Eyes*)

> People assume that time is a strict progression of cause to effect, but actually, from a nonlinear, non-subjective viewpoint, it's more like a big ball of wibbly-wobbly, timey-wimey . . . stuff.
> (The Tenth Doctor, *Blink* [written by Steven Moffat])

Sometime in the second century CE, Pausanias of Magnesia (modern-day Turkey) wrote the *Periegesis Hellados* or *Description of Greece* (text and translation: Jones-Ormerod 1913; biographical information: Habicht 1985: 9-12; Bowie 2001: 21-4). Documenting 'the sights worth seeing' (Pausanias 1.39.3) on a tour of the Greek mainland, this text offers a uniquely rich first-hand account of ancient Greece's built environment, down to its statues and paintings. Yet spatial description characterizes only one aspect of this narrative: Pausanias also relates 'accounts' (*logoi*, Pausanias 1.39.3) that provide histories to many of the places or objects he describes. Faced by a frequently confusing itinerary, made more complex and confusing by the stories that sprawl out from it, the tendency when approaching Pausanias is to mine for details on ancient Greek mythology, history and religion. While scholars of the past generation have been far more alert to surveying the context for each information

nugget or tracing the byways of particular encounters, little attention has been given to how the building blocks of his narrative, the entities of place and time, relate to and intersect with each other as his journey unwinds: that is to say, the form and dynamics of Pausanias's chronotope.

This article documents and offers preliminary reflections on a collaboration that in significant ways both shares points of contact with and departs from the *Chronotopic Cartographies* project. Like that initiative, the focus of the *Digital Periegesis* project is on mapping text using digital technology. However, not only has its research programme developed independently from *Chronotopic Cartographies*; in the tools it leverages and the methods it has developed for identifying spatial and temporal entities, the *Digital Periegesis* offers an alternative, potentially complementary, digital-based analysis of the interplay of narrative time and space. Thus, even though the *Digital Periegesis* is based on the mapping of a single text, and although that text cannot be described as straightforwardly literary — and, indeed, derives from a culture quite distinct from the imaginative and fictional literature of the modern period explored in *Chronotopic Cartographies* — the work discussed here may act as a useful interlocutor to that of the latter.

Indeed, both elements — the focus on a single text; the examination of a non-modern historiographic narrative — are key touchstones that enable the *Digital Periegesis* project to contribute to an understanding of chronotopic analysis more broadly, as much to real-world geographies as to literary ones. First, the *Description of Greece* is the most granular description —providing detail on a very local scale — of place and space that survives from Greco-Roman antiquity. Representing a deep dive into Greece's major political and cultural centres, this text inverts (and subverts) the historiographic organizing principle of chronological time to privilege space. This means that accounts of the same events or people occur at different times in the narrative, depending on the places through which readers move. Second, the disjunction between narrative and chronological time draws attention to Pausanias's modes of telling the time. Using various strategies from narrating grand-scale events and articulating genealogies to identifying individual people or using time expressions to place a reader in his landscape, Pausanias's timekeeping presents a significant challenge to digital mapping technologies (like GIS) that depend on numerical dating. Focusing on his temporal indicators and chronotopes can shed light on the values underpinning the narrative. Third, the *Description of Greece* is a product of its times. Pausanias, a Greek from Asia Minor, is writing under Roman rule. As a political and military entity Greece exists on the margins of this world, yet in this narrative its culture takes centre stage. Pausanias's text represents and reproduces a series of negotiations with Roman power precisely through the ways it weaves together space and time.

In this article, we first establish a framework for viewing the chronotopes running through the *Description of Greece*, sketching out scholarship on Pausanias, time, and digital approaches to mapping text. Next, we set out our method for identifying chronotopic information in Pausanias. We explain how semantic annotation helps us identify space and time in the *Description*, and describe our typology for categorizing both sets of entities. In section three, we discuss the preliminary results of this approach. Semantic annotation can

help draw attention to the text's database of information — Pausanias's descriptions of the built environment, its temples, statues, etc. — and expose it for analysis. Our emphasis, however, is on how the technology equally facilitates close reading, as we trace how individual locations, objects and people relate to each other through the unfolding of chronotopes, and examine how in turn these chronotopes transform our understanding of the spaces of Greece and Greece as a place. We conclude by offering reflections on the potential for semantic annotation of the kind documented here not only for conducting chronotopic investigations of textual geographies, but also for bringing the textualization of space into direct dialogue with the material culture on the ground.

**Approaching space and time in Pausanias**

Pausanias's ten-volume *Description of Greece* narrates a tour from Attica to Phocis, following a clockwise circuit around the Peloponnese (Figure 1). Long neglected as a work of literature — it was read as a tourist guide of interesting, if eclectic information — the *Description* has been revisited with ever growing sophistication, inspired in part by Christian Habicht's (1985) reassessment of Pausanias as an author (cf. Hutton 2005) and by the Humanities' spatial turn. The extent to which his description has been used as a guide for excavating Greece's archaeology has come under increasing scrutiny (Stewart 2013), in line with a recognition that his narrative projects an imaginary 'Greece' (Pirenne-Delforge 1998: 129-33). His route-based itinerary, described as projecting a 'relentless linearity' on the text (Snodgrass 1987: 84), has been viewed thematically as a kind of pilgrimage (Elsner 1992), or structurally through the lens of cognitive mapping to reveal 'radial' patterns of movement (Hutton 2005). Spatial aspects of narratology (e.g., the travelling person vs. the narrator's 'ego': Akujärvi 2005) have helped to identify the narrative's centripetal drive (Hawes 2016b; cf. Musti 1984), analyse its mapping of myth (Hawes 2017), and explore the relationship between space, identity and memory (Alcock–Cherry–Elsner 2001).

Yet, the *Description* is still rarely read *as a narrative*. The issue, as Jody Cundy (2016: 146) has identified, is the fact that the 'topographic flow of the text' is frequently disrupted by digressionary material that 'takes the reader to a far off-place'. In fact, at every step of the way, Pausanias records accounts (*logoi*) that direct the reader off the beaten path, whether because something of interest had happened in this or that place or because the person to whom a statue, say, had been dedicated had done something of interest. In these digressions, Pausanias moves through *time* as well as space (Bowie 1996). As Jaś Elsner (2001: 6) argues: 'The places themselves, their material monuments and appearance, cannot be separated from the activities that take place there, whether in the present or in the deep past, or from the stories, myths just as much as histories, associated with them.' In his review of the edited volume in which Elsner's chapter appears (Alcock–Cherry–Elsner 2001), Will Hutton (2002) warns the reader that 'some of the most interesting and creative scholarship in this book deals only tangentially with Pausanias himself'. Elsner does more than most by setting out to show that the text is 'more than a mine to be excavated by historians in search of facts' (3). Even so, his approach goes only so far as to contextualize

Figure 1. A map showing the areas by book covered in Pausanias's Description of Greece, openly licenced from a Harvard Library publication https://dash.harvard.edu/handle/1/40939994.

the nuggets of information: as he puts it (19), 'no reading of Pausanias has ever been anything but a selection of passages.' This article sketches out an attempt to do just that, and, with the kind of close reading that Hutton calls for, read the *Description* as a continuous narrative. Our test case is Book 1 ('Attica'), in which we show how incessant temporal shifts insistently interrupt and dislocate a reader's path through, and understanding of, Athenian space.

Analysis of how the concepts of time and space work in literature, including how different temporal and spatial configurations characterise different genres, has been termed the chronotope after Bakhtin (1981). In addition to the general idea of chronotopes being the 'organising centres for the fundamental narrative events of the novel' (1981: 250),

Bakhtin also posited specific chronotopes that give definition to a text's form, four of which bear superficial resemblance to Pausanias's narrative. The *Description of Greece* marks a series of routes, departures, arrivals and turning points around the topography of mainland Greek cities ('chronotope of the road'), which trace the histories of these places through visible manifestations of its past ('chronotope of the castle'). Providing a strong impetus to his movement around Greece is his linking of the local to the panhellenic ('chronotope of the provincial town'), or of different spaces through points of crisis ('chronotope of the threshold'). While these categories can highlight useful aspects for thinking about classical texts more broadly (Branham 2002), it is not our aim here to prove or challenge their valence for negotiating the temporal-spatial forms of Pausanias's *Description*. This is not least because their precise definition (based on thematic aspects of the modern novel) sits rather awkwardly with a non-modern text; Bakhtin's 'chronotope of the provincial town', for example, describes 'specific locales of the *petty-bourgeois* with sleepy streets and quaint little houses'. What is useful is the idea of the chronotope itself, to home in on the ways in which the narrative is plotted on a space-time axis — or, rather, via a matrix of interlocking and intercutting temporal and spatial units.

The investigation into Pausanian chronotopes offers a particularly interesting contribution to this special issue for several reasons. First, Pausanias's *Description of Greece* not only provides a non-modern view of space-time relations; it is a view, however conceptual or imaginary, that is rooted in historiography. While insisting on a strict division between historical and literary texts risks overstating their difference (Woodman 1988; cf. White 1978), the accounts which Pausanias records represent events that were deemed to have happened or people who were deemed to have lived. That said, Pausanias's text also represents a significant departure from historiographic tradition (Hutton 2005: ch.7). Histories are *about time*. They represent events occurring at a particular moment in time and space, and, by virtue of narrative's linearity (Levelt 1981), are organized in temporal sequence: any single event leads on from or leads to another. In this model, space is subordinate to time. Note, for example, the following passage from Herodotus (1.95.1b):

> *From here* our account goes on to inquire into both Cyrus—who this man was who took down Croesus's rule—and the Persians—in what way they came to rule over Asia. So, according to what some of the Persians say, those who don't want to exalt Cyrus's affairs but rather speak the real account, that's what I'll write, knowing there are three other *paths of words* about Cyrus that I could mention.

Using the spatial adverb *enteuten*, 'from here', Herodotus marks out this turning point to a new subject (Cyrus), before acknowledging other paths he could pursue. The spatial language, especially the metaphor of the 'path of words' (*hodos logōn*, Dewald 1987: 165; Purves 2010: 126 n.21), demonstrates Herodotus turning time into space, as lived time (chronology) and narrative time (chronotope) coincide and mutually reinforce each other. The fact that he narrates events in sequence enables the historian to interrogate the essential idea of causation — how one event leads to or provokes another, and so on

(Herodotus 1.1.1; cf. Pelling 2019). It is, of course, more complicated: historiography's strict chronology is frequently upset through flashbacks or flashforwards (*analepsis* or *prolepsis*). Nevertheless, such moments tend to be marked precisely because the customary impetus of historiography has an inexorably forward momentum.[1]

Route-based metaphor runs through Pausanias (e.g., 'I go back (*epaneimi*) to the beginning from where I stepped out of (*ekbainō*) my account', 1.4.6), but with a twist: where Herodotus's path of words links places far apart topographically (Barker 2021), Pausanias's becomes a literal path as place and space form the organizational principle of his narrative. With the historiographic trope of subordinating space to time reversed, accounts of the same event or people occur as and when they impinge on the space he is describing, continually obstructing, tripping the reader up as they pick their way through Greece's physical and cultural topography. Ewen Bowie has sharply observed this peculiar 'juxtaposition of events or monuments of quite different periods', where the description of 'monuments of different eras stand[ing] cheek-by-jowl' stems from the basic 'topographical' structure of the text (1996: 213). But, where Bowie sees a confusing free-for-all, we believe that these forceful juxtapositions, while difficult to negotiate, form another kind of structuring device (cf. Elsner 2001). Places resonate with moments from specific pasts that serve almost a kind of thematic purpose.

