

Learning from the Past to Understand the Present: 536 AD and its Consequences for Man and the Landscape from a Catastrophist Perspective



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Abstract: The global catastrophic consequences of the 536 AD ‘dust veil’ have been recorded by numerous contemporary observers. Recently, scholars have suggested that the event has been recorded, in the form of myth, in both the Elder and Snorri’s Edda. This ecocritical study aims to highlight the consistency between the description of the consequences of Fimbulvetr (‘Great Winter’) on the landscape in the Eddic tradition, and the effects of the ‘dust veil’ on the landscape of early medieval Europe. The primary intention is to endorse the opinion of scholars who hold that the myth of Fimbulvetr does in fact correspond to a historical catastrophic event that occurred in 536 AD. Furthermore, this analysis will emphasize the importance of said myth in the construction of the cultural memory of the society that witnessed and recorded it in verses. I argue that the memory of the ‘Great Winter’ was particularly valuable, for it was considered a way in which important lessons could be taught to future generations: humbleness (similar catastrophes had already happened, and could happen again), hope (mankind survived the catastrophe), and respect (for the memory of what had happened in the past, and that could recur in the future).

INTRODUCTION: AN ONGOING DEBATE AND NEW PERSPECTIVES

The potential relationship between archaeological evidence of the 536 AD ‘dust veil event’ and the Old Norse representation of *Fimbulvetr* (‘Great Winter’) has recently drawn new attention from scholars, especially following Bo Gräslund’s study.¹ It was not the first time that an attempt was made to link *Fimbulvetr* with historical events and climate downturns: in the middle of the last century, archaeologists proposed that the myth of the ‘Great Winter’ could

*I wish to express my most sincere thanks to the editors and peer-reviewers for their constructive and useful suggestions to help improve this paper.

¹ Bo Gräslund, ‘Fimbulvintern, Ragnarök och klimatkrisen år 536–537 e. Kr.’, *Saga och sed* (2007), pp. 93–123.

be a literary depiction of climate changes which occurred in the last millennium BC, in the transition from the Late Bronze Age (1100–500 BC) to the Early Iron Age (500–150 BC).² However, strong evidence has been provided in the last decade concerning the major impact of one or more volcanic eruptions around the year 536 AD, which seem to have caused important societal changes in Europe.³ This has been labelled a ‘dust veil event’, for the extreme weather conditions of 536–537 AD were allegedly brought about by a thick layer of ash that covered the sky and screened sunlight for many months, from Europe to the far East. Dendrochronologists have demonstrated that tree rings in the northern hemisphere, from Ireland to Siberia, show basically no signs of growth in the year 536, and considerably limited growth in the entirety of the following decade.⁴ Archaeological sources from Scandinavia suggest a scenario that Gräslund has defined as a ‘a climate-related agricultural disaster’.⁵ As a whole, the sixth century seems to represent a particularly dramatic moment in a generally negative trend, which led to a demographic crisis of the Scandinavian population.⁶ Summer temperatures in particular dropped considerably for about ten to fifteen years, leading to increased rainfall and humidity and reduced evaporation, accompanied by rising levels of water and overflowing rivers.⁷

The matter is currently being debated from a variety of perspectives, not least that of cultural memory studies.⁸ Within such a thriving field, several contributions have served as an

² See, for instance, Tor Bergeron et al., ‘Fimbulvinter’, *Fornvännen* 51, 1 (1956), pp. 1–18. See also Daniel Löwenborg and Thomas Eriksson, ‘Climate and the definition of archaeological periods in Sweden’, in *Climate and Cultural Change in Prehistoric Europe and the Near East*, ed. by Peter F. Biehl and Olivier P. Nieuwenhuys (Albany: State University of New York Press, 2016), pp. 257–76.

³ Lars B. Larsen et al., ‘New ice core evidence for a volcanic cause of the A.D. 536 dust veil’, *Geophysical Research Letters* 35 (2008), L04708 (who associate the event with an equatorial eruption); Torun Zachrisson, ‘Fjärran ting: Exotiska föremål och nya seder under mellersta järnåldern’, in A. Andrén, ed., *Förmodern globalitet: essäer om rörelse, möten och fjärran ting under 10 000 år* (Lund: Nordic Academic Press, 2011), pp. 109–29; Andres Tvauri, ‘The impact of the climate catastrophe of 536–537 AD in Estonia and neighbouring areas’, *Estonian Journal of Archaeology* 18, 1 (2014), pp. 30–56.

⁴ Louis A. Scuderi, ‘Tree-ring evidence for climatically effective volcanic eruptions’, *Quaternary Research* 34 (1990), 67–85; Mike G. L. Baillie, *Exodus to Arthur. Catastrophic Encounters with comets* (London: B. T. Batsford, 1999); Rosanne d’Arrigo et al., ‘Spatial response to major volcanic events in or about AD 536, 934 and 1258: Frost rings and other dendrochronological evidence from Mongolia and northern Siberia’, *Climatic Change* 49 (2001), pp. 239–46; Gräslund, ‘Fimbulvintern, Ragnarök och klimatkrisen’, pp. 108–9.

⁵ Gräslund, ‘Fimbulvintern, Ragnarök och klimatkrisen’, p. 112.

⁶ Bo Gräslund and Neil Price, ‘Twilight of the gods? The dust veil event of AD 536 in critical perspective’, *Antiquity* 86 (2012), pp. 428–43 (p. 434); Morten Axboe, ‘Året 536’, *Skalk* 4 (2001), pp. 28–32; Id., ‘Amulet pendants and a darkened sun’, in *Roman gold and the development of the early Germanic kingdoms*, ed. by B. Magnus (Stockholm: Royal Academy of Letters, History and Antiquities, 2001), pp. 119–36; Id., ‘Guld og guder’, in *Ragnarök: Odins verden*, ed. by T. Capelle and C. Fischer (Silkeborg: Silkeborg Museum), pp. 41–56.

⁷ Gräslund and Price, ‘Twilight of the gods?’, p. 438; Ulf Büntgen et al., ‘2500 years of European climate variability and human susceptibility’, *Science* 331, Issue 6017 (2011), pp. 578–582.

⁸ Mathias Nordvig and Felix Riede, ‘Are there echoes of the AD 536 event in the Viking Ragnarok myth? A critical appraisal’, *Environment and History* 24 (2018), pp. 303–24.

inspiration for this study. Among them, those penned by British social anthropologist Paul Connerton, who has analyzed at length the matter of 'cultural amnesia': this concept has proven fundamental in order to develop this paper's main thesis, according to which myth was used as a tool to crystallize the past.⁹ Furthermore, alongside the contributions by Jan and Aleida Assmann¹⁰ and anthropologists such as Jack Goody,¹¹ cultural memory studies have benefited from scholars of Scandinavian Studies in recent years, to which this analysis is indebted: Pernille Hermann, Stephen A. Mitchell, Jürg Glauser and John Lindow, to name a few.¹²

In the present paper, I wish to highlight in particular the correlation between the literary descriptions of the impact of *Fimbulvetr* on the environment, and the descriptions in chronicles and annals of how the climate and environment were affected by the 536 AD 'dust veil event'.¹³ By placing the focus on the environmental changes, as well as on people's reactions to the

⁹ Paul Connerton, *How Societies Remember* (New York: Cambridge University Press, 1996); Id., *How Modernity Forgets* (New York: Cambridge University Press, 2009).

¹⁰ See, among others: Jan Assmann, 'Cultural memory and cultural identity', *New German Critique* 65 (1995), pp. 125–33; Id., *Religion and Cultural Memory: Ten Studies*, trans. by Rodney Livingstone (Stanford, CA: Stanford University Press, 2006); Id., *Cultural Memory and Early Civilization. Writing, Remembrance, and Political Imagination* (Cambridge: Cambridge University Press, 2011); Aleida Assmann, 'The dynamics of cultural memory between remembering and forgetting', in *Cultural Memory Studies. An International and Interdisciplinary Handbook*, ed. by Astrid Erll and Ansgar Nünning (Berlin and New York: de Gruyter, 2008), pp. 97–107.

¹¹ Jack Goody and Ian Wiatt, 'The consequences of literacy', in *Literacy in Traditional Societies*, ed. by Jack Goody (Cambridge: Cambridge University Press, 2005; 1st ed. 1968), pp. 27–68.

