

REIGN OF THE BEAST
THE ATHEIST WORLD
OF W. D. SAULL AND HIS
MUSEUM OF EVOLUTION

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Cover illustration: A spoof of the “Devil’s Chaplain”, the Rev. Robert Taylor (left, on the podium). His patron, the atheist Richard Carlile, is seen on the right, landing a punch. The wine merchant W. D. Saull funded both men and grounded his evolutionary talks in their dissident sciences. Such pastiches reinforced the prejudices of pious readers, by depicting the moral rot caused by irreligion. The wall posters on the left advertize contraception manuals and licentious memoirs, and a lecture by “Miss Sharples”, Carlile’s common-law “wife”. Taylor’s character is being impugned by portraying the mayhem caused by his infidel oratory. Beyond the brawling and debauchery, thieves are shown in the audience (bottom right) and a dagger-wielding agitator (centre). In reality, Taylor’s congregations were respectable and attentive.

Etching, in the author’s possession, entitled “The Triumph of Free Discussion” (the motto of Carlile’s Fleet Street shop selling subversive prints). The caption reads, “A Sketch taken in the Westminster Cock Pit on Wednesday the 24th. of September 1834. Subject A Lecture by the Revd R. Taylor, A.B.M.R.C.S. ‘On the importance of Character.’”
Cover design by Jeevanjot Kaur Nagpal

26. Provisions for the Afterlife

His own months-long illness and Hetherington's death forced Saull to face up to the museum's future. He was getting old, and intimations of mortality rekindled his interest in putting his people's museum in a permanent home. Others, too, were chivvying him, knowing the value of an 'evolutionary' display to the freethought cause. Where else, after all, could you find a museum-grade fossil sequence pointing up the self-empowered progress of life? Or the historical artefacts illustrating humanity's rise from savagery, crowned, at the moral apotheosis, by the revered relics of Hibbert and Petrie?

From the first, Saull had wanted to bequeath his museum to the Owenites, to add a hands-on, deep-history experience to their "rational" schooling programme. Typical of Owen's disciples, he never lost his zeal for children's education. Using the fossil display would ease "the infant mind" into naturalistic ways of thinking. By breaking the thrall of parsonism, and the stultified science of Divine Creation used by the gentry to instil docility, it would help the masses challenge their servitude.¹ Implicit in this was that geology, rightly understood, could function ideologically. This distinguished it from that (often cynically) disparaged craft theory taught in mechanics' institutions, which would crank up the output of the workforce, or, in Saull's words, hone the skills to make domestics "better servants".² His Enlightenment faith in a liberating materialism never waned. But the aim enlarged over the years, as the museum became targeted more generally at working adults, mostly unschooled themselves, but receptive to the revelations of the new geology. In this respect it was meant to go to Harmony,

1 *Crisis* 3 (28 Dec. 1833), 144; (4 Jan. 1834): 150.

2 *Crisis* 2 (1 June 1833): 163; Shapin and Barnes 1976, 1977, 55–56; Johnson 1979.

but with the collapse of that dream, the museum's destination again became uncertain.³

Because his fossil cabinet was intended to benefit the dispossessed, Saull never considered bequeathing it to the aristocrat-controlled British Museum. Crunch time came in the late 1840s, with the collapse of Harmony and Owenism in disarray. It forced Saull to search for a new home. What emerged was a scheme for a working man's hall in London, built from the ground-up, with his museum, now valued at £2,000, lying at its heart. By 1847, Saull was already promising to endow such a public building with a £2,000 cash bequest, "constituting a munificent donation to the cause of science".⁴

Others rallied to the idea. For a couple of years, Holyoake had been floating the notion of a new organizational headquarters, an "Atheon" (a Pantheon without the gods). A "public fraternity" he called it, supporting atheists, republicans, and communists. It was to provide a base for the trades, and share intelligence, hence its projected atheist library, reading room, and "theological museum" of defunct deities. But where Holyoake's museum was to contain "*Blasphemy relics*" from the atheist trials, thus immortalizing them, Saull's promised to substitute real relics to evoke a blasphemous 'evolution'.⁵ One letter-writer in the *Reasoner* immediately saw the link-up. "If Mr. Saul [*sic*] were to make his Museum the foundation" of an Atheon, what an impetus the cause would receive, "and how much more would it connect the name of Devonshire Saul [*sic*] with that anti-superstitious progress he has so much at heart, than any posthumous bequest to accidental cultivators of Science?" That was the nub, the posthumous aspect. "Could anything induce that gentleman to make his disposal of his bequest in life, instead of leaving it to the uncertainty of death and the law?" The wisdom in that reflected another salutary event, which Saull knew only too well. Were Saull to die, speculated the correspondent, would it "not be the case of Barber Beaumont repeated?"⁶

John Thomas Barber Beaumont (1774–1841) had made a fortune as managing director of the County Fire Office, one of the largest fire

3 Holyoake 1906, 1: 190.

4 *UR*, 15 Sept. 1847, 83.

5 *Movement* 2 (1 Jan. 1845): 4–5; Royle 1974, 88; McCabe 1908, 107.

6 *Reasoner* 3 (6 Oct. 1847): 551.

insurers. The chronic asthmatic was praised as a “poor man’s friend”. He had set up the first Provident Institution (a savings bank) in the country and, in 1840, just before his death, had ploughed £6,000 into a new Philosophical Institution in Beaumont-square, Mile-End.⁷ Like Saull, Beaumont was a fossil collector, and interested in the vegetation of coal fields, in which Saull’s museum excelled. His Institution had a museum housing his minerals, and he was still arranging them on the days before his death.⁸

Beaumont’s will was written *before* the Institution was built. The building had gone up and looked very grand. But he, evidently, had failed to change his will, which left £13,000 to build it, causing confusion. In 1847, as the *Reasoner* writer was cajoling Saull, the court was *still* trying to decide how, or indeed whether, the sum should be applied.⁹ More confusion occurred because Beaumont named Saull as a Trustee, along with John Elliotson (among others). Both however declined, presumably because the will stipulated that the Institution was to cultivate the “principles of natural theology and the wisdom of God”. Worse from Saull’s perspective, it had a chapel, and was running Sunday lectures to “enforce the great principles of practical religion and morality.”¹⁰ These were “introduced by sacred music” in order to give the lecturer’s moral and religious “exhortations” solemnity.¹¹ It was too much for Saull, and the loss of the two Trustees and death of a third further complicated the court’s decision, which dragged on.