The resulting fragmented narrative makes the bigger historical movements more difficult to grasp, while simultaneously 'in several places narrative accounts almost overwhelm the topographical framework' (Pretzler 2007: 73). As articulated by Paul Ricoeur:

> the act of emplotment combines in variable proportions two temporal dimensions, one chronological and the other not. The former constitutes the episodic dimension of narrative. It characterizes the story insofar as it is made up of events. The second is the configurational dimension properly speaking, thanks to which the plot transforms the events into a story (1984: 66).

In historiography the two temporal aspects are closely aligned and assimilated: the chronological trajectory of both the events and plot pull in the same direction. In Pausanias, however, the plot is the story of Greece, whereas the historical stories of its spaces and places pull in a multitude of different temporal directions.

If Pausanias's notion of Greece is the sum of all its stories, a key question becomes just how his narrative encodes models of temporality (cf. Blanshard et al. 2020: 25-6), which brings us to this study's second important contribution to the analysis of literary chronotopes. The temporality of the stories that Pausanias narrates are ill-suited to a modern dating system of BCE/CE. This is not only because many of the peoples and events cannot be securely dated; those that can be, such as the battle of Chaironeia ('338 BCE'), introduce an indelibly modern imprint. As Denis Feeney (2007: 15) explains:

We simply cannot help thinking of ancient writers as working with dates, which to us are numbers. But they are not connecting numbers; they are connecting significant events and people. In so doing they are not placing events within a pre-existing time frame; they are constructing a time frame within which events have meaning.

While the idea of time as something constructed rhetorically or symbolically (Blanshard et al. 2020: 19; cf. Gell 1992) is arguably true for any non-modern text, the issue is all the more acute in Pausanias not only because of the range and variety of time markers in this text, but also fundamentally because of the disrupted, and disrupting, chronologies. Chaironeia, for example, represents for Pausanias and his readers the end of a particular age of Greece (of interdependent city-states) and the beginning of another (the age of single place empires, first Macedon, then Rome). Even the distinction we tend to draw between mythical and historical time is less decisive. Mythical events, such as the Trojan War, are understood to have happened, even if, because the time elapsed means that the evidence for them cannot be tested, they have a different truth status from more recent, documentable, events (Feeney 2007: 69-84). As we shall see, Pausanias's movement through time is marked: by genealogy (Pretzler 2007: 83-4), as Pausanias frequently ties people to places; and especially by landmark events (Bowie 1996: 208), particularly wars that represent key historical junctures (and disjunctions). Being alert to the ways in which Pausanias encodes time can help bring to light important aspects of the ideological framing of the narrative.

One notable feature of the *Description* is the absence of an overarching temporal model based on socially agreed measures of time — typically, leaders in power (Athenian archons, say) or priesthoods. The explanation may in part reflect Pausanias's description of Greece as a space where each place has its own system (Feeney 2007: 9-19; cf. Clarke 1999: 10-13). Even so, it remains striking that Pausanias does not use an available universal system of dating based on Roman consulships — and this brings us onto our third point: Pausanias as a Greek writing under Rome. Drawing on post-colonial literature, recent scholarship on the literature of the late Roman Empire has explored ways in which Greek writers self-consciously engage with their classical tradition to negotiate a world dominated by Rome (Goldhill 2001; Whitmarsh 2013). The situation in Pausanias is correspondingly diverse. At various times he praises Hadrian, criticizes other Roman leaders, explores Greek encounters with Rome before Roman hegemony, laments various Greek misadventures, and so on. What can be said is that Pausanias's time periods reflect an interest first and foremost in explaining Greek space on Greek terms. His 'use of such canonical events as hooks from which intervals forwards or backwards could be counted' provide 'a way of dividing the past, giving a kind of map, making it possible to develop a sense of contours, large-scale and small-scale' (Feeney 2007: 13). His choice of which events and peoples to dwell on affords ways of apprehending the temporal contours of the places through which we move, even as they engage with and work through varying manifestations of Roman power.

In addition to analysing the chronotope, this article also contributes to a broader study of the use of digital technology for mapping and analysing literary texts. Over the past decade or so, the Humanities' spatial turn has gained impetus by exposure to digital technology, giving rise to the new discipline of Spatial Humanities (Bodenhamer et al. 2010). The value of 'locating historical and cultural exegesis more explicitly in space and time' (Bodenhamer 2010: 28) has greatly assisted historical inquiry into places (Gregory and Ell 2007; Gregory and Geddes 2014). Geographic Information Systems (GIS) hold the promise of facilitating the gathering, management and analysis of spatially based data *systematically* (Gregory and Healey 2007; Dunn 2019). At the same time, the very systematic structure of a GIS is frequently ill-suited to capturing aspects of uncertainty and ambiguity that typically characterize, and explain interest in, Humanities data (Gregory and Healey 2007: 641). Narrative-based studies in particular 'raise fundamental epistemological and ontological issues for GIS applications' (Harris, Bergeron and Rouse 2011: 228).

In a series of interdisciplinary collaborations, the *Hestia* project developed a blended methodological approach to exploring literary geography, namely the ways in which texts organise spatial knowledge. Investigating the representation of geographic space in the fifth-century BCE *Histories* of Herodotus, *Hestia* demonstrated the limitations of viewing his references to places as dots on a map against a Cartesian plane (Barker et al. 2016). Instead, it proposed an alternative conceptual (and technical) model that brought to the surface the underlying spatial structure of the narrative based on *relations* between places (Bouzarovski and Barker 2016) — a textual modelling of space, constructed by and through the stories told about places and the people living in, moving through, and escaping from them (Barker and Pelling 2016). Independently, work emerging from Ian Gregory's long engagement with historical GIS explorations of the English Lake District has combined GIS with corpus linguistics and natural language processing to spatially interrogate a large corpus of writing dedicated to this single place. This kind of Geographic Texts Analysis (Gregory and Donaldson 2016) has been instrumental in identifying correspondences between eighteenth-century aesthetic theory on the sublime and descriptions of the Lakes in nineteenth-century travel literature (Donaldson et al. 2017; cf. Murrieta-Flores et al. 2017).

Less well represented in this Spatial Humanities research has been the intersectionality and co-implication of space and time (Massey 2005). In addition to the challenge of visualizing space and time together (e.g., Drucker 2020), particularly the intricate and ever shifting chronotopic configurations of a narrative (cf. Barker–Pelling 2016), the representation of time has yet to attain the kind of authoritative mapping achieved for concepts of place. Indeed, it is the canonical disambiguation achieved by using place Uniform Resource Identifiers (URIs) that has enabled global gazetteers to become such a powerful means of representing place. The URI for 'ancient Athens', for example, published by the ancient world gazetteer, *Pleiades*, is https://pleiades.stoa.org/places/579885 — a character string that is stable and unique to this place. A direct result of this URI-definition of places has been the development of a method that enables different online resources to do with place to be interlinked. This method of semantic geo-

annotation, pioneered in the Humanities by the *Pelagios* initiative, is the subject of our next section.

## Annotating space and time

*Pelagios* was established to address the challenge facing Humanities scholars as research pivots online — namely disciplinary division, fragmentation of sources, and proliferating data standards. Working with various international partners and using the semantic web technology of Linked Open Data (LOD; cf. Bizer et al. 2009), *Pelagios* co-created a lightweight but universally applicable method of linking online materials of different types (texts, images, databases), hosted by different global data providers (Vitale et al. 2021). This method is based on the gazetteer URI. Instead of compelling everyone to remodel their data according to an all-embracing ontology, the *Pelagios* method simply states that each provider should semantically annotate the places mentioned in their data with the appropriate gazetteer URI record. In this way, heterogenous resources can be linked together by means of the common places to which they refer. Additionally, to enable the production of LOD by the domain specialist or curator without need for coding expertise, the *Pelagios* team created a free open-source tool, *Recogito* (https://recogito.pelagios.org/: Simon et al. 2017; Vitale et al. 2021; cf. Vitale et al. 2020).

Ever since its public launch in 2016, by facilitating the semantic annotation of maps or texts *Recogito* has been attracting increasing adoption in both the research into, and teaching of, places in historical records (Palladino 2016, 2021; O'Doherty 2021; Dunn and Vitale 2021). In addition to its open availability, ease of use and collaborative platform, there are at least three reasons why *Recogito* was the chosen tool of the *Digital Periegesis* team. First, given our interest in *Pausanias's* description of spatial and temporal entities, we needed to work on the Greek text. Like other geoparsers, *Recogito* has the capacity to utilise Named Entity Recognition (NER) search to automatically identify place names (Porter and Milligan–Lilley 2020), but NER copes far less well with an inflected language like ancient Greek. Critically for us, *Recogito* puts the power of annotation into the hands of the expert user, making it easy to semantically annotate places, even if such hand-encoding is time consuming and requires dedicated close reading. Second, precisely because our spatial analysis depended on working closely with the text, where every annotation of a place demands interpretation at some level (as we shall see), it was important to make the process as transparent as possible. Unlike the construction of *Hestia*'s network maps, whose preparatory data was never in a form to be published, *Recogito* captures the whole annotation process, thereby enabling scrutiny of each and every choice made. Third, as with *Hestia*, we have used a text available on an open license (CC-BY) from the *Perseus Classical Library* (Barker et al. 2016: 183-6). Because *Recogito*'s annotation functionality is based on stand-off mark-up, we are able to hand the more fully enriched text back to Perseus for its own community of users.[2] For the rest of this section, we discuss our annotation strategy for encoding the entities of place and time.
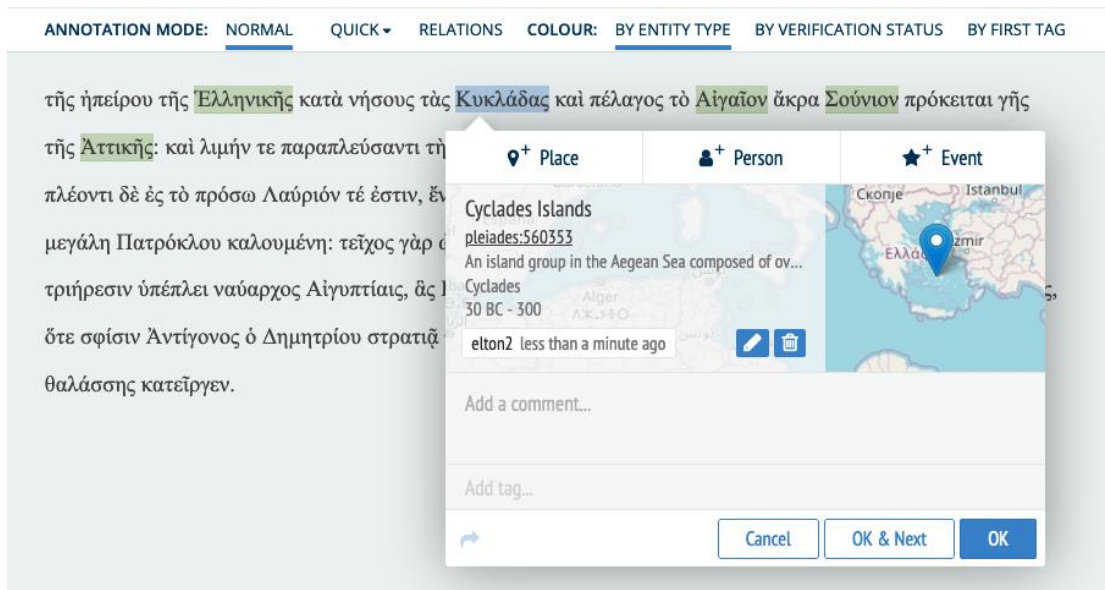
Figure 2. Screenshot of the Recogito platform, showing the 'two-step' semantic annotation of the place 'Cyclades': first, the user highlights (/ asserts) that a particular character string represents a place; second, they align that place reference in their document to an appropriate match in a global authority file, in this case the gazetteer of ancient world places, Pleiades.

