Singularity and the Sublime in Australian Landscape Representation

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In reports of inland exploration in nineteenth-century Australia, an encounter with the type of formation that sprang unexpectedly out of a flat terrain was often recorded as a site of pleasure. The subject experienced a sensuous delight from the surprise of the confrontation, from finding the gaze arrested by the unknown and strange. Surveyor and artist James Henderson commented on the experience: 'On descending a hill we came suddenly upon a large bold rock of sandstone standing isolated on a rising ground. The effect was pleasing'.[1] Feelings of pleasure in the engagement related to a complex manifold of concepts in which the taste for the uncommon or what was called in the eighteenth century, the singular, was sometimes the entry to the more profound experience of the sublime. In apprehending such objects, size was only of relative consequence in inducing an initial response; mounds or mountains as surprise elements held an appeal to the senses. If the object differed dramatically from the surrounding landscape its effect was to astonish the observer and produce a 'shock effect' on consciousness. In his published journal of travels in the south eastern area of Western Australia the explorer John Forrest drew the reader's attention to an isolated mountain north of the Musgrave Ranges: 'Mount Connor rises abruptly out of the plain and is most remarkable, appearing like an island rising out of the ocean'.[2] Forrest's reaction was to resort to metaphor. In this and similar situations the imagination of the viewer was jolted into activity by the strangeness of the object. Its singularity set up trains of thought or movements of the mind that engaged in recall and regress. The eighteenth-century theorist, Alexander Gerard, analysed the process:

> Whenever our pleasure arises from ideas associated with an object, and suggested by it, it is their being instantaneously suggested that renders the object striking ...[3]

Gerard goes on to explain that the sensuous encounter is followed by an enlargement of the mind that makes it difficult to entertain the thought of anything but the present object. Yet the imagination is so

strong that it 'readily, and with a kind of eagerness, passes from one idea to its associates'. When one idea is conceived, 'no force can prevent the other from rushing into the mind'.[4] The eighteenth-century philosophers, especially the Scottish group, agreed that the pleasure we find in the singular is often the entry to the more profound experience of the sublime. A taste for singularity, novelty, the uncommon coupled with surprise: the position of the sublime in this schema was complex. In eighteenth-century theories of aesthetics the sublime was most often associated with the individual finding the grandeur and magnificence of nature an overwhelming experience, a pleasure accompanied by a sense of awe that was apprehension rather than outright fear.[5] Yet most eighteenth-century texts on the sublime are accompanied by some analysis of the attractions of the singular.[6] John Baillie is one of several writers who discuss the uncommon or singular as having a bearing on the sublime: 'Uncommonness, though it does not constitute the sublime of natural objects, very much heightens its effect upon the mind.'[7] Baillie's argument is that we cannot entertain ideas of the sublime if the object is familiar to us. The more singular and unusual the object, the greater will be its effect.

As a theoretical concept the singular was rarely discussed in the nineteenth century, yet I want to suggest that it remained visible in the documentation and representation of the landscape element. In this paper I explore a group of Australian nineteenth-century texts (writings and images) that give some indication of the degree to which the apprehension of the singular may be linked to the experience of the sublime if the sublime is thought of in terms of a discursive formation rather than as a discrete aesthetic. Looking at the evidence of this discourse today it is possible to trace a new kind of sublime, one with a relationship to both the concept of the singular and to new theories concerning the formation of the world. Because these new knowledges developed into part of the discipline now known as 'geology', the discourse of the 'geological sublime' included both an aesthetic and a scientific appreciation of the natural world. It is the textual space between these fields that I am investigating. After the publication of Charles Lyell's *Principles of Geology* in the early 1830s, rocks were a topic of constant conjecture, and Australian research contributed to put in place the 'truths' of the new discipline.[8] The idea I want to advance is that fresh understanding of the geological age of the earth prompted speculation on the vast time scale involved in its evolution. In the mind's regress to an unknowable time/space, those familiar with the concept were capable of experiencing the

sublime, but I also want to suggest that some of the intensity of this reaction arose from the excitement of the initial encounter.[9]

In the *Enquiry* Edmund Burke paid a great deal of attention to the element of surprise, seeking to shed light on why it should produce such a sudden emotional surge in the subject. Speaking of the place of astonishment in relation to the sublime, he explained:

> In this case the mind is so entirely filled with its object, that it cannot entertain any other, nor by consequence reason on that object which employs it. Hence arises the great power of the sublime, that far from being produced by them, it anticipates our reasonings, and hurries us on by an irresistible force.[10]