It was an object lesson, and Saull should have heeded it. Even as Saull became ill in 1849, Holyoake was pleading for the community to build a “unique College and Lecture Hall”. Two years had passed, he noted, since the *Reasoner* correspondent had “sought to enlist Mr. Saull’s interest, in the disposal of his Museum.”¹² Saull’s brush with death now gave the project a greater urgency.

7 NMW 8 (14 Nov. 1840): 313; bank: MC, 21 May 1841.

8 MC, 21 May 1841; *Proceedings of the Geological Society* 3 (1842): 152–53.

9 *Daily News*, 5 July 1847.

10 NMW 8 (14 Nov. 1840): 313; *St. James’s Chronicle*, 3 July 1847, 1; *Standard*, 5 July 1847.

11 *Phrenological Journal* 17 (Jan. 1844): 54. For all that, the venue was unsectarian and non-dogmatic, and even F. D. Maurice (1884, 2: 64) in 1851, observed that the 1200-capacity hall was “being used partly for dancing, partly for some infidel lectures, partly for anti-Papal meetings, &c.”

12 *Reasoner* 6 (24 Jan. 1849): 57.

As he was recovering a new vista opened up. Another fortune was promised, this time by a wealthy supporter of Owen and Feargus O'Connor. A Harrow gentleman, Charles James Jenkins, had come, like Saull, to see that "*education* was the most important—if not *the* most important—means" of enabling the industrious classes to gain the initiative.¹³ Consequently, the bulk of his fortune (£10,000) in September 1849 was willed to trustees tasked with building a new "People's Institute", with another £3000 in the offing.¹⁴ He stipulated a "commodious hall" for lectures, with offices, reading room, and library, somewhere in Central London, to be available as a "place of resort for working men, operatives, and artisans during the evenings, and as a school for the children of such classes during the day-time." He made provisions for schoolmasters, and added the proviso that the "Jenkins' Institution" should be totally non-discriminatory in respect to "country or colour" or "religious or political tenets".¹⁵ It was too good not to attract Saull, who immediately offered to present his 20,000 exhibit "magnificent museum" to the institution, while others pledged a thousand volumes for the library.¹⁶

But within a year or two, suspicions were raised and it began to seem like another forlorn hope. An impetuous Holyoake started chaffing:

We could name half a dozen gentlemen of fortune who, for some years past, have publicly avowed their intention of leaving bequests, in some cases to individuals, in others of founding Libraries, Museums, and erecting Public Institutions. We pray those who thus mean well to Free-Thought to profit by the serious failures that from year to year are recorded.

That shaft was aimed at Saull. He rammed the point home. Where is the Beaumont money? "Where is the 'Jenkins Institution?'" he asked in 1851:

the worthy old gentleman ... died in the certain hope that the "Jenkins Institution" would be a noble and useful monument of his life. The law has stepped in—taken it all away—and not one brick will ever be laid in

13 NS 13 (13 Apr. 1850): 3; *Reasoner* 7 (26 Sept. 1849): 207. Jenkins died on 7 Sept. 1849 and bequeathed £500 to O'Connor and £200 to Robert Owen: C. J. Jenkins, Will, National Archives, Kew, PROB-11-2101-173, ff. 143-45.

14 *Reasoner* 7 (24 Oct. 1849): 270.

15 *Reasoner* 7 (26 Sept. 1849): 207; (14 Nov. 1849): 318; (5 Dec. 1849): 361-62.

16 *Spirit of the Age* 2 (2 Feb. 1850): 79; *Athenaeum*, 1 Dec. 1849, 1210.

commemoration of his name. Again we say to all those gentlemen who meditate anything munificent for the people—'Do what you intend while you live—nothing can be depended upon that is to come after death.'¹⁷

Twilight Distractions

The warning was stark. Yet for Saull, running a business, museum, secular and archaeological meets, and filling umpteen offices, the distractions were manifold. There was always something pushing posterity into the background.

All the while he was getting older and, having stared down death, more contemplative. The nostalgia of old age was showing. In the 1850s, he emerged after his illness at his old stamping ground, the City Road Hall of Science, to reminisce about the '20s, Carlile and Taylor, police spies, and state prosecutions, and how, although he escaped prison himself, he took massive financial hits covering the trials.¹⁸ This might have been distant history, yet there were still tangible reminders of those days. Saull's group never forgot the Carlile family. In 1850, Eliza Sharples, "Mrs Carlile" in common law—the fiery "Lady of the Rotunda"—was now following in the "death-wake" of so many herself. As usual, there were tales of penury, of suffering, although with "death staring her hard in the face" she "still adheres most tenaciously to her principles!" And as usual, Saull and his friends contributed to a fund. There were also donations to Carlile's children, which helped his two daughters sail for America in 1852.¹⁹

The Mechanics' Hall of Science remained one of Saull's favourite haunts. A glimpse of what the venue was like at this time was provided by a Congregationalist minister, who peeked in to view the uninhibited behaviour of "men and women who have altogether thrown off the moral restraints of religion". He bought himself a ticket to a tea party, and insinuated himself among "the enemies of Christianity, at a time when they are the most actively engaged in the prosecution of their godless and debasing enterprise".²⁰ What resulted was a stinging account sent to

17 *Reasoner* 10 (5 Mar. 1851): 354. Holyoake was being hasty. Also, a "Jenkins Secular School" was set up in John Street in 1853.

18 *Reasoner* 8 (20 Feb. 1850): 54; 16 (5 Feb. 1854): 98–99.

19 *Reasoner* 12 (10 Dec. 1851): 64; (21 Apr. 1852): 367; *NS*, 22 Nov. 1851.

20 *British Banner*, 5 Oct. 1853, 705–06.

the big-circulation *British Banner*, a 4d Congregationalist weekly, set up in 1847 to fight infidelity and promote Evangelicalism. The paper thrived on such reports, being obsessed with London's "spiritual destitution", growth of socialist halls, and want of anti-infidel preachers to redeem the populace.²¹

The 400-seater hall, ran the report, although not "handsome, is fitted up with a good deal of taste, and lighted by an elegant glass chandelier". A huge platform extended the entire width of the room for the lectures, to the left of which was a small gallery.²² Up and down the hall walked the "Negative Evangelist," Holyoake, "a dark-haired, lankey [*sic*], amiable-looking young man", resembling "a minister of the Gospel wearing his week-night black stock", chatting to "his loving flock", all seated at tables. It was bad enough that most of the two hundred taking tea were young, showing that the secularists were recruiting a new generation, but the real horror for the *Banner* was that so many were women, long idealized as the angel in the home and moral bedrock of the family.²³ These were lost souls,

silly creatures, who, having had their minds ... perverted from the right ways of the Lord, vainly expect to be able to cure all the evils of oppression and wrong which exist in the world, by banishing therefrom all that savours of modesty or religion.