The semantic annotation of 'places' in *Recogito* involves a two-step process (see Figure 2; cf. Vitale et al. 2021: 18-22). First, we identify an entity in the text as a place. Given the scope and granularity that Pausanias provides in his description, our understanding of 'place' encompasses both broad, ill-defined territories or concepts (such as Attica, Egypt, 'Asia') and objects in space (e.g., temples, statues, paintings), as well as more recognisable 'places' (e.g., Athens, Corinth). Having highlighted the 'place' in the document, we then align that reference (via a pop-up map) to a gazetteer record. This enables us not only to disambiguate the place and locate it on a map, but also to publish our text as LOD. (We shall return to this at the end.)

In addition to marking a place reference as an entity and aligning it to a gazetteer, we provide more information about it using *Recogito*'s tagging functionality. As a free-text feature — you can type in and use any label you wish — tags represent a powerful mechanism for identifying key aspects of place in the target document. Additionally, while you can create any tag you want, once entered *Recogito* recalls it for each subsequent annotation, meaning tags can be applied in a systematic and uniform manner throughout a document. The following ontology for annotating places in Pausanias was developed within our collaboration, with individual team members trialling different methods and classes, before agreeing on a robust schema that could be applied consistently to narrative as a whole (see Figure 3; cf. Barker et al. 2020):

- Tag 1: identifies the broad type ('genus') of the place: i.e., whether it is physical, part of the built environment, a regional concept, or an object in space;

- Tag 2: defines the place more specifically (its 'species'): e.g., 'physical places' include rivers and mountains; the 'built environment' settlements, sanctuaries and temples; 'objects' statues and paintings, etc.;
- Tag 3: represents Pausanias's framing of the place.

The three classifications require some explanation. The first tag is based on the distinction drawn in the *Hestia* project using a comparable text, Herodotus's *Histories*. To a certain extent this category borders on the abstract and difficulties can arise: for example, an island like Sicily might be understood (and tagged) as a 'physical' feature at one point in the narrative, part of the 'built' environment at another, or even a 'region', depending on context. Yet, asking the question helpfully draws attention to how a place is operating at any given time, while the *Hestia* project successfully drew attention to large-scale spatial patterns underpinning the narrative (such as the predominance of natural features when one moved away from the central Aegean world focus: Barker et al. 2016: 191-6). The one addition — the object category — reflects Pausanias's more granular focus, where even small-scale items like statues or rocks are placed in the landscape. In defining the 'place' more discretely, the second tag attempts to reuse Pausanias's own description so far as it is possible. In Figure 3, for instance, the tag '*naos*' is a transliteration of the Greek ναὸς Ἀθηνᾶς, Pausanias's description of the temple ('*naos*') of Athena. Where Pausanias doesn't provide a specific description, such as when he describes the 'bronze Hermes' of the marketplace (1.15.1), meaning the statue (*agalma*, in Greek) of Hermes, we supply the identification in English (in this case 'statue', since '*agalma*' is not used). The third tag offers an attempt to represent the orientation of the reader to the place in question. For the most part (as we noted above) the *Description* represents a hodological, route-based journey through the sites of mainland Greece. To mark this view from the ground, as it were, we use the tag 'Paus' (as if the author/narrator were there showing us the sites). But places have other aspects, and other roles, in the narrative. Sometimes Pausanias provides an overview of an area, a view from above like that enjoyed by Homer's gods or epic muse (cf. Purves 2010: 1): in this case we use the tag 'synoptic'. Pausanias often compares one place to another (cf. Cundy 2016: 145, 172-3): for this we use the tag 'analogic'. Finally, Pausanias often refers to a place which, though not on his itinerary, he has seen and for which he (as a narrator) personally vouches: for this we use the tag 'opsis' ('eyewitness'; cf. Marincola 1987 on Herodotus use of *opsis*).

In using tags this way, we understand the dangers of adding another layer of description to Pausanias's own. We do this, however, not wishing to reify the idea of description, but rather to enable interrogation of it: to identify and examine the precise spatial aspects Pausanias marks out, how, and when. We mentioned above our strategy for reusing Pausanias's description so far as it is possible, and where we use the English when no description is supplied. The issues become particularly evident, and urgent, when tagging statues. Already Pausanias's terminology reveals interesting nuances that differentiate between a statue of a god ('*agalma*') or a human ('*andrias*'), or those where it is the 'likeness', or '*eikôn*', of an individual that is important, where the *eikôn* is 'both an image
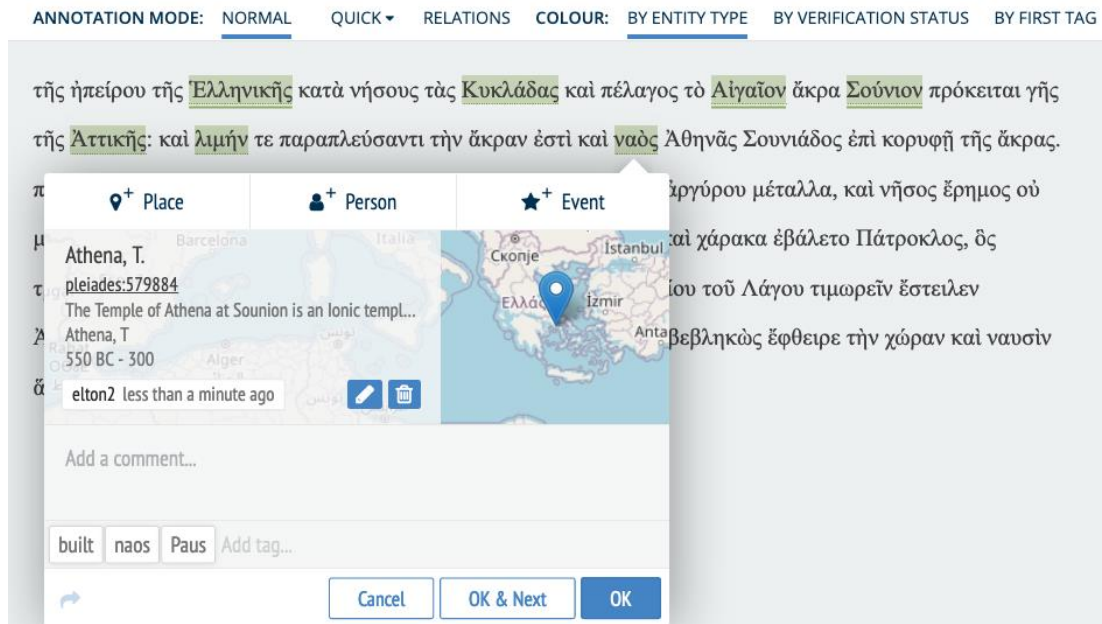
Figure 3. Screenshot showing the use of tags to create a typology based on the genus of a place (built, physical, object, etc.), its species (temple, settlement, etc.), and its spatial perspective ('Paus' represents the hodological, route-based view). In this case we reuse Pausanias's description 'naos' for the temple of Athena at Sounion.

of the man and a manifestation, an emanation, a presence, coming off the physical statue' (Ma 2016: 100). Being able to discriminate between these different usages across the narrative will play an important role in analysing Pausanias's description — whether, for example, he is drawn towards the statues of gods or humans, or which humans are singled out. Yet the denotation of a statue's human presence also manifests itself in a different, more striking way, as in the following scenario (1.1.3):

> Both [precincts] have statues (agalmata: plural of agalma) of bronze: the one (Zeus) holds a sceptre and a Nikē, Athena a spear.

Here Pausanias describes the statues of Zeus and Athena as if they were the actual gods ('the Zeus', 'the Athena'), which is an easy leap for a reader to make because they have already been denoted as statues (of gods: an '*agalma*'). However, this is only the first instance in which Pausanias elides the distinction between the agents and their representation in stone (or bronze or wood). At 1.5.2, for example, Pausanias catalogues 'the eponymous heroes' who stand in the Athenian marketplace (*agora*), having similarly identified them as statues (in this case of humans: an '*andrias*', 1.5.1). In the list that follows, Pausanias drops the label of statue, to leave us, it seems, in the company of the heroes themselves: 'there is Hippothoōn...; there is Antioch...; and, third, Ajax...' (1.5.2). The last group are heroes from a later date — 'Attalos, the Mysian, Ptolemaios, the Egyptian, and King Hadian of my time' (1.5.5). The former two function as a portal to another world, as if by coming face-to-face with them we are frozen to the spot and transported to a pre-

Roman time of global power dynamics, in what is the longest digression yet in this most circuitous of itineraries (1.6.1-8.1). This is more than simply a case of Pausanias ascribing agency to statues (Kindt 2016: 113-30); statues and the figures they represent bleed into one another —or, rather, these historically important people (for this place) emerge from their encasing to stand before us, somehow embodying and shaping the landscape through which we move (König 2023). Tags are thus an important heuristic, another way of organizing and sifting through the material, as will become clear in our analysis below.

Before moving on, there is a related aspect of Pausanias's spatial description that requires definition: the extent to which places are encoded through reference to individuals or peoples. The *Hestia* project had similarly drawn attention to the greater depth and complexity of spatial relationships underpinning Herodotus's *Histories*, if one expanded the inquiry beyond the mere mention of a toponym to encompass those instances where an individual or a group act as a proxy for the space from which they come or in which they reside (Bouzarovzki and Barker 2016: 163-4; Barker et al. 2016: 186-7; Barker and Pelling 2016: 228). Thus, at the beginning of Book 5, when Herodotus writes about how 'the Persians, whom Darius left behind in Europe, first subdued the Perinthians' (Herodotus 5.1.1), both ethnic adjectives refer to important spatial information: as we might render this in English, the kingdom of Persia was occupying Perinthia. The same embedded spatiality is present in Pausanias's narrative too. To capture this, we annotate the adjective as a place entity, map to the corresponding record in the gazetteer, and use the tag 'proxy', as if the person/people were being used metonymically for the place in question.

