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Abstract. In the winter of 1822/23, William Wordsworth wrote a pair of poems on the foundation of Rydal Chapel. The second of these poems focused on the solar symbolism of the orientation of churches. Wordsworth's romantic medievalism is manifest in his description of how 'in the antique age of bow and spear' the founders of the Mother Church of Rydal Chapel had performed a nocturnal vigil before the feast of the church's patron saint, waiting for the Sun to rise, a practice which was neglected by his contemporaries. For him, this divinely ordained rising was a sign of where to place the church's high altar and to trace out its foundations. He prefixed to the poem a brief note asserting that this orientation toward sunrise on the patron saint's feast day was the reason that churches sometimes deviated from true east. Wordsworth's claims were influential in disseminating the concept that churches should be oriented to sunrise on the feast day of the saint to whom the church was dedicated. This idea was also adopted by nineteenth-century ecclesiologists, as part of their drive for the renewal of formal liturgy in the Church of England. In this paper, rising from a broader examination of the validity of the hypothesis of patronal orientations, I will place Wordsworth's discussion in their nineteenth-century context and discuss the texts and church orientations which contributed to it.

I was led to investigate the sources of Wordsworth's views on church orientation in the course of a larger research project examining the role of astronomy in the orientation of English medieval village churches.¹

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¹ Some early results of this project have been presented as 'Medieval Astronomical Concepts and an Archaeoastronomical Investigation of Church Orientations', at the National Astronomy Meeting, Dublin Castle, 7–11 April 2003 and 'Astronomy and Symbolism in the Orientation of Medieval Churches',

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Wordsworth is important to that study because in the nineteenth century he spread a particular view of church orientations through his widely-read poetry. This idea has been frequently quoted up to the present day by people investigating the orientation of churches. His assertion was not that churches faced east, for that was a commonplace when he wrote, but that there was a particular reason why many churches deviated either to the north or south of due east. He claimed that churches were oriented to face sunrise on the particular feast day of the saint to whom the church was dedicated.

As my surveys progressed, the data began to demonstrate that the principles underlying church orientation were much more complex than the simple model Wordsworth had presented. Since my results called Wordsworth's ideas into question, the sources and evidence underlying those ideas began to have greater importance, and that led me to the present investigation. Wordsworth is known for describing his observations of nature – probably everyone knows 'My heart leaps up when I behold a rainbow in the sky....'² That kind of attention to natural phenomena led me to wonder what role observations of astronomical phenomena played in the development of the ideas Wordsworth presents in 'Rydal Chapel'. Tracing the sources of those ideas is the principal focus of today's presentation.

The subject of this essay is not Wordsworth the poet, rather it investigates Wordsworth the observer of nature and interpreter of the historical significance of those observations. To get at these aspects of Wordsworth's career, I will discuss the nature of some of Wordsworth's astronomical observations that appear in his poetry and evaluate the actual orientation of the churches mentioned in his poem in the light of his attitudes toward the role of historical evidence. In addition, I intend to compare what we can learn about how and why medieval people oriented their churches from a historically based study of medieval texts and churches with what Wordsworth tells us about those issues.

Wordsworth presented his view of church orientation in a poem with the formal title 'On the Same Occasion', the occasion being, as we can infer from the preceding poem, 'On Seeing the Foundation Preparing for the Erection of Rydal Chapel, Westmoreland'. Let's begin by considering

at the 2003 annual meeting of the Société Européene pour l'Astronomie dans la Culture (SEAC), University of Leicester, 11–12 August 2003.

² E. De Selincourt and Helen Darbishire, eds, *The Poetical Works of William Wordsworth* (Oxford: Clarendon Press, 1952–59), Vol. 1, p. 226. Hereafter cited as *Poetical Works*.

the context in which these two poems were written. Wordsworth wrote his poems on Rydal Chapel in the winter of 1822/23, during the earliest phases of the construction of a chapel of ease on Rydal Mount, where Wordsworth then lived. The construction continued for two years, and the chapel was first used for religious services on Christmas 1824. This chronology confirms what the title of the poems suggests, that when Wordsworth wrote he was looking at the foundations of the church, not the finished church itself.³

Two very different churches are mentioned in Wordsworth's discussion: the first is the Chapel of St. Mary on Rydal Mount, a charming example of the romantic nineteenth-century concept of what a medieval church should look like. The walls are of neat stone masonry, the tower is surmounted by crenelated battlements, the windows are ornate gothic arches, which in time became filled with romantic, if scarcely Christian, versions of medieval stained glass.