While Burke believed that in the precise moment of confrontation the intoxication of the encounter ruled out both the workings of reason and associative imaginings, he did not totally reject the mind's tendency towards association - the desire for analogy with the known, or the search for a cause. This was in line with the beliefs of several other *philosophes*, yet no one else gave astonishment quite the power assigned it by Burke. 'Astonishment, as I have said, is the effect of the sublime in its heighest degree; the inferior effects are admiration, reverence and respect.'[11]

In nineteenth-century Australian writings, the word 'astonishment' is often coupled with 'awe' as reactions simultaneously experienced. In a landscape where rock forms asserted their presence because of their size or singularity, the subject encoded them as 'other' to the physiognomy of the terrain since they held an ambiguous place in the field of visibility. A hill or mountain standing in grand isolation on a flat plain or an almost spherical rock was read as an aberration that displayed the riddle of its origins and sent thought tracking through consciousness to find analogies. The check to the emotions, the gasp of surprise induced by the strangeness of the object, was the physiological sign of a process of entry into consciousness. The shock effected an initial deferral, and the object was then introduced with greater force through association.[12]

While the site was encoded as 'other' by comparison with the more usual and known features of local scenery, sometimes a metaphorical identity was applied, or it was compared with known sites of inexplicable formations elsewhere in the world. This is particularly the case before the advent of new understanding of the geological age of the earth. Some of the mystery attached to strange rock formations in Europe, to the erratics of Norber Moor and Borrowdale in England, to groups of European megaliths and dolmens, or to those positioned by human

intervention, such as Stonehenge in Britain and Carnac in Brittany, carried an enigmatic connotation on to the natural formations found in the Australian continent. A region near Glen Innes in New South Wales, called Stonehenge, was named from its giant boulders and supposed resemblance to the Druid's plain in England.[13] The concept of the nineteenth century's particularised object was in opposition to the eighteenth century's concern with the universal, where nature was encoded as rational, repetitive, and as unified, homogenous. In contrast, in the idea of singularity, nature was constituted as eccentric and irrational, throwing up a phenomenon which pleased by stirring the emotions and stimulating the imagination. Artists seized upon the existing strangeness and sought to intensify this characteristic in various ways. It was re-encoded as 'difference' in visual representation by being presented in a privileged position or alone in the format, sometimes with no attempt to include the surrounding landscape. In reinforcing the difference, the simulacrum made strange what was essentially already strange in comparison with other parts of the phenomenal world. When concentration on the individual object was narrowed to exclude all else, not only was a sense of the object's'otherness' produced but intimations of the sublime often informed the image.

Published accounts of exploration circulating in Australia in the first half of the century, and later publications for a popular market made efforts to answer the kind of questions that were part of the usual reaction to an extraordinary formation. Was the level of the earth once at the height of the pillar? Had erosion whittled away the surrounding earth to leave the sandstone stack? In taking the mind back across the eons of time required to produce such changes, a space was made for the viewer to experience a sublime response. Chambers Pillar, discovered by John McDouall Stuart in 1860 and illustrated in his published journal, was exactly the type of object that prompted speculation.[14] The original sketch by the South Australian artist, George French Angas, converted into an engraving for Stuart's journal, conveys the singularity of the giant rock form against a countryside that is flat and barren. An article in the *Illustrated Australian News* of April 24, 1869, set out the style of many encounters, the initial sense of astonishment, and the will to knowledge prompted by contemporary geological theories:

> The remarkable appearance of the Table Top lands as presented in

> this sketch, will at once strike the eye ... It is a supposition entertained by geographers that the surrounding country has in past ages been washed away or disintegrated by vast floods—and hence—the Table Top mountains whose tops represent the old level of the ancient land. There is much to be said to support this theory but too lengthy to be introduced in a few passing remarks on a *very singular region of Central Australia*.[15] (emphasis added)

Texts in Australian illustrated nineteenth-century newspapers and journals seldom reveal to today's twentieth-century reader the compelling nature of the formation's original appeal to a population as interested in geological 'news' as we are in world economics today. In March, 1864, the *Illustrated Melbourne Post* published an illustration of isolated granite rocks near Anakies in the vicinity of Geelong, an image which today appears unremarkable.[16] The granite was one attraction as it was known to be an igneous rock, and the accompanying article also mentions the combination of size and the bizarre that appealed to the nineteenth-century mind.

