

# The Seven Sisters of Lewes?

a sceptical speculation about long-  
entangled landscapes and skylscapes

**Andy Stirling, Lewes, August 2022**

A review draft of work in progress for the Lewes Archaeology Group <sup>1</sup>

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## 1: Introduction: The Seven Hills of the Lewes Downs

The Lewes Downs is a distinctive block of Sussex chalk downland about four square miles in extent, lying to the east of the Ouse Valley, about a mile north of the South Downs across Glynde Reach. Rising between 100m and 160m above the surrounding tidal river pastures, the present near-circular form of this cluster of hills has eroded over millions of years to leave fans of winding dry valleys draining to the west, surrounded by an arc of gently rolling brows and crests of hills (Figure 1).

Many traces have been left by the people of the Lewes Downs over the past six thousand years <sup>2</sup>. These include: Neolithic long barrows, Bronze Age settlements, Iron Age burials, Romano-British fields, post-Roman earthworks, Anglo-Saxon tracks, medieval enclosures and ancient dewponds of unknown age. Perhaps most strikingly, a ring of some twenty tumuli of different ages crowns the chalk ridge, whose gentle undulations scattered on the skyline echo the rounded profiles of the hills.

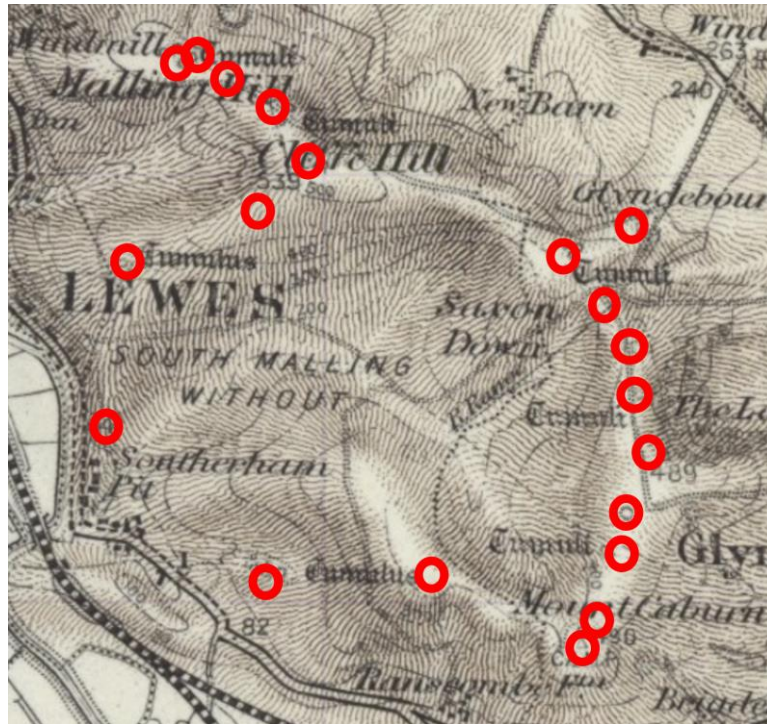


Figure 1: variously-recorded tumuli, plotted on 1850 Ordnance Survey mapping of the Lewes Downs <sup>3</sup>

One obvious query occurring to any regular walker on the Lewes Downs is, how many hills are there? This question is made more meaningful, because the Lewes Downs form such a clearly defined block of landscape. So there is little room for ambiguity about whether a given hill is inside or outside their bounds. But dangers of wishful thinking in any study like this, demand a more precise and objective definition of what counts as ‘a hill’. Is this a proper crest, a local rise, or a brow visible from below?

If a ‘hill’ is counted as a proper crest as marked by Ordnance Survey (OS) contour lines, then the answer to the query about how many hills there are in Lewes Downs, is seven. Other brows are apparent from different angles when viewed from beneath, but when visited, these can be seen not to be proper crests. Running clockwise from the North, these hills are called Malling Hill, Cliffe Hill, Saxon Down, Glynde Hill, the Caburn, Ranscombe Down and Round the Down. Marked by an especially large Bronze Age round barrow, this seventh crest is far smaller and lower than the others, almost lost among ridges and quarrying <sup>4</sup>. But it is still a lovely place to watch a Midsummer sunset.

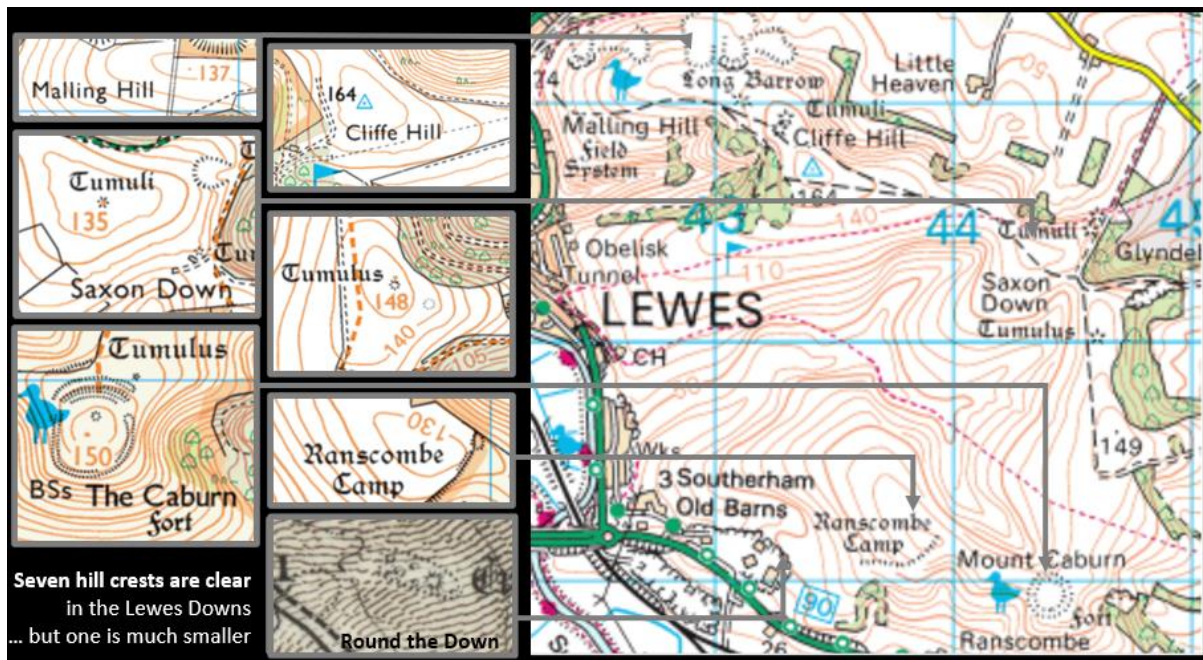


Figure 2: close-ups and distribution of seven hill crests on the Lewes Downs <sup>5</sup>

The vista of the Lewes Downs is best viewed from the top of Cliffe Hill. But only five of the other hill crests are visible from there. The lowest crest (Round the Down) is hidden behind the shoulder of Ranscombe Hill. However, the underlying pattern of the seven crests of the Lewes Downs as seen (or imagined) from above, takes the form of a deep arc, wrinkled in an open way to the west (Figure 3).