Thus far we have been discussing an annotation strategy used by all members of the team for annotating their respective books of Pausanias. Inevitably there will be individual variation in its application: no two people read a text in exactly the same way (nor indeed does the same person at different times); but we have tried to reduce systematic discrepancies as far as humanly possible. Annotating time, on the other hand, has been a far more speculative enterprise. In part this has been due to the challenge articulated above, namely our concern to avoid thinking in terms of our contemporary numerical system (e.g., '490 BCE', '2021 CE'). An additional problem is that authority files for temporal categories are only just beginning to emerge. Practically, this means that there is no 'time gazetteer' in *Recogito* to which one can align a temporal reference as one can do for place. Even if one did exist, however, we would still be faced with the issue that periods such as 'archaic', 'classical' and 'hellenistic', which still structure Classical Studies as a discipline today, would frame our reading of Pausanias in ways more revealing of modern classifications than the temporal contours of his narrative.

Attempting to encode the text's 'multiple frames', as well as any 'changing scales of identification from the local to the global' (Blanshard et al. 2020: 25), has necessitated trying out different approaches that vary according to both theme and application. The first theme is familiar and straightforward: genealogy. A genealogical understanding of time is evident in the minutiae of person individuation, where patronyms (e.g., Theseus, the son of Aegeus; Pericles, the son of Xanthippus) efficiently locate the reader in an established framework of reference. Lengthier genealogies mark out important individuals. One such

figure is Pyrrhus: Pausanias traces his ancestry back to Pyrrhus the son of the Greek Trojan War hero Achilles (1.11.1), which acts as a fitting introduction to this Greek general who first fought the Romans (1.11.7) and, by doing so, is seen to replay that earlier conflict (where the Romans are understood to be ancestors of the Trojans). The use of genealogy to mark the passage of time, and to encode power, is a familiar strategy in ancient Greek culture, and evidenced in both literary and inscriptional texts. To capture this information model, we annotate these figures using the 'Person' entity in *Recogito*, supply *Wikidata* identities for each (or create them where none exist), and use *Recogito*'s 'relationship tagging' feature (where you can link two or more entities) to map out the family tree. This will allow the display of Pausanias's generational calculations for Greek history, including murky subjects like early Spartan kingship (Book 3).

Yet Pausanias's itinerary is punctuated by a far more common temporal marker: the event. 'What begins as undifferentiated space becomes place as we get to know it better and endow it with value,' writes Yi-Fu Tuan (1977: 6). In Pausanias, space becomes place, when a particular location is endowed with meaning, by being described in relation to something that had happened there or, as in the case of dedications and statues, to someone who had done something that had impacted on that space. Using the 'Event' entity in *Recogito*, we can mark an identifiable moment — a battle, an individual's accession to power, an athletic competition, the founding or destruction of a city — and again cross reference to *Wikidata*. But, while this strategy is useful for linking the events mentioned in Pausanias to an emerging global authority record (*Wikidata*), it is less insightful for understanding how temporal description works in Pausanias. This requires a broader understanding of the event in relation to the cultural horizons of Pausanias and his reader, as well as an annotation practice that identifies the broader semantic range of the event. Take the following sentence (1.1.2):

> And Phalēron — for here the sea is least far away from Athens — used to be their [the Athenians'] harbour, and they say that Menestheus from here set sail with his fleet for Troy, and before him Theseus, when he went to give justice to Minos for the death of Androgeos.

Pausanias here records two separate moments, yet both belong to the same event range, or *period*: the 'heroic' age, in which gods still walked the earth but where the focus was on human figures, their travels and travails, and whose actions led to the foundation of cities and customs. Additionally, when annotating this period definition, it is important to note that its semantic range extends over the whole clause (excepting the explanatory parenthesis 'for here'). That is to say, unlike place entities, whose annotation is limited to the single mention of the place in question ('Phalēron'), the effect of time spills over the individual event ('set sail for Troy') to encompass the entire semantic unit ('And Phalēron...Androgeos'). Frequently temporal referentiality span matches a sentence (as here); but often it extends over paragraphs, as Pausanias provides stories that give meaning to the places through which he moves.

Taking Book 1 (Attica) as a pilot study, we have experimented with both aspects of Pausanias's time keeping — the type of 'period' to which his accounts may be allocated, and the kind of annotation needed to identify it. To capture the 'event string', we simply add a time tag to each entity (place and person) that falls within the scope of the event. This takes the form of 't-' plus the 'period' in question (see Figure 4). As for the period types: basing our chronology on the ways in which Pausanias anchors events in time in Book 1, we have developed the following chronotopes:

- 'theogony' — This period (of 'deep myth') represents the time when gods and monsters populated the earth, including their interaction with the first (semi-divine) humans. Generations are indistinct. The term is taken from the early Greek epic poem, Hesiod's *Theogony*, which sings of the birth of the gods and the ordering of the cosmos;
- 'heroic' — This period ('epic past') represents the time when humans play a more active role in ordering the world, as encapsulated by heroes acting individually (Herakles, Theseus), or in coalition (e.g., the Trojan War). The term is taken from the early Greek epic poems, Homer's *Iliad* and *Odyssey*, which describe this generation of hero men;
- 'Persian' — This period describes the events surrounding the conflict between the Greeks and Persians (499-478 BCE). A 'pre-Persian War' tag is used for those (few) events that fall before this critical time event, as recorded in the *Histories* of Herodotus (c. 420 BCE);
- 'Peloponnesian' — This period describes the events involving the conflict between the Athenians and Spartans, and their coalitions (431-404 BCE). A 'pre- / post-Peloponnesian War' tag is used for those (few) events that fall either side of this critical time event, as recorded in Thucydides's *History of the Peloponnesian War* (c. 404 BCE);
- 'Macedonian' — This period describes the events involving Macedonian hegemony in the Mediterranean region and beyond, following Philip of Macedon's victory at Chaironeia (338 BCE);
- 'Gallic' — This period describes the events involving the Gallic invasion of the Greek mainland (279 BCE) and its fallout;
- 'Roman' — This period describes the events involving Roman hegemony in the Mediterranean region and beyond following the battles with Pyrrhus of Epeirus (280 BCE).
- 'present' — This period describes what is or remains current in the world of the narrator. It is marked by time expressions such as 'in my / our time', or by the use of the present tense.

While it may be objected that these labels say more about our own reception of Pausanias, three points are worth stressing. First, it is incontrovertible that Pausanias's sense of time and its impact on the present landscape reaches all the way back to the distant past, to what
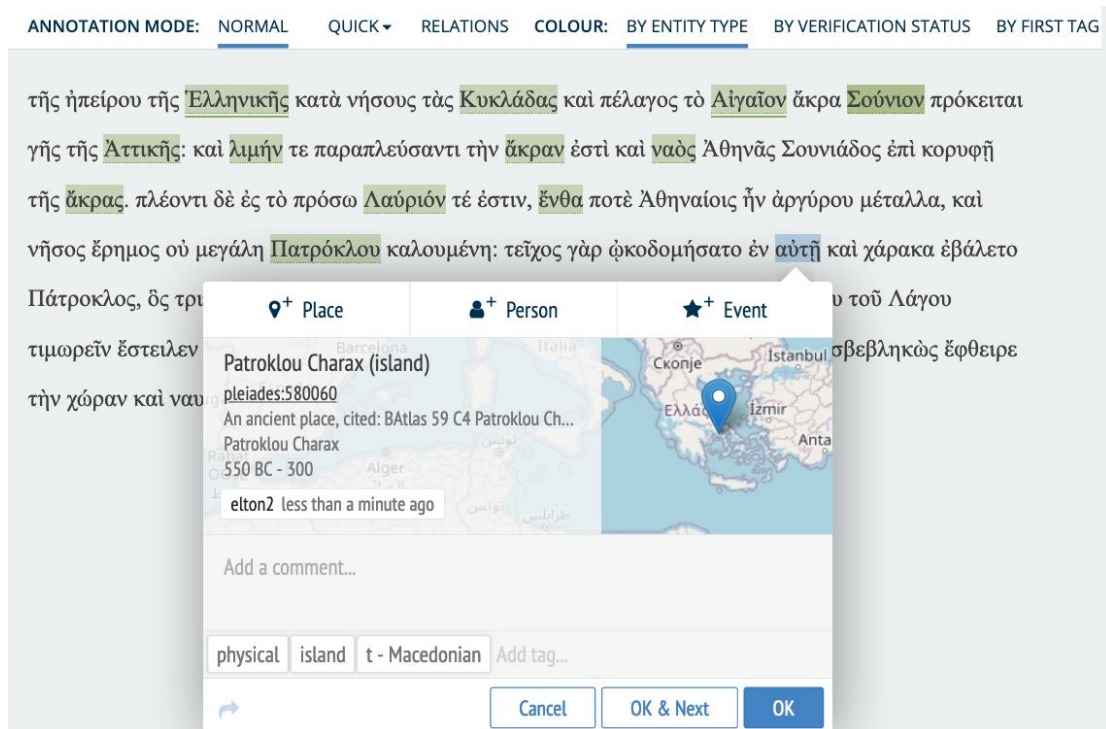
Figure 4. Screenshot showing the use of the third tag to show temporality. In this case, after an initial mention of Patroklos island as part of the itinerary, Pausanias moves in time to explain when and why fortifications were built on it.

we would call myth. It's worth again reminding ourselves that this label unhelpfully imports an anachronistic notion that it is separate from history: it is separate only in the sense that one cannot adequately research it (Feeney 2007: 72-5, on Herodotus). Instead, we use two terms that attempt to differentiate a period of deep myth (or 'theogony'), where generations are indistinct, from a 'heroic' past where events can be stratified. Second, and following on from this, these terms and notions would have been recognizable to his readership: not only Hesiod's *Theogony* and Homer's heroic poems, but also the Persian and Peloponnesian Wars, which are the subjects of histories by Herodotus and Thucydides respectively. That is to say, the accounts that Pausanias records recall not only events of great historical import but also their *literary representation*. Or, to put that the other way around, these events are recalled *because* of the impact of their representation. Pausanias, we recall, is writing in the period known as the second Sophistic, when exactly this kind of familiarity with literary sources was expected. That said, and this is our third point, the accounts on which Pausanias draws are predominantly structured around power struggles. Conflict is the critical frame for contextualizing the places and spaces through which he moves.

In later work we will test the applicability of this periodization on the rest of the *Description*. To a certain extent Book 1 is an anomaly, in that Pausanias takes the reader on a tour of Attica and Athens, and their complex histories, with little fanfare (see below). From Book 2 ('Corinth and the Argolid') on, Pausanias changes tack to frontload his descriptions with summary histories of the places that he will describe (Pretzler 2007: 75-

8). His own sense of periodization emerges from these summaries: though they largely accord with the chronology articulated here, there are also interesting differences that reflect the space he will be describing. Equally, histories of individual places and peoples continue to press in on the reader as they make their way through the topography he maps out — histories which need to be read in and against those opening frames. For the rest of this article, however, we will limit our commentary to Book 1, since its lack of an introductory frame makes the challenge for reading Pausanias's chronotopia and the benefits of using spatial and temporal annotation all the greater and more instructive.