> The rocks ... are from their massiveness and from the peculiar manner in which they have been thrown together, one of the most interesting sights in the neighbourhood.[17]

In the November 25, 1863 issue of the *Illustrated Melbourne Post* a writer commented on a gigantic copper-impregnated out-crop at Peak Downs, Queensland:

> these accumulations ... tarnished by the influence of untold ages ... presenting as they do an aspect peculiar and imposing on a scale but rarely beheld.[18]

Thus the singular (peculiar) is allied with the possibility of a reaction that moved towards the sublime in the mind's capacity to dwell on its original formation. Just as the object occupied the gaze and the thoughts of the original spectator, so the bewildering questions loomed large in the mind of the contemporary reader whose thoughts could certainly have turned to the 'untold ages' of geological time. The grand theories, such as Charles Lyell's Uniformitarianism, which suggested an immeasurable time scale for the evolution of the world, offered few conclusive answers to the baffling questions. And in 1840 another publication of tremendous significance exploded in the geological world.[19] The author was the Swiss-American naturalist and geologist, Louis Agassiz, and his book, *Etudes sur Les Glaciers*, made a radical claim.[20] Expanding on ideas suggested by earlier geologists on the action of glaciers to move boulders, Agassiz put forward the then

remarkable concept of a whole ice age.[21] The glaciers were not simply a local circumstance but part of a climatic change that had once affected whole continents, covering them totally with vast sheets of ice. Erratic blocks were carried on the surface of the ice and as it melted, dropped on mountains and high on the sides of valleys. Prior to an understanding of glacial action, it was believed that single boulders, sometimes weighing thousands of tons, were moved in the universal seas of the biblical deluge.[22] The irrefutable evidence of glacial action queried firmly held convictions as to the truth of Genesis and opened up further debate on the age of the globe.

A realisation of the significance of glacial action spread to Australia with remarkable swiftness.[23] Assuming an interested readership, papers on glacial activity appeared in Australian newspapers. A lecture given to the Royal Society by the Rev. J. E. Tenison Woods in February, 1867, was published the following month in the *Australasian*, and Woods' narrative included the remark:

> I need not go into the details of all this. They [Agassiz' observations on evidence of glacial action] are so well known as to be found in every popular manual of science, and have caused quite a revolution in our received explanations of terrestrial phenomena.[24]

Known erratics were peered at with a new sense of wonder, and mountainous country scrutinised for the evidence of glacial activity. Odd and remarkable phenomena in the landscape, polished and striated pavements, for instance, and chaotic assemblages of mixed rock types, received renewed attention in the 1840s and in the decades following. Any formation that seemed an irregularity in relation to its surroundings was investigated as a violation of the logical 'order' that had been assumed in creation. The fascination of the erratic lay in its difference. Its wondrous size and shape elevated it to an'otherness' that exercised a spell-binding effect. Of all the formations that provoked interest in the second half of the century, the erratic was the most stimulating and disturbing. The enigmatic shape, sometimes almost spherical, and its 'habit' of balancing precariously on groups of rocks, set it apart from all other elements in the landscape. Increasing such perceived singularity and sensate appeal was a haptic quality that made the traveller want to draw near and by touching somehow plumb the depths of its mystery. The smooth surface was noticed and admired, and prior to Agassiz' theories of an Ice Age, often attributed to the rocks floating to a present location, on the waves of a gigantic sea. When represented in imagery the boulder continued to exert a powerful presence, compelling the

gaze, and changing the reader's perception of any landscape scene into which it was introduced. The artist sometimes stressed its difference in rhetorical gestures, positioning it against the skyline, making it appear more spherical, or at times increasing the imbalance of scale between rock and human figure. In some instances the technique was deliberately oriented to stimulate a sense of thrill and excitement in the sensitive viewer, receptive to the sublime.