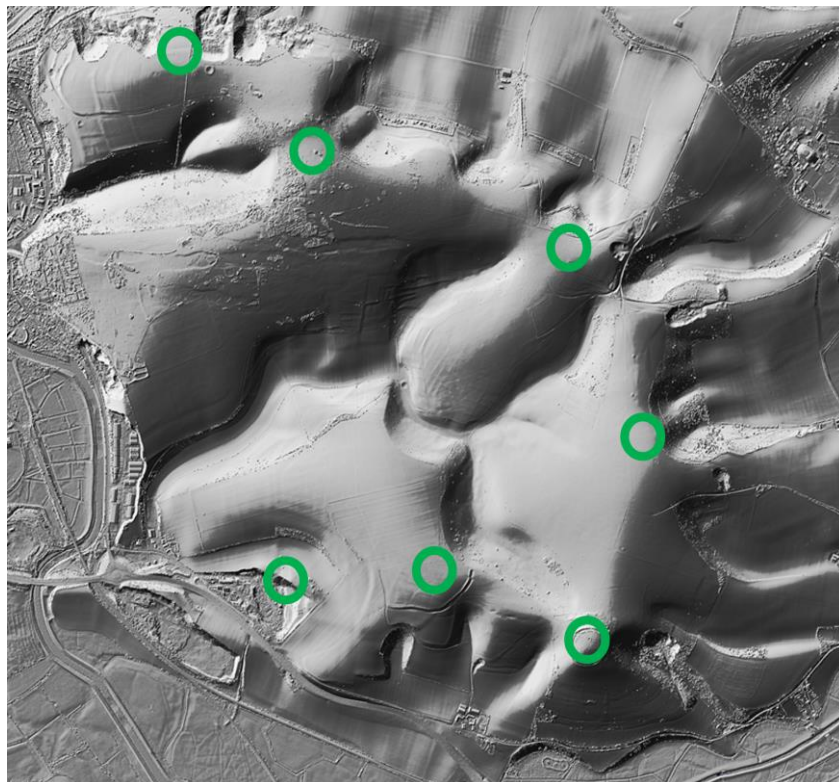


Figure 3: the basic form of the seven hill crests shown on a DEFRA lidar image of the Lewes Downs <sup>6</sup>



How might people of the past have thought about these evocative hills? In many different ways, of course! It can be inferred, for instance, from hill figures of southern England (like the Bronze Age Uffington White Horse), that the imagining of landscapes from above was a possibility <sup>7</sup>. But this is not sure for any prehistoric place or time. The truth is that despite best efforts of archaeologists, much of how past people thought cannot now be known with any confidence <sup>8</sup>. Yet speculating on this in a sceptical way can not only be fun, but may help lead to ideas that can be rigorously tested.

## 2: The Seven Sisters in Sky and Myth

Amidst many unknowns, one near certainty is that people of the past were far more aware than is our own culture, of the daily glorious mystery of the night sky <sup>9</sup>. In the British Isles, as around the world, thousands of folktales entangle landscapes with this skyscape <sup>10</sup>. Even today, people can be regularly met on the Lewes Downs, watching how Sun, Moon and Stars rise and fall over the hills <sup>11</sup>.

So, might Neolithic or Bronze Age people (for instance) have told stories linking the Sussex landscape with the rich stores of myth traced across variously-recognised constellations of stars? If so, what might most likely have been the foremost kinds of figures in the most prominent families of tales?

Despite the obscuring veils of time and diverse societies and minds, it is possible here to make an informed – albeit very hazy – guess. For there is one particular feature of the night sky that is widely acknowledged to come to the fore (for some unknown reason) more strongly than any other, in stories told across radically different cultures throughout history and around the world <sup>12</sup>. Oddly named repeatedly after a group of six or seven sisters chased by an amorous male across land and sky, this is known to astronomers as the Pleiades star cluster <sup>13</sup>. The form taken by the visible stars of this cluster is (in a way that strikingly echoes the form of the hills) a deep arc open to the west.



Figure 4: a telescope view of the Pleiades, showing how seven or so visible stars relate to others <sup>14</sup>



Figure 5: A UK view of the Milky Way (lower left to top), Pleiades (upper right) and Orion (centre) <sup>15</sup>

Often linked with the male figure of Orion some way ‘behind’ them along the ‘long white path’ of the Milky Way (Figure 5), tales of ‘Seven Sisters’ and their pursuer form what is widely thought to be the world’s most widespread folk motif <sup>16</sup>. For instance, the chasing of Seven Sisters across the land is the focus of arguably the most important of the ancestral ‘song-line’ myths of indigenous Australian cultures <sup>17</sup>. Sometimes with all seven sisters, sometimes with one disappearing, similar tales can be found across all six inhabited continents, including in traditional cultures in India, Japan, Indonesia, Canada, the USA, Egypt, New Zealand, Greece, Ukraine, Guatemala and Mexico <sup>18</sup>.

Perhaps a clue to why this motif is so uniquely wide in its distribution, is that it evidently goes far back in history – being variously described, for instance, as “*the world’s oldest story*” <sup>19</sup>. At Lascaux in France, the Pleiades feature in some of the world’s oldest cave art (Figure 6) <sup>20</sup>. Recognised by archaeologists on the German Late Neolithic Nebra Disc (Figure 7), the Pleiades are also the earliest known representation of a star formation on a European artefact <sup>21</sup>. If the stories truly are of a similar antiquity to the pictures, then tales of the Seven Sisters have been told for a very long time.



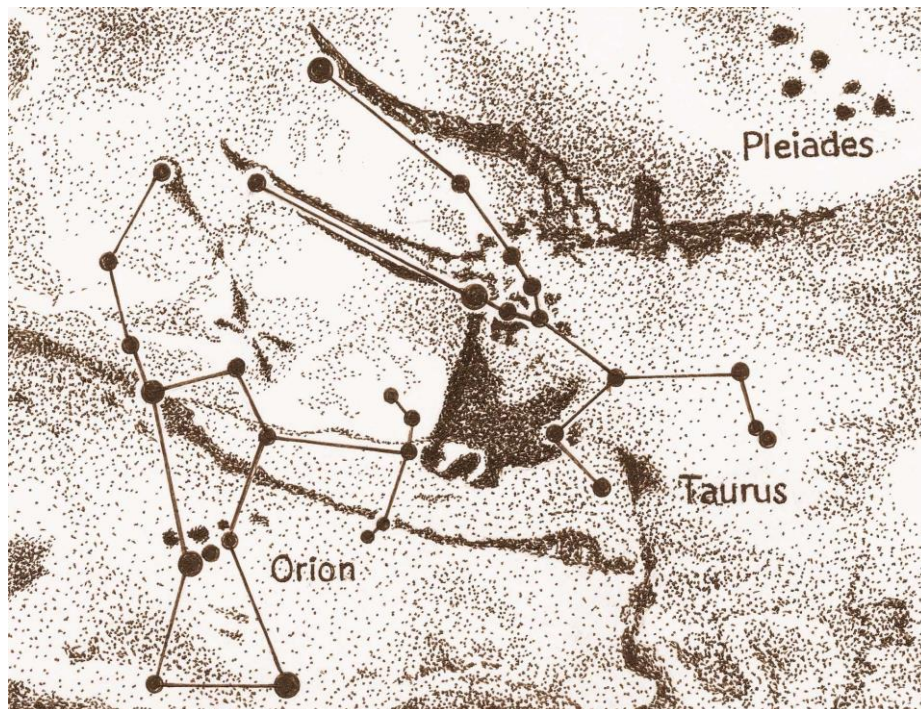


Figure 6: the Pleiades with Orion and Taurus in Salle de Taureaux, France, c.17,300 BP <sup>22</sup>



Figure 7: the Pleiades with the Sun and Moon, Nebra Disc, Germany, c.3,600 BP <sup>23</sup>

One near-ubiquitous feature of these ancient, widespread stories of the Seven Sisters, is that the little one gets lost <sup>24</sup>. Also lost, however, are any related tales from the early Sussex landscape <sup>25</sup>. Yet with the Pleiades known as ‘Freya’s Hens’ in pre-Christian England, it is a sign of the familiarity of this motif that this same name is shared with the (often six or seven) spotted ladybird <sup>26</sup>. Locally, the name ‘Seven Sisters’ is also given to the famous line of towering chalk cliffs, some twelve miles from the Lewes Downs <sup>27</sup>. Here again (through action of the sea), it is the little sister who is becoming lost.