The secular halls were in competition with the Congregationalist chapels, and their Sabbath socializing and moral sermonizing clearly irked the interloper. And yet Holyoake's chat about putting parsons on half pay, or thanking the cook instead of God for dinner, and such "mean, grovelling, despicable, and absolutely blasphemous sentiments, found a ready and hearty echo in the breasts of his obtuse, shameless, and godless audience."²⁴

21 For example, *British Banner*, 24 Oct. 1849, 677; 9 June 1852, 9; 13 Oct. 1852, 691; 11 Jan. 1854, 36; Halévy 1961, 390, on the *Banner*.

22 *British Banner*, 5 Oct. 1853, 705–06.

23 The "Angel in the House" idealisation is covered in B. Taylor 1983, 30; E. Richards 2017, ch. 7; Tosh 1999, 55; Hilton 2006, 363. As Schwartz 2013, 16–17, points out, the idea of women's 'higher' moral nature, emphasized by the religious press, and which led to their civilizing role, inside and outside the home, in education and so on, was shared by the Owenites.

24 *British Banner*, 5 Oct. 1853, 705–06.

Saull, another “negative evangelist”, shared Holyoake’s sentiments. He was now feeling an anachronism himself among the young. Perhaps, too, it struck onlookers as incongruous that so many secular “tea parties” here, with their pointed abstinence from alcohol, were presided over by a wine merchant. Politics still vied with secularism at City Road, and the last gasps of Chartism here showed that the Hall’s radicals retained their teeth.

Saull was among them; his radicalism had never dimmed. This was proved by events at the City Road Hall of Science late in 1851, when Saull joined the agitation over events in Bonner’s Fields. This was East London’s playground, an area between Spitalfields and Bethnal Green, centred on the three-hundred-acre Victoria Park. Once the site of Bishop Bonner’s Palace, now it was used by the Spitalfields artisans, especially in summer when they bathed in the ornamental lake. But the salubrious image belied the jaundiced police view. Problems had started in the late 1840s. The park had opened just before the great Chartist outdoor gatherings in 1848, and stave-wielding demonstrators had made Bonner’s Fields synonymous with sedition and riot in the authorities’ eyes. In response, the government had banned Chartist assemblies in Bonner’s Fields. But still the defiant Chartists continued their “monster meetings”. On occasion over five thousand troops, and as many special constables with cutlasses, backed by guns from Woolwich arsenal, had been mobilized to disperse the crowds. The Chartist leaders had been given stiff sentences for inflammatory speeches, while the people had vented their fury by showering the police with stones and smashing up the nearby church, which had sheltered the specials.²⁵

The febrile atmosphere continued into the early 1850s. It made Bonner’s Fields fertile ground for freethought propagandists, who set up stalls amid the crowds. These outdoor gatherings were a *mêlée*, part carnival, part “war”, as the soap-box orators competed with Christian preachers, who had their own tents for tract distribution and refreshment. As fast as *Reasoners* were sold (eight dozen could go on a Sunday), the freethought posters were torn down. A young Charles Bradlaugh (eventually the first openly atheist Member of Parliament) converted to freethought at this time, and the boy cut his teeth in Bonner’s Fields.

25 Goodway 1982, 79, 83–88; H. G. Clarke 1851b, 64–65; Hogben n.d., 52.

Soon “scores or hundreds” were milling round his stump.²⁶ It was to celebrate this recruiting success in Bonner’s Fields that the East London freethinkers held a public tea party in the Hall of Science, hosted by Saull, Holyoake, Robert Cooper, and James Watson.²⁷ But the congratulations were premature. There remained considerable hostility to the atheists in the park. Christian missions were revitalized and tracts with titles such as *Park Visitor and Christian Reasoner* were passed out to counter the threat. Then, in May 1852, *all* assemblages in Bonner’s Fields were prohibited, the ban enforced by armed police.²⁸ The main target was the secularists, which left the Church missions outraged that the Christian baby was being thrown out with the atheist bathwater.

The result was that the “East London Reasoners” retreated back indoors and planned a vast new hall for the swelling crowds. When the Baptists moved out, they took over the dilapidated Morpeth Street Chapel in Bethnal Green. Carpenters among them pulled out the pews and put up a platform. Painters gave it five fresh coats, all working gratis. But the “gas-fitters and paper-hangers require payment in a more vulgar coin” and so they put out a call for help, and that is where Saull and the other donors came in.²⁹ The funding started, and by January 1853 they opened their 700-capacity “Tower Hamlets Literary Institution”, which the East Londoners proudly ranked for size alongside John Street and the City Road Hall of Science.³⁰

Saull was still funding secular halls, but not one to house his own museum. He simply had too many irons in the fire. He admitted as much at City Road: “He was now advanced in years”, he conceded, “but his interest in the ‘good old cause’ was undiminished.”³¹ And as old causes evolved into new, he remained in the fray, and the side-tracking continued.

Nostalgia was again stirred at a new talking shop, the Co-operative League, founded in March 1852 by an alliance of Christian Socialists and

26 *Reasoner* 10 (30 Oct. 1850): 35–36; (6 Nov. 1850): 54; Bradlaugh 1891, 6–8; Royle 1974, 210–11.

27 *Reasoner* 11 (12 Nov. 1851): 407.

28 *Reasoner* 12 (4 Feb. 1852): 191; (2 June 1852): 452–53; (9 June 1852): 470.

29 *Reasoner* 13 (15 Dec. 1852): 432.

30 *Reasoner* 14 (12 Jan. 1853): 23. The President was Robert Le Blond, another wealthy businessman and financier of freethought.

31 *Reasoner* 16 (5 Feb. 1854): 97–98.