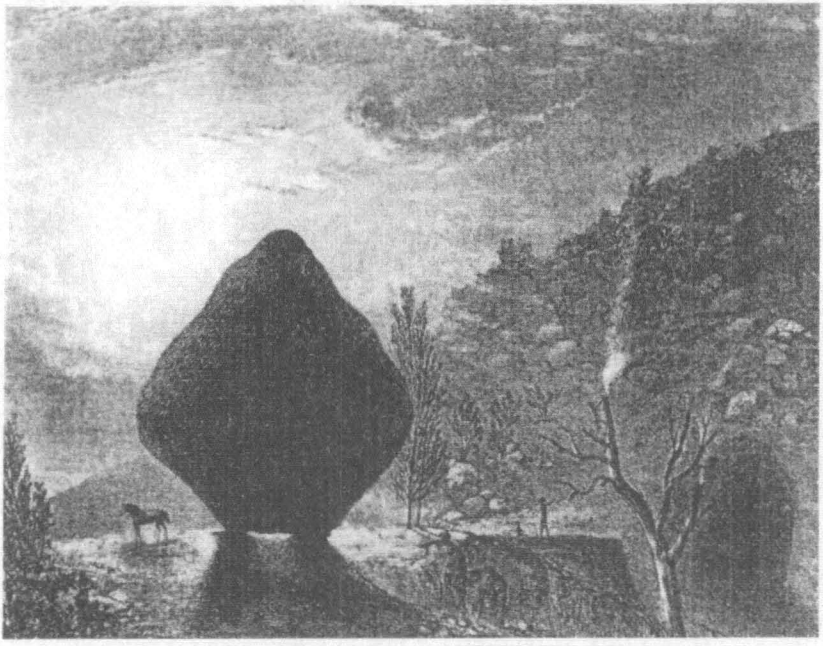

Plate I: J. Redaway & Sons, engravers after William Blandowski, *Pattowatto, Granite Boulder [Perry's Haystack] Looking N-W 47 miles N by W of Melbourne*, copper engraving , pl.8, 16.5 x 21.5 cm, *Australia Terra Cognita*, 1855–56.

The idea of the parched dry scrub of Australia's inland under Agassiz' ice age stretched all the powers of the imagination, and made the localities where erratics were found the goal of artists and geologists. The German mineralogist and sketcher, William Blandowski, was both a founding member of the Geological Society of Victoria and of the Philosophical Society of Victoria. As one of the key figures in the original Victorian Government Survey Team he made sketches of rock formations in geological field trips around Victoria and South Australia, and from these drawings had a series of engravings executed in 1855 in

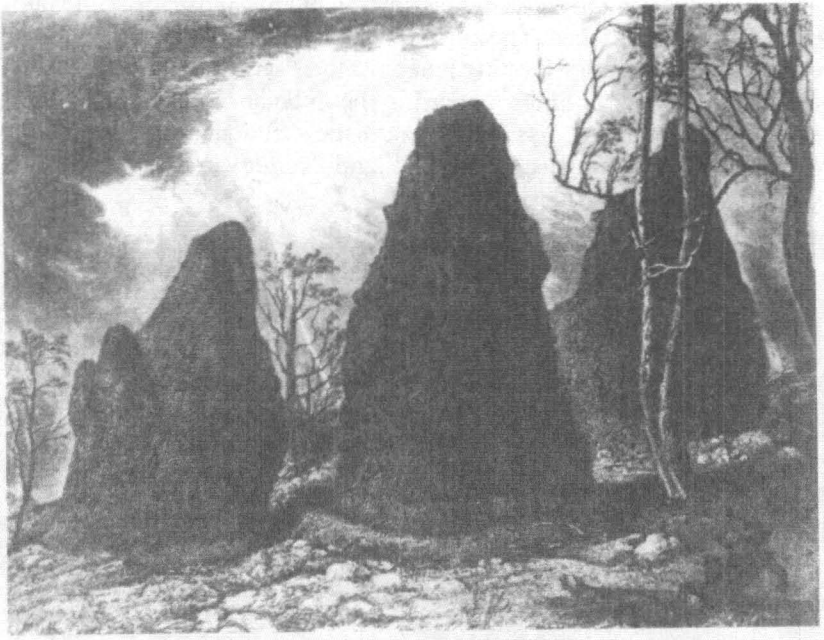

Plate II: J. Redaway & Sons, engravers after William Blandowski, *Foot of Diogenes Momument* copper engraving, 16.5 x 21.5 cm, *pl.9, Australia Terra Cognita, 1855–56.*

Germany. The twenty-nine plates, collected in a bound volume entitled *Australia Terra Cognita*, included a section in which images of huge boulders evidence a conflated interest in the aesthetic appreciation of the object and its geological implications.[25] Two of the erratics sketched have Aboriginal names, *Yauan* and *Pattowatto*. Blandowski's perpetuation of the names in a caption is some indication of the almost reverent attitude of both the black and white local inhabitants towards the formations in the 1850s. *Pattowatto* is also known as *Perry's Haystack*, and it is this monstrous haystack shape that occupies the central picture plane, to the exclusion of other landscape elements.[26] A diminutive horse and Aboriginal figures lend scale, appearing in silhouette from a flood of transcendent light. In the representation, night lighting transforms the scene to one of eerie mystery, and in a preferred reading there is no mistaking the air of apprehension that the gradations of light and dark convey. Hugh Blair was one of several eighteenth-century writers who concluded that 'night scenes are commonly the most sublime.'[27] The German engraver's treatment of