With pre-Christian English traditions so relatively unknown, there remains little choice but some kind of careful speculation <sup>28</sup>. Accordingly, a query arises whether traces of this story may still be found in an old English nursery rhyme: *“Ladybird, ladybird fly away home; Your house is on fire and your children are gone; All except one, and her name is Ann; And she hid under the baking pan”* <sup>29</sup>? As so often among tales of the Seven Sisters, it is again the little sister who most easily falls from sight.

Either way, it is clear in general that traditions linking land and sky span nearly all traditional societies and go deep into the human past. Around the world and through history, the Seven Sisters in particular are among the most frequently referenced groups of stars. They feature strongly in English folklore. They are prominently named in the Sussex landscape. Yet – aside from this general high profile – what might the Seven Sisters possibly have to do specifically with the Lewes Downs?

### 3: Landscapes and Skyscapes in the Lewes Downs

It is here that attention might reasonably go back to the form of the hills mentioned above. For, as is just discernible from up high, this pattern of seven hill crests in the landscape (Figure 3) bears a striking resemblance to the shape of the most visible stars of the Pleiades in the skyscape (Figure 4).

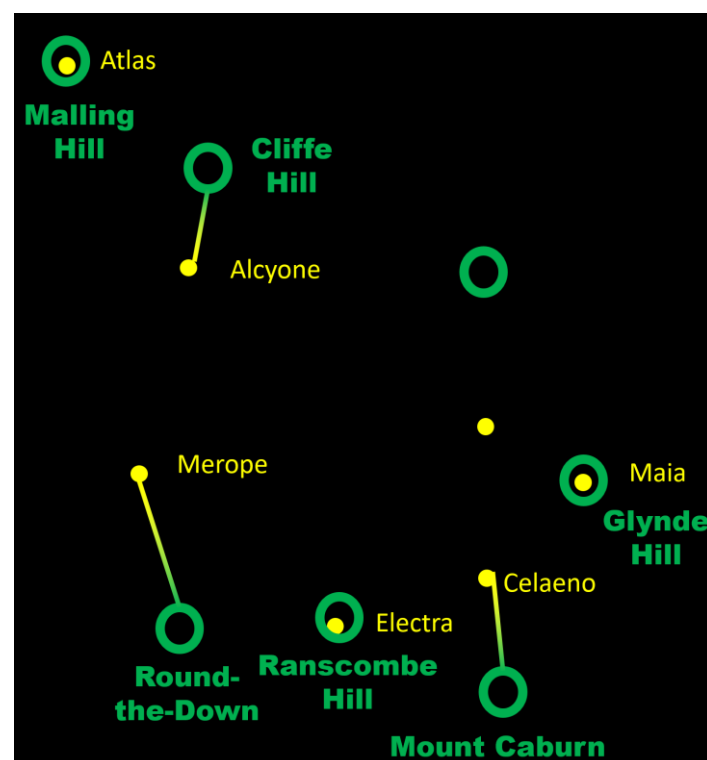


Figure 8: comparing the forms of the Pleiades (yellow) and the Lewes Downs (green)

It is a complex task to establish the magnitude of this coincidence. The Lewes Downs have taken this basic natural form for many millions of years<sup>30</sup>. The Pleiades have barely moved in their relative positions over the course of human history<sup>31</sup>. When these forms of hills and stars are mapped onto each other such as to measure the differences in their mutual positions (Figure 8), it can be seen that these are relatively minor compared with the similarities. So, the degree of serendipity involved might reasonably be thought to be quite notable. Simulations of seven randomly-generated points suggest that the likelihood of such a convergence forming by chance is less than one in a million.

Perhaps also notable here (especially in the yellow-marked Pleiades stars shown in Figure 8), is the folklore reference to a 'baking pan' remarked on above. Does the deeply-arc'd side profile of this tool evoke the deeply arc'd form shared both by the Seven Sisters and by the Lewes Downs hills?

Either way, it is not an entirely eccentric thought, to muse whether this remarkable concordance of forms in hills and stars might have been noticed in the past? That the bright night sky made stars more prominent for past cultures than now supports such thoughts. It follows from the ubiquity and age of the Seven Sisters motif discussed above, that this would likely have featured in stories told by the people of the Lewes Downs. But (aside from clues in the name of the nearby Seven Sisters cliffs), what else can be gleaned about the possible thinking in past Sussex cultures about land and sky?

Again, the most important factor here is the fog of time. Great perils arise in enthusiastic projections into remote pasts<sup>32</sup>. But, this very predicament of unavoidable ignorance, also threatens a converse error of assuming '*absence of evidence is evidence of absence*'<sup>33</sup>. With care rather than credulity, then, many kinds of insight may cast light. So the philosophy of knowledge suggests that value may be yielded by a cautious, self-questioning, constantly self-testing kind of 'sceptical speculation'<sup>34</sup>.

In this light, it is striking that archaeologists are increasingly recognising the importance played by landscape forms in prehistoric imaginations<sup>35</sup>. It is growing ever clearer, for instance, how Neolithic monuments were often placed very carefully on skylines (rather than exactly on hilltops), so as to be clearly inter-visible from each other<sup>36</sup>. More generally, Neolithic people seem to have been fascinated by other juxtapositions of near and distant land-edges<sup>37</sup>. An example here can be found in the way the massive earthen mound of Silbury Hill in Wiltshire is positioned so that its summit just marginally intercepts the skyline as seen from inside the nearby Avebury henge (Figure 9)<sup>38</sup>.



Figure 9: a Neolithic fascination with the sky-lining of monuments in landscapes<sup>39</sup>



Of greater present significance is a particular example of Neolithic sky-lining that can be found in the Lewes Downs, where the Camel's Humps long barrow on Cliffe Hill, is carefully sited on a slope, such as to be visible from the nose of the low ridge on the opposite side of the Ouse Valley (Figure 10) <sup>40</sup>.