The other church mentioned in this poem is the Church of St Oswald at Grasmere, where Wordsworth worshiped for much of his life, and where he taught in the nearby village school. If Rydal Chapel exemplifies nineteenth century medievalism, the Church of St Oswald at Grasmere is the real thing. There are said to have been earlier churches at Grasmere, but the present church is old, and like most medieval village churches, evolved over time. It began as a simple church with a tower and nave, the earliest surviving parts dating to around 1300. Around 1500 a side aisle was added to allow for a growing congregation and in 1562 the roof was replaced to span both aisles, supported by a double arched arcade and a complex wooden framework. The walls are stuccoed over to protect, and perhaps conceal, the church's rude masonry. Wordsworth mentions that simple village church several times in his poetry, comparing the crude wooden framing of the roof to the

leafless underboughs in some thick wood all withered by the depths of shade above.⁴

³ De Selincourt and Darbishire, *Poetical Works*, Vol. 4, pp. 165, 168, 439; W[illiam] W[ordsworth] to Francis Merrewether, Rydal Mount, 10 Jan 1825, in A. G. Hill and E. De Selincourt, *The Letters of William and Dorothy Wordsworth* (Oxford: Clarendon Press, 1978), pp. 300–02..

⁴ Wordsworth, 'The Excursion', 5.148-9, *Poetical Works*, Vol. 1, p. 158.

Wordsworth's second poem on Rydal Chapel begins, as do some of his other poems, with a prefatory paragraph sketching out the concept underlying the poem:

> Our churches [he writes], invariably perhaps, stand east and west, but why is by few persons exactly known; nor that the degree of deviation from *due* east often noticeable in the ancient ones was determined, in each particular case, by the point in the horizon at which the sun rose upon the day of the saint to which the church was dedicated. These observances of our ancestors, and the causes of them, are the subject of the following stanzas.⁵

Wordsworth's poem, then, is an exposition on the ancient ritual and, since antiquity is a sign of authority, on the proper method for establishing the orientation of churches.

He begins, however, with a brief portrait of the Middle Ages as an age of incessant warfare, of feudal rapine clothed with iron mail - a vision shared by Wordsworth's friend, Sir Walter Scott, and by many of my students in medieval history.

This age of violence was tempered by the church's ministers of peace, the men who established 'The Mother Church in yon sequestered vale', that is, the Church of St Oswald some two miles from Rydal in the Vale of Grasmere. The foundations of this older church, he tells us, had been laid out after a vigil spent in prayer on the eve of the feast of the church's Patron Saint.

Now, he goes on, we no longer follow the medieval practice of determining the place of the altar by such a 'prelusive vigil' on the eve of the feast of the church's patron, but we still place the altar in the east. This poem has implications that can be tested on the ground. If, as Wordsworth reports, the Mother Church in Grasmere was built in the fashion he describes, then we should expect it to be oriented toward sunrise on the Feast of St Oswald (5 August). Furthermore, since the practice was no longer held in Wordsworth's time, we should not expect Rydal Chapel to be oriented toward sunrise on one of the feasts of the Virgin Mary (the Purification, 2 February; the Annunciation, 25 March; the Assumption, 15 August; the Birth of Mary, 8 September; or the late

⁵ Wordsworth, 'On the Same Occasion', Poetical Works, Vol. 4, pp. 168-9.

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medieval (c. fifteenth century) feast of the Immaculate Conception, 8 December).

The measurement of the medieval church in Grasmere could test two different questions. First, it could tell us whether that church appears to be oriented according to the principles described by Wordsworth. Whatever the measurement tells us about that one church, it would be of limited significance for inferring a more general medieval practice. The presence or absence of a single oriented church is of limited value for establishing a pattern of practice; the study of a large set of churches, built about the same time, in the same geographic region, and with the same patronal dedication is essential to obtain a statistically valid demonstration of such a pattern.