**Analysing space and time**

A brief survey may suffice to indicate the extent, depth and complexity of space and time in Pausanias. As of 28 September 2022, the *Digital Periegesis* team have made 43,894 annotations to the Greek text. We have categorized 21,059 references to places or objects, 16,823 of which are now aligned to one or more URI-based global gazetteers with mappable coordinates (see Figure 5). There are 17,304 references to people, of which 14,544 have been aligned to 2,684 distinct *Wikidata* items for people (and gods). In more granular terms, some 2,360 mentions of 1,825 identifiable artworks have been tagged. There are, for example, 534 annotations of approximately 380 distinct temples. Using Pausanias's vocabulary, we can distinguish between 95 references to an *andrias* (a 'human portrait statue') and 841 to an *agalma* (a 'statue of a god'). Gods are characterized by an epithet 597 times, with 292 distinct epithets for which a *Wikidata* item exists or has been created. Regarding time, where tagging is less complete: 1,190 events have been annotated, 473 with temporal tags and 438 with a *Wikidata* ID. This includes 86 Olympiad dates and various Athenian archonship dates.
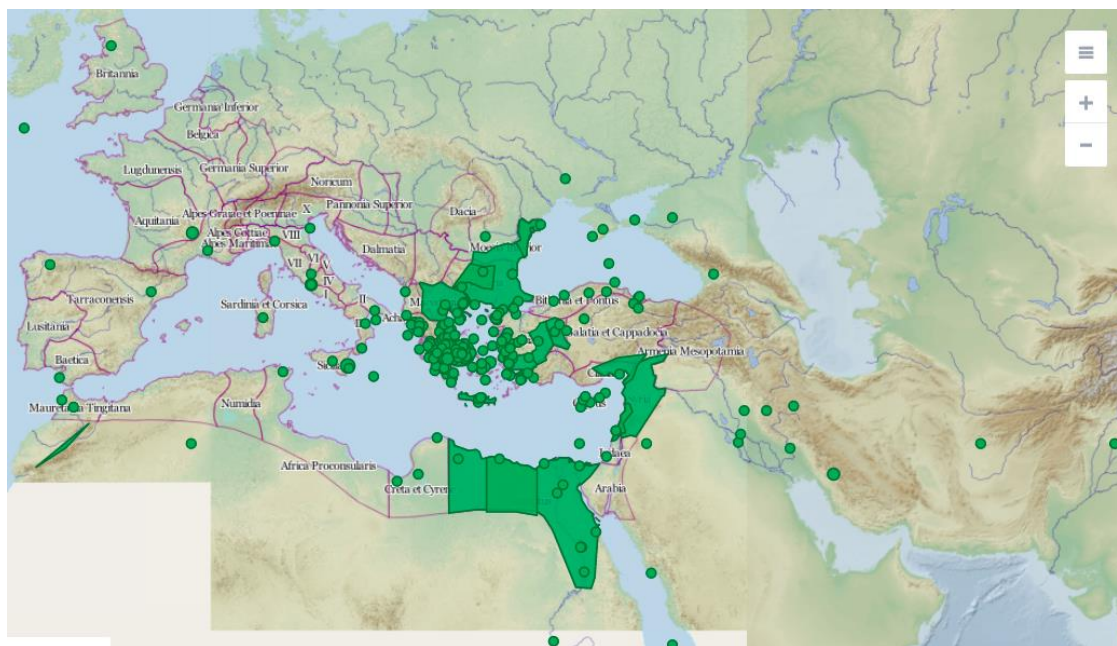


Figure 5. Map of all the places / peoples mentioned in Book 1 (the description of Attica).

Figure 5 visualizes all the places and peoples mentioned in Book 1. Even at the level of this broad overview, the value of a semantic geo-annotation approach is clear. Simply by virtue of aligning a place and/or its peoples to their respective gazetteer records, it is possible to map the places in Pausanias in a far more accurate, comprehensive, and granular way than has hitherto been possible. Moreover, though simple, this visualization tells a story. If we recall that Book I is devoted to a 'tour' of Attica (the region around and including Athens), the spatial footprint of the narrative is striking. The visualization of our geo-annotations makes clear that even in Book 1 Pausanias in fact refers to places and peoples from across the Greco-Roman world and beyond, to Britain in the far west to India in the far east. All of these places are somehow name checked as we move through Athens and Attica. The challenge, of course, is to investigate how and why and to what effect they are cited in relation to the places of the Athenian landscape. In this sense, the visualization is also critically limited: it provides little indication of the narrative's spatiality beyond this static image, a snapshot, furthermore, misleadingly represented from a 'bird's-eye' perspective all but inaccessible to Pausanias and his reader. Therefore, an important caveat needs issuing from the onset: mapping should be regarded less as an end in itself — even if it is *also* a product of close reading and lengthy research — and more as a part of the heuristic process, a tool of investigation, even provocation, rather than simply an illustration (Bodenhamer 2015; Barker et al. 2016: 18). Going beyond a surface visualization, digital technology affords the possibility of creating *deep maps* — maps that allow different kinds of documents to be brought together according to their geographical location and explored through their spatiality (Bodenhame et al. 2015; cf. Ridge et al. 2013; Taylor and Gregory 2022). In particular, such a multimedia approach can help provide different perspectives on literary geography (Taylor et al. 2018). Here we focus on some preliminary observations based on geo-annotating Pausanias's chronotopic description of Attica, which includes using visualizations and rudimentary deep maps to bring out patterns in the data and make visible the invisible. But first we highlight the complexity and nuance of this literary text, which presents a challenge to any kind of systematic analysis of its places, even if our observations have been sharpened through annotating each place entity.

While the *Description* may give the impression of being a comprehensive account of all of Greece's significant spaces, religious or otherwise, Pausanias explicitly draws attention to the incompleteness of his record (1.39.3):

> Such in my opinion are the best-known accounts [*logoi*] and sights that the Athenians possess, and from the beginning my own narrative [*logos*] has set apart, from many such things, those that reach a mark for writing up.

The fact that this programmatic statement of sorts comes near the end of his first book (composed of 44 chapters) should already give us pause. How, for example, should we retrospectively understand his description? According to what criteria are objects 'set apart'

(*apokrinō*)? What point needs to be reached (*anēkō*) for them to be 'written up' (*sungraphē*)? — itself a pointed call-back to Thucydides's writing (up) of history (*sungraphō*, 1.1.1). Moreover, though his description of Attica habitually notes what is worthy of view or memory (cf. Whitmarsh 2015: 51; Galinsky 2015: 11-18), far from all are supplemented by an account, while by the same token many places and objects not tagged as 'worthy' provide the launchpad for lengthy descriptions about a place, person or event. Where Herodotus may be legitimately accredited for inventing the problem of sources (Fowler 1996), Pausanias makes *description* —of a place and of a historical account — a constant nagging question.

One determining factor appears to be age. Pausanias is keen to point out the antiquity of monuments and objects — such as the 'ancient' (*archaios*) sanctuary of the Dioskouroi (1.18.1), or old statues of Athena now too fragile to handle (1.27.6). In the temple of Athena Polias, he singles out 'the votive-offerings worthy of account', starting with 'those that were ancient', a chair made by Daidalos (1.27.1; other instances of *archaios*: 1.1.3; 4.1, 6; 5.1, 5; 6.1; 12.5; 14.2; 18.4, 7, 8; 20.3; 23.7; 24.3; 25.8; 27.4; 33.1, 7; 34.4; 36.4; 37.4, 5; 38.1, 7, 8; 39.4; 40.2; 42.5; 43.6; 44.2). Material can be used as an index for age: for evidence that ancient statues of Nemesis didn't have wings, Pausanias notes that 'not even the holiest wooden-images [*xoana*] of the people of Smyrna have them' (1.33.7), where holiness resides in antiquity, and antiquity in a wooden form. Other *xoana* litter his account (1.3.5; 18.5; 23.7; 29.2; 31.4; 33.1; 36.2; 38.8; 42.5; 43.5). The older something is, the more valuable it appears and the greater likelihood of it being worthy of mention.

By the same token, Pausanias frequently passes over recent interventions in Greek topography. Pausanias's silence can be heard in particularly egregious examples, such as when he describes Corinth — a city sacked and resettled by the Romans — in terms that still privilege its age and longevity (Hutton 2005: 97-117). Yet, the *Description* pointedly resists a simple equivalence of age with importance. In the temple of Athena Polias, Pausanias directly confronts the issue of value. After highlighting some ancient works, he continues: 'Whoever places things made with artistry (*technē*) before those that have reached a state of antiquity (*archaiotēs*), there are the following things for them to view' (1.24.3). Pausanias isn't only interested in describing antiquities, though there is a time and place for that. His selectivity is also made according to aesthetic criteria: the extent of artistic 'skill' (*technē*), which is more intangible and, by its nature, judgemental (cf. Elsner 2007: ch.3). Can we, as readers of Pausanias, recognise quality as well and as readily as he does?

Picking out the age of objects relates more generally to Pausanias's interest in the distant past. In Book 1 alone there are over forty cases of the label 'first', frequently accompanied by the gloss, 'they say' — a method, adopted from Herodotus, of attributing the source of a story to another to suggest a critical distance and elicit trust in this account (Hutton 2005: 190-213; Hawes 2016b; cf. Dewald 1987). These moments refer to actions that have impacted on the landscape of Greece, whether physical or cultural: a plain called Rharion 'was the first to be sown, they say, and the first to grow crops for harvest' (1.38.6; cf. 37.2, 4); Skirōn was the first to make Skironis a usable road (1.44.6); the people of Marathon were the first to worship Herakles as a god (1.15.3, 32.4; cf. 34.2). The origins

of names are of particular interest: the Athenians were the first to surname Athena as *Erganē* ('Work', 1.24.3; cf. 14.7, 19.3, 42.7); Kephalos was the first to dwell in the island that now bears his name (Kephallēnia: 1.37.6; cf. 35.2). Another 'first' is the establishment of institutional practice: Ares was the first to be put on trial for murder (1.21.4; cf. 28.8); it was when Erekhtheus was king of Athens that the ox-slayer first killed an ox at the altar of Zeus *Polieus* (1.28.10). Stories of gods and heroes recall the early Greek hexameter poems of Homer's *Iliad* and *Odyssey* and Hesiod's *Theogony*. Epic poetry of this nature not only depicts gods and people interacting, but also provides foundational narratives for humankind at a point of rupture from the divine: they help us understand where we come from and why that's important (Graziosi and Haubold 2005; Barker and Christensen 2020). In the Greek epic tradition, the Trojan War is crucial for marking a rupture in the relations between gods and mortals, and for representing a demarcation from myth, in contrast to the first Olympiad (corresponding to '776 B.C.E.'), which signals a demarcation into history (Feeney 2007: 81, 84). Gods and heroes similarly fill Pausanias's canvas to the extent that, while the landscape itself barely receives comment, its *meanings* — aspects that while typically invisible to a traveller are necessary to make sense of travelling through it — are articulated by and exemplified through the actions and experiences of these founding figures (König 2023; cf. Hawes 2016a). Supplementing the label 'first', then, are those tags of ours, 'theogony' and 'heroic', which, by revealing the origins of a particular name, practice or building, underscore the aetiological logic at the heart of the text. In particular, the tag 'heroic' is a chronotope of 'foundation', in which the consequences of events that took place in a bygone world reverberate through the ages.