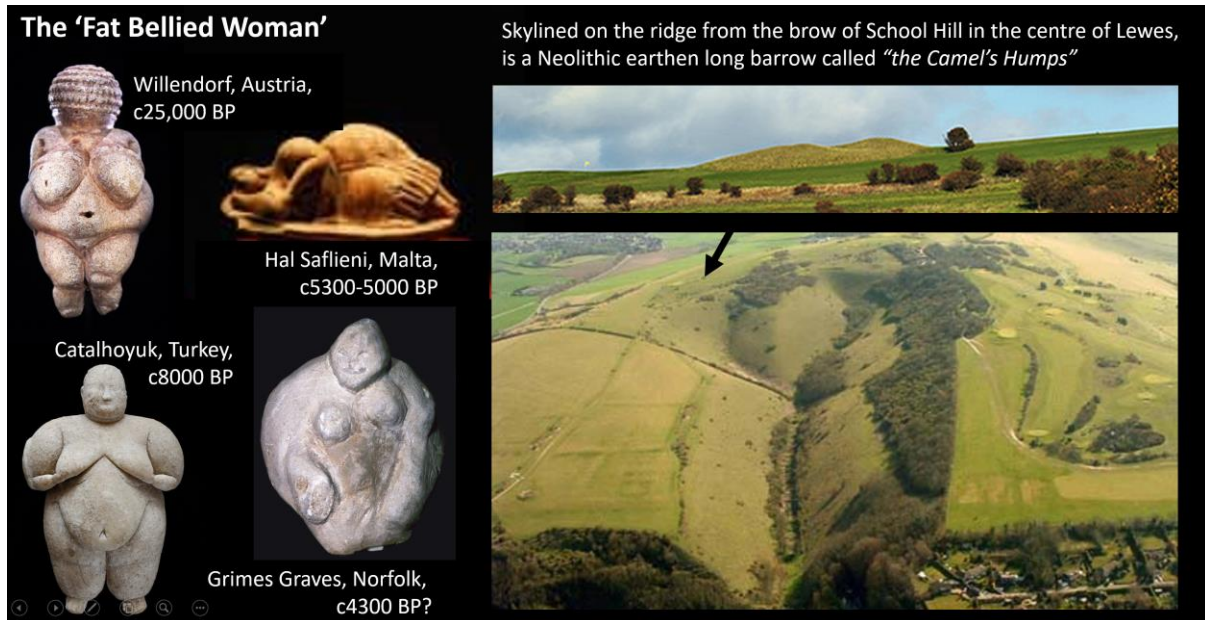


Figure 10: female figures in the Eurasian Neolithic (and earlier) and in the Lewes Downs landscape

A wider suggestion also relevant to the Seven Sisters, concerns the possible importance of female figures in Neolithic landscapes. It has been asked, for instance, whether earthworks around the six- or seven-tiered Silbury Hill in Wiltshire, might knowingly resemble 'Mother Goddess' figurines of the time (some in southern Europe with six- or seven-tiered skirts) <sup>41</sup>. Here again, the Lewes Downs chime tantalysingly. For beneath the Camel's Humps long barrow, between the 'legs' of Malling Coombe, the strikingly 'pregnant' form of Cliffe Hill has earned the local name of 'Fat Bellied Woman' <sup>42</sup>. The age of this name is not known. But whether passed down by history or recently directly evoked by the landform, it testifies to an imagined female figure associated with these hills.

Moving from landforms in general, to more specific links between land and sky, archaeologists have long recognised the importance of these connections too, both in Neolithic and Bronze Age British societies <sup>43</sup>. They are evident, for instance, in the many astronomical alignments observed in English monuments of this period – including at the Devil's Jumps, Heyshott Down and the Amex Stadium in Sussex <sup>44</sup>. Current work by members of the Lewes Archaeology Group is actively researching the astro-archaeology of the Ouse Valley to the west of the Lewes Downs <sup>45</sup>. And with people still climbing Chapel Hill at the edge of the Lewes Downs, to watch the sun "roll down Offham Hill" on Midsummer Eve, cultural links between land and sky are clearly evidently not yet dead in this area <sup>46</sup>.

#### 4: Sceptical Speculation about the ‘Seven Sisters of Lewes’

So, where does all this leave us? What might we say about ways in which people of this area have thought about the land and sky in the distant past? How much confidence may we place in this? Here – as emphasised earlier – great caution is needed. In gauging speculations, one of the surest safeguards lies in finding ways concretely to test ideas against emerging evidence. At this early stage of the present enquiry, the jury is out. But there do already emerge a few relevant reflections.

First, if it is indeed the case that local prehistoric people made an association between the Lewes Downs and the Seven Sisters, then a general prediction might focus on the likelihood that unfolding archaeological research may uncover a growing importance here of links between land and sky.

Here, the present general ideas about the possible value of ‘*sceptical speculation*’ can align strongly with wider recent moves in British archaeology towards an interpretive approach – especially in the study of the Neolithic <sup>47</sup>. Tellingly, it was only after completion of the work described here, that the present author found in searches on Google Scholar, that studies of this period published in the past few years are indeed illuminating exactly the kinds of general land/sky links this work points to. In 2015, a leading scholar in this field, Fabio Silva, started an academic journal dedicated to *Skyscape Archaeology* <sup>48</sup>. Among significant recent contributions to this literature, is research by John Grigsby, who observed of British Neolithic sites that “*the ‘skyscape’ was as important to the builders of these monuments as the ‘landscape’, if not more so*” <sup>49</sup>. This lends support to the present work.

A second relevant development occurring after completion of the present stage of work, also arises from Grigsby’s study of British Neolithic sites. Although neither the Pleiades nor any Sussex places presently feature directly in his research, Grigsby’s analysis shows for the first time that Neolithic henge sites often align on the rising and setting of precisely the triad of star formations (Orion, Milky Way and the Pleiades) that are most connected with the stories of the Seven Sisters (Figures 5 and 6) <sup>50</sup>. He reports such alignments “*on or around the Winter Solstice, on the rising and setting of Orion, and with the rising of the sun as it crosses the Milky Way around the start of May*” <sup>51</sup>.

In particular, Grigsby noticed that astronomical cycles led this triad to become especially significant in Neolithic skies. He says “[t]he ‘linear’ form of the Milky Way seen across the sky becomes ‘circular’ when it rings the horizon, a phenomenon visible between c. 6000 to 2000 BC, but most apparent c 4000-3000 BC” <sup>52</sup>. Shown in Grigsby’s diagram below (Figure 11), this recognition casts possible light on why these skyscape features might have been especially significant in the Neolithic.

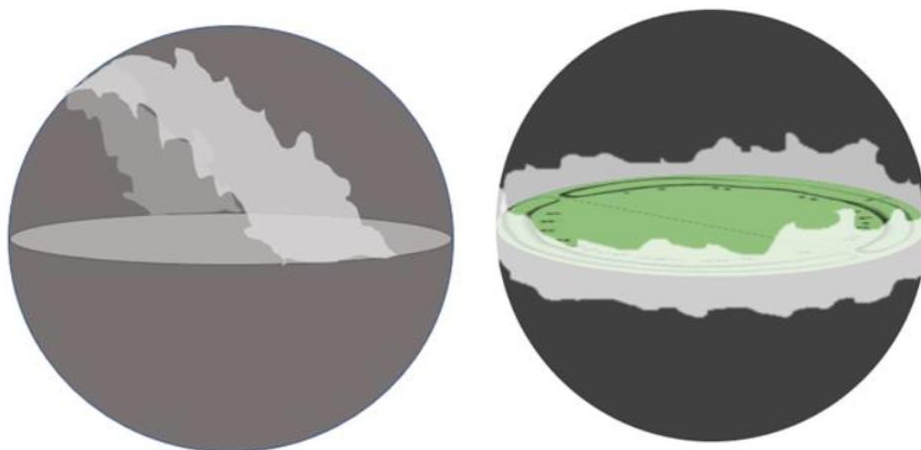


Figure 11: historic cycling of the Milky Way in the night sky: left at present; right in the Neolithic <sup>53</sup>

On this basis, Grigsby wonders whether *“the long chalk forms of Long Barrows, then, and perhaps the cursus monuments which sometimes accompanied them, might have reflected the long white path of the Milky Way across the sky”*<sup>54</sup>. Implicitly but remarkably, this recalls ways in which the Milky Way features centrally in stories around the Seven Sisters song-line<sup>55</sup>. Here this ‘long white path’ in the sky is traced in a continent-spanning braiding of paths across the Australian landscape<sup>56</sup>.