¹² See, among others: Pernille Hermann, 'Founding narratives and the representation of memory in saga literature', *ARV* 66 (2010), pp. 69–87; Pernille Hermann, 'Concepts of memory and approaches to the past in medieval Icelandic literature', *Scandinavian Studies* 81, 3 (2009), pp. 287–308; Pernille Hermann, 'Cultural memory and Old Norse mythology in the high Middle Ages', in *Theorizing Old Norse Myth*, ed. by Stefan Brink and Lisa Collinson (Turnhout: Brepols, 2017), pp. 151–173; Stephen A. Mitchell, 'The sagaman and oral literature: the Icelandic traditions of Hjørleifr inn kvensami and Geirmundr heljarskinn', in *Comparative Research on Oral Traditions: A Memorial for Milman Parry*, ed. by John Miles Foley (Columbus, OH: Slavica Publishers, 1987), pp. 395–423; Stephen A. Mitchell, 'Óðinn's twin ravens, Huginn and Muninn', in *Gemini and the Sacred: Twins and Twinship in Religion and Myth*, ed. by Kimberley Patton (London: Tauris, 2020) forthcoming; Stephen A. Mitchell and Pernille Hermann, eds., *Memory and Remembering: Past Awareness in the Medieval North, Scandinavian Studies* (special issue) 85, 3 (2013); Jürg Glauser, 'The speaking bodies of saga texts', in *Learning and Understanding in the Old Norse World. Essays in Honour of Margaret Clunies Ross*, ed. by Judy Quinn, Kate Heslop, and Tarrin Will, *Medieval Texts and Cultures of Northern Europe* 18 (Turnhout: Brepols, 2007), pp. 13–26; John Lindow, 'Memory and Old Norse mythology', in *Minni and Muninn. Memory in Medieval Nordic Culture*, ed. by Pernille Hermann, Stephen A. Mitchell, and Agnes S. Arnórsdóttir (Turnhout: Brepols, 2014), pp. 41–57.

¹³ Icelandic volcanic eruptions seem to have had an impact on the rest of Europe on multiple occasions, in the early Middle Ages. The case of Ireland, for instance, has been recently studied by Francis Ludlow. See Francis Ludlow, 'A surprisingly useful source of information about Ireland's past climate – the Irish Annals', *Geographical Viewpoint* 33 (2005), pp. 26–33; Id., 'Three hundred years of weather extremes from the Annals of Connacht', *Journal of Postgraduate Research [Now: Trinity Postgraduate Review]*, 5 (2006), pp. 46–65; Id. et al., 'The history of volcanic eruptions since Roman times', *Past Global Changes Magazine* 25, 2 (2015), pp. 48–49; Id. and Conor Kostick, 'The dating of volcanic events and their impacts upon European climate and society, 400–800 CE', *European Journal of Post-Classical Archaeologies* 5 (2015), pp. 7–30; Id. et al., 'Reconciling multiple ice-core volcanic histories: the potential of tree-ring and documentary evidence, 670–730 CE', *Quaternary International* 394 (2016), pp. 180–93.

catastrophe, I intend to stress the fundamental social role of myth as a memory and a didactic device.¹⁴ I will use material and historical evidence to explain the relationship between cultural memory, history, and myth. Jan Assmann refers to the latter as ‘foundational stories’ (*fundierende Geschichten*);¹⁵ however, an example to the contrary,¹⁶ as noted also by Assmann, is how the story of the Israelites’ deliverance from slavery was ‘transformed into myth’, even though it was a historical event.¹⁷ The Old Norse story of *Fimbulvetr* represented a strong example of how myths fixed the memory of key historical events in time, and how important social and moral messages were attached to them. In particular, the *Fimbulvetr* myth reveals a deep sense of anxiety that was caused by celestial phenomena.

The ‘Great Winter’ was the major catastrophic event that, in Old Norse mythological tradition, precedes and introduces *Ragnarøk* (‘The Twilight of the Gods’). It includes more than a modern reader would associate with our idea of winter, however: the impact of *Fimbulvetr* is so dreadful that the sun becomes useless and is soon followed by devastating earthquakes and floods. Lately, scholars such as Bo Gräslund, Neil Price and Joel D. Gunn have convincingly argued that the story of *Fimbulvetr* refers to the aforementioned ‘dust veil event’ of 536 AD.¹⁸ On that year and in the following years, ‘a cluster of very large volcanic eruptions triggered exceptional cooling and possibly drought across several parts of the globe’, leading to ‘a pronounced but short-term demographic contraction in several regions of the world’.¹⁹ As will be shown, many European contemporary sources recorded the ominous event to varying degrees, and addressed the dramatic consequences accompanying it (cooling of the temperatures, darkening of the sun, poor harvests, etc.).²⁰ It is still not clear where the volcanic

¹⁴ Frances Harwood, ‘Myth, memory, and the oral tradition: Cicero in the Trobriands’, *American Anthropologist* 78, 4 (1976), pp. 783–96. He also noted that the term is often used as synonym for ‘fiction’ and seen in contrast to ‘history’.

¹⁵ Jan Assmann, *Cultural Memory and Early Civilization*, p. 59.

¹⁶ For instance, even though discussing the case of medieval Icelandic sagas, Pernille Hermann emphasizes the fact that cultural memory was not an unfiltered process: on the contrary, the construction of Icelandic cultural memory may have been heavily influenced by the most prominent families in the island. Hermann, ‘Founding narratives and the representation of memory’, *passim*.

¹⁷ Assmann, *Cultural Memory*, p. 59.

¹⁸ See, among others: Gräslund, ‘Fimbulvintern, Ragnarök och klimatkrisen år 536–537 e. Kr.’; Id. and Neil Price, ‘Twilight of the gods?’; Id., ‘Excavating the Fimbulwinter? Archaeology, geomorphology and the climate event(s) of AD 536’, in *Past Vulnerability: Volcanic Eruptions and Human Vulnerability in Traditional Societies Past and Present*, ed. by Felix Riede (Aarhus: Aarhus University Press, 2015), pp. 109–32; Joel D. Gunn, *The Years Without Summer: Tracing A.D. 536 and Its Aftermath* (Oxford: Archaeopress, 2000).

¹⁹ Timothy P. Newfield, ‘The climate downturn of 536–50’, in *The Palgrave Handbook of Climate History*, ed. by Sam White, Christian Pfister, and Franz Mauelshagen (London: Palgrave Macmillan, 2018), pp. 447–93 (p. 449).

²⁰ Michael McCormick et al., ‘Climate change during and after the Roman Empire: reconstructing the past from scientific and historical evidence’, *The Journal of Interdisciplinary History* 43,2 (2012), pp. 169–220 (pp. 191–99).

eruptions occurred, but it is fair to assume that their impact was widespread and lasted from about twelve to eighteen months.

In this paper, I will argue that the *Fimbulvetr* myth may have played the role of preserving the memory of this calamity, following Assmann's definition of myth as 'a story one tells in order to give direction to oneself and the world'.²¹ I suggest that the 'direction' of the 'Great Winter' myth concerned the cyclic occurrence of catastrophes and the consequent rebirth of nature and mankind. Within the ongoing uniformitarianism/catastrophism debate about earth history (which is gradually shifting towards the latter position),²² I thus propose that the myth be read from a catastrophist perspective: I believe that it may reflect a deep awareness of the threats that constantly and cyclically endanger life on earth based on previous calamities. Originating in a historical event before becoming a myth, *Fimbulvetr* may have been a metaphorical description of a natural calamity that made people reflect on the precariousness of life. For this reason, perhaps, it took the shape of a prophecy, of an ever-looming disaster and served as a moral tool for the Norse peoples to develop their self-consciousness.²³

I base this analysis primarily on the main Icelandic sources featuring the *Fimbulvetr* myth: the poems of the so-called *Elder Edda*, and Snorri Sturluson's *Prose Edda*.²⁴ Many centuries separate these written sources from the oral tradition on which they were based,²⁵ and Snorri Sturluson likely intended his text as a treatise on skaldic verse.²⁶ This may well undermine any attempt to attach historical meaning to such sources. Yet, in the next pages I assume that *Fimbulvetr* may have referred to a precise historical event, and I will be mostly

²¹ Newfield, 'The climate downturn of 536–50', p. 449.

²² For an overview of the uniformitarianism/catastrophism debate, see *Archaeology. The Key Concepts*, ed. by Colin Renfrew and Paul Bahn (London and New York: Routledge, 2005), pp. 15–18, 204–7.

²³ Jordan Peterson, *Maps of Meaning. The Architecture of Belief* (New York: Routledge, 1999), pp. 277–78.

²⁴ The following editions have been used: *Eddukvæði*, ed. by Gísli Sigurðsson (Reykjavík: Mál og menning, 2014); and Snorri Sturluson, *Gylfaginning*, in Id., *Edda: Prologue and Gylfaginning*, ed. by Anthony Faulkes (London: Viking Society for Northern Research 2005).

²⁵ Terry Gunnell, *The Origins of Drama in Scandinavia* (Cambridge: D. S. Brewer, 1995), p. 93; Rudolf Simek, *Dictionary of Northern Mythology*, trans. by Angela Hall (Cambridge: D. S. Brewer, 2007), p. 366; Jónas Kristjánsson, *Eddas and Sagas. Iceland's Medieval Literature* (Reykjavík: Hið íslenska bókmenntafélag, 2007), pp. 27–28.