Blandowski's sketch is a convincing example of how the erratics were viewed, how geological understanding in the fifties had not totally overcome strongly held beliefs of the power of unstable forces ruling the earth. The erratics' displacement was the visible evidence of one ice age (Pleistocene) but the signifiers in the Blandowski images imply a mystery that science has not yet penetrated. There is a similar theatrical effort in a second image in Blandowski's series, titled *Yauan*.[28] The large, almost spherical rock is treated as the apex of a pyramidal structure; its shape against the sky gives it a foreignness in an environment where almost geometrical perfection is strange.

Diogenes' Monument, also known as Dryden's Mount, and today called Hanging Rock, projected a mysterious and threatening image in nineteenth century representations of the site.[29] The so-called 'rock' is a small mountain near Mt. Macedon in the Woodend district of Victoria, distinguished by its dense mantle of stupendous rock crags and outcrops. In Blandowski's engraving, titled *Diogenes Monument*, moonlight illuminates a surreal scene in which unbelievable rock forms locate the sense of unease generally felt by visitors to the location.[30] The dark shadows and menacing shapes are barely alleviated by the campfire of an Aboriginal group on the hillside. Notes accompanying a letter to Blandowski from Germany suggest that the engraver intended to convey the potential danger in nature—that he saw Australia as a country close to a time when primordial forces ruled the earth.[31] Blandowski's reports, published in the *Transactions of the Philosophical Institute of Victoria* in the 1850s, are generally couched in the mode of particularised geological terminology, but occasionally the language rises to the rhetoric of the figural as he shows his emotional involvement with the scene. Of Hanging Rock he writes:

> Dryden's Monument is, as well on account of its geological character as its *singular conformation*, one of the most remarkable spots in Victoria, if not in the whole of Australia, and were a careful and minute description of it made, accompanied with good drawings, it would not fail to engage the attention of every geologist. The approach to it presents a scene of *most imposing grandeur*. A massive wall of dolomite, whose deep and sombre hue is in exquisite harmony with the dark green of the eucalyptus, rises almost perpendicularly above the loftiest of the trees, and imparts a striking majesty to the whole view.[32] (emphasis added)

Blandowski wants to be geologically informative, but is carried away by the need to impart to the reader the intensity of his sense of being in the presence of something strange, singular and sublime in the natural

world. His'most imposing grandeur' intimates the latent expectation of a sublime experience, the word 'grand' and 'grandeur' often being synonymous with 'sublime' in eighteenth- and nineteenth-century writings. A sense of threat invades another dramatic Blandowski image, *Foot of Diogenes Monument*, where forked lightning strikes the ground and throws into relief the extraordinary outlines of three of the mountain's cone-shaped rocks. An Aboriginal figure reels back in horror at the spectacle; his arm raised in astonishment: the classic convention to signify he is in the presence of the sublime.[33]

There were many known, but few easily accessible sites of erratics: one at Hartley in the Blue Mountains, and another near Kyneton in Victoria appear in extant artworks. Conrad Martens sketched at Stonehenge, New England, and Eugen Guerard at Hartley in the 1850s.[34] Like many of the educated class, both artists had an intense interest in the developing science of geology, and an understanding of the sublime. In the time Martens spent with Charles Darwin on the hydrographic survey voyage of the ship, Beagle, in 1833 the young Darwin may have alerted the artist to Charles Lyell's theories on the