Once again a notable resonance with these evocative associations emerged only after this work was completed. In a 2021 South Downs National Park photography competition (again found in a Google search of key terms from this work), several competitors highlighted a striking echo between the ‘long white path’ of the Milky Way and the long white stretch of the South Downs (eg: Figure 12)<sup>57</sup>.

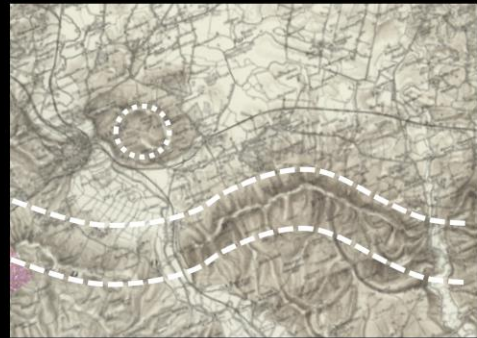
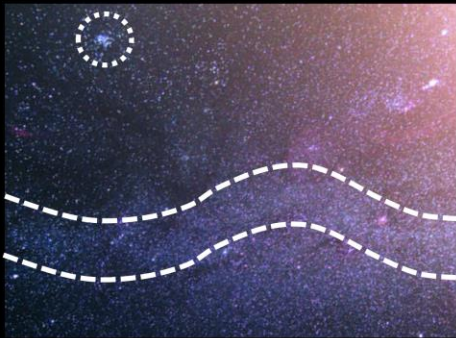


*Figure 12: The Milky Way from Cissbury, Neil Jones, 2021*<sup>58</sup>

This adds a further possible insight to the present sceptical speculation that strong cultural presence and a remarkable concordance of forms, might have led in the past, to the seven hills of the Lewes Downs becoming associated with the Seven Sisters of the Pleiades. For (as illustrated in Figure 5) each also share a similar relationship with a local ‘long white path’. For their part, the Lewes Downs are situated just to the North of the winding linear white-coloured landscape formation of the South Downs. The Pleiades, on the other hand, lie similarly just aside from another ‘long white path’ – that traced so beautifully (and so visibly) by the course of the Milky Way across the night sky (Figure 13).



The Seven Sisters star cluster sits just aside from the 'long white path' of the Milky Way ...



... the Seven Hills of Lewes sit just aside from the 'long white path' of the South Downs

*Figure 13: echoing 'long white paths' in the Neolithic skyscape and Sussex landscape*

### 5: A Testable Prediction of a Possible Prehistoric Viewing Point

These reported resonances occurring after finishing the present stage of work, might be reckoned worthy of further thought. But they fall short of a key aspiration in sceptical speculation, to come up with 'testable' propositions<sup>59</sup>. So it is in this regard, that we come to a third and final development after completion of this work. This was prompted by further reflection on a point mentioned above (and illustrated in Figure 9), concerning the evident fascination of Neolithic people with the sky-lining of what they held to be significant features in their landscapes<sup>60</sup>. This raises a query about whether there might be any point from which can be seen all the seven crests of the Lewes Hills?

It was mentioned earlier that only six of these seven hill crests can be seen from the highest point on the Lewes Downs, the top of Cliffe Hill. As with the Pleiades, the 'smallest sister' among the hills (Round the Down) can all too easily disappear from view. Reaching only 50m in elevation above the Ouse Valley and positioned just above a winding chalk coombe on the flank of Ranscombe Hill, this crest is a bit of an anomaly. But the sceptical need for an objective definition of what counts as a hill (discussed above), means that this example must be included among the total of seven. So, perhaps there is a different site, from which this crest can indeed also be seen, alongside all the others?

In terms of topography, there is no necessity that there be any such special viewing point from which all seven hills of the Lewes Downs might be visible. So it is remarkable that field-walking readily confirms not only that there is exactly just such a spot, but that it is only a few square meters in extent. Traversing the tight boundaries around this spot puts one or other hill crest out of sight. And all the more striking, is that this special spot happens to straddle the route of an ancient footpath.

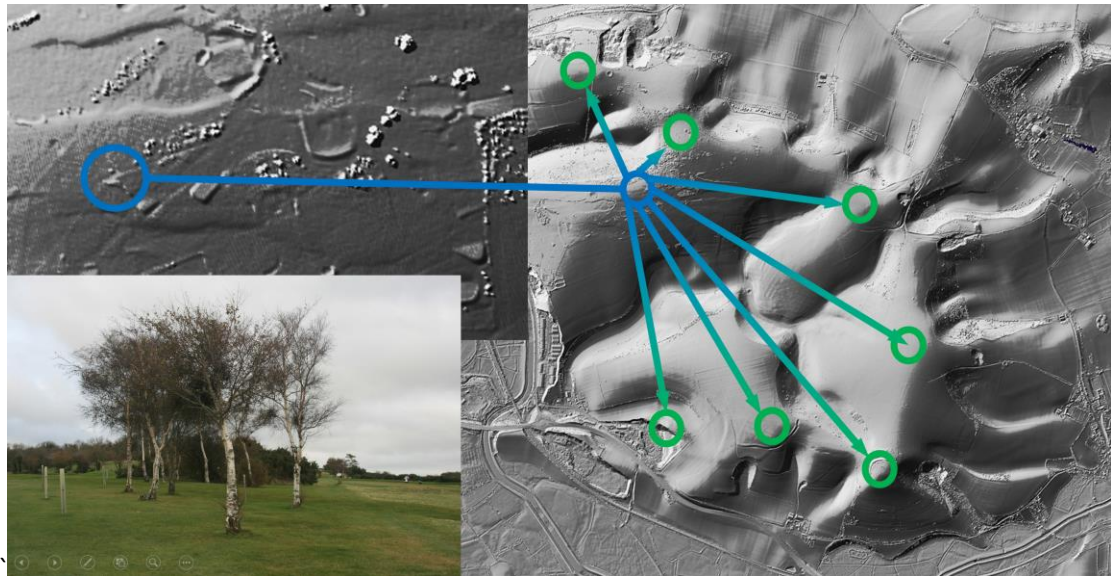


Figure 14: a unique viewing point from which can be seen all seven hill crests of the Lewes Downs

Located on Lewes Golf Course just to the south of a rather evocative stand of birch trees (Figure 14), this viewing point is also an example of natural serendipity. Within a few paces, each of the crests of all seven hills can be seen profiled either against the sky or behind another hillside (Figure 15). If Neolithic people were indeed interested in the sevenfold count of Lewes Downs hills, then the taste of that culture for inter-visibility might be thought likely to have lent this location some significance.