²⁶ Kevin J. Wanner, *Snorri Sturluson and the Edda: The Conversion of Cultural Capital in Medieval Scandinavia* (Toronto: University of Toronto Press, 2008), p. 94.

concerned with *why* that could be the case. I propose that it be interpreted as a historical myth,²⁷ that ‘relates to the past’, but in which ‘time stands still’.²⁸

THE FUNCTION OF MYTH

Myths represent powerful tools often used to depict ‘how the world should have been’,²⁹ in contrast to what it was. But the problem with studying cultural memory is that memory is not stored in a universally readable and accepted format and is not empirical evidence for historical events, for it always passes through the filters of ‘representation’.³⁰ The “evidence” provided by memories of past events is fluid in nature: ‘The representation of memories involves exclusion and inclusion’,³¹ notes Pernille Hermann. Historic literature and myth represent *a* past, not *the* past: ‘Cultural memory relates to the engagement with the past in the present’, Hermann adds, ‘not with the past as such’.³² Yet, even a *present* representation of the *past* is worthy of being investigated because such representations could also have important social functions, myths in particular. It would be wrong to see them as mere artificial products, even though ‘at a certain point, the only way for the memory to survive is for it to be written down’,³³ which implies a passage from the authenticity of orality to the ‘derivativeness of writing’.³⁴

In order to understand the function of myth in the past, it is necessary to relate to people in the past, that is, in the pre-industrial world. People felt the need to overcome the, at times, overwhelming sense of anxiety for feeling at the mercy of nature or, to use Heidegger’s terminology, ‘lost in the world’,³⁵ and one way to do so was to resort to myth and ritual.³⁶ In

²⁷ Roland Bernhard et al., ‘Historical myth: a definition from the perspective of history education research’, in *Myths in German-language Textbooks: Their Influence on Historical Accounts from the Battle of Marathon to the Élysée Treaty*, ed. by Roland Bernhard, Susanne Grindel, Felix Hinz and Christoph Kühberger, Eckert, Dossier 4 (2019), pp. 12–34.

²⁸ *Ibid.*, p. 12. The authors note: ‘The particular speciality of historical myths is the creation of narrative cohesion within a specific community and the reconnection of the present to a past that infuses it with meaning.’

²⁹ Peterson, *Maps of Meaning*, p. 1.

³⁰ Max Saunders, ‘Life-writing, cultural memory, and literary studies’, in *Cultural Memory Studies*, pp. 321–31 (p. 330).

³¹ Hermann, ‘Founding narratives and the representation of memory’, p. 82.

³² *Ibid.*, p. 71.

³³ Ann Rigney, ‘Plenitude, scarcity and the circulation of cultural memory’, *Journal of European Studies* 35,1 (2005), pp. 11–28 (p. 12); Maurice Halbwachs, *La Mémoire collective* (Paris, Albin Michel, 1997; 1st ed. 1950), p. 130.

³⁴ Rigney, ‘Plenitude, scarcity’, p. 13; Jacques Derrida, *L’Écriture et la différence*, Paris: Seuil, 1967.

³⁵ Martin Heidegger, *Being and Time*, trans. by Joan Stambaugh (Albany, NY: State University of New York Press, 1996; orig. pub. Tübingen, 1953), pp. 127–29. See Andrea Maraschi, ‘Eaten hearts and supernatural knowledge in *Eiríks saga rauða*’, *Scandia: Journal of Medieval Norse Studies* 1 (2018), pp. 25–47 (p. 28); *Id.*, ‘Hunger games: magic, miracles and rituals to fight famine in medieval Scandinavia’, *Arkiv för nordisk filologi* 133 (2018), pp. 29–51 (p. 29).

³⁶ Maraschi, ‘Eaten hearts’, p. 28.

fact, said anxiety, and related remedies to deal with the sense of 'thrownness' before the world, features in literary texts, chronicles, and annals. The main concern about the landscape was that it was, not unlike the people who inhabited it, at the mercy of the elements: floods, rainstorms, earthquakes, etc.

As mentioned above, myths did not merely mirror anxieties, fears, and existential uncertainties, but they could also refer to historical events. In this sense, their social function was not to propose a model of "what should be", but of "what could happen" that would have a massive impact on society, the world, and the landscape. Examples of this are myths concerning natural calamities, such as flood myths. Mircea Eliade interpreted them from a symbolic viewpoint,³⁷ but recent research has suggested that the Deluge *topos* may have arisen from geological catastrophes, for example.³⁸ 'Considered together', geologist David R. Montgomery observed, 'geological and anthropological evidence suggests rational explanations for why flood stories are uncommon in Africa, why they are so different in China, and why they are widespread in the Middle East, northern Europe, America, and all across the Pacific'.³⁹ In his opinion, natural disasters did shape the history of humanity and their stories, 'which were then passed down through generations – and civilizations – to become powerful legends'.⁴⁰ Martin Sweatman has recently emphasised the need among past civilisations to record calamities for the sake of their memory.⁴¹ Studying the case of the megalithic site of Göbekli Tepe in south-eastern Turkey, he has come to the conclusion that pillar 43 may be the astronomical representation of a specific date – namely, 10950 BC. Interestingly, archaeological evidence suggests that the earth was devastated by a comet impact on

³⁷ See, for instance, Mircea Eliade, *Images and Symbols. Studies in Religious Symbolism*, trans. by Philip Mairet (Princeton: Princeton University Press, 1991), p. 158; Id., *The Sacred & The Profane: The Nature of Religion. The Significance of Religious Myth, Symbolism, and Ritual Within Life and Culture*, trans. by Willard R. Trask (New York: Harvest Books, 1968), pp. 130–31.

³⁸ Edith Kristan-Tollmann and Alexander Tollmann, 'The youngest big impact on Earth deduced from geological and historical evidence', *Terra Nova* 6,2 (1994), pp. 209–17; William Ryan, Walter Pitman, *Noah's Flood: The New Scientific Discoveries About the Event That Changed History* (New York: Simon & Schuster, 1998); David R. Montgomery, 'Emperor Yu's Great Flood', *Science* 353, Issue 6299 (2016), pp. 538–539; Alan Dickin, 'New historical and geological constraints on the date of Noah's Flood', *Perspectives on Science and Christian Faith* 70,3 (2018), pp. 176–193; Helmut Brückner and Max Engel, 'Noah's Flood – probing an ancient narrative using geoscience', in *Palaeohydrology. Traces, Tracks and Trails of Extreme Events*, ed. by Jürgen Herget and Alessandro Fontana (Cham: Springer, 2020), pp. 135–51.

³⁹ David R. Montgomery, *The Rocks Don't Lie: A Geologist Investigates Noah's Flood* (New York: Norton, 2012), pp. 248–49.

⁴⁰ *Ibidem*.

⁴¹ Martin Sweatman, *Prehistory Decoded* (Leicester: Matador Books, 2019); Id. and Dimitrios Tsikritsis, 'Decoding Göbekli Tepe with archaeoastronomy: what does the fox say?', *Mediterranean Archaeology and Archaeometry* 17,1 (2017), pp. 233–50. But cf. Jens Notroff et al., 'More than a vulture: a response to Sweatman and Tsikritsis', *Mediterranean Archaeology and Archaeometry* 17, 2 (2017), pp. 57–63.

approximately that date.⁴² pillar 43 would have had the function of preserving the memory of such a dramatic event for mankind, possibly in order to remind future generations that life can be swept away in a matter of moments by natural calamities, specifically those that come from the sky.⁴³ That said, it is possible that the ‘dust veil event’ of 536 AD was caused by a similar calamity, as has been suggested.⁴⁴

On the other hand, these perspectives do not necessarily negate each other, and the ‘dust veil’ incident may have served a dual function. On the one hand, it may have taught a lesson about life and nature, in line with Jordan Peterson’s idea that mythological tales had the purpose of providing an answer to the fundamental moral subqueries “what is?”, “what should be?”, and “how should we therefore act?”.⁴⁵ On the other hand, it may have been meant to preserve the record of a historical event for the community, in order to teach future generations the intrinsic and extrinsic dangers of life on Earth. In this way, they would have highlighted the fragility of existence,⁴⁶ the more-or-less natural signs that would have announced the nearing of the end, and – most importantly – they would have shown future generations that life would return victoriously, despite the destruction of the landscape and of everything else.

Given the purposes of the present article, it is essential to highlight that the sky and the landscape were considered to be bound in a special relationship in classical, late antique, and early medieval times.⁴⁷ Historical sources, that is, mostly chronicles and annals, show a deep sense of fear caused by celestial phenomena such as comets, meteors, bolides, and even aurora borealis throughout the Middle Ages. With few exceptions, lights in the sky were interpreted by Christian intellectuals and historians as ominous signs which were sent by God to mankind to forewarn it of major future calamities concerning both man and land. Medieval chroniclers interpreted signs from the sky as the words through which history unfolded according to God’s

⁴² See, for instance: R. B. Firestone et al., ‘Evidence for an extra-terrestrial impact 12,900 years ago that contributed to the megafaunal extinctions and the Younger-Dryas cooling’, *Proceedings of the National Academy of Sciences* Vol. 104, Issue 41 (2007), pp. 16016–21; V. T. Holliday et al., ‘The Younger-Dryas impact hypothesis: a cosmic catastrophe’, *Journal of Quaternary Science* 29,6 (2014), pp. 515–30.