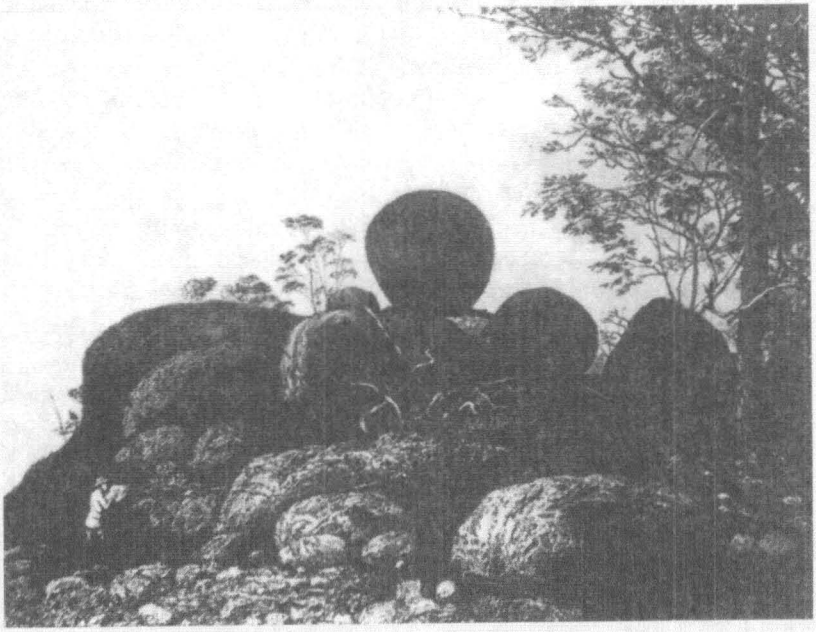

Plate III: J. Redaway & Sons, engravers after William Blandowski, *'Yuan', Granite Boulders 45 miles N by W of Melboutne*, copper engraving, 16.5 x 21.5 cm, *pl.7, Australia Terra Cognita, 1855–56.*

age of the earth. Darwin always acknowledged his debt to Lyell. And Martens' connection with scientific circles continued in Sydney where he was a founding member of a branch of the Royal Society and one of his closest friends was one of our early geologists, William Branwhite Clarke.[35] Guerard put two of his sketches to good use to make a composite oil painting.[36] Now known as *Sunset New South Wales*, the left section of the composition is a view of a cabbage tree forest near Wollongong. In the other half, the Hartley rock, resonant against the skyline, lends a primitive monism to a late afternoon scene.[37] It is likely that the 'poetic' subject with the silhouette of cabbage palms against the setting sun, once held more profound implications. It might be read in the discourse of the geological sublime as a dialogue of indexical signifiers with the same sublime referent. The rock as relic of glacial origins associated with the infinite age of the earth is not at variance with the palm tree as the most ancient of fossil ferns, whose traditional function was as a symbol of eternity. An attempt by the artist, Henry Gritten, to introduce the erratic into a landscape painting was perhaps prompted by a photograph titled, *Granite Boulders at the Black Hills, near Kyneton* by the colonial photographer, Frederick Cornell.[38] Alternatively he may have photographed the rock himself as he was an accomplished artist and photographer who had exhibited extensively overseas before coming to Australia. Cornelle's photograph was converted to an engraving for the *Illustrated Australian News* of 2 May, 1868.[39] Titled *Granite Boulders at the Black Hills near Kyneton*, the image is in a vertical format, but very near Gritten's composition with the almost spherical rock silhouetted on the horizon.[40] An accompanying article in the *Illustrated Australian News* mixed a touch of mythologising, implying immensity of a fabled scale, with a tentative scientific approximation:

> For a distance of many hundreds of yards, the sides of the range are covered with enormous masses of granite, here scattered about in the wildest profusion, there piled one on other like the fabled handiwork of the Titans. The weight of many of the detached blocks may be estimated by thousands of tons, but they are undergoing rapid disintegration from atmospheric influences.[41]

The metaphorical description, 'fabled handiwork of the Titans' followed by the new scientific assessment, 'they are undergoing rapid disintegration from atmospheric influences' is typical of the way in which the singular/geological/ sublime was spoken of in the second half of the nineteenth century. A sense of wonder is attached

to both statements, to both the associative recall of the fable and the suggestion of immeasurable time in the disintegration of granite, the hardest of rocks. The Uniformitarianism theories of Charles Lyell encouraged every would-be geologist to look for evidence of the immensely slow changes in the surface of the earth, and there were many amateurs who took up the challenge. In 1865 the locality of the granite rocks was beginning to be known as a special regional attraction and a favourite place for excursions from Kyneton. The granite boulders that once moved the viewer to feelings of astonishment and a sense of awe shifted into a different discourse when they became a destination for picnic parties. Their singularity remained, but their capacity to incite the sublime was subsumed into a discourse of leisure.