Owenites to hammer out the direction of the co-operative movement. The League's philosophical bent must have appealed to Saull, who was on board immediately. Another aspect, its educational onus, was dear to his heart, even if the co-op rank-and-file were more concerned with a cash bonus than "edification".³² Among the first items for League discussion was the failure of the original Labour Exchange, which Saull, one of those still alive who had been involved, put down to the unequal demand for exchange goods: everyone wanted bread and the daily necessities.³³ But so much had happened in the intervening years. Younger recruits now talked up the latest Co-operative Stores, organized on a buy-and-sell (rather than swap) basis, with profits going to the buyers, after interest had been paid to capital investors.

Saull was still front and centre at Holyoake's London Secular Society. With the shattering of Owenism, this had taken up the slack and taken over the venues: it met at the Literary Institution in John Street. There were also daughter secular societies in many provincial cities within a few years, often just the Owenite branches rebranded.³⁴ Saull moved with the new men. He became treasurer of the London Secular Society, basically just transferring from his old Owenite duties.³⁵ And he carried on addressing the new men with little change in tone.

The secular causes were never ending, and securing the museum's permanent home always seemed to be shunted into second place. The astonishing number of campaigns Saull supported in the early fifties simply eclipsed such mundane matters. He was fighting the remaining penny newspaper stamp duty (carrying on Hetherington's campaign),³⁶ presiding over dinners to Owen, and speaking at the theatrical debates

32 J. F. C. Harrison 1961, 105. The League was founded by the Christian socialist Vansittart Neale and old social missionary Lloyd Jones, who were attempting to get the various Co-operative Societies to buy their goods wholesale through one depot, Neale's Central Co-operative Agency in Oxford Street (which opened in 1850): Cole [1944], 110; W. H. Brown 1924, 59–60; Royle 1974, 150; McCabe 1908, 1: 191–92.

33 *Leader* 3 (1852): 509; *The Star of Freedom*, 5 June 1852; *Reynolds's Newspaper*, 1 Aug. 1852. See also Saull's similar talk at the London Working Men's Association: *Journal of Association* (1852): 182.

34 J. F. C. Harrison 1969, 246; Royle 1974, 177.

35 *Reasoner* 16 (15 Jan. 1854) 38; (5 Feb. 1854): 83. Right to the end Saull was putting cash into the Secular Propagandist Fund.

36 *Reasoner* 10 (13 Nov. 1850): 11 (5 Nov. 1851): 383; *Leader* 2 (1851) 1012.

with Christians.³⁷ On other fronts the activity showed no let up. Aldersgate Ward politics went on as usual, as Saull joined other City merchants to petition against the window tax, or to set up a working group to establish a better water supply to the ever-expanding city.³⁸

He was also campaigning to amend the bankruptcy law. The recent removal of imprisonment for £20 debts had led to rise in City fraud, and small creditors wanted the power to seize assets to clear the debt.³⁹ This was especially important to a wine trader like Saull, who dealt extensively with credit. Credit, debt and bankruptcy were all too familiar to him, and sometimes came close to home. His publican nephew had gone bankrupt, perhaps as a result of anti-infidel policing, and in the later years Saull had a bankrupt working as a clerk in his wine depot.⁴⁰

Nor did campaigning on national politics let up. Ever the radical champion, he “poured a little vinegar” into City meetings, which sought Lord John Russell as their Liberal MP—Saull preferred a more radical voice.⁴¹ And, as ever, being one of the “agitators”, he incurred “the sneer of pure Whig flunkeyism”.⁴² These years, too, saw a revival of middle and working-class alliances. Joseph Hume’s old reformers joined anti-corn-law activists and Chartists under Feargus O’Connor in the National Reform Society, which pressed for an extension of the franchise.⁴³ Then there were new lobby groups demanding the ballot.⁴⁴ Officiating left Saull as rushed as ever.

37 *Reasoner* 16 (16 Apr. 1854): 261.

38 *Daily News*, 13 Feb. 1850; *MC*, 25 Feb. 1851; *NS*, 1 Mar. 1851.

39 Numerous press reports of Saull taking the small traders’ side on the question of debtor and creditor laws, and his role in the Equitable Debtor and Creditor Association, show his extensive engagement with the question, starting in 1845 (e.g., *Examiner*, 29 Mar. 1845) and culminating in 1849 (e.g., *Daily News*, 26 May 1849.)

40 This was Edward T. Tweed: *Evening Star*, 20 Jan. 1858, 4.

41 *Guardian*, 26 May 1852, 359.

42 *The Era*, 11 July 1852; *Daily News*, 25 May 1852; *Times*, 25 May 1852, 8; *MC*, 25 May 1852, 5.

43 This was the Metropolitan Parliamentary and Financial Reform Society (founded 1849), which became the National Reform Association in 1850. The Society’s embrace of Chartists proved too much for free-traders such as John Bright, but it appealed to Saull: *Daily News*, 1 Sept. 1849, 1; Jan. 8 1850; 4 Feb. 1851; 12 Mar. 1851; *Express*, 8 Jan. 1850, 3; *Standard*, 8 Jan. 1850, 1; *NS*, 15 Mar. 1851. On this Association: Huch and Ziegler 1985, 150; Maccoby 1935, 315.

44 On Saull at the Ballot Society: *Daily News*, 18 July 1853.

Saull's expanding role in the learned bodies squeezed the last hours out of his free time. Trains now made it possible for him to travel huge distances on the firm's business, and he always took the opportunity to talk locally on the meaning of his fossil sequence or on social progress revealed by nearby antiquities.⁴⁵ Added to this, his council duties in the societies led to him criss-crossing the country. He would join the peripatetic British Archaeological Association each August,⁴⁶ and visit the British Association for the Advancement of Science meeting the following month.⁴⁷ Then, during the season, Saull routinely attended meetings of the Society of Antiquaries in town, and he was on the council of the splinter Numismatic Society from 1851. Add to all of this the Council of the Ethnological Society in 1850, and the Chronological Institute in 1852–54, and one senses that he spent a mint of money on dues, and lost a lot of time on bureaucracy.

Saull's Exhibition and the Great Exhibition

At the Society of Antiquaries, Saull continued to expand on his schema of ancient progress from primeval to pastoral through the Celtic-Roman period. But now there was an innovation: his use of models.⁴⁸ At one meeting in 1850, he displayed scaled-down replicas to illustrate the hill forts at the centre of the transition. Four miniatures sat on the table as he talked "On an Ancient Fortified Station, and other Celtic or early British Remains, in Cornwall". They were to illustrate the sophistication of these Cornish forts, with their walls and ditches, and to suggest that, like the local tin-mining dwellings, with stone-walled and ceilinged cells, they were erected by Mediterranean traders. Even here the freethinker protruded. Another model, of Cornish stone circles, were, he thought, where the tribes sat in council, not in religious observance. He was

45 *Monthly Notices of the Royal Astronomical Society* 16 (Feb. 1856): 90.