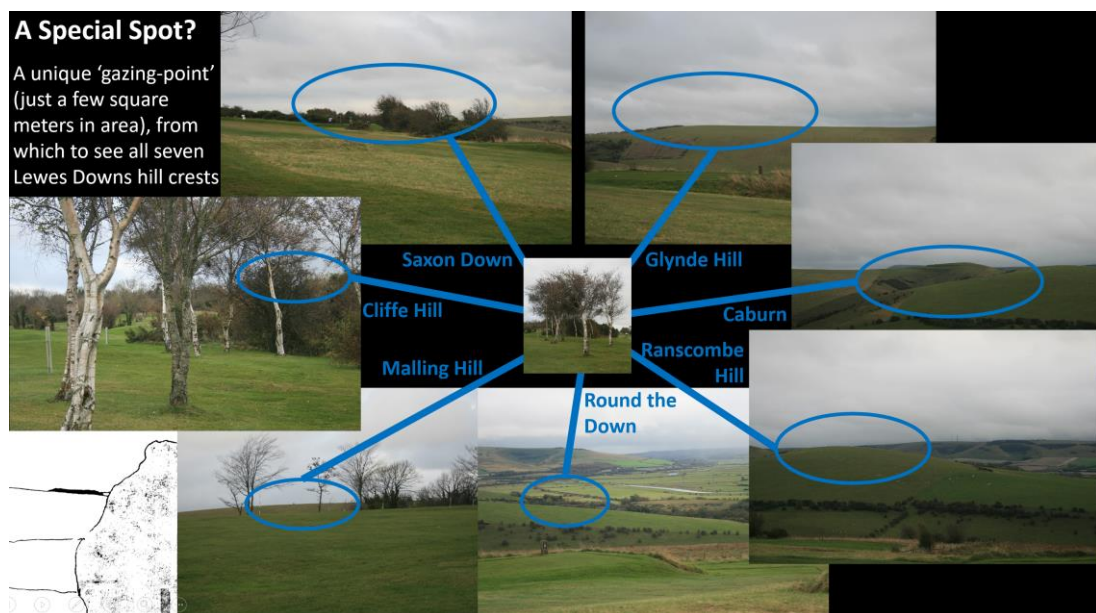


Figure 15: as evidently favoured in Neolithic landscape sensibilities (lower left – see Figure 9) all seven crests are sky-lined and / or marginally profiled against an intervening hillside

This last speculation is important, because the prediction of prehistoric significance at this precise location is concretely testable in principle by archaeological excavation or non-invasive geophysics.

## 6: Conclusion: Seven Sisters in the Prehistoric Lewes Downs

The findings of this work in progress are easily summarised. The seven hill crests of the Lewes Downs are strikingly congruent in number and form, with the Seven Sisters of the Pleiades star cluster. A very low probability of such precise spatial congruence occurring by chance, makes this a significant natural coincidence. Seven Sisters folklore is uniquely widespread across the world's diverse cultures and repeatedly prominent in the deep past. Among both hills and the stars, it is the smallest, that is most distinctively prone to be lost. Traces of Seven Sisters folklore survive in the Sussex landscape. The Lewes Downs are still associated with a mythical female figure. Links between landscapes and skiescapes are known to have been central to Neolithic British cultures. So this remarkable coincidence in natural forms may reasonably be judged likely to have been noticed in the past.

Beyond this, the illumination of the above patterns in this work might be reckoned to offer some further possible value in the support lent to a number of additional insights by other researchers.

First, this work adds to currently growing attention in archaeology to the previously neglected general importance of likely links made in prehistoric cultures between landscapes and skiescapes.

Second, this work reinforces recent research on the British Neolithic that points to the particular significance of a specific triad of star formations (Orion, the Milky Way and the Pleiades) and highlights that these are those that are most connected with the Seven Sisters mythology.

Third, this work begins to open possibilities for further research in archaeology, folklore and history, asking whether the prominence in nearby Sussex topography of the 'long white path' of the South Downs, may (in echoing the Milky Way in relation to the Pleiades) also resonate with this myth.

Fourth (and most concretely testable), this work identifies a unique and very specific location that would have formed an especially significant site for any culture that did recognise this congruence between landscape and skyscape. This can be verified or falsified in further archaeological research.

Fifth (and most generally), this work seeks to demonstrate a complementary style for archaeological interpretation in 'sceptical speculation'. According with general moves in archaeology towards more explicit and open styles of interpretation, the present case study may also be salient elsewhere.

Finally (and perhaps most important), a chance may be offered here, for enhancing enjoyment of the unique natural beauty and archaeological richness of this patch of the South Downs. I hope this work might help more fun to be had in the Lewes Downs – perhaps including onward collaborations?



Figure 16: a graphic summary of the whole study: stars, skylines, skiescapes, landforms, hill crests



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## 7: Endnotes, References and Sources

- <sup>1</sup> The study described here is work in progress. The present text is intended as a means to collect queries, comments, corrections and other feedback. Please send all thoughts to: [a.c.stirling@sussex.ac.uk](mailto:a.c.stirling@sussex.ac.uk)

The author is very grateful to members of the Lewes Archaeology Group for discussions following a presentation of an earlier form of this work at a meeting in Lewes Town Hall on 19<sup>th</sup> November 2021.

Led by Paula Cohen, the Lewes Archaeology Group meets regularly to discuss local archaeological and historical issues, occasionally engaging in research and fieldwork: <http://www.lewesarchaeology.org.uk/>

Particular debts are owed for comments on this work as well as broad education and inspiration on related issues over many years to: John Bleach, Paula Cohen, James Fairhead, Gail Vines and Frances Wakeford.

The author is also very grateful for time taken by leading archaeologists in the field to give encouraging comments on the initial presentation, including: Richard Bradley, Nick Campion, Timothy Darvill, John Grigsby, Fabio Silva and Chris Tilley. The many flaws that remain are of course entirely the author's fault.

Leading archaeoastronomy expert Fabio Silva of Bournemouth University later gave an excellent talk to the Lewes Archaeology on *Group What's wrong with archaeoastronomy? (and how to fix it...)*, 6<sup>th</sup> May 2022

- <sup>2</sup> The broad kinds of sites referred to here are drawn from evidence contained in a large number of sources, especially articles published since 1848 in the journal of the Sussex Archaeology Society *Sussex Archaeology Collections*. Arguably the best single recent general survey of the archaeology of an immediately adjoining area is: Moore D, Allen M J, Rudling D, (eds) *Archaeology of the Ouse Valley to AD 1500: a tribute to Dudley Moore and archaeology at Sussex University CCE*. (Archaeopress Archaeology, 2016).
- <sup>3</sup> The sites marked for tumuli were collected by the author from across all Ordnance Survey maps of the Lewes Downs available online from the National Library of Scotland. The background Ordnance Survey 25 inch mapping dated to the 1850s is sourced from the same site: <https://maps.nls.uk/os/>
- <sup>4</sup> One especially excellent source both for this particular site and for the wider archaeology of the Lewes Down is: Vines G, Price F., Remembering 'Round-the-Down': topographic perspectives on early settlements and land use at Southerham, near Lewes. *Sussex Archaeol. Collect.* **143**, 117–134 (2005).
- <sup>5</sup> All insert and background maps in Figure 2 with contours are reproduced from Ordnance Survey 1:50,000 mapping dated to 2021 sourced from: <https://www.ordnancesurvey.co.uk/>
- The stippled insert map of Round the Down is reproduced from Ordnance Survey 25 inch mapping dated to the 1850s and sourced from the National Library of Scotland: <https://maps.nls.uk/os/>
- <sup>6</sup> The hill crest sites are from Ordnance Survey 1:50,000 mapping. background imagery is from the DEFRA Data Services Platform dated 2019: <https://environment.data.gov.uk/DefraDataDownload/?Mode=survey>
- <sup>7</sup> About 190 miles from the Lewes Downs and dated to between 1740 and 210 BCE, the relevance of this famous large hillside Wiltshire 'geoglyph' is that its prehistoric builders clearly conceived of it in at least some important sense as being visible from above, which is the angle shown in other prehistoric representations of essentially the same motif. More can be read in: Miles D, Palmer S, Lock G, Gosden G, Cromarty A M. *Uffington White Horse and its Landscape: Investigations At White Horse Hill, Uffington, 1989–95, And Tower Hill, Ashbury, 1993–4* (Oxford Archaeology, 2003); Pollard J, The Uffington White Horse geoglyph as sun-horse. *Antiquity* 356, 406–420 (2017).
- <sup>8</sup> One especially useful wide-ranging collection of reflections on this conundrum in the important field of interpretive archaeology can be found in Thomas J, (ed) *Interpretive Archaeology: a reader*. (Leicester University Press, 2000).
- <sup>9</sup> Some useful discussion of this can be found in: Ruggles C, Urton G, (eds) *Skywatching in the ancient world: new perspectives on cultural astronomy*. (University Press of Colorado, 2007).
- <sup>10</sup> Two excellent recent overviews of different aspects bearing on these links can be found in: Ruggles C, *Handbook of Archaeoastronomy and Ethnoastronomy*. (Springer, 2015); Silva F, Campion N, (eds) *Skyscapes: the role and importance of the sky In archaeology*. (Oxbow Books, 2015).