At the other end of the spectrum are comments related to the here and now of Pausanias and his reader. These expressions capture the enduring impact of an event or people on the space he describes (the Gauls who 'even now' hold land in Asia Minor, 1.8.1; cf. 39.4), or changes in how a place is regarded or experienced. For example, the place 'now called the Acropolis used to be called the Polis' (1.26.6), where the reduction of the space of the polis to a single rocky outcrop signifies antiquity. Significantly, change often relates to important places conceptually, such as 'in what is now Attica' (1.2.6), or 'now Ionia' (1.29.5), or even Greece itself: 'for in ancient times the greater part of what is now called Greece was inhabited by foreigners' (1.41.8). As in this last example, Pausanias can use the appeal to the present as part of an argument. At 1.1.5, 'on the road to Athens from Phalēron' he describes a temple of Hera without doors or roof. Mardonius, the Persian general, burned it. 'So they say', Pausanias adds. Drawing on that Herodotean distancing device again, Pausanias goes further: he notes that a statue is still there 'now'. The survival of the statue subtly casts doubt on the temple story — a story that otherwise confirms Greek prejudice against the Persians — as if the past were still felt in, and capable of impinging on, the present.

The past lingers on in the present most obviously at those moments when Pausanias recounts ritual practice (Pirenne-Delforge 2008), as if the symbolic action of ritual performance could overcome the distinction between past and present (Gell 1992: 27-9 on Levi-Strauss). Pausanias uses the present tense to describe a small shrine, into which 'every

year on the assigned days they carry the statue of Dionysus *Eleuthereus*' (1.29.2); or a temple and statue of Ajax to whom 'even in this day and age the Athenians pay honours' (1.35.3). At 1.27.3 he describes a ritual event involving two maidens living close to the Athena *Polias* temple, who, when the festival comes round, perform a ritual in which neither party knows what is given, or why. His account here is obscure and dark, not only mirroring the actions of the maidens (who 'go down into a natural underground passage..., leave behind the things they were carrying, and taking something else bring it back covered up'), but also reproducing the ineffability of the ritual and its sense of wonder — an unknowability knowingly appropriate for talking about divine-human relations in the present. The chronotope of the present represents in various ways the residual presence of the past.

Between these two extremes of the heroic past and Pausanias's present are various chronotopes that provide contours to Pausanias's movement through space, particularly those related to Greeks in conflict — with Persians, with Gauls, with Macedonians, with Romans, as well as with each other. While some of these may appear to map straightforwardly on to a Greek-other template, others are clearly more complex: to what extent are Romans Greek (and/or barbarian), for example (cf. Bowie 1996: 218-24)? For the rest of this section, however, we want to give a sense of how Pausanian chronotopes work in relation to each other by exploring in detail the text *as a narrative*, using our maps as guides and prompts.

We start with a visualization of one of the chronotopes we have already considered: 'heroic'. The Peripleo[3] visualization has four reading panes (see Figure 6): the annotated text of Pausanias on the right (place entities highlighted in green); a map of those places on the left; a 'timeline' view at the bottom right; and a pop-up box filtered with the tag 't-heroic'. The timeline shows the places tagged by 'heroic' across the course of Book 1 (against a faded backdrop of all annotations). This visualization provides at a glance all those places/objects that Pausanias describes in relation to the time of the heroes. As noted above, the 'heroic' age is a constant presence, though now it is revealed that its instances crowd in as the book nears its end, as Attica's borders with Megara come under sustained scrutiny and the contest over land (and its meaning) sharpens.

If this map is a helpful visualization of Pausanias's 'heroic' description, consider Figure 7. In this instance the tag filter is 't-Macedonian', which denotes all those places and objects that Pausanias describes in relation to the period of Macedonian hegemony—from around '338 BCE', when Philip of Macedon defeated the combined Greek forces at Chaironeia, to '146 BCE', when Rome sacked Corinth. Paying particular attention to the 'timeline' of the narrative at the bottom right, it emerges that this period of history functions rather differently from the 'heroic' palimpsest underlying Book 1. Macedonian presence is much more uneven, but at the same time much more prominent at certain moments in the course of this journey through Athens and her spaces. Chiefly this concerns Pausanias's description of the Athenian *agora* (highlighted by the red circle). The *agora* was the central civic (political, cultural and economic) space of the Greek city (cf. Vernant 1982: 125-6). In Pausanias's description, the Athenian *agora* falls under Macedonian occupation. Such a visualization provides a framework for reading the

chronotopic dynamics of the narrative while simultaneously being a provocation to it, especially with respect to how the politics of those space-time relations are being configured.
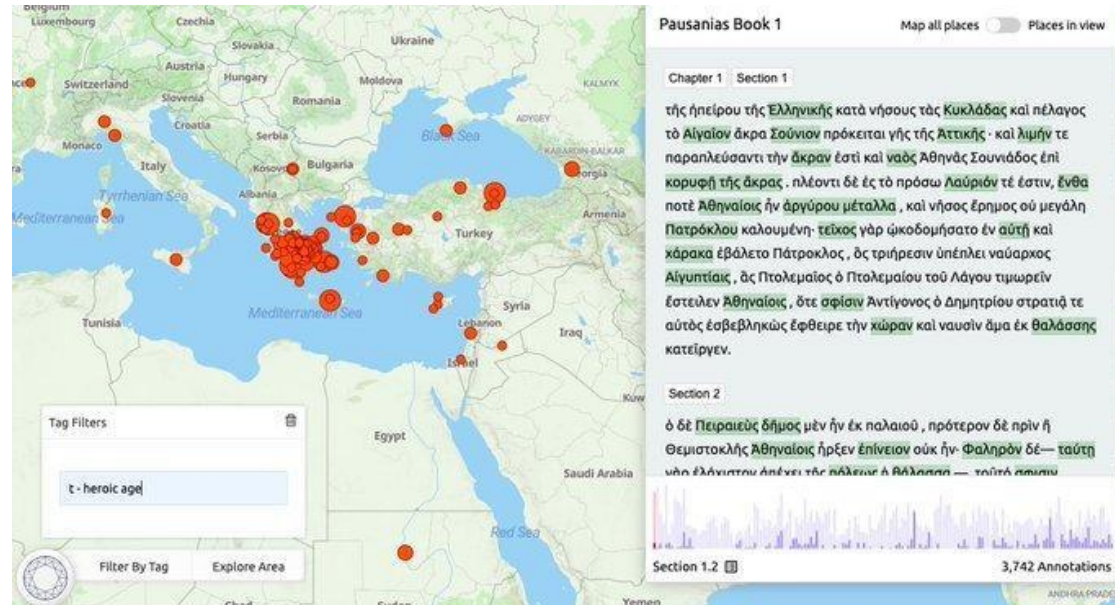


Figure 6. Peripleo visualization of all the places / peoples mentioned in Book 1 filtered by the temporal tag 'heroic', with a timeline showing their occurrences over the course of that book.
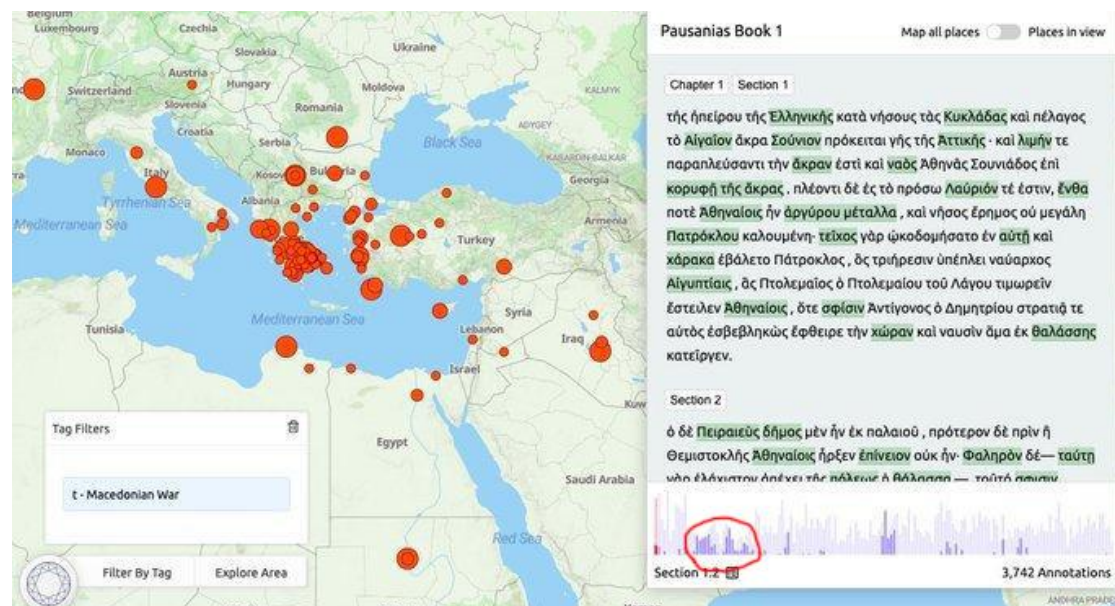


Figure 7. Peripleo visualization of all the places / peoples mentioned in Book 1 filtered by the temporal label 'Macedonian', with the section in which Pausanias describes the Athenian agora highlighted in the timeline.

We will come back to the Macedonian impact on Athenian space in a moment. But we first detour to consider a striking early example of the political implications of reading the textual chronotopes in narrative sequence. The first place in Attica to which we are introduced is Piraeus. This is Athens's famous harbour, but Pausanias immediately notes that in 'the olden days' (*palaios*, tagged as 'heroic') it was simply a deme and not yet the port — it would be made the port only when Themistocles recognised its potential in the build-up to the Persian War (1.1.2, tag 'Persian'). Before this, Pausanias notes, 'their port was Phalēron, for at this place the sea is least far away from Athens, and from here they say that Menestheus set sail with his ships for Troy, and before him Theseus, when he went to give justice to Minos for the death of Androgeos' (1.1.2). In keeping with a place that was prominent before the Persian Wars, Pausanias ascribes to Phalēron two of the great expeditions conducted by Athenian heroes, Menestheus sailing off to join the Troy story, and Theseus sailing to Crete and into legend as the killer of the Minotaur (tags 'heroic'). When he describes someone 'entering the city' in the next section, (*eselthontōn*, 1.2.1), Pausanias singles out a memorial to the Amazon Antiope (tag 'heroic'). Yet, after only three paragraphs, Pausanias is describing the same event, someone 'entering the city' (*eselthontōn*, 1.2.4). This time he notes instead 'a building for the preparation of the processions, which are held in some cases every year, in others at longer intervals' (tag 'present').

As a heuristic instrument semantic annotation enables us not only to observe the importance of both objects to Athens's history but also to go some way to grasping the distinction at stake. The first, the memorial to Antiope, relates to the 'heroic' time when the Amazons attacked Athens and Theseus defeated them; the second, the building for the processions, relates to the city in its everyday 'present' ritual practice. The close proximity of these different ways into the city jars: not only does Pausanias describe two entry points into the city hard on the heels of each other; each is starkly different from the other. You can't step into the same city twice, for its appearance (and significance) will change according to your point of entry and where you're coming from. The path from Phalēron takes us into the city of Theseus ('t-heroic'), while the path from Piraeus takes us into the city of Themistocles ('t-Persian'), a path on which Pausanias draws attention to the rebuilding of Themistocles's walls by Konon (1.2.2, tag 'post-Peloponnesian'), While it would be a mistake to draw too decisively a line between the two, the different chronotopes affect the way we enter Pausanias's representation of Athenian space.[4] Phalēron is distanced both temporally and spatially, a byway off the beaten track, a heroic palimpsest underlying present Athenian topography that you have to search out. Instead, emphasis falls on Piraeus: it is from this place that we enter Athens both literally (Piraeus as Athens's harbour) and figuratively, as we move through time ('Persian', 'post-Peloponnesian') to join the always 'present' procession into the city.