46 He was in Manchester (1850), Derby (1851, on the General Committee), Newark (1852), Chichester (1853), and Chepstow (1854), where again he was on the General Committee.

47 Ipswich (1851), Belfast (1852), Hull (1853, on the Geography and Ethnology Committee), and Liverpool (1854).

48 Despite modelling being a standard way of representing sites three-dimensionally, almost no historiographical studies exist of the archaeological procedure beyond Christopher Evans 2004.

loath to allow any precedence to ancient veneration. Displaying another model, he demurred from those “who were inclined to see in it an object of superstition; and preferred to assign it to another purpose, namely, to the sports and pastimes of the Britons”.⁴⁹ These models possibly ended up in the museum.

Certainly, miniature models of *saurians* could be found there. A *Mining Manual* reporter commented on seeing them in 1851. Museum modelling had a respectable pedigree. Sowerby had used models of birds and mammals in his museum, and fossil casts were becoming common as exchange items, although not without problems. (Saul’s wild millenarian tea-sipping friend Thomas Hawkins even modelled missing bones in his ichthyosaurs and plesiosaurs before selling the ‘complete’ skeletons to the British Museum, which caused a furore.⁵⁰) The *Mining Manual* simply noted “models of the smaller saurian tribe”. Possibly these were the extinct reptiles.⁵¹ If so, they were a didactic tool to give audiences a hands-on experience of Saul’s pride of place, the Wealden reptiles. Models could have showed what they were thought to have looked like in life. As such they would have helped illustrate his Owenite sequence, from ruling reptiles through ice-age mammals, and on to perfectible humans—the ‘rational’ core of his programme for educational regeneration.

If these were reconstructions of extinct saurians, it would have made them the earliest known. Also, they would have represented vastly different values from the commercially-based models of the day. Of the latter, consider the *Iguanodon* and *Megalosaurus* miniatures⁵² being sold,

49 *PSA* 2 (1853): 91–92. Trips were often multi-purposed, even if they did not involve wine merchandizing, and so we find him presenting fossil sharks’ teeth and molluscs from the Suffolk Crag to the Royal Cornwall Geological Society’s museum in Penzance at the same time: *Royal Cornwall Gazette*, 4 Oct. 1850, 6; *Royal Geological Society of Cornwall, Thirty-Seventh Annual Report of the Council*, 1850, 25.

50 *MNH* 4 (Jan. 1840): Appendix, 11–44.

51 *Mining Manual and Almanack for 1851*, 136. Given the terminology of the times, the word *saurian* (especially qualified by “smaller”) could equally have referred to a living reptile.

52 The sculptor Waterhouse Hawkins (1854) was touting one-inch-to-the-foot models at the Society of Arts in May 1854, where he was encouraged to mass produce them for schools. The marketing opportunity opened up swiftly, because the entrepreneurial geologist James Tennant, who had been making casts of saurian fossils since the 1840s at his shop in the Strand (Moore, Thackray and Morgan 1991, 137), was selling Hawkins’ sets of monster miniatures for five guineas. These are listed in the two-page flyer, “Key to a Coloured Lithographic Plate of

scaled-down copies of the full-size monsters that were being constructed in Crystal Palace Park, near Sydenham, just outside London, in 1854. The Park's concrete effigies glorified the Old Immoral World—they turned the past to their own advantage, forced “us to think upwards toward the Creator's past eternity,” and “show us His power”, said the Methodist *London Quarterly*. And to give further perspective, the reporter looked through the hissing “vein of steam” from the megatherium nostrils to see the reassuring “spire of Penge church” rising in the distance. Tories saw the Palace amusements as a “vast safety-valve” for the multitudes. Even if the exhibits had no educational value for the hordes, they were somehow part of God's inscrutable plan to ‘civilize’ them. Nor need “Timid politicians” have any fear “of any countenance to socialism” from the experiment: “It is property, in the shape of hard money” which had built this mausoleum of Britain's ancient empire, and a healthy dividend was expected.⁵³ Speculative capitalism was at root of the venture, the gigantic Crystal Palace saurians being financed by investors who expected a good gate return. The monsters were “Antediluvian” money spinners, and the public paid to see the “prae-Adamite” spectacle. Of course, words like ‘antediluvian’ and ‘preAdamite’ were anathema to Saull, part of the grubbing exploitation of the ‘Old Immoral World’ to be spurned.⁵⁴

The Crystal Palace monsters were to accompany the Great Exhibition, which moved from Hyde Park to Sydenham in 1854. Socialists called for the Exhibition to be opened on a Sunday, and at a reduced rate, so that poorer people could visit it.⁵⁵ But why *pay* at all to view the Great Exhibition's geological exhibits, said the *Lancaster Gazette* in a diatribe against the aggrandizing metropolis, when a visitor could see so many for free at Saull's.⁵⁶ This was truly free, with unrestricted

Waterhouse Hawkins's Restorations of Extinct Animals” (n.d.), my copy of an original owned by Steve Gould. M. Freeman 2004, 21, discusses the sale of strata models before the 1850s.

53 *Westminster Review* 62 (Oct. 1854): 542; *London Quarterly Review* 3 (Oct. 1854): 235, 238; *Quarterly Review* 96 (Mar. 1854): 307; J. A. Secord 2004a, 139; Dawson 2016, 172–208.

54 Their very unfamiliarity led the monsters to be viewed by the public as “Frankensteinic” oddities (*MC*, 2 Jan. 1854, 3), and, as such, they were more freak-show spectacles than educational.

55 *Reasoner* 14 (11 May 1853): 293.