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- <sup>11</sup> This suggestion is substantiated in light of later discussion in endnote 46.
- <sup>12</sup> One particularly good compilation in a very broad field of literature is Andrews, M. *The seven sisters of the Pleiades: stories from around the world*. (Spinifex, 2004).
- <sup>13</sup> For this in a wider context, see: Aveni, A. *Star Stories: constellations and people*. (Yale University Press, 2019).
- <sup>14</sup> The image in Figure 4 is taken from Mann A, *Pleiades: The Seven Sisters star cluster* (accessed 16<sup>th</sup> November 2022): <https://www.space.com/pleiades.html>
- <sup>15</sup> The image in Figure 5 is taken from Smale D, The night sky in November, UK Space Agency, 2020 (accessed 16<sup>th</sup> November 2022): <https://space.blog.gov.uk/2020/11/03/the-night-sky-in-november/>
- <sup>16</sup> See references in notes 12 and 13 above, also: Selin H., Xiaochun S. (eds). *Astronomy Across Cultures. Science Across Cultures: The History of Non-Western Science*. (Springer, 2000)
- <sup>17</sup> As also discussed In references in notes 12 and 13 above, First Nation Australian song-line myths involving this story gained international prominence as this study was underway in 2021, with permission being given for the first time for artefacts and knowledge concerning the Seven Sisters Song-line to be made public and exhibited in a series of extraordinary exhibitions around the world – see: Wroe N, Songlines: the Indigenous Australian exhibition preserving 65,000 years of culture, *Guardian*, 25<sup>th</sup> October 2021 (accessed 16<sup>th</sup> November 2022): <https://www.theguardian.com/artanddesign/2021/oct/25/songlines-the-indigenous-australian-exhibition-preserving-65000-years-of-culture>
- <sup>18</sup> In addition to references in notes 12 and 13 above, an excellent summary of the breadth and richness of these international traditions can be found in the Wikipedia entry on *Pleiades in folklore and literature* (accessed 16<sup>th</sup> November 2022): [https://en.wikipedia.org/wiki/Pleiades\\_in\\_folklore\\_and\\_literature](https://en.wikipedia.org/wiki/Pleiades_in_folklore_and_literature)
- <sup>19</sup> For an overview of these issues, see Norris, R, The world’s oldest story? Astronomers say global myths about ‘seven sisters’ stars may reach back 100,000 years, the Conversation, 21<sup>st</sup> December 2020 (accessed 16<sup>th</sup> November 2022): <https://theconversation.com/the-worlds-oldest-story-astronomers-say-global-myths-about-seven-sisters-stars-may-reach-back-100-000-years-151568>
- <sup>20</sup> See Rappenglück M A, The Pleiades in the ‘Salle des Taureaux’, grotte de Lascaux. Does a rock picture in the cave of Lascaux show the open star cluster of the Pleiades at the Magdalenian Era (c.15,300 BC)? in *Astronomica en la Cultura* (eds. Jaschek, C. & Barandela, F. A.) (Universidad de Vigo, 2016).
- <sup>21</sup> See: Pernicka, E. *et al.* Why the Nebra Sky Disc Dates to the Early Bronze Age. An Overview of the Interdisciplinary Results. *Archaeol. Ausriaca* **104**, 89–122 (2020).
- <sup>22</sup> The image in Figure 6 is from Gnez D, Paleo-Astronomy, *Tree of Visions*, 29<sup>th</sup> April 2015 (accessed 26<sup>th</sup> November 2022): <https://treeofvisions.wordpress.com/2015/04/29/paleo-astronomy/>
- <sup>23</sup> The image in Figure 7 is from Wikipedia, with credit to Frank Vincentz, April 2022 (accessed 16<sup>th</sup> November 2022): [https://en.wikipedia.org/wiki/Nebra\\_sky\\_disc#/media/File:Nebra\\_disc\\_1.jpg](https://en.wikipedia.org/wiki/Nebra_sky_disc#/media/File:Nebra_disc_1.jpg)
- <sup>24</sup> See references in notes 12 and 13 above.
- <sup>25</sup> For instance, despite the relative prominence of Seven Sisters placenames – and Sussex being a county of particular interest to one of the authors of a canonical and otherwise comprehensive summary of English folklore motifs – there is no mention at all of any stories specifically attached to the Pleiades in Simpson J, Roud S A, *Dictionary of English Folklore*. (Oxford University Press 2000) or in Simpson J. *Folklore of Sussex*. (History Press, 2009).
- <sup>26</sup> The attribution is widely discussed in relation to Viking star-lore. A nice short musing on this theme can be found in Howard-Hobson J. *Freya’s Hens*. (Manticore Press 2020) – accessed (16<sup>th</sup> November 2022): <https://manticore.press/2016/05/21/freyas-hens/>
- <sup>27</sup> Giving its name to the Lighthouse built near its summit in 1832, *Belle Tout* (sometimes glossed as “*all beautiful*”) is the lowest and most southerly of the Seven Sisters cliffs, most in danger of marine erosion. Non peer-reviewed background on this site (accessed 16<sup>th</sup> November 2022) is given by Rob Wassell here: [https://www.belletoutlighthouse.co.uk/questions/#:~:text=Where%20does%20the%20name%20Belle,Head%20\(1724%20reference%20thereon\)](https://www.belletoutlighthouse.co.uk/questions/#:~:text=Where%20does%20the%20name%20Belle,Head%20(1724%20reference%20thereon))