If the 'Persian' War Piraeus shapes the Athens that we enter, equally it is also a very different city that we encounter. The impact of time on space is introduced in the very opening paragraph of the *Description* —which, in lieu of any other programmatic

introduction, stands for the beginning of both this route around Attica and the book as a whole (1.1.1):

> On the Greek mainland facing the Cyclades Islands and the Aegean Sea the Sounion promontory stands out from the Attica land [*gē*]. There is a harbour, when you have rounded the promontory, and a temple to Athena of Sounion on the peak of the promontory. Sailing farther on is Laurion, where once [*pote*] the Athenians had silver mines, and an island, deserted and not big, called Patroklos. For a fortification was built on it and a palisade that Patroklos threw up, who was admiral in command of the Egyptian triremes, which Ptolemy, son of Ptolemy, son of Lagos, sent to help the Athenians, when Antigonos, son of Demetrios, who had invaded with an army, was ravaging their land [*chōra*], and at the same time was blockading them by sea with ships.

Mimicking this homing in on the target (from the 'Greek mainland' to 'the Attic land'), while simultaneously shifting from a synoptic overview of space (the mainland, the islands, Attica) to a hodological perspective ('as you round the Sounion promontory'), the narrative stalls at the mention of 'the Island of Patroklos'. Appearing at first inconsequential (it's not only deserted; it's not even big), Pausanias's explanation for its name dives into Athenian history. A time signature is keyed by the previous sentence, which had introduced the indefinite temporal marker 'once' (*pote*). Precisely by being indefinable, the label 'once' demands that the reader make a judgement about when and for how long precisely. The stakes could not be higher, for 'once' governs a clause that mentions Laurion, a deme of Athens and, as Pausanias glosses, the home of its silver mines. These mines were a source, arguably *the* source, of Athenian power, not least because Themistocles advised the Athenians to use the wealth generated from them to build a formidable navy (Plutarch *Themistocles* 4), which in turn proved crucial in building and sustaining an empire. It was for this reason that Themistocles built that harbour at Piraeus. Thus, we can draw more or less a direct line from the rounding of Sounion to Piraeus to Athens in terms not only of space but also of time — Athens at the height of her powers ('t-Persian'), a place we would surely want to (re)visit and wander around.

   That label 'once', then, is highly charged. It takes us back to a time when the Athenians had control over their own land and destiny, and it leaves open when that period ended. But in the wrinkle that follows there is a hint. As Pausanias explains who this Patroklos was, who gave his name to this island, time becomes sharper and the events more specific: he was 'admiral in command of the Egyptian triremes' which Ptolemy sent when Antigonos was ravaging the land and blockading the city. While this degree of definition allows these events to be dated should we choose, we find the tag 'Macedonian' more revealing of the time-space dynamics at play. It brings to the fore the abrupt transition in geopolitical resonance, from a 'once' of great power to a specific moment of existential crisis. Relatedly, the Attic land as a physical entity (*gē*) introduced in the first sentence returns now as a political unit (*chōra*), an object to be possessed and fought over.

Fighting over this land are in-fighting Macedonians, whose genealogies — Ptolemy, son of Ptolemy, son of Lagos; Antigonos, son of Demetrios — pointedly introduce us to the principal players of Book 1 (Hutton 2005: 275-6) and the genealogical source of their power. These same figures will return later to battle it out in and over the very political heart of the city, the *agora*, and make a reader's progress through it a struggle (1.6.1-8.1; 8.6-14.1). Or, as Maria Pretzler puts it: 'Most of the Hellenistic history presented in Book 1 is included in the description of the Athenian agora. This passage, with its many long digressions, *makes it quite difficult to follow* the complicated route around the site and its many distinguished monuments' (2007: 76, our italics). Blocking our entry into the Athens of Themistocles are blockading Macedonians. Where we might have expected (or hoped) to walk into the Athens of its heyday, we are instead introduced to Athens as a city under siege, its fate hanging in the balance even as we approach it.

The reason why Pausanias focuses on this particular Macedonian chronotope is not only because of its potential shock factor — the 'Patroklos' of 'Patroklos island' refers to a Macedonian general, not to the familiar hero from Homer's *Iliad* — or because, as he explains at 1.6.1, it's a history that is less well known. It's also because this Macedonian footprint in Athenian space is emblematic. Athens hasn't been autonomous since. Macedonian boots on the ground are clearly felt, as our Figure 7 had indicated. What happens in the *agora*, in the temporal accounts that Pausanias describes when we are there, helps explain the Athens that we find. But, although those accounts have a strong explanatory value, the wider issues introduced by these time shifts — issues related above all to struggles over dominion and for power — are not so easily contained. Later on, as the Attica book draws to a close, Pausanias describes the land of Oropos, located between Attica and Tanagra: 'originally belonging to Boeotia, in our time the Athenians have [it], having fought for it all the time, and not acquiring secure possession of it until Philip gave it to them after sacking Thebes' (1.34.1). The syntax here is challenging. The clause describing the Athenians as the current holders [of Oropos] has no direct object; when the pronoun standing for Oropos does come, it is bounded by a boundless temporal phrase, 'all the time' (*tōn panta… chronōn*). The effect of leaving Oropos a hanging object, which is then contained within a temporal unit reaching back to the beginning of time, represents and reproduces the struggle over it. Elsewhere, when Pausanias approaches the border between Laconia and Messenia, competing viewpoints and claims similarly crowd in, as the space of the narrative mimics the contest over the space of the land (cf. Hawes 2018). The temporal shift to 'in our time' on the borders of Attica and Tanagra also has the effect of implicating the reader in the struggle. While we were in Attica, as we have seen, Macedonia loomed large. Here we learn of another Macedonian intervention, but this time the dynamics are inverted. After contesting this place over the course of its history, it is only when Philip conclusively defeats the combined Greek forces at Thebes — forces, we should recall, which included the Athenians — that they acquire it. This place is a possession of Athens now only because Philip gave it to them, he who had taken away Athens's own independence.
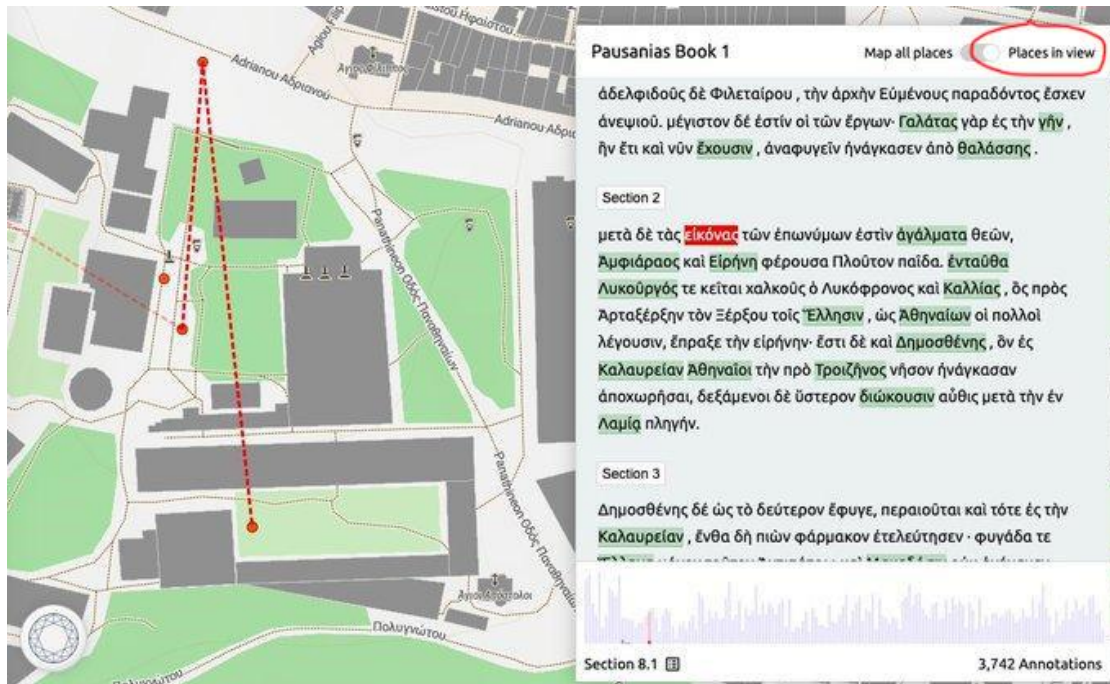
Figure 8. Peripleo visualization, the 'itinerary' view, showing Pausanias's route through the Athenian agora.

We end with a more speculative use of geo-visualization, one which has the potential to reveal the idiosyncrasies and gaps in the narrative as much as to draw attention to underlying patterns. As mentioned in passing above, the *Peripleo* visualization presents a reading pane with text and map alongside each other. To take advantage of this juxtaposition, one can switch from a map showing all 'all places' to home in on only those places mentioned in a section of text (see Figure 8). Such a view is particularly powerful for a text like Pausanias's, which, for a large part, is itinerary based. It then becomes possible to follow Pausanias's movements through the civic space of Athens. Moreover, since all the places (where possible) have been semantically annotated — i.e., aligned to a gazetteer URI record — it is also possible to link from Pausanias's text to other online LOD resources that refer to the same place and learn more about it through the information found there.[5] In this way, we can better contextualise the reference in Pausanias and start to bring together other information that could have a bearing on our understanding of its description and function within Pausanias's narrative.

But that's not all. It is also possible to reveal other places found in the vicinity of those Pausanias describes which *he does not mention*. At 1.18.6 Pausanias describes the sanctuary of Olympian Zeus and the temple rededicated by Hadrian, along with 'a statue of Zeus, worthy of view, whose size exceeds all other statues except for the colossi in Rhodes and in Rome; it is made of ivory and gold and exhibits supreme skill [*technē*] when one beholds the size'. The emperor emerges well from this description: Pausanias describes two statues of Hadrian outside the sanctuary and notes how every Greek city dedicated a likeness to him. Yet, as Tim Whitmarsh observes, Pausanias passes over any mention of another architectural feature here — Hadrian's Arch. Turning to Figure 9 this omission is