56 *Lancaster Gazette*, 9 Mar. 1850, 4.

access: socialist subsidized free education, for the benefit of the people not the speculator, was on offer. By now, Saull's museum promotion stretched far beyond the artisanal or radical community. There was a vast potential clientele, middle-class hobbyists, students of archaeology or geology, ladies piqued by Roman London beneath their feet, visiting dignitaries, antiquarian gentry, and the "intellectual holyday-maker"⁵⁷ from the provinces. All were catered for by the increasing numbers of press listings, and all of the press listed Saull's free museum.⁵⁸

The London guidebooks were becoming an essential part of the tourist's kit. With railways shrinking the country, huge numbers were now visiting London for the first time. In 1850, the *Times* said that "Thirty years ago not one countryman in one hundred had seen the metropolis. There is now scarcely one in the same number who has not spent the day there." But they met a huge, sprawling, smoggy, "strange land", a "Human Awful Wonder",⁵⁹ with a gigantic 2.7 million inhabitants—the largest city in the Western world. Its streets swamped foreigners, who were made giddy by the great "waves of people silently surging through the gloom." This was the modern Babylon, "whose extravagant immensity a pedestrian could not encompass in a day's time". It was all "profoundly disturbing and overwhelming", all "turmoil and bustle", and tourists found themselves "lost in a labyrinth".⁶⁰

Hence the profusion of "strangers' guides" and "intellectual guides". They cashed in on the Great Exhibition in 1851, centred on Joseph Paxton's twenty-acre glass and steel building in Hyde Park. This symbol of industrial might, with its vast assemblage of manufactures from around the world, lured six million paying visitors. They included hordes of working people, who so frightened Wellington that he brought in 10,000 troops, fearing the worst.⁶¹ Saull took a co-operative view of the exhibition, as proof of a growing fraternity of feeling between nations. Upturning the press rhetoric, he considered that it laid bare

57 *Bell's Life in London and Sporting Chronicle*, 31 Mar. 1850.

58 It was listed in everything from *The Parlour Magazine* to the *Civil Engineer and Mining Manual*; from *Bell's Life in London* to *Reynolds's Newspaper*, and in all the 1851 London guides cashing in on the Exhibition: *Gilbert's Visitor's Guide to London, London As it Is Today, London What to See, London In All Its Glory*; as well as *Black's Guide to London* (1853).

59 J. White 2007, 78.

60 Hogben n.d., 5. This, of course, listed Saull's museum. Tristan 1980, 1–2.

61 J. White 2007, 169.

capitalist greed. It was a “powerful rebuke to those who continued to deprive the men who could produce such results from the power of self-government. Was it not a disgrace that at a time when more wealth was created than at any time in the world’s history, that more misery ... should be found among its producers”?⁶²

The swathe of city guides capitalizing on the event gave Saull’s museum a boost, listing it in places to visit, and highlighting the individual attention offered. (“The proprietor usually explains personally to visitors the various phenomena, and developes some new views on the earth’s motion.”) “Rich” in specimens, its attractions were the “gigantic” fossils, especially the tree ferns from that distant age of coal which was powering the country’s industrial growth.⁶³ The one benefit they all extolled was the price—it was free, and no questions asked. The cheapest turnstile entry to the Great Exhibition was a shilling, and it was expected to rake in £360,000 net. But even before the first girders from Smethwick Iron Works had arrived,⁶⁴ the papers were pointing parsimonious visitors to alternative free venues, particularly Saull’s.

The museum was open Thursdays, and Saturdays on some festive occasions.⁶⁵ “The favourite, but false idea, that educational institutions are not valued unless they are paid for, stands completely in the way of the poor but zealous student”, complained the *Civil Engineer*. The “rank-and-file” are “left to scramble on”, it added, unfavourably comparing Britain to France, where state sponsorship meant “There are schools where the greatest professors teach, and the poorest mechanic can enter.” How is the new archaeology to spread if students cannot afford the fees asked by the societies, it went on, praising Saull and Bowerbank for opening their cabinets. If only all “Geology and natural history” benefited “from such freedom”.⁶⁶ Students swelled the visitor numbers,

62 NS, 24 May 1851.

63 H. G. Clarke 1851a, 242; 1851b, 143; Gilbert 1851, 139; A. and C. Black 1853, 310.

64 P. Cunningham 1851, xlix.

65 At least that was the case over Christmas 1847: *New Weekly Catholic Magazine*, 26 June 1847, 166; *Morning Post*, 27 Dec. 1847.

66 *Civil Engineer and Architect’s Journal*, 17 (Feb. 1854): 42–43. The papers were now separately listing London’s free institutions, which included Saull’s museum: e.g., *Bell’s Life in London and Sporting Chronicle*, 31 Mar. 1850; *Reynolds’s Newspaper*, 20 Apr. 1851.

with Saull's collection being credited in text-books,⁶⁷ and the mining and civil engineering journals puffing it. It was, said the *Mining Manual and Almanack*, "considered to be the largest private collection of organic remains in the United Kingdom."⁶⁸ By 1851, it comprised well over 20,000 exhibits, and Saull would give a walking tour and impromptu lecture on the artefacts if large numbers of students or visitors turned up.

With the students came the professors, a generation older, and with a different take on things. Framed by Saull's 'evolutionary' explanation, the exhibits appealed less to the older party. Consider the stern American Congregationalist and geologist, the Rev. Edward Hitchcock, President of Amherst College in Massachusetts, who was touring the old country in 1850. He was a good surveying geologist, famed for his study of the fossilized footprints left by huge "birds"—or, as it turned out, bipedal reptiles—that once walked in the Connecticut River valley. Hitchcock was equally famous for dealing with threats to biblical orthodoxy, and would return home to see his *Religion of Geology* through the press. The book irked even the *Monthly Christian Spectator*, which regretted that he should have tried to use the strata to deduce not merely God's power, but even our "piety towards God".⁶⁹ Nevertheless, it supplied ammunition to fire at the infidel. The *Bible and the People* used it to demonstrate that only Jehovah could replenish life after each geological catastrophe and adapt it to the "improved condition" of the earth's surface at that time.⁷⁰ Hitchcock visited the museum and admitted: "Many good things in it, but dirty & not well exposed. The fossils are distributed through the formations in proper order & the collection if put into proper cases & light would be a valuable one." Having presumably suffered a Saull lecture, probably monkey-men and all, Hitchcock was not inclined to be generous. "Mr. Saull seems to me superficial in geology", he concluded in his diary.⁷¹

67 For example, Dixon 1850, 55; Morris 1854, iv; G. F. Richardson 1855, 353, 379, 392.

68 *Mining Manual and Almanack for 1851*, 136; *Civil Engineer and Architect's Journal* 16 (Apr. 1853): 125; 17 (Feb. 1854): 42–43; Timbs 1855, 542.

69 *Monthly Christian Spectator* 2 (June 1852): 379; footprints, Desmond 1982, 129.