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- <sup>28</sup> Some related issues are well explored in Trubshaw, B. *Explore Folklore*. (Albion Press, 2010).
- <sup>29</sup> This nursery rhyme is one of the most persistently well-known in the English tradition and credited with having inspired the resurgence of folklore studies in the twentieth century – see reference in endnote 25.
- <sup>30</sup> Gallois R W, *British Regional Geology: The Wealden District* (Inst. Geological Sciences, 1965)
- <sup>31</sup> Norris R P, Norris B R M, Why are there Seven Sisters? in *Advancing Cultural Astronomy: Studies In Honour of Clive Ruggles* (eds. Boutsikas, E., McCluskey, S. & Steele, J.) (Springer, 2021).
- <sup>32</sup> See discussions in Gazin-Schwartz A, Holtorf C, *Archaeology and Folklore*. (Routledge 1999).
- <sup>33</sup> See discussion of approaches to incertitude in Stirling, A. Keep it complex. *Nature* **468**, 1029–1031 (2010).
- <sup>34</sup> Albeit not a first use of the term, this understanding of “sceptical speculation” is my own for the purpose of this study. More details of relevant principles that bear on this own approach were outlined in the talk cited in endnote 1. Associated growing interest in the value – even necessity – of speculation is evident in recent works like: Achinstein P. *Speculation: within and about science*. (Oxford University Press, 2019); Currie A, Epistemic Optimism, Speculation, and the Historical Sciences. *Philos Theor Pr. Biol* 11, 7 (2019); Swedberg R, Does Speculation Belong in Social Science Research? *Sociol. Methods Res.* 50, 45–74 (2021).
- <sup>35</sup> See various angles on this in David B, Thomas J, *Handbook of Landscape Archaeology*. (Routledge, 2008).
- <sup>36</sup> See: Bradley R. *The Significance of Monuments: on the shaping of human experience in neolithic and bronze age europe*. (Routledge, 1998); Edmonds, M. *Ancestral Geographies of the Neolithic: Landscape, Monuments and Memory*. (Routledge, 1999); and Scarre C, (ed) *Monuments and Landscape in Atlantic Europe: perception and society during the neolithic and early bronze age*. (Routledge, 2002).
- <sup>37</sup> See: Thomas, J. *Understanding the Neolithic*. (Routledge, 1999).
- <sup>38</sup> As illuminatingly noticed by Devereux P. Three dimensional aspects of apparent relationships between selected natural and artificial features within the topography of the Avebury complex. *Antiquity* **65**, 894–8 (1991).
- <sup>39</sup> The image in Figure 9 is taken from the reference in end-note 38.
- <sup>40</sup> This nose now forms the central cross-roads on the High Street of the town of Lewes. I am grateful to John Bleach for being the first person (I think) to point this out to me. John Bleach is also responsible for discovering an unusual concentration of exceptionally large conical prehistoric or Romano-British mounds in Lewes, destroyed in the early modern period: Bleach J, A Romano-British (?) barrow cemetery and the origins of Lewes *Sussex Archaeological Collections* 135 (1997): 131–42. This has heightened interest in the skylining of the Camel’s Humps long barrow from the enigmatic Priory Tump in Lewes, all the more so because the orientation of this alignment is close to the Midsummer sunrise – cf: *Modern Antiquarian* on Lewes Tump (accessed 16<sup>th</sup> November 2022): <https://www.themodernantiquarian.com/post.php/24106>. However, interpretations that this might be a trace of prehistoric intervisibility are challenged by recent core sampling which suggests a medieval date for the Tump: Leary J. *The Mount, Lewes: ancient monument, medieval fortification... or garden feature?* (accessed 16<sup>th</sup> November 2022): <https://roundmoundsproject.wordpress.com/2016/10/05/the-mount-lewes-ancient-monument-medieval-fortification-or-garden-feature/comment-page-1/>.
- <sup>41</sup> This suggestion is explored in detail in Dames M. *The Silbury Treasure: The Great Goddess Rediscovered* (Thames and Hudson 1976).
- <sup>42</sup> This name was told to the author (in a rather knowing way) in 1988 by Bill Bates, a lifelong resident from a longstanding Lewes family and Chair of the Malling Coombe allotments, which lie within this evocative narrow straight-sided valley. This name has also been taken by a local morris group: [https://morrisdancedatabase.org.uk/dances.php?action=show&dance=1570&return=show\\_team&team=861](https://morrisdancedatabase.org.uk/dances.php?action=show&dance=1570&return=show_team&team=861)
- <sup>43</sup> See references in endnote 10 also discussed in: Henty L. Skyscape Archaeology: an emerging interdiscipline for archaeoastronomers and archaeologists. *J. Phys. Conf. Ser.* **685**, 012003 (2016); Henty L, Brown D, (eds) *Visualising skylscapes: Material forms of cultural engagement with the heavens*. Routledge, 2019.



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- <sup>44</sup> The author is again indebted to John Bleach for pointing him towards the first two of these sites, as documented in: Garwood P, Round Barrows and Funerary Traditions in Late Neolithic and Bronze Age Sussex, in D. Rudling (ed.), *The Archaeology of Sussex to AD 2000*. (Heritage Books 2003) 47–68. A similar alignment in the structures excavated at the Amex Stadium is reported in: Garland N, Anderson-Whymark H. Mesolithic and late neolithic / Bronze Age activity on the site of the American Express Community Stadium, Falmer, East Sussex. *Sussex Archaeol. Collect.* **154**, 1–31 (2016).
- <sup>45</sup> The author is grateful to Fiona Marsden for telling him that this interesting work is in progress.
- <sup>46</sup> Referring back to endnote 11, a continuing tradition linking land and sky in this area was suggested when the author was surprised during walks over the Lewes Downs in the course of this study, by a number of encounters with Lewes residents ascending (apparently independently of each other) who climbed Chapel Hill to the Lewes Golf Club in order to watch the Midsummer Sun set in a fashion described this way.
- <sup>47</sup> See references cited in endnotes 8 and 37.
- <sup>48</sup> Both accessed 26<sup>th</sup> November 2022, the journal website is here: <https://journal.equinoxpub.com/JSA>; and . Dr Silva's website is here: <https://staffprofiles.bournemouth.ac.uk/display/fparrachosilva#overview>.
- <sup>49</sup> Grigsby J. *Skyscapes, Landscapes, and the drama of Proto-Indo-European myth*. Doctoral thesis (University of Bournemouth, 2018) page 3.
- <sup>50</sup> See references cited in endnotes 12 and 13.
- <sup>51</sup> See reference cited in endnote 49: page 3.
- <sup>52</sup> See reference cited in endnote 49: page 252.
- <sup>53</sup> This illustration is copied from John Grigsby's Figure 215 on page 252 of the reference cited in endnote 49.
- <sup>54</sup> See reference cited in endnote 49, page 252.
- <sup>55</sup> See for instance: Norris R. P, Harney, B Y, Songlines and Navigation in Wardaman and other Australian Aboriginal Cultures. *J. Astron. Hist. Herit.* **17**, 1–15 (2012); Norris R P, Dawes Review 5: Australian Aboriginal Astronomy and Navigation. *Publ. of the Astron. Soc. of Australia* **33**, (2016); Sveiby, K.-E. & Skulthorpe, T. *Treading Lightly: the hidden wisdom of the world's oldest people*. (Allen and Unwin, 2006).
- <sup>56</sup> See: Neale M, *Songlines: tracking the Seven Sisters*. (National Museum of Australia).
- <sup>57</sup> See Figure 12. The current website for this competition (accessed 16<sup>th</sup> November 2022) is here: <https://www.southdowns.gov.uk/dark-night-skies/>
- <sup>58</sup> This image is from a BBC report of winning entries in 2021-2 South Downs Dark Skies Photography Competition, accessed (16<sup>th</sup> November 2022) at: <https://www.bbc.co.uk/news/uk-england-surrey-56072651>
- <sup>59</sup> See endnote 34 and references cited there.
- <sup>60</sup> See endnotes 36, 37 and 38 and references cited there.