More importantly, that measurement could tell us whether that Church could have provided Wordsworth with an instance of such orientations to support his further speculations. After all, Wordsworth reports that the Mother Church at Grasmere was oriented so that the Sun rose to the East of the church on the feast of the church's Patron Saint Oswald of Northumbria. Wordsworth worshiped regularly at that church; if the church were oriented in that fashion, anyone reasonably acquainted with the motions of the heavens – and especially someone with Wordsworth's delight in observing nature – should have noticed whether the sun rose along the church's center line on the feast of St Oswald.

Wordsworth's poetry shows him frequently drawing inspiration from some acute observations of astronomical phenomena. On 7 September 1820, while traveling in Italy, he observed an eclipse of the Sun over Lake Lugano. He notes that he had come upon this change unlooked for, while

> High on her speculative tower Stood Science waiting for the hour When Sol was destined to endure *That* darkening of his radiant face.⁶

After describing the changes brought about around the lake by the growing darkness, he went on to note how Fancy saw the eclipse in Milan and he asks the deity who guards his home whether the eclipse was seen at Grasmere, and whether all was well at home. Although he knew that science anticipated the eclipse, it came upon him 'unlooked for' and

⁶ William Wordsworth, ;The Eclipse of the Sun, 1820', *Poetical Works*, Vol. 3, pp. 184–86.

he seemed uncertain whether it would be seen at Grasmere which, like Lugano, lay near the calculated maximum of this annular eclipse.⁷

Wordsworth did not just notice spectacular events like eclipses. In January of 1838 he noted the growing brightness of Venus as the Evening Star, which he attributed poetically to some 'allurement' drawing her nearer to the Earth. It is not clear whether this 'drawing near' refers to the planet's distance from the Earth or her elevation above the horizon, both of which were decreasing as her brightness grew through the month of January. However, his description, and perhaps his understanding, was incomplete. In the ensuing months, as Venus continued to approach the Earth, the brightness of the Evening Star would wane until she reached inferior conjunction in early March. Although Wordsworth was an astute observer, theoretical knowledge such as the influence of Venus's crescent shape on the planet's changing brightness had no influence on his description.⁸

Venus appears in his poetry again in a poem dated 25 February 1841, where he remarks on the close approach of the Moon and Venus:

The Crescent-moon, the Star of Love Glories of evening, as ye there are seen With but a span of sky between Speak one of you, my doubts remove, Which is the attendant Page and which the Queen?⁹

Again, Wordsworth seems to allude to an actual phenomenon, for the Moon and Venus changed places between the evening of the 24th and the 25th. On the 24th the Moon was five degrees below Venus; on the evening of the 25th the Moon had ascended to five degrees above her.

It is quite clear from this cursory inspection of Wordsworth's poetry that he was familiar with the heavens and was a careful, if not systematic, observer of astronomical phenomena. He certainly had the skill and the interest to note the position of sunrise from the church at Grasmere.

Yet we still must address another practical question: granted his interest, would Wordsworth have been able to observe the rising sun

⁷ At Lugano the local time of maximum eclipse was 14:12, the eclipse magnitude was 0.928; at Milan 14:13, magnitude 0.927; at Grasmere 13:42, magnitude 0.869. These, and subsequent computations were made using C. A. Marriot, *SkyMap Pro*, v. 8.0.3 (The Thompson Partnership: Uttoxeter (Staffs), 2001). ⁸ Wordsworth, 'To the Planet Venus', *Poetical Works*, Vol. 3, pp. 59–60.

⁹Wordsworth, 'Evening Voluntaries, XI', Poetical Works, Vol. 4, p. 14.

from the church? If he could not see the sun from inside the church, we would have to postulate a systematic system of observations, but such a program of systematic observations does not fit into his particular empirical style. Fortunately, we are spared this necessity, for the church of St Oswald has a large eastern window behind the altar. (If you look very closely at the photograph in Fig.1, you can just make out the hilltop in the gap between the trees at the center of the window) The present window was installed in 1937, and we can still see an outline of the previous Victorian stained glass window in the exterior stucco of the eastern wall.¹⁰ This outline, and a photograph of the original window, show it to be tall and narrow, offering Wordsworth a ready opportunity to observe the sunlight gleaming into the church as the sun rose over the ridge to the east.

Granted that Wordsworth could have observed sunrise from the church, would he or the church's medieval builders have seen the sun rising along the center line of the church on the feast of St Oswald? We can readily determine this by measuring the orientation of the church and the elevation of the surrounding hills. In the course of my survey of village churches in the English Midlands, I had already established and validated a simple procedure using magnetic compass for such surveys which I could readily apply at these two churches.