70 *Bible and the People* 2 (1852): 447. The freethinkers for their part used the book as a foil: *Reasoner* 16 (25 June 1854): 418; *LI* 2 (Dec. 1855): 136.

71 Herbert, "Edward Hitchcock", 33.

The museum was even listed in Paris.⁷² Boucher de Perthes turned up to see it at this time. He was no stranger to controversy himself, having raised eyebrows by suggesting his stone tools had been fashioned by humans living alongside extinct mastodons. He did not think much of Saull's Roman and Celtic axes, but he was awed by the upstairs gallery, rich in tropical "plants and fruits coming from English collieries". It was size that mattered in an age of spectacle, and Saull pointed him to a gigantic fossil shark's tooth, which must have come from a fish up to eighty feet long, impressive enough for Boucher de Perthes to record it in his journal.⁷³

Each cultural group brought a unique understanding to the artefacts in Aldersgate Street. Distinct interests led to different perceptions, whether it was the *Northern Star* Chartist awed by the skeletal shrine to his fallen heroes, the antiquarian studying the Roman foundations of his world city, or the mine engineer's interest in the swamp-crushed tree ferns lying in the hearth of Britain's coal-powered economy. But to geologists, the focus remained on a two-foot slab of Isle of Wight rock. The rock had been cracked, figuratively speaking, by the prickly Richard Owen, a man now making enemies among a new generation (a "queer fish", the brash young T. H. Huxley called him⁷⁴). Owen had diagnosed the fossil as the five fused sacral vertebrae of *Iguanodon* and used this fusion as the basis of his new order, Dinosauria.⁷⁵ But this accelerated a 'proprietary' tussle with Gideon Mantell, who had a vested interest (this was, after all, *Iguanodon Mantelli*, capitalized at the time to bring out the personal importance). Mantell had been the first to illustrate Saull's sacrum (in 1849), having borrowed it to expose more of the fossil, from which he deduced that it had six fused vertebrae.⁷⁶ There was no love lost as Owen and Mantell fought over this intellectual property. Saull was caught in the middle, unwaveringly faithful to Mantell, but careful to keep Owen onside.⁷⁷ One squib fabricated a City trial between Owen

72 Duckett 1853–60, 12: 412.

73 Perthes 1863, 416–17.

74 T. H. Huxley to Eliza Scott, 20 May 1851 (letter in the possession of Angela Darwin).

75 Richard Owen 1841 [1842], 130; Torrens 2014, 671.

76 Mantell and Melville 1849, 275; Torrens 1997, 183. In 1851 Mantell had a model of it made, presumably for his own museum (J. A. Cooper 2010, 153).

77 Saull would continue to ask Richard Owen's advice on new fossils, and allow Owen to prepare his specimens. He would send his warehouseman along with

and Mantell, before the Lord Mayor, thus mimicking decades of trials (including Saull's own) of corporation reprobates. Mantell died in 1852, and the squib rather callously suggested that Owen had "worrited him to death",⁷⁸ although probably an overdose of pain-relieving opium did that. Anyway, with Mantell dead, Owen now had a clear run, and in 1854 he published his own series of plates of Saull's *Iguanodon sacrum*, showing it from all sides, and with only five vertebrae.⁷⁹

The Temple of Free Thought

Whatever the scuffle over the intellectual property, Saull still owned the physical specimen, along with over 20,000 others, and their future remained problematic. While the museum's socialist *raison d'être* remained paramount, Saull was determined to keep it in a free-to-plebeians, anti-religious institute, where its meaning could remain intact. Any opportunity was seized. With Barber Beaumont scotched, and Jenkins's bequest destined for the courts, Thomas Cooper at John Street suggested they start from scratch. There was a good reason freethinkers had to build or buy an institution of their own. London had very few large halls, and many of those it had were barred to socialists at any price. Others had exorbitant rates, and none could be used on a Sunday.⁸⁰ So Cooper now urged them to build their own temple, pitching it in grandiose terms. In a speech, running a diatribe against "Popery" (an intolerance shared by all the sectaries, secular and Protestant alike), he argued for

a large, if not a splendid building in the metropolis ... one in which all of the intellectual that Catholics adopt should be used—organ, choir, stringed instruments, drums (even) and trumpets—pomp of Handel, sweetness of Haydn, richness of Mozart, sublimity of Beethoven—instruction and eloquence—but none of the painted doll, the petticoated priest, the incense, the smoke, and stench.

fossils to be named, thus increasing their intellectual and financial worth: W. D. Saull to Richard Owen, 14 July, 27 July 1851, British Museum (Natural History), Owen Collection, 23: ff. 112–15.

78 Mantell *ODNB*; squib: [Pycroft] 1863.

79 Richard Owen 1854, Tab 3–7.

80 *Reasoner* 13 (22 Dec. 1852): 446; *Reynolds's Newspaper*, 19 Dec. 1852.

Such stirring imagery was guaranteed to fire up the freethinkers. It certainly did Saull, in the audience, for he “sprang up” and promised “£500 to raise such a building”.⁸¹

Actually, there was little new in the rousing approach, Cooper had simply injected his “mad enthusiasm” for Haydn and Handel into the scene. Music drove socialist and secular devotion, and proceedings often began with a social hymn. Many socialist branches had choirs for the purpose. In the old days, Harmony Hall had christened its newly finished rooms with a spectacular concert of social hymns and sacred classics, and John Street had long had an organ and choir, with up to fifty performing on a Sunday evening, led by Cooper.⁸² So there was nothing much new in this. Sacred music brought solemnity to reinforce dry sermons,⁸³ just as it was now used to whip up enthusiasm for the new building drive.

Some shine was taken off the proposal by the fact that many of the sacred lyrics had never been converted. This made them hugely incongruous. No mind that the angels have the best tunes, if the devil can control the lyrics. Complaints that Cooper’s performances had not adapted Handel’s *Messiah* to socialist ends had their effect, and the John Street choir was finally practising the re-scripted “Liberty the People’s

81 *Reasoner* 10 (20 Nov. 1850): 80.