⁴³ Sweatman and Tsikritsis, ‘Decoding Göbekli Tepe’, p. 243: ‘What was their motivation? Quite possibly, it was to communicate to potentially sceptical generations that followed that a great truth about the ordering of the world was known, and that this truth was important for their continued prosperity, and perhaps survival.’

⁴⁴ Emma Rigby, Melissa Symonds, and Derek Ward-Thompson, ‘A comet impact in AD 536?’, *Astronomy & Geophysics* 45,1 (2004), 1.23–1.26.

⁴⁵ Peterson, *Maps of Meaning*, p. 13.

⁴⁶ Peter Harrison shares this opinion. See Peter Harrison, ‘Noah’s Flood and the western imagination’, in *Flood: Essays Across the Current*, ed. Paul Thom (Lismore: Southern Cross, 2004), pp. 1–28 (p. 1). See also Ben Wisner et al., eds., *At Risk. Natural Hazards, People’s Vulnerability and Disasters* (New York: Routledge, 2003).

⁴⁷ On this, see Andrea Maraschi, ‘Red lights in the sky, hunger in sight. Aurora borealis and famine between experience and rhetoric in the early Middle Ages’, *Revista de História da Sociedade e da Cultura* 18 (2018), pp. 301–19.

plans,⁴⁸ but often their words betray worries that were not too far removed from the emotional reality of the common folk, and for good reasons: e.g. strange *signa* appeared in the skies of Gaul during the 780s. The Annals of the Abbey of Lorsch describe the aurora borealis as 'fearsome ranks. . . so great that nothing like it had occurred in our times'⁴⁹ and record, 'great thunder and lightning',⁵⁰ and a glowing arch that appeared at night. These *signa* were all associated with floods, destruction of buildings, the death of many people and birds, and a deadly plague.⁵¹ The Bible mentions calamities and signs coming from the sky in various forms that had caused major distress among the people: e.g. the thunderstorm of hail and fire (Ex 9:13–35), the darkening of the sun for three days (Ex 10:21–29), Luke's *signa in sole et luna et stellis* (Lk 21:25),⁵² and the aforementioned Deluge (Gen 7:12). Consequently, if the instinctive emotional reaction was fear, the cultural response was religious, for medieval society (at least its Christian literate portion) did believe that God 'unfolded' history by means of celestial signs.⁵³

In the following sections, the *Fimbulvetr* myth will be discussed by employing a different approach to the matter in question than that by Mats Widgren, who stated that 'the process of learning from history must start with learning from the present'.⁵⁴ On the other hand, I will try to emphasize the role of myth as a social tool with precisely the opposite function: understanding the present by preserving the past, with particular attention to the potential destruction of the landscape (and of the world, in general). Indeed, as previously observed, myths have served the purpose of preserving the memory of key moments of a civilization's experience and history.⁵⁵

⁴⁸ Umberto Dall'Olmo, 'Latin terminology relating to aurorae, comets, meteors, and novae', *Journal for the History of Astronomy* 11 (1980), pp. 10–27; Gregory Halfond, 'Tenebrae refulgeant: celestial signa in Gregory of Tours', *A Journal of Early Medieval Northwestern Europe* 15 (2012): <http://www.heroicage.org/issues/15/halfond.php#rasm2003>, §7; Maraschi, 'Red lights in the sky', passim.

⁴⁹ *Annales Laureshamenses*, MGH SS, 1, ed. by G. H. Pertz (Hannover: Hahn, 1826), pp. 22–39 (p. 33).

⁵⁰ Ibidem.

⁵¹ Ibidem. See Maraschi, 'Red lights in the sky', p. 310.

⁵² 'And there will be signs in the sun and the moon and the stars [...].' Biblical quotations are from: *Biblia Sacra Vulgata. Editio Quinta*, ed. by Robert Weber and Roger Gryson. Stuttgart: Deutsche Bibelgesellschaft (electronic version retrieved from The Scholarly Bible Portal of the German Bible Society, available online at <http://www.academic-bible.com/en/online-bibles/vulgate/>).

⁵³ Giselle de Nie, 'History and miracle: Gregory's use of metaphor', in Kathleen Mitchell and Ian Wood, eds., *The World of Gregory of Tours* (Leiden: Brill, 2002), pp. 261–79 (p. 265); Stephen McCluskey, *Astronomies and Cultures in Early Medieval Europe* (Cambridge: Cambridge University Press, 1998), p. 29; Maraschi, 'Red lights in the sky', p. 303.

⁵⁴ Mats Widgren, 'Climate and causation in the Swedish Iron Age: learning from the present to understand the past', *Geografisk Tidsskrift-Danish Journal of Geography* 112, 2 (2012), pp. 126–34 (p. 133).

⁵⁵ In Judeo-Christian tradition, for instance, the stories of Cain and Abel (Gen 4:3–8) and of Jacob and Esau (Gen 25:27–34) may well be mythologic depictions of the invention of agriculture and of its consequences: if this is

THE WOLF THAT SWALLOWED THE SUN

The bulk of Old Norse mythological tradition is found in the *Eddas*. With this term scholars refer to two different sources: 1) the *Elder Edda*, or *Poetic Edda*, consisting of a collection of anonymous poems which were passed down orally for centuries, and which relate to facts and characters dating back to the migration period;⁵⁶ and, 2) the *Younger Edda*, or *Prose Edda*, compiled by the Icelandic Christian scholar Snorri Sturluson around 1220 AD.⁵⁷ The poems of the *Elder Edda* were a fundamental resource for Snorri, who heavily drew upon them for the composition of his *Edda*. The simple fact that such verses were probably learnt and recited for generations until the time they were written on parchment is testimony to the cultural importance of their stories.⁵⁸

The description of *Fimbulvetr* in the *Elder Edda* is not as rich as Snorri's but presents interesting elements. In *Völuspá* ('The Seeress's Prophecy'), the first poem in the *Poetic Edda* and arguably one of the more important sources for the study of Old Norse mythology, a *völva* ('seeress') prophesies the future *Ragnarøk*, which would be heralded by *Fimbulvetr*. According to her, society would collapse after the death of Óðinn's son Baldr, and then there would come the 'Great Winter': 'sunshine becomes black all the next summers, // weather all vicious',⁵⁹ the seeress recites. Many gods would be killed. Óðinn would be slain by the wolf Fenrir, a beast that – as will be shown later – had a strong symbolic significance. There is one detail that needs to be underscored, though. John L. Greenway observed that 'the significance of Ragnarök only becomes clear when the inevitability of the ultimate destruction is understood

true, such a transition was anything but smooth. Abel and Esau are, respectively, a shepherd and a hunter, and thus represent nomadic/semi-nomadic cattle-breeding societies that had a peaceful and harmonious relationship with the environment: a kind of relationship where man does not seriously threaten the environment. Cain and Jacob, on the contrary, are farmers, and represent sedentary societies. These were characterized by private property, accumulation of wealth, and an aggressive attitude towards nature and the landscape (Massimo Montanari, *Il riposo della polpetta e altre storie intorno al cibo* (Roma-Bari: Laterza, 2010), pp. 19–20). Not surprisingly, perhaps, Cain kills Abel, Jacob buys his brother's birth right: it is a violent fracture with the past. The strong symbolic meaning of these biblical scenes underscores the function of myths as "devices" to perpetuate the memory of "fate-changing" events.

⁵⁶ The most important manuscript featuring the poems of the *Elder Edda* is the *Codex Regius*, dating to the first half of the thirteenth or the beginning of the fourteenth century. See Heimir Pálsson, 'Reflections on the creation of Snorri Sturluson's *Prose Edda*', *Scripta Islandica* 68 (2017), pp. 189–232.

⁵⁷ Snorri's *Edda* survives in four manuscripts and several fragments, the oldest of which — the *Codex Upsaliensis* — dates to the first quarter of the fourteenth century. See Snorri Sturluson, *Gylfaginning*, pp. xxviii–xxxii.

⁵⁸ Pernille Hermann, 'Mythology', in *Handbook of Pre-Modern Nordic Memory Studies. Interdisciplinary Approaches*, ed. by Jürg Glauser, Pernille Hermann, and Stephen A. Mitchell. 2 vols (Berlin-Boston: de Gruyter, 2018), I, pp. 79–92 (pp. 78–83, 87–89); Mathias Nordvig, 'Nature and mythology', in *Handbook of Pre-Modern Nordic Memory Studies* I (2018), pp. 539–48 (pp. 539–40); Assmann, 'Collective memory and cultural identity'; Id., *Religion and Cultural Memory: Ten Studies*.