The azimuths of the churches I had surveyed in the Midlands all fell well within the arc of sunrise, with no churches pointing outside that range. The distribution centered on an area slightly north of due east, a pattern which has also been found in other surveys of church orientations.¹¹ There is a special concentration on the area from 80⁰ to

¹⁰ Anonymous, *Grasmere Church* (Billinghurst: Weald Printers, Ltd., n.d.), pp. 2–3.

¹¹ F. C. Elles, 'The Orientation of Scottish Churches, Illustrated by an analysis of some examples in Aberdeenshire and Banffshire', *Proceedings of the Society of Antiquaries of Scotland* 12, 4th series (1913–14): pp. 169–83; C. J. P. Cave, 'The Orientation of Churches', *Antiquaries Journal* 30 (1950): pp. 47–51; Hugh Benson, 'Church Orientations and Patronal Festivals', *Antiquaries Journal*, 36 (1956): pp. 205–13; Richard Davies, 'Church Orientation in Rutland', *Rutland Record* 4, (1984): pp. 142–43; Peter G. Hoare and Caroline S. Sweet, 'The orientation of early medieval churches in England', *Journal of Historical Geography* 26 (2000): pp. 162–73; Norman Hinton, 'The Alignment of Medieval Churche', *The Annual: The Bulletin of the Norfolk Archaeological and Historical Research Group* 10 (2001): pp. 3–15; Jason R. Ali and Peter Cunich, 'The Orientation of Churches: Some New Evidence', *The Antiquaries Journal* 81 (2001): pp. 155–93.

 87^{0} , corresponding to the positions of sunrise on the various dates (18 March, 21 March, and 25 March) that are given in medieval liturgical calendars for the dates of the vernal equinox. There is also a second, smaller, peak that may reflect the positions of sunrise on the dates of the autumn equinox.

In addition to this general orientation to Equinoctial East', which was mentioned by religious authorities from Late Antiquity through the Middle Ages, the survey determined that churches dedicated to different saints have different, and statistically significant, patterns of orientation. These patterns, in turn, can be interpreted in the light of medieval religious and astronomical texts.

First among these are churches dedicated to All Saints. None of the churches surveyed were oriented toward sunrise on the feast of All Saints, one of the so-called 'Celtic' mid quarter days, but a significant number of them were oriented toward sunrise on the Vernal Equinox. One of the dates of the equinox, 25 March, is identified in a number of medieval sources as the day of the Last Judgement. As the English monk, Byrhtferth of Ramsey' said in the eleventh century:

On that day the angels were created; on that day the archangel Gabriel was sent to Mary; on that day Christ arose from death; on that day God's spirit came to mankind. It is holy Sunday; when all days fail, it will endure forever in its festiveness. It is the joy of angels and eternal benefit to *all the saints*.¹²

The second group of churches were those dedicated to St John the Baptist. Again, none of these churches were oriented toward sunrise on the major feast of St John at the Summer Solstice. However, a strikingly significant number of them were precisely oriented so that while the altar was in the east, the nave points toward sunset on the feast of the Conception of John the Baptist, which falls on the Roman autumnal equinox of 24 September. There are many liturgical texts justifying this orientation, perhaps the most impressive being that of Melito of Sardis, who associates Baptism with Sunset:

Now if the Sun, with stars and moon, bathes in the ocean [when he sets], why may not Christ also bathe in the

¹² Byrhtferth, *Enchiridion*, II.1.279–288, pp. 72–73.

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Jordan? King of heavens and creation's Captain, Sun of uprising, who appeared both to the dead in Hades and to mortals in the world, he also alone arose a Sun out of heaven."¹³

Furthermore, the traditional location of baptismal fonts in the west of the church turns baptism's ritual focus westward. These are the only two statistically significant orientations that emerged in this survey. However, two marginal patterns should be mentioned. First, churches dedicated to St Andrew are more widely scattered than other churches. While half the churches dedicated to St John were concentrated in a band less than 10^{0} wide, half the churches dedicated to St Andrew were spread over a band over 19^{0} wide. These churches dedicated to Andrew tend to avoid the region of sunrise at the equinoxes. Although this pattern is clearly present in the data, I have not identified any theological justification for it. Second, there is a slight clustering of churches dedicated to Mary at about 76^{0} . This peak, however, is not statistically significant (χ^{2} probability of 0.08) and does not correspond to any Marian feast.