The relationship of the sublime and the singular in nineteenth-century Australia was a significant, isomorphic alliance; one of contiguity in some instances, and of dependency in others. While not every example mentioned in the discourse discussed in this paper demonstrates an exemplary instance of the singular leading to a sublime experience, the evidence here and elsewhere suggests strong links between the two concepts in nineteenth-century writings and images of the landscape. The rock that arrested the gaze of the viewer in an initial confrontation simultaneously became a catalyst for the mind's associative recall. If the imagination was stretched to dwell on either the millennia of geological time or further, to the unknowable origins of the earth, then the failure to grasp these mysteries contributed to the subject experiencing the infinite pain of this unknowable 'space' and the infinite pleasure of the sublime.[42]

Notes

1 James Henderson, 'Narrative of an Expedition to Lake Frome in 1843', *Proceedings Royal Geographical Society of Australia (South Australian Branch)*, 1924–25, vol. xxvi MS, State Archives.

2 John Forrest, *Journal of Proceedings of the Western Australian Exploring Expedition through the centre of Australia from Champion Bay on the West Coast to the Overland line between Adelaide and Port Darwin*, Government Printer, 1774.

3 Alexander Gerard, *An Essay on Taste, with three Dissertations on the same subject by Mr. de Voltaire, Mr. D'Alembert, Mr. de Montesquieu*, London, 1759, p.161.

4 Gerard, pp.154–60.

5 Actual fear does not allow the subject to experience the pleasure principle

of the sublime. Edmund Burke's idea of 'terror' was not well received by his contemporaries. See James T. Boulton, Introduction to Edmund Burke, *A Philosophical Enquiry into our Ideas of the Sublime and Beautiful*, London, 1757, ed. James T. Boulton, London, 1958, Indiana, 1968.

6 Towards the end of the eighteenth century the consensus of most theorists was that only the experience of the viewer could legitimately be called 'sublime', yet the term continued to be applied to nature's grand phenomena. For Kant the ultimate source of the sublime was located in the subject's sense of purpose, the moral, which will not be discussed in this paper as the argument concentrates on the associationism promoted by the *philosophes*.

7 John Baillie, *An Essay on the Sublime*, London, 1747, pp.11, 12.

8 Charles Lyell, *Principles of Geology: being an attempt to explain the former changes of the Earth's surface by reference to causes now in operation*, 3 vols, London, 1830–33.

9 For further explication of the argument for the geological sublime see Mary Mackay, 'Sleeping Tigers of the South: Volcanoes and the Sublime', *Australian Journal of Art* 13 (1996): 93–114.

10 Burke, p.57.

11 Burke, p.57.

12 In a discussion of Kantian notions of the sublime, Derrida writes: 'In the feeling of the sublime, pleasure only "gushes indirectly". It comes after inhibition, arrest, suspension, (Hemmung) which keeps back the vital forces.' Jacques Derrida, *The Truth in Painting*, Chicago, 1987, p.128; original publication 1978

13 A. Dewhurst, 'Liverpool Plains and New England' in *Cassell's Picturesque Australasia*, London, Paris, New York and Melbourne, 1889, p.424.

14 George French Angas, *Chambers Pillar*, woodcut illustration in John McDouall Stuart, *Explorations in Australia: The Journals of John McDouall Stuart during the years 1858, 1859, 1860, 1861, and 1862, when he fixed the centre of the Continent and successfully crossed it from Sea to Sea*, London, 1864.

15 A. Calvert, engraver after Alfred Cook, *Scene near Coopers Creek in the vicinity where Burke died*, *Illustrated Australian News*, April 24, 1869, p.93.

16 *Granite Rocks near Anakies*, wood engraving, *Illustrated Melbourne Post*, 24 March, 1864, p.13.

17 *Illustrated Melbourne Post*, 24 March, 1864, p.13.

18 *Illustrated Melbourne Post*, 25 November, 1863, p.4.

19 David Branagan explains that Charles Lyell had no regular correpondents in Australia, but the number of place and topographic names that commemorate Lyell are evidence of the high regard Australian explorers and scientists held for the author of *Principles*. D. F. Branagan, 'Charles Lyell and the Pacific Region—An Exchange of Knowledge

and Ideas', *Records of the Australian Academy of Science* 3.3/4 (November, 1977).

20 Jean Louis Rodolphe Agassiz, *Etudes sur les Glaciers*, Neuchatel, 1840.

21 John Playfair and Ferdinand de Saussure had already indicated glacial action. Nevertheless, Agassiz added to their research, ideas that went beyond anything they had suggested. See A. Hallam, *Great Geological Controversies*, Oxford, 1983, pp.64–71.