⁵⁹ *Svart var þá sólskin of sumur eftir, // veður öll válynd. Völuspá*, in *Eddukvæði*, pp. 3–20 (p. 12). Translation: *The Poetic Edda*, trans. by Carolyne Larrington (Oxford: Oxford University Press, 2014), p. 9.

as a direct consequence of creation'.⁶⁰ The 'Twilight of the Gods' represents an inevitable occurrence, as if the world is doomed to be destroyed. Furthermore, said destruction is all-encompassing: as noted by Heather O'Donoghue, *Ragnarøkkr* is a 'democratic' version of the idea of the end of the world, for it leads to the death of almost everybody, giants and gods included.⁶¹

Further references to *Fimbulvetr* are found in other poems of the *Elder Edda*. In *Vafþrúðnismál* ('The Lay of Vafþrúðnir'), they are mostly indirect, but still very meaningful. Here it is told that Óðinn, disguised as a poor wanderer, went to visit the giant Vafþrúðnir with the intention of obtaining knowledge about cosmogony. Giants were the oldest beings, older than the gods themselves, and thus could satisfy Óðinn's curiosity about *Ragnarøkkr*.⁶² 'Which humans will survive when the famous // Mighty Winter is over among men?',⁶³ Óðinn asks. The giant Vafþrúðnir replies that only two humans, Líf and Leifþrasir, would survive the catastrophe by hiding in Hoddmimir's wood and feeding on *morgindogg* ('morning dew'). In the following stanza, it becomes clear that the sun would be seized and destroyed by the wolf Fenrir, and that a new sun would shine on the world.⁶⁴ Finally, one last reference to *Fimbulvetr* emerges in the poem *Völuspá hin skamma* ('The short prophecy of the seeress'), an interpolation found in *Hyndluljóð* ('The song of Hyndla'). Here, the verses describe violent snowstorms and harsh winds that destroy the land and even kill the gods.⁶⁵

Snorri Sturluson, the Christian author of the *Prose Edda*, based his version of the story on this poetic and mythological tradition.⁶⁶ 'Snow will drift from all directions', he begins in *Gylfaginning* ('The Delusion of Gylfi').

⁶⁰ John L. Greenway, *The Golden Horns. Mythic Imagination and the Nordic Past* (Athens: The University of Georgia Press, 2008; 1st ed. 1977), p. 28.

⁶¹ Heather O'Donoghue, *From Asgard to Valhalla. The Remarkable History of the Norse Myths* (London and New York: I. B. Tauris, 2007), pp. 73 and 79.

⁶² *The Poetic Edda*, p. 36. See Ármann Jakobsson, 'A contest of cosmic fathers: god and giant in *Vafþrúðnismál*', *Neophilologus* 92, 2 (2008), pp. 263–77.

⁶³ *Hvað lifir manna þá er inn mæra líður // fimbulvetur með firum? Vafþrúðnismál*, in *Eddukvæði*, pp. 56–69 (p. 65). Transl.: *The Poetic Edda*, p. 44.

⁶⁴ *Hvaðan kemur sól á inn slétta himin // þá er þessa hefir Fenrir farið? Vafþrúðnismál*, p. 66. ('From where will a sun come into the smooth heaven // when Fenrir has destroyed this one?'; *The Poetic Edda*, p. 44).

⁶⁵ *Haf gengur hríðum við himin sjálfan, // líður lönd yfir en loft bilar, // þaðan koma snjóvar og snarir vindar, // þá er í ráði að rögn um þrjóti; Hyndluljóð*, in *Eddukvæði*, pp. 395–406 (p. 404) ('The ocean rises in storms against heaven itself, // washes over the land, and the air yields; // from there come snowstorms and biting winds; // then it is decreed that the gods come to their end'; *The Poetic Edda*, p. 250).

⁶⁶ Besides, the description is consistent in all manuscripts. Anders Hultgård, 'Fimbulvintern – ett mytmotiv och dess tolkning', *Saga och sed* (2004), 51–69.

There will then be great frosts and keen winds. The sun will do no good. There will be three of these winters together and no summer between. But before that there will come three other winters during which there will be great battles throughout the world. Then brothers will kill each other out of greed and no one will show mercy to father or son in killing or breaking the taboos of kinship. [...] Then something will happen that will be thought a most significant event, the wolf will swallow the sun, and people will think this a great disaster. Then the other wolf will catch the moon, and he also will cause much mischief. The stars will disappear from the sky. Then there will take place another event, the whole earth and mountains will shake so much that trees will become uprooted from the earth and the mountains will fall, and all fetters and bonds will snap and break. Then Fenriswolf will get free. Then the ocean will surge up on to the lands because the Midgard serpent will fly into a giant rage and make its way ashore.⁶⁷

The description of *Fimbulvetr* reveals an interesting pattern across the *Elder* and the *Younger Edda*: the sun turns dark, the moon and the stars disappear, the weather gets considerably worse, the temperature drastically decreases, society collapses, and the landscape is destroyed by massive earthquakes and floods. Furthermore, the series of winters without summer is eventually disrupted by a new sun.⁶⁸ Despite the fact that the different branches of the *Fimbulvetr* tradition scene have obvious symbolic features, then, its references to the

⁶⁷ *Þá drífr snær ór þóllum áttum. Frost eru þá mikil ok vindar hvassir. Ekki nýtr sólar. Þeir vetr fara þrír saman ok ekki sumar milli. En áðr ganga svá aðrir þrír vetr at þá er un alla veröld orrostur miklar. Þá drepask bræðr fyrir ágirni sakar ok engi þyrmir fǫður eða syni í mamdrápum eða sífjasliti. [...] Þá verðr þat er mikil tíðindi þykkja, at úlfrinn gleypir sólna, ok þykkir mǫnnum þat mikit mein. Þá tekr annarr úlfrinn tunglit, ok gerir sá ok mikit ógagn. Stjörnurarnar hverfa af himninum. Þá er ok flat til tíðinda at svá skelfr jörð ǫll ok björg at viðir losna ór jörðu upp, en björgin hrynja, en fjǫtrar allir ok bǫnd brotna ok slitna. Þá verðr Fenrisúlfr lauss. Þá geysisk hafit á lǫndin fyrir því at þá snýsk Miðgarðsormr í jǫtunmód ok sækir upp á landit; Snorri Sturluson, *Gylfaginning*, pp. 49–50. Translated in Snorri Sturluson, *Edda*, ed. by Anthony Faulkes (London: J. M. Dent, 1987), pp. 52–3. See Maraschi, ‘Hunger games’, pp. 32–3.*

⁶⁸ Comparisons with similar – but more recent – events can shed light on the impact of such natural catastrophes. The eruption of mount Tambora (Indonesia) of 1817 was responsible for the so-called ‘year without summer’. It is argued that Mary Shelley, who was writing *Frankenstein* in the same year, may have been influenced by the event as she was crafting the atmosphere of the novel (see, for instance, Gillen D’Arcy Wood, *Tambora. The Eruption That Changed the World* (Princeton-Oxford: Princeton University Press, 2014); Richard B. Stothers, ‘The great Tambora Eruption in 1815 and its aftermath’, *Science* 15 (1984), pp. 1191–8; I want to thank the peer reviewer of this piece for suggesting this connection). Something similar is likely to have happened with the iconic ‘The Scream’ by Edvard Munch (1893), who seems to have been influenced by the 1883–1884 volcanic eruption of Krakatoa (Marilynn S. Olson, Donald W. Olson and Russell L. Doescher, ‘On the blood-red sky of Munch’s *The Scream*’, *Environmental History* 12, 1 (2007), pp. 131–5). It is also worth noting that the origins of ‘New Iceland’ (province of Manitoba, Canada) in the 1870s were a consequence of a ‘long cycle of subnormal temperatures’ that ‘produced hardship and privation’ in Iceland, leading to an important migration phenomenon from the island. Many factors seem to have been at play, but ‘a series of volcanic eruptions in north-central and eastern Iceland [...] covered great areas with molten lava or ash’, and specifically ‘the eruption of Mt. Askja [...] was the prime factor’ in the emigration of two large groups of Icelanders who arrived in Canada in August of 1876 (Burke G. Vanderhill and David E. Christensen, ‘The Settlement of New Iceland’, *Annals of the Association of American Geographers* 53, 3 (1963), pp. 350–363; see also Kirsten Wolf, ‘Emigration and mythmaking: the case of the Icelanders in Canada’, *Canadian Ethnic Studies Journal* 33, 2 (2001), pp. 1–15).

consequence of such a catastrophic event are rather consistent with what would happen (or could have happened) if a series of massive volcanic eruptions occurred.⁶⁹ On the other hand, this latter interpretation is embodied metaphorically by the figure of the wolf that literally 'swallows' the sun (ON: *gleyppa*), making it disappear. Here, unlike in *Vafþrúðnismál*, the wolf responsible for the destruction of the sun is not Fenrir, but his son Sköll (maybe because Fenrir had been chained by the gods, in the meantime): aside from its name, however, it is clear that the animal was a representation of ensuing catastrophe in Old Norse tradition.⁷⁰ Interestingly, as written in *Vafþrúðnismál*, a new sun – and a new civilization – rise after the cataclysm, as if the thick layer of ash has ultimately dissipated.