In sum, none of the churches in the Midlands study displayed a pattern of orientation toward sunrise on the feast of the church's Patron Saint. Furthermore, only two churches in the Midlands data were found with azimuths as far north as 67^{0} , yet both of the churches in the Lake District had azimuths in this extreme range. St Oswald's Grasmere is oriented to an azimuth of 66.2^{0} ; Rydal Chapel is oriented to 66.7^{0} . The measurements of these two churches were distinctly anomalous when compared to my earlier measurements of 130 churches in the Midlands. At first glance, these orientations seemed to indicate that Wordsworth's churches were pointing north of the place of equinox sunrise toward a date nearer the summer, perhaps toward the feast of St Oswald on 5 August.

However, the one aspect I had not fully accounted for in my earlier work on churches had been the elevation of the horizon. This had not been a serious problem for a preliminary evaluation of the churches in the Midlands, where the land is gently rolling and the horizon elevation is generally quite uniform. In the hilly Lake District, however, horizon elevations are large and variable. Since the azimuth of sunrise changes by more than a degree for each degree of elevation of the horizon, I needed to take this into account. Fortunately, my friend and colleague Gail

¹³ Melito of Sardis, Fragment 8b, 'On baptism', in *On Pascha and Fragments*, ed. S. G. Hall (Oxford: Clarendon Press, 1979), pp. 72–3.

Higginbottom had dealt with a similar problem in her dissertation. She introduced me to Andrew Smith, a physicist at the University of Adelaide, who had written a program that generates horizon profiles and computes astronomical declination to the horizon from Digital Terrain Model data. I already had GPS locations for all of my churches and DTM data for the surrounding region, and after two weeks of correspondence and twenty minutes of computation, Smith had generated horizon profiles for the 139 churches I had surveyed, including Grasmere and Rydal Chapel. Needless to say, I am extremely grateful to both of them for this assistance.

These calculations, taking account of the elevation of the horizon (15.0°) at Grasmere and 11.3° at Rydal Chapel) indicated that these churches were pointing well to the north of the place of sunrise on the feast of St Oswald. In fact, the church in Grasmere points so far to the north that the Sun, rising over the elevated horizon, will never shine directly down the aisle of the church, not even at the summer solstice. At Rydal Chapel, where the horizon is almost four degrees lower, the sun will briefly shine down the aisle around 4 June and 8 July, but these dates are not near any Marian feast and, as Wordsworth reminds us, his contemporaries did not perform the rituals for orienting churches to sunrise on a saint's feast.

These measurements demonstrate unequivocally that the builders of the church at Grasmere did not orient it to face the rising sun, for the sun always rises to the south of the church's axis. In such a visually striking landscape, we must not rule out the possibility that a more mundane influence guided the orientation of this church. The center line of the church falls within a degree of the highest point on the horizon. The anonymous author of the church's history pamphlet was drawn to quote Psalm 121, ;I will lift up mine eyes unto the hills from whence cometh my help'. Perhaps the medieval builders of this church had the same scriptural passage in mind.¹⁴

If the orientation of the Mother Church at Grasmere, which Wordsworth attended regularly and mentioned in his poem, could not support his proposed theory of sunrise orientation on the feast day of the church's Patron Saint, we must turn to possible written sources.

¹⁴ Anonymous, *Grasmere Church*, p. [3]. It has frequently been pointed out that early medieval education was founded on the study of the psalms; see for example, Pierre Riché, *Education and Culture in the Barbarian West: From the Sixth through the Eighth Century* (Columbia, SC: University of South Carolina Press, 1978), pp. 279–85, 290–93, 463–66.

Starting in the seventeenth century, English antiquaries examining the structure and orientation of churches had been led to postulate the same solution to the same problem as that discussed by Wordsworth: that the orientation of churches deviated from true east because they were built to face sunrise on the feast of the Church's patron saint. In a manuscript from about 1678 (printed in Brand and Ellis's *Popular Antiquities* of 1813) John Aubrey noted that

Capt. Silas Taylor says, that "in the days of yore when a Church was to be built, they watched and prayed on the Vigil of the Dedication, and took that point of the horizon where the sun arose for the east, which makes that variation, so that few [Churches] stand true except those built between [sic] the two equinoxes. I have experimented some Churches, and have found the line to point to that part of the horizon where the sun rises on the day of that Saint to whom the church is dedicated.¹⁵

Sir Henry Chauncy, in his *Historical Antiquities of Hertfordshire* (1700), proposed a similar model, tracing the diversity of church orientations to the varying positions of sunrise on the date on which the foundation was laid down.