manifest: it shows up on our map because *Peripleo* can also reveal other LOD resources, in this case the pertinent record in Pleiades. This arch, however, was critical in demarcating Athens both spatially and temporally, between the ancient western city of Theseus and the Hadrianic present of Athens's eastern part. 'It is this imperial chronotopy,' Whitmarsh continues, 'that Pausanias engages with, deconstructs, and reconfigures in his account of the temple' (2015: 53). Even the statuary appears to get caught up in this chronotopic reconfiguring. As we follow Pausanias inside to the 'antiquities' (*archaia*, singular *archaios*), we come across a statue of Isocrates and a group of Persians. Isocrates, a fourth-century BCE rhetorician, was famous for insisting that the Greeks maintain their freedom from the Persians (as Pausanias observes). This seems to imply that the statue group of Persians should be understood as relating to the Persian Wars of the previous generation ('t-Persia', 480-478 BCE). Yet, noting that the Persian statue group is made of Phrygian marble, a material not used by the Greeks of that earlier time, Whitmarsh argues that the group must have commemorated Hadrian's victory over the Parthians ('t-Roman'). Even if this wasn't the case —the Athenians, for example, may have dedicated a statue to their resistance to the Persians long after the event and may even have done so in Hadrian's time precisely to draw an association between both of their actions — the point remains that Pausanias's account omits both Hadrian's arch and any identification of the statue group in relation to his campaigns. Where Whitmarsh sees the effect as marking 'continuity with the Greek past' (56), we understand it as a description that brings together, and yet keeps in tension, different temporal moments.
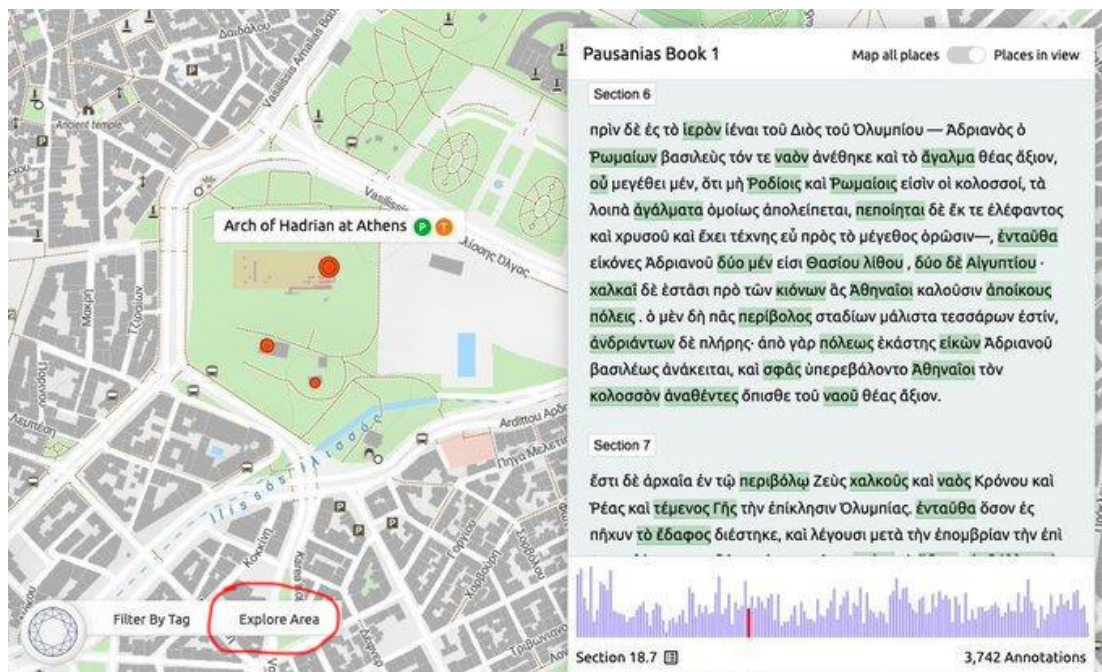


Figure 9. Peripleo visualization showing the objects and places annotated (in red) in Pausanias Book 1 section 18.7, as well as the Arch of Hadrian (in white), which Pausanias does not mention.

With this last example, we are getting a little closer to better exploiting the power of LOD deep maps, where it is possible to compare Pausanias's description of objects to other resources about them and to identify and explore the gaps and the silences in his record more systematically.[6] Time doesn't so much collapse into one as it is revealed to be multiple — Roman, archaic, Persian War, post-Persian War, *now* — all jostling for attention, depending on the spaces Pausanias describes and how we interpret them. To repurpose a recent description of Brueghel's Fall of Icarus (Blanshard et al. 2020: 163), we could say:

> Instead of trying to resolve the temporal instabilities that [Pausanias] puts into motion, we could say that [his narrative] represents an inward folding of time: like a crumpled sheet, time bends and allows the past and the present to touch each other on the surface of the [text]. The [narrative] visualizes this process: it renders visible in a spatial medium a fold within time. The [reader of the text], looking on from without, inhabits neither time zone, and is interpellated into this problematic space as on more complication, one more fold, in time.

Pausanias writes into his *Description of Greece* many folds in time; as narrative time unfolds, the reader is left to negotiate time's contours and reflect on which constellations impact on which spaces and how.

<p style="text-align:center">*****</p>

This paper offers preliminary reflections on some of the ways time and space intersect in Pausanias. Although provisional, nevertheless, two important themes have emerged. The first relates to how the narrative is put together. Going against the historiographic tradition, Pausanias asserts a hierarchy of space over time. The spatial dimension is further underlined by the configuring of space and place in terms of movement, as Pausanias and his reader travel around promontories, enter cities, ascend acropoleis, etc. His appropriation of the historiographic metaphor of the 'path of words', first trialled and trailed in Herodotus, where spatial adverbs turn time into space, cements the impression of taking a literal route around Greece. The strong impression of path making renders the breakages or slippages even more prominent. Though there are various ways in which Pausanias obstructs the flow of his route-based narrative (such as by taking a spatial overview or by comparing different places), by far the most prevalent and disruptive are his accounts of past events and peoples related in some way to the places and objects he describes. Introducing different values as well as different times, these multiple and varied chronotopes interrupt and reroute one another (cf. Levine 2015: 48, 106, 119-20), as much criss-crossing and cutting across Greece's topography as mapping it out and providing a historical basis for it.

As well as the impact on the formal aspect of the text, a chronotopic analysis can also shed light on the meaning that can be ascribed to that topography. Examining

Pausanias's *Description of Greece* as a prime example of a historical, non-Cartesian geography, 'woven together out of ongoing stories' (*logoi*) of the people who moved through or put their stamp on the space, enables each place to be understood 'as a moment within power-geometries, as a particular constellation within the wider topographies of space, and as in process, as unfinished business' (Massey 2005: 131). A stark manifestation of this unfinished business is Pausanias's disruption of chronological time and a sequential temporal model, which has the effect of resisting the pull of linear progress (cf. Blanshard et al. 2020: 163). Instead, the multiple time-space dimensions of the *Description* make picking one's way through Greece (and its histories) difficult, full of discovery, and fraught with the risk of finding our own sense of progress — both spatial and temporal — frustrated, questioned or undermined. This is not so much to stress a continuity with the past (Bowie 1996; Whitmarsh 2015), or to view the past as shadowing our every step, as to acknowledge that the past — in all its various manifestations — exists also in the present, constantly nagging away at it.

We end with a vision of a future. Too often new digital initiatives devote time and money to building bespoke new applications that reinvent the wheel or duplicate ongoing efforts, which lead to the unwelcome further stratification of resources. Our approach puts the emphasis on the reuse and extension of data and tools that already have a community around them. This has included, as we noted briefly above, using opensource software, publishing our data as LOD, and working with or contributing to *Wikidata*, as well as other historical resources. By using *Recogito* to semantically annotate our text of Pausanias, we are not only producing data that may be of use to others, but also enabling the linking of different resources, making it more likely to use them in comparison. One additional chronotopic line of investigation that may emerge from building such a linked ecosystem would be to compare the dates attributed to the objects that Pausanias describes, as well as their spatial relations to other objects found near them, whether described by Pausanias or not. Potentially it will be those chronotopes erased or repurposed by Pausanias's account which will help us gain a more complete, if fractured, description of Greece.

**Notes**

\* The annotation strategy for marking places in Pausanias was implemented in phase one of the *Digital Periegesis* (2018-2021), funded by the Marcus and Amalia Wallenberg Foundation, with critical input from additional team members Nasrin Mostofian, Linda Talatas and Cenk Demiroglu. The ten books of Pausanias have been geo-annotated by: Barker (1); Konstantinidou (2); Kiesling (3, 6, 8, 9, 10); Talatas (4, 5); Foka and Mostofian (7). The Book 1 annotations (discussed here) are accessible via: http://recogito.humlab.umu.se/document/vg4xbkht7tblkt. For helping to guide our way through Pausanias's landscape, we thank Jaś Elsner, Greta Hawes, Johanna Hanink, Jason König and Maria Pretzler, and especially our two anonymous referees and the editors of this volume. As with the translations, any stumbles are ours.

[1] This is not to suggest that historiography is *all* (or only) about time (the past), or geography is all / only about space (in the present): as Clarke (1999) argues, 'Human life takes place in or against the matrices of time and space simultaneously, making discussion of them as distinct entities strained' (20). It is the precise nature of their interaction, the emphases given to each, that is at issue. Referring to Clarke and Feeney (2007: 163) writes: 'What happens when time hits space, as Katherine Clarke has shown us in her studies of history and geography, is that space becomes place: mere area becomes significant locality once it becomes a historical venue for agents moving in plotted time.' We see space becoming place in Pausanias precisely by the injection of time into his itinerary. Not enough has been made of how moving through time impacts on the reader's movement through space.

[2] Specifically we use the Perseus Classical Library *Periegesis* (the 1913 text by Jones and Ormerod), in Greek, available via the Scaife viewer (https://scaife.perseus.org/reader/urn:cts:greekLit:tlg0525.tlg001.perseus-grc2). CTS URNs (Canonical Text Services Universal Resource Names) enable universally recognised citation of digital resources: https://web.archive.org/web/20220928061109/https://sites.tufts.edu/perseusupdates/2021/01/05/what-is-a-cts-urn/.

[3] This visualization — a JavaScript viewer for geospatial linked data — builds on the 2017 *Peripleo* developed by *Pelagios* as a proof of concept for showing the value of LOD. Where *Peripleo* represented an installation that harvested random LOD resources, *PeripleoLite* enables a user's curated search of LOD resources through their web browser. The re-development of *Peripleo* has taken place with funding from The Open University under the aegis of the *Pelagios Network* (https://pelagios.org/), of which the *Digital Periegesis* is a Partner. This new model of development 'in the round' within a collaborative framework is one of the immediate benefits brought about by the transition of *Pelagios* from a project dependent on a grant to its operation as a (free) formal Association of equal and interdependent Partners, each with their own source of funding (Kahn et al. 2021). *PeripleoLite* has since been taken up by, among others, the British Library (https://github.com/britishlibrary/peripleo).

[4] In his biography of Theseus, Plutarch similarly recounts Antiope and the Amazon attack (*Theseus* 27.1-27.6) but ties it to a quite different landmark at Athens — a pillar commemorating her in the Sanctuary of Olympian Zeus. I owe this point to Greta Hawes. On how Pausanias puts together different parts of the same story topographically: Gartland (2016) on Boiotian history. On Pausanias's 'mythographic topography' more generally: Hawes (2019).

[5] The resources currently linked include: the Pleiades gazetteer of ancient world places; the German Archaeological Institute's database of archaeological finds (https://arachne.dainst.org); Judith Binder's art historical database (https://dipylon.org/en/2018/05/07/judith-binders-opus-magnum/); and the *ToposText* classical library (https://topostext.org/).

[6] This is where the laborious process of creating a distinct *Wikidata* item for each notable place, person, or event Pausanias mentions comes into its own. A well-crafted query of

*Wikidata* will be able to generate in a few seconds a list of the noteworthy monuments and potentially relevant people and events that Pausanias *could have* mentioned but *did not*. One cannot tag what is not mentioned, but using *Wikidata* (and other LOD) it will be possible for anyone to shine a light on the gaps in, and identify fault lines running through, the *Description* to better understand its construction.

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