22 Hallam, p.65.

23 Thomas G. Vallance, 'Origins of Australian Geology', *Proceedings of the Linnean Society of New South Wales* 100, part 1 (1975): 29.

24 J. E. Tenison Woods, 'The Glacial Period in Australia', *The Australasian*, 16 March, 1867, p.328.

25 William V. Blandowski, *Australia Terra Cognita*, Melbourne, 1862. The twenty-nine plates in the album were redrawn from Blandowski's original sketches which have not survived. See Thomas Darragh, entry in *Dictionary of Australian Artists*, ed. Joan Kerr, Oxford, 1992, p.75.

26 J. Redaway & Sons, engravers after William Blandowski, *Pattowatto, Granite Boulder [Perry's Haystack] Looking N-W 47 miles N by W of Melbourne*, copper engraving, pl.8, 16.5 x 21.5 cm, *Australia Terra Cognita*.

27 Hugh Blair, *Lectures on Rhetoric and Belle Lettres*, Edinburgh, 1783, p.48; ed. Carbondale, Illinois, 1965, p.48.

28 J. Redaway and Sons, engravers after William Blandowski, *'Yuan', Granite Boulders 45 miles N by W of Melbourne*, copper engraving, 16.5 x 21.5 cm, pl.7, *Australia Terra Cognita*.

29 Hanging Rock, six miles from Woodend, Victoria, is an unusual volcanic formation built up of viscous lava. In geological terminology it is called a mamelon. See J. W. Gregory, 'The Geology of Mount Macedon, Victoria', *Proceedings of the Royal Society of Victoria* 14, (April, 1902): 188.

30 J. Redaway & Sons, engravers after William Blandowski, *Diogenes Monument*, copper engraving, 16.5 x 21.5 cm, pl.1, *Australia Terra Cognita*, 1855–56.

31 Dr Thomas Darragh, Senior Curator, *Museum of Victoria*, Melbourne, located the letter and kindly made a copy available to me.

32 William Blandowski, 'Personal Observations made on an excursion towards the Central parts of Victoria, including Mount Macedon, McIvor, and Black Ranges.' *Transactions of the Philosophical Society of Victoria* 1 (July, 1855): 50–74.

33 J. Redaway & Sons, engravers after William Blandowski, *Foot of Diogenes Monument*, copper engraving, 16.5 x 21.5 cm, pl.9, *Australia Terra Cognita*, 1855–56.

34 Conrad Martens, *Stone Henge, N England*, 1852, pencil on paper, 1852, PX 26 f.14, Dixson Library, Sydney.

35 See Shar Jones' entry on Martens in *Dictionary of Australian Artists*, ed. Joan Kerr, Oxford University Press, 1992, p.513. Clarke attended the lectures of the Woodwardian Professor of Geology, Adam Sedgwick. Ann Moyal, *A Bright and Savage Land: Scientists in Colonial Australia*, Sydney: Collins, 1986, pp.119–22.

36 Eugen Guerard, *Granit Boulders at Hartley, Blau Mountains, New South Wales*, 1859, DG*D17f27 and *American Creek*, Wollongong, 1859, DG*D17f20, Dixson Galleries, Sydney.

37 Eugen Guerard, *Sunset in New South Wales*, 1865, oil on canvas, 71.8 x 91.9 cm. ML 258, Mitchell Library, Sydney. The title is a later addition.

38 Henry Gritten, *Granite Boulders at the Black Hills near Kyneton*, 1867, oil on canvas, 40.6 x 55.9 cm. Australian National Gallery, Canberra. For provenance and a discussion of related works see T. Bonyhady, *Australian Colonial Paintings in the Australian National Gallery, Melbourne, 1986*, pp.135–7. See also, Jennifer Phipps entry in *Dictionary of Australian Artists*, ed. Joan Kerr, Oxford, 1992, p.329.

39 W. H. H., engraver, (initials only) after Frederick Cornelle, *Granite Boulders at the Black Hills near Kyneton, Illustrated Australian News for Home Readers*, 2 May 1868, p.18.

40 *Illustrated Australian News*, 2 May, 1868, p.18.

41 *Illustrated Australian News*, 2 May, 1868, p.18. Frost was one of the 'atmospheric influences' believed to cause erosion.

42 The material in this paper is taken from a book I am writing on the sublime in nineteenth-century Australia.