The question is: how close is the relationship between collective memory, myth, and history?⁷¹ It is fair to assume that there cannot be perfect identity, nor total opposition, between them, for 'any historical discourse must be founded, ultimately, on the memory of those who directly took part at the events that are being narrated'.⁷² In Greek mythology, the muse of history, Cleo, is the daughter of the personification of memory, Mnemosyne: the recording of history relies on the capacity to preserve memories, and 'collective memory carves from history symbolically relevant portions that are subsequently organized into a meaningful narrative, extirpating all the rest of historical reality that cannot be symbolically capitalized for the time being'.⁷³

In our specific case, the question is then: is it important to understand how reliable Old Norse mythological sources are with regards to the consequences that *Fimbulvetr* had on the landscape? Scholars have tried to marry the consequences of *Fimbulvetr* with written and archaeological sources from Europe to China that document similar eruptions. As I explain below, a geological event such as this may have led to the genesis of the *Ragnarøk*r myth.⁷⁴ If

⁶⁹ See Michael R. Rampino, Stephen Self, and Richard B. Stothers, 'Volcanic winters', *Annual Review of Earth and Planetary Sciences* 16 (1988), pp. 73–99; Stothers, 'The great Tambora eruption'; Id., 'Far reach of the tenth century Eldgjá eruption, Iceland', *Climatic Change* 39,4 (1998), pp. 715–726; Id., 'Climatic and demographic consequences of the massive volcanic eruption of 1258', *Climatic Change* 45,2 (2000), pp. 361–74.

⁷⁰ Perhaps because of a supposed relationship between ominous celestial phenomena and the constellation of Wolf's Jaw, as recently suggested: see Johnni Langer, 'The Wolf's Jaw: an astronomical interpretation of Ragnarök', *Archaeoastronomy and Ancient Technologies* 6, 1 (2018), pp. 1–20.

⁷¹ Siobhan Kattago, 'Introduction: Memory Studies and its companions', in *The Ashgate Research Companion to Memory Studies*, ed. by Siobhan Kattago (Burlington, VT: Ashgate, 2015), pp. 1–19 (pp. 3–4): '[...] collective memory shares much with tradition and myth, particularly in the way that foundational events are remembered as sources of collective identity'.

⁷² Mihai Stelian Rusu, 'History and collective memory: the succeeding incarnations of an evolving relationship', *Philobiblon* 18, 2 (2013), pp. 260–82 (p. 264).

⁷³ *Ibidem*.

⁷⁴ See, among others: Dallas H. Abbot et al., 'What caused terrestrial dust loading and climate downturns between A.D. 533 and 540?', *Geological Society of America Special Papers* 505 (2014), pp. 421–38; Antti Arjava, 'The

the association between *Fimbulvetr* and the 536 AD ‘dust veil’ is correct, its impact must have been dramatic enough that the Eddic poets recorded it in verses and imagined that the world was close to the end.⁷⁵

However, the myth is in the form of a prophecy. How does one explain the chronological and logical difficulty of accepting the witnesses experienced an event, which they survived, and then cast it as a story that is yet to happen? One answer may be that they felt as if they were living at the end of the world and, even though they survived, they may have realized that such calamities could occur cyclically, hence the need to pass down the related moral lesson: one concerning humbleness and the awareness of being vulnerable to forces they and future generations could not govern.⁷⁶

To support the historicity of the *Fimbulvetr* myth, Bo Gräslund has highlighted an otherwise banal detail: within the context of the ‘end of the world’ theme, severe snowstorms would not have been particularly unusual if they had occurred in wintertime because winter in the northern regions can be quite harsh without involving natural disasters.⁷⁷ On the contrary, the ‘Great Winter’ came suddenly, when no one was expecting it (perhaps in the summertime, he argues), and its characteristics were far more serious than common winters, especially because they seemed to suggest that something dreadful was happening to the most visible and important celestial body: the sun.⁷⁸

mystery cloud of 536 CE in the Mediterranean sources’, *Dumbarton Oaks Papers* 59 (2005), pp. 73–94; Morten Axboe, ‘The year 536 and the Scandinavian gold hoards’, *Medieval Archaeology* 43 (1999), pp. 186–88; Mike G. L. Baillie, ‘Dendrochronology raises questions about the nature of the AD 536 dust-veil event’, *Holocene* 4 (1994), pp. 212–17; Ulf Büntgen et al., ‘Cooling and societal change during the Late Antique Little Ice Age from 536 to around 660 AD’, *Nature Geoscience* 9 (2016), pp. 231–36; Olga V. Churakova et al., ‘A cluster of stratospheric volcanic eruptions in the AD 530s recorded in Siberian tree rings’, *Global and Planetary Change* 122 (2014), pp. 140–50; Bruce Dahlin and Arlen F. Chase, ‘A tale of three cities: effects of the AD 536 event in the lowland Maya heartland’, in *The Great Maya Droughts in Cultural Context: Case Studies in Resilience and Vulnerability*, ed. by G. Iannone (Boulder: University of Colorado Press, 2014), pp. 127–55; Chaochao Gao et al., ‘Volcanic forcing of climate over the past 1500 years: an improved ice core-based index for climate models’, *Journal of Geophysical Research: Atmospheres* 113 (2008), D23111; Margaret S. Houston, ‘Chinese climate, history, and stability in A.D. 536’, in *The Years Without Summer: Tracing A.D. 536 and Its Aftermath*, ed. by J. Gunn (Oxford: Archaeopress, 2000), pp. 71–77; Joannes Koder, ‘Climatic change in the fifth and sixth centuries?’, in *The Sixth Century – End or Beginning*, ed. by P. Allen and E.M. Jeffreys (Brisbane: Australian Association for Byzantine Studies, 1996), pp. 270–85; Larsen et al., ‘New ice core evidence’; Daniel Löwenborg, ‘An Iron Age shock doctrine – did the AD 536–7 event trigger large-scale social changes in the Mälaren Valley area?’, *Journal of Archaeology and International History* 4 (2012), pp. 1–29; Jürg Luterbacher and Christian Pfister, ‘The year without a summer’, *Nature Geoscience* 8 (2015), pp. 246–48; Richard B. Stothers, ‘Mystery cloud of AD 536’, *Nature* 307 (1984), pp. 344–45.

⁷⁵ Gräslund and Price, ‘Twilight of the gods?’, p. 440.

⁷⁶ Maraschi, ‘Eaten hearts’, p. 28; Id., ‘Hunger games’, p. 29.

⁷⁷ Gräslund, ‘Fimbulvintern, Ragnarök och klimatkrisen’, p. 96.

⁷⁸ *Ibidem*.

WHO ELSE SAW THE WOLF?

The thick ash veil screened the sunlight and had a dramatic impact on the landscape. Antti Arjava observed that 'although physical evidence is ambiguous, the written evidence from the Mediterranean region remains the clearest proof that something extraordinary happened precisely in 536–37'.⁷⁹ I will dedicate attention to sources such as this later in this paper, but it is first worth starting with Irish annals – one of the northernmost written sources making a reference to the event, and thus probably one of the closest sources (in terms of latitude) to the geographic area where the Eddic poems are supposed to have been produced.

For the year 536, the Annals of Tigernach, the Annals of Ulster, and the *Chronicum Scotorum*, report a 'failure of bread'.⁸⁰ Considering that this is one of only two possible occurrences of a harvest failure (Charles-Edwards suggests that the 'failure of bread' recorded for the year 536 may be a doublet of that recorded for 539)⁸¹ between the fifth and the tenth centuries in Ireland, it may well be an indication that the event was considered serious, and it is significant that these annalistic records correspond to the years in question. One more consecutive series of bad harvests is a perfectly coherent consequence of 'three [...] winters together and no summer between', with consequent prolonged food shortages.⁸² The *Annales Cambriae*, on the other hand, only refer to a plague that affected Britain and Ireland.⁸³

Such dramatic conditions, which are implied in mythological tradition, were preceded by signs which are clearly described in the *Eddas*, though metaphorically. Indeed, as previously noted, the lack of food supplies and the severe worsening of the weather were ushered in by the coming of what the northern poets described as a wolf that swallowed the sun. The impression that the wolf Fenrir may indeed be a poetic representation of the thick ash cloud that spread all over Europe is supported by Cassiodorus, who was alive at the time of the event. Cassiodorus, who served the king of the Ostrogoths Theoderic the Great in the 530s, was very concerned about the mysterious cloud: he wrote that a certain sign coming from the sky threatened to disrupt the otherwise harmonious order of all things planned by God.⁸⁴ The sun and the moon

⁷⁹ Arjava, 'The mystery cloud of 536 CE', p. 78.

⁸⁰ *The Chronicle of Ireland*, trans. By T. M. Charles-Edwards (Liverpool: Liverpool University Press, 2006), p. 94.

⁸¹ *Ibid*, p. 95.

⁸² Gräslund, 'Fimbulvintern, Ragnarök och klimatkrisen', p. 95. See also Cherie N. Peters, 'Translating food shortages in the Irish Chronicles, A.D. 500–1170', *Cambrian Medieval Celtic Studies* 71 (2016), pp. 29–58.

⁸³ *Annales Cambriae*, ed. by John Williams (Wiesbaden: Kraus Repr. Ltd., 1965), p. 4.