And one end of every Church doth point to such Place, where the Sun did rise at the time the Foundation thereof was laid, which is the Reason why all Churches do not directly point to the East;... and by the standing of these Churches, it is known at what time of the Year the Foundations of them were laid.¹⁶

Chauncy further maintained that the church must be consecrated by the bishop before the construction, describing a Greek tradition in which the

¹⁵ Cited by John Brand and Henry Ellis, *Observations on Popular Antiquities...*, (London: F. C. and J. Rivington, et al., 1813), Vol. 1, p. 427 from 'the Antiquarian Repertory, No. xxvi from the MS Collections of Aubrey (relating to North Wilts) in the Ashmolean Museum at Oxford;. dated 1678'.

¹⁶ Sir Henry Chauncy, *The Historical Antiquities of Hertfordshire...*, (London, Ben Griffin, et al., 1700), pp. 43–44; p. 88 in the 2nd edn (London: 1826; London: Dorking, Kohler and Coombes, 1975, repr.). Michael Hoskin kindly pointed out this source.

bishop marked a stone with the cross and laid it as 'the first Foundation Stone'. He then suggested a liturgical connection of this event to the feast of the Church's patron saint, noting that after this ceremony 'the singing Men say a kind of Collect for the Saint to whose Name the Church is to be dedicated'.¹⁷ Although Chauncy was normally careful to provide detailed descriptions of antiquities and full citations for the sources of his historical arguments, he offered no evidence to support his orientation hypothesis.

A decade after Aubrey's account appeared in Brand and Ellis's *Popular Antiquities* (1813), William Wordsworth wrote his poems on Rydal Chapel. Neither Brand and Ellis's *Popular Antiquities*, nor Chauncy's *Historical Antiquities of Hertfordshire* are listed in the catalogue of Wordsworth's library.¹⁸ Nonetheless, there are some striking similarities between the way these authorities frame the question in terms of variation from due east and the way Wordsworth expresses it in the preface to his poem:

that the degree of deviation from due east... was determined... by the point in the horizon at which the sun rose upon the day of the saint to which the church was dedicated.¹⁹

A further similarity can be noted between Simon Taylor's account that 'they watched and prayed on the Vigil of the Dedication', Henry Chauncy's account that 'the singing Men say a kind of Collect for the Saint to whose Name the Church is to be dedicated', and Wordsworth's account of the 'unremitting vigils of the night'.²⁰

The parallel is strongest with the recently published passage from Simon Taylor in Brand and Ellis. Despite its absence from Wordsworth's library, I suspect that this text, rather than any observation, may be the source of Wordsworth's confident assertion of the reason why churches deviate from due east.

To the historian, Wordsworth's reliance on an antiquarian collection such as Brand and Ellis seems a bit dubious; we would urge our students

¹⁷ Chauncy, Antiquities of Hertfordshire, 1st edn, p. 46, 2nd edn, pp. 93–4.

¹⁸ Chester L. Shaver and Alice C. Shaver, *Wordsworth's Library: A Catalogue, including a list of books housed by Wordsworth for Coleridge from c. 1810 to c. 1830* (London: Garland, 1979).

¹⁹ Wordsworth, 'On the Same Occasion', *Poetical Works*, Vol. 4, p. 168.

²⁰ Wordsworth, 'On the Same Occasion', *Poetical Works*, Vol. 4, p. 169.

to turn to more authoritative primary sources. But Wordsworth was writing poetry, not history, and several times Wordsworth tells us something about his attitude toward historical and archaeological evidence. In his *Memorials of a Tour in Italy* (1837), he took the opportunity of a visit to the historic city of Rome to express his regrets with the increasingly critical nature of historical research.