⁸⁴ Cassiodorus, *Variarum libri duodecim*, MGH SS AA, 12, ed. by Th. Mommsen (Berlin: Weidmann, 1894), 25, pp. 381–82.

lost their usual brightness, the sun turned blue, shadows on the ground were faint, temperatures dropped. Most interestingly, he notes that this was not the temporary consequence of an eclipse (*quod non eclipsis momentaneo defectu [...]*),⁸⁵ but of another phenomenon that had started a year earlier. The climatic consequences of this anomaly look different to those described in the *Eddas* but are equally devastating. Cassiodorus describes the people as terrified as the seasons seemed to have lost any meaning: winter without storms, spring without mildness, summer without heat. The perfect balance of elements accorded by God to mankind was subverted: '[...] perpetual frost, and unnatural drought. The seasons have changed by failing to change'.⁸⁶ The consequences on the agricultural landscape were dreadful: the crops were devastated, the soil was barren, fruits did not ripen. He also reports that the snow was particularly enduring for it was not melted by the sun's warmth, and that 'in other times, too' similar things had been observed because of a cloudy sky. Furthermore, although he relied on the Christian interpretation of celestial signs, which finds a positive explanation for any celestial phenomenon in God's will, he still noted that the fruits of the earth were being destroyed, and that practical measures were necessary to limit the damage.⁸⁷

The mythological characteristics of *Fimbulvetr* seem to be consistent with Cassiodorus' meticulous description of the effects of the 'dust veil' on the landscape and the economy of the Italian peninsula. At least five contemporary European and Mediterranean written sources make reference to the event in very similar fashion (not to mention others from China and Japan),⁸⁸ proving that, although celestial phenomena were often used for rhetorical purposes with the intention of connecting historical reality with biblical prophecies, they could also be the result of observation.⁸⁹ The sources report that the sun and the moon lost their brightness, that many birds died, and that extreme weather conditions ensued along with the destruction of pastureland in Asia which caused the migration of thousands of people.⁹⁰ Relevant to the present research is Patriarch Michael the Syrian's *Chronicle*, which dates to the twelfth century but was based on earlier chronicles (such as John of Ephesus' *Ecclesiastical history*) of early and high medieval history.⁹¹ In Book 9 of the *Chronicle*, to the effects of the mystery cloud quoted above

⁸⁵ *Ibid.*, p. 381.

⁸⁶ *Ibidem*. Translation mine.

⁸⁷ Maraschi, 'Red lights in the sky', *passim*.

⁸⁸ Newfield, 'The climate downturn of 536–50', pp. 450 ff.

⁸⁹ Maraschi, 'Red lights in the sky', pp. 312–13.

⁹⁰ Arjava, 'The mystery cloud of 536 CE', pp. 78–80; Newfield, 'The climate downturn of 536–50', p. 450.

⁹¹ Jean-Baptiste Chabot (ed. and trans.), *Chronique de Michel le Syrien, Patriarche Jacobite d'Antioche (1166–1199). Éditée pour la première fois et traduite en française*, 4 vols (Paris: E. Leroux, 1899–1910), II, Book 9, 26, pp. 220–221. See Newfield, 'The climate downturn of 536–50', p. 450.

he adds that the sun remained dark for eighteen consecutive months, each day weakly shining for about four hours, so much so that it was commonly believed that its original brightness would never be restored. He also notes that the consequence was that fruits did not ripen, and that the quality of wine was so bad that it tasted like sour grapes.⁹² However, it must be noted that records of fruits not ripening were part of a rhetorical set of attributes which was frequently employed by medieval chroniclers to emphasize the eschatological fulfilment of history.⁹³ This fact does not detract from the significance of the event as a recorded phenomenon as rhetorical devices were often used to connect history with eschatological prophecies.

All in all, the most dramatic portrayal of the 'dust veil event' is found in the *Liber Pontificalis* which refers to 'a huge famine that affected the entire world',⁹⁴ to the extent that, according to a Milanese bishop, mothers were forced to eat their own children in Liguria (north-western Italy). Even though it could be assumed that such a statement is too exaggerated to be credible, it certainly adds to the historical evidence mentioned above, and does not seem too far removed from the general picture.

The relationship between the Eddic *Fimbulvetr* and the 'dust veil event' is also supported by another important factor: the myth of Baldr's death, featured in stanzas 31–35 of *Völuspá*. The importance of this story within the context of the 536 AD catastrophe has been recently suggested by Mathias Nordvig and Felix Riede,⁹⁵ who note that such an event had deep consequences for all the gods and, consequently, for mankind. The reason for this, from a literary perspective, would be that Baldr was associated with fertility and prosperity, and his demise may well have symbolic significance. Nordvig and Riede note that not only do the numerous traditions of this myth indicate that it was considerably ancient (and thus could date back to the time of the calamity), but archaeological evidence shows that a great number of gold bracteates were suddenly deposited in 536 in an attempt to 'appease the higher powers'⁹⁶ that were held responsible for the ongoing catastrophe.⁹⁷ Most interestingly, said bracteates feature representations that have been linked with the myth of Baldr's death itself, thus

⁹² Chabot (ed. and trans.), *Chronique de Michel le Syrien*, p. 221.

⁹³ Maraschi, 'Red lights in the sky', p. 304.

⁹⁴ *Liber Pontificalis*, MGH SS GPR 1, ed. by Th. Mommsen (Berlin: Weidmann, 1898), pp. 145–46: *Eodem tempore tanta famis fuit per universum mundum, ut Datus episcopus civitatis.*

⁹⁵ Nordvig and Riede, 'Are there echoes of the AD 536 event in the Viking Ragnarok myth?', pp. 310–11.

⁹⁶ *Ibid.*, p. 307.

⁹⁷ Axboe, 'Amulet pendants and a darkened sun'; Id. and Wilhelm Heizmann, eds., *Die Goldbrakteaten der Völkerwanderungszeit: Auswertung und Neufunde* (Berlin: Walter De Gruyter, 2011).

suggesting that the frenzied process of bracteates deposition on that specific year may have been a reaction to a calamity involving the environment.⁹⁸

LEARNING FROM THE PAST TO UNDERSTAND THE PRESENT

Whether the consistency between sources from Europe and from the Far East is probable but not ultimately demonstrated, it is undeniable that ‘something atmospherically and climatologically unusual’ happened ‘during and after 536’.⁹⁹ A more difficult task is to assess whether the apocalyptic vein of the Eddic representation of *Fimbulvetr* is supported by historical evidence. Unfortunately, as has been shown, the poetic record of the phenomenon seems to be the only northern extant account, except for the Irish annals, whereas most of the written sources are located around the Mediterranean basin. So, if, on the one hand, tree rings and ice cores confirm that the impact of the dust veil on temperatures and weather conditions was considerable, on the other hand Mediterranean sources seem to suggest that said impact was not homogenous, but varied from place to place.

The actual effects of the historical *Fimbulvetr* (i.e., the cloud) in the regions where its related mythological representation was produced are not easily demonstrable either, due to the lack of additional written sources. Scholars have shown that several Scandinavian settlements, as well as arable and pasture lands, were abandoned in the first half of the sixth century,¹⁰⁰ but have also suggested that these signals of crisis are part of a longer-term decline whose roots are likely to be found two centuries earlier.¹⁰¹ This being said, the social and cultural role of the *Fimbulvetr* myth should not be underestimated. Such a series of natural changes and catastrophes that occurred in 536 AD and were accompanied by the aforementioned signs in the sky, may well have led witnesses to the composition of poems and stories where said event was crystallized in metaphorical form. As earlier observed, this process was no novelty in the history of human civilizations, and had multiple purposes:¹⁰²

⁹⁸ Nordvig and Riede, ‘Are there echoes of the AD 536 event in the Viking Ragnarok myth?’, pp. 310–11.

⁹⁹ Newfield, ‘The climate downturn of 536–50’, p. 452.

¹⁰⁰ Gräslund and Price, ‘Twilight of the gods?’, pp. 431–32.

¹⁰¹ Newfield, ‘The climate downturn of 536–50’, p. 470; T. Douglas Price, *Ancient Scandinavia: An Archaeological History from the First Humans to the Vikings* (New York: Oxford University Press, 2015), pp. 258 ff.; Löwenborg, ‘An Iron Age shock doctrine’, pp. 10–13.

¹⁰² See Slavica Ranković, ‘Communal memory of the distributed author. Applicability of the connectionist model of memory to the study of traditional narratives’, in *The Making of Memory in the Middle Ages*, ed. Lucie Doležalová. *Later Medieval Europe 4* (Leiden-Boston: Brill), pp. 9–26 (pp. 15–18). Jordan Peterson states: ‘The generation and constant refinement of these stories, told and retold over centuries, allows us to determine ever more clearly just what proper (and improper) behavior consists of, in an environment permanently characterized by the interplay between security and unpredictability’ (*Maps of Meaning*, p. 75).