Those old credulities, to nature dear, Shall they no longer bloom upon the stock Of History, stript naked as a rock 'Mid a dry desert?... One solace yet remains for us who came Into this world in days when story lacked Severe research, that in our hearts we know How, for exciting youth's heroic flame, Assent is power, belief the soul of fact. Complacent Fictions were they, yet the same Involved a history of no doubtful sense, History that proves by inward evidence²¹

The new historical scholarship ,with its critical use of historical evidence leads, in Wordsworth's mind, to a sterile history, one as barren as a rock in a desert, much the same kind of criticism that he levels at those kinds of science which would turn us from an appreciation of nature. He prefers the old beliefs that he learned in his youth; belief, for him, gives life to the story that is proven by inner, not external, evidence.

This imaginative attitude toward the past had earlier roots in Wordsworth's thought. Wordsworth applied this historical method to a familiar case. In the summer of 1793 he had wandered for two or three days across Salisbury Plain, taking in the prehistoric antiquities. He took his insights as an illustration of the poetic, or prophetic, faculty that enabled him to perceive what he called 'a mighty scheme of truth'.

> [T]he plain [he writes] Was figured o'er with circles, lines or mounds, That yet survive, a work, as some divine, Shaped by the Druids, so to represent

²¹ Wordsworth, 'IV At Rome–Regrets.–In Allusion to Niebuhr, and other Modern Historians; V Continued; VI Plea for the Historian', *Poetical Works*, Vol. 3, pp. 213–15.

their knowledge of the heavens,... [W]ith believing eyes, where'er I turned, [I] Beheld long-bearded teachers, with white wands Uplifted, pointing to the starry sky, Alternately, and [to the] plain below....

This for the past, and things that may be viewed Or fancied in the obscurity of years From monumental hints.²²

There, in a nutshell, is Wordsworth's historical methodology. Writings of antiquaries and archaeological remains were not so much evidence as

²² William Wordsworth, *The Prelude: or Growth of a Poet's Mind*, 13.336-352, eds E. De Selincourt and H. Darbishire (Oxford: Clarendon Press, 1958), pp. 472–75.

they were hints of things that may be fancied in the obscurity of years. That term 'fancied' brings us back to Wordsworth's distinction between inner and external evidence, to the classical distinction between the inner and external senses.

Wordsworth's external senses, particularly the sense of vision by which he beheld such phenomena as rainbows and daffodils, the Sun, Moon and planets, were acutely perceptive and fed his romantic inner vision. His inner senses, particularly his phantasy, which he called fancy, was more limited. Fancy could not tell him whether there was an eclipse at Grasmere; fancy beheld Druids encoding astronomical knowledge on Salisbury Plain; fancy beheld monks waiting for the rising of the sun to mark the place of the high altar so they could trace the outlines of their church's foundation. Not for Wordsworth the textual rigor of the historian or the quantitative rigor of the astronomer. Fancy, nourished by his belief in the wisdom of his ancient predecessors, led him to his historical conclusions.

With these insights into his historical method, we should not be surprised that the mother church in Grasmere, which he presented as the exemplar of orientation for sunrise on its feast's day, has only the loosest hint of such orientation. Our measurements show that it differs by more than twenty five solar diameters from the place of sunrise on the feast of St. Oswald. For Wordsworth, however, sunlight streaming in through the east window and hinting at an orientation, some ideas gleaned from his readings of the antiquaries, and a belief in the wisdom of his medieval predecessors, sufficed to convince him, and those who read him, that he knew the reason why churches deviated in particular ways from orientation toward due east.

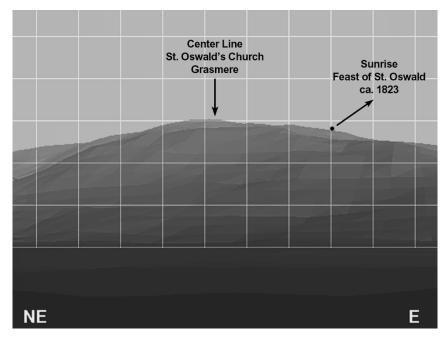


Figure 1. View from St Oswald's Church B Grasmere. Computer generated view showing the intersection of the extended center line of the church with the nearby hills, and the position of sunrise on the feast of St Oswald, some 13⁰ to the south of the axis of the church. Horizon profiles generated by Dr Andrew Smith, Department of Physics and Mathematical Physics, University of Adelaide, using Land-Form PANORAMA Digital Data. Data Crown Copyright Ordnance Survey. An EDINA Digimap/JISC supplied service.

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