- 1) recording a historically relevant event;
- 2) recording the event in a form that could be easily passed down from generation to generation;
- 3) reminding the community and future generations that human existence is constantly threatened by non-human factors (mostly associated with the sky) which are ultimately beyond mankind's control;
- 4) reminding them that despite the catastrophic consequences of the event, which annihilates humans, giants, and gods, civilization will start anew, and a new cycle will begin.

From this perspective, the story of *Fimbulvetr* seems to work as a lesson to learn about the infinitesimal power of men in comparison to the power of nature. An archetypal lesson which, in line with Judeo-Christian and other traditions, is about:

- a) humbleness (civilization is doomed to be annihilated);
- b) hope (civilization will be reborn, as the myth of Líf and Leifþrasir shows);¹⁰³
- c) respect for cultural memory (what has been is important for those who will come).

Within this framework, the landscape plays multiple roles: it represents the environment where a society's ancestors lived and acted; the stage on which the destructive power of the catastrophe takes place; but its rebirth is also the proof that the end of one cycle necessarily leads to the beginning of a new one. The description of the landscape is thus part historical and part mythic,¹⁰⁴ for these two dimensions merge into each other: 'The cultural memory is based on fixed points in the past', Jan Assmann observes:

Even in the cultural memory, the past is not preserved as such but is cast in symbols as they are represented in oral myths or in writings [...], and as they are continually illuminating a changing present. In the context of cultural memory, the distinction between myth and history vanishes. Not the past as such, as it is investigated and reconstructed by archaeologists and historians, counts for the cultural memory, but only the past as it is remembered.¹⁰⁵

¹⁰³ O'Donoghue, *From Asgard to Valhalla*, p. 94.

¹⁰⁴ Clearly landscapes reach far beyond history and myth (i.e., space, memories, etc.). However, the former two are particularly relevant for this paper's purposes.

¹⁰⁵ Jan Assmann, 'Communicative and cultural memory', in *Cultural Memory Studies*, pp. 109–18 (p. 113).

Specifically, in the case of the dust veil of 536 AD and of the Eddic *Fimbulvetr*, the landscape is partially described in accordance with what historically happened, but also features elements imbued with moral and cultural significance. As earlier noted, it is highly unlikely that history and myth may be linked by a perfect identity: on the other hand, myth does not need to be a close representation of history, as long as it crystallizes and preserves the inner message attached to history itself, with the purpose of making it easy to pass down and to understand. As noted by Rudolph Bultmann, myth is the expression of a ‘man’s understanding of himself in the world in which he lives’,¹⁰⁶ while Roland Barthes held that ‘mythology can only have an historical foundation, for myth is a type of speech chosen by history’.¹⁰⁷ I believe that these two angles perfectly summarize the meaning of the *Fimbulvetr* myth: it is not simply a myth with historical foundation, but an invaluable teaching to transmit down the generations. ‘It is reasonable to presume that, over the long run’, Jordan Peterson noted about the meaning of world mythologies, ‘our species “forgets” most things that are useless: we do not forget our myths, however. Indeed, much of the activity broadly deemed “cultural” is in fact the effort to ensure that such myths are constantly represented and communicated’.¹⁰⁸ The sole fact that myths of this kind tend to be preserved for centuries, in oral or written form, is quite indicative of their incredible social, cultural, and moral value.

Returning to the initial premises, then, the *Fimbulvetr* myth simultaneously answers the aforementioned questions of “what is?”, “what should be?”, and “how should we therefore act?”, and fixes a segment of historical reality which was deemed fundamental for the collective identity and the history of the civilization that witnessed it.¹⁰⁹ It is, in some sense, a “formative” text, for it formulates ‘the self-image of the group’:¹¹⁰ together with “normative” texts (i.e., texts featuring norms of behaviour), those that are “formative” constitute the ‘sub-group of texts that are constantly taken up and reproduced by a whole society’.¹¹¹ These can be either written or oral, and by their transmission ‘a society or culture reproduces itself in its “cultural identity” through the generations’.¹¹² But, assuming that *Fimbulvetr* is a mythological depiction of the

¹⁰⁶ Rudolph Bultmann, ‘New Testament mythology’, in *Kerygma and Myth. A Theological Debate*, ed. by Hans Werner Bartsch (New York: Harper & Row, 1961), pp. 1–44, p. 46.

¹⁰⁷ Roland Barthes, *Mythologies* (London: Vintage, 2000), p. 110.

¹⁰⁸ Peterson, *Maps of Meaning*, p. 91.

¹⁰⁹ *Ibid.*, pp. 13–14. See also Birgit Neumann, ‘The literary representation of memory’, in *Cultural Memory Studies*, pp. 333–43 (p. 339). About the use of literature to ‘save memories from oblivion’ in medieval Iceland, see Hermann, ‘Concepts of memory and approaches to the past’, p. 291.

¹¹⁰ Jan Assmann, ‘Form as a mnemonic device: cultural texts and cultural memory’, in *Performing the Gospel. Orality, Memory, and Mark. Essays Dedicated to Werner Kelber*, ed. by Richard A. Horsley, Jonathan A. Draper, and John Miles Foley (Minneapolis: Fortress Press, 2006), pp. 67–82 (p. 76).

¹¹¹ *Ibidem.*

¹¹² *Ibidem.*

'dust veil event', the myth does not only ensure cultural continuity and identity: it conveys an edifying social message, an answer to the anxiety of existence. In this sense, it can be seen as a myth of the Fall that allows humanity – through pain and death – to re-emerge and develop its self-consciousness: before the Great Winter and the (temporary) end of the world, man is not conscious of the 'drama of human history'.¹¹³ *Fimbulvetr* thus represents that 'cultural capital [...] that is continuously recycled and re-affirmed',¹¹⁴ a 'fateful event of the past, whose memory is maintained through cultural formation [...] and institutional communication'.¹¹⁵ The subversion of nature's cycles during the 'Great Winter' then constituted one of those historical foundations for the existence of the people who recorded it orally and handed it down to future generations.¹¹⁶ The myth is a cultural response to a situation which may have well looked dramatic: 'a society "works" to the degree that it provides its members with the capacity to predict and control the events in their experiential field', observes Peterson, 'to the degree that it provides a barrier, protection from the unknown or unexpected'.¹¹⁷ This is exactly what our myth seems to be accomplishing: the 'Great Winter' comes, the end of the world ensues, society collapses. However, *Fimbulvetr* and *Ragnarøkkr* happen in the future, and their myths provide a positive explanation: it is a form of teaching and protection. Indeed, one of the branches of the *Fimbulvetr* story takes the shape of a prophecy (*Völuspá*), and the same idea emerges in Snorri's rendition: this means that the historical *Fimbulvetr* was recorded on the level of history, whereas it was bound to happen in the future on the level of myth. In other words, the actual catastrophe had already happened in the recent past, but according to the seeress it would happen in years to come.¹¹⁸ *Ragnarøkkr* 'looms, ever present in the cultural memory',¹¹⁹ John Lindow has noted. The fundamental lesson that is implied in this prediction, whose immense value is confirmed by our knowledge of past calamities which had dramatic effects on the planet, shall be remembered, hopefully: human existence is constantly hanging by a thread, and will be swept away unexpectedly by something coming from the sky. It had already happened, if the parallel between *Fimbulvetr* and the 536 AD dust veil is correct. According to the seeress, though, it has *yet* to happen – maybe again, and again.

¹¹³ Peterson, *Maps of Meaning*, pp. 477–79.

¹¹⁴ Assmann, 'The dynamics of cultural memory', p. 100.

¹¹⁵ Jan Assmann and John Czaplicka, 'Collective memory and cultural identity', *New German Critique* 65 (1995), pp. 125–33 (p. 129).

¹¹⁶ Jacques Le Goff, *History and Memory*, trans. by Steven Rendall and Elizabeth Claman (New York: Columbia University Press, 1992), p. 55.

¹¹⁷ Peterson, *Maps of Meaning*, p. 228.

¹¹⁸ Lindow, 'Memory and Old Norse mythology', p. 41.

¹¹⁹ *Ibid.*, 53.

In conclusion, this analysis supports the opinion of scholars who hold that the Eddic depictions of *Fimbulvetr* are the products of actual observation,¹²⁰ and that, more generally, apocalyptic visions could be linked with personal experience.¹²¹ The memory of the effects of the volcanic eruptions of 536 AD and of their massive impact on the landscape was probably deemed too important to be forgotten: in fact, it was perceived as so catastrophic that it was not merely associated with the destruction of mankind only, but with that of giants and gods as well. The result of the operation was a success: the cultural identity of the civilization that fixed the memory of *Fimbulvetr* in verses would be linked with the event itself forever.



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¹²⁰ Gräslund, 'Fimbulvintern, Ragnarök och klimatkrisen'; Id. and Price, 'Twilight of the gods?'; Gunn, *The Years Without Summer*; Widgren, 'Climate and causation in the Swedish Iron Age'; Nordvig and Riede, 'Are there echoes of the AD 536 event in the Viking Ragnarok myth'.

¹²¹ James. T. Palmer, *The Apocalypse in the Early Middle Ages* (Cambridge: Cambridge University Press, 2014), p. 146.