82 *NMW* 11 (7 Jan. 1843): 227; 13 (16 Nov. 1844): 165; Thomas Cooper 1872, 110, 315; *LI* 1 (Sept. 1854): 94; 2 (Mar. 1856): 177. Cooper was lecturing on Haydn at John Street at the time. The John Street choir comprised the Apollonic Society. Loose 2014, 63–64 on political hymn singing. Owenites carried their *Social Hymn Book* the way Catholics carried a missal, and, with 155 socially-regenerative hymns, there was one for every occasion. Their ungodly nature was execrable in the eyes of the City of London Mission (Ainslie 1840, 11–12), which singled out the 39th and 57th hymns for blasphemously making nature the creative force:

Yet *Nature* in her varied forms
 Applies to local things;
 To men, to beasts, fish, fowl, and worms,
 As each to nature clings.
 The universe produces all,
 (As *Nature* keeps her course),
 Unnumbered beings great and small,
 By one projectile Force.

83 Royle 1974, 231–32. It continued to add gravity to secular talks right through to T. H. Huxley’s ‘lay sermon’ at St Martin’s Hall in 1866 (Barton 2018, 431; Desmond 1998, 344–45).

Messiah, the true Redeemer of our Race” when the call for the new institution surfaced.⁸⁴

In tune with all this, the projected building was to be called, fittingly, the “Temple of Free Thought”. Cooper, Saull, and others worked up a blueprint for the “Temple” with its socialist museum, which they planned to inaugurate with all the solemnity of a secular High Mass. Given the contextual shift, Haydn’s *Creation* would now be forced to assume a new mantle, as it trumpeted the ‘evolutionary’ ethos of Saull’s museum.

A whirl of activity resulted in a “Metropolitan Building Club” in John Street, set up to raise £10,000 through £1 shares, with Saull as a Trustee and Treasurer. They projected a 3,000-capacity Hall, near Oxford Street, with committee room, library, reading room, and class room for boys and girls, a book depot, and shop—in short, a grander Mechanics’ Hall of Science, two decades on.⁸⁵

The John Street Institution was refurbished in 1852, with large gas-chandeliers fitted,⁸⁶ but it was a stop-gap measure as the lease was due to expire in 1858. And too many converts meant that the building was bursting. The secularist movement was doing well, so much so that the Bishop of London in 1851 thought that there was now more danger of the spread of “Rationalism” than of “perverts” to Rome (to use the Anglican slang of the day).⁸⁷ Saull, in 1852, lamented that for several years the John Street Institution and Mechanics’ Hall of Science had had to turn away “Scores often—in some instances, hundreds” on a Sunday because they were packed out, hence the need for a new “Temple”, which “would be filled on Sunday evenings ... by an audience eager to listen to the teachings of democracy and freethought”.⁸⁸

84 *Reasoner* 6 (10 Jan. 1849): 18–22.

85 *Reasoner* 10 1851 (12 Mar. 1851): 371; 13 (21 July 1852): 96, which shows the investment goal being lowered to £5,000.

86 *Reasoner* 13 (11 Aug. 1852): 134.

87 *NS*, 24 May 1851. Although this might have reflected more the fact that debates over the “romanizing tendency of ritualism” (Blomfield *ODNB*) had temporarily died down, rather than “Rationalism” had risen.

88 *Reasoner* 13 (22 Dec. 1852): 446; 12 (3 Mar. 1852): 245; *Reynolds’s Newspaper*, 19 Dec. 1852.

A Temple it would be, but not in name. When they actually tried to register it as a “The Temple of Free Thought” under the Friendly Societies Acts, the Attorney-General refused to allow it.⁸⁹

Saull had “grown grey in the service of reform”. Now, staring seventy in the face, and contrasting “the gory past” of prosecutions and prison cells with society’s growing “smoothness” in the Great Exhibition years, he needed to secure his museum for future generations of working people. He upped the ante, offering “to devote a portion of my property for such a purpose—to double the sum I have already subscribed” if the project took off.⁹⁰ The group tried and failed several times to get the company certified under the Friendly Societies Acts, but eventually managed to register it under the Joint Stock Companies Acts, in the name of “The Metropolitan Institution Company”.⁹¹ So the title was fixed: it was to be the “Metropolitan Institution”.

The Last Astronomical Hurrah

Unfinished business elsewhere was being wrapped up. For twenty years, a staple of Saull’s talks to workers had been the relationship between cosmic dynamics and the laws of social progress. He was preaching to the converted, promising heaven to the dispossessed on earth. As one of the last living acolytes of Sir Richard Phillips and Sampson Arnold Mackey, Saull still used planetary perturbations to explain vast-scale geological changes in order to subject planetary prehistory to the deterministic “laws of progress”. Phillips had even rejected Newton’s gravity for its occult quality. Sir Richard had been in his grave since 1840, and detractors thought his absurd views should have died a lot earlier. Thomas Cooper might be running with the hares, but he could still hunt with the hounds. He too deplored the way Phillips had “sneered” at the Newtonian System, and cynically said he only did it “to put money in his pocket”.⁹² But Saull remained loyal, right down to

89 *Reasoner* 10 (30 Apr. 1851): 450; 12 (3 Mar. 1852): 245. Cole [1944], 77, on these Acts.

90 *Star of Freedom*, 2nd ser. 1 (31 June 1852): 5; *NS*, 24 May 1851; *Reasoner* 12 (28 Nov. 1851): 20.

91 *Reasoner* 12 (3 Mar. 1852): 245; 13 (21 July 1852): 96; 13 (28 July 1852): 112; 13 (4 Aug. 1852): 128.

92 *Cooper’s Journal* 1 (20 Apr. 1850): 249. This was an easy claim to make, when Phillips’s print works had churned out huge numbers of compendia for popular

specifics. Phillips had insisted that granite was the oldest bedrock, and Saull would passionately defend that view if it came under attack at the British Association for the Advancement of Science. Here, too, Saull would moot the changing position of the poles, as part of a defence of Phillips's and Mackey's accounts of see-sawing temperatures through geological time.⁹³

After twenty years of talking to the unwashed, Saull tried one last time to persuade the impeccably scrubbed. He had one last crack at the gentlemen of the Geological Society. A new paper, read on 3 May 1848, restated his controversial case: that planetary orbits can explain palaeo-environments, so that shifting polar axes can account for a spot on the earth switching from torrid to frigid climes through time. And this, combined with a varying planetary wobble, the precession of the equinoxes, can further explain the movement of oceans from north to south or vice versa, exposing new land or submerging old. In short, the suit of planetary perturbations explained why his museum contained tropical corals, coal-forming tree ferns, and huge reptilian *Iguanodons*, all proving that Britain had at times been much hotter and periodically submerged.⁹⁴

Saull had been touting this astronomical line for twenty years. It remained hopelessly at variance with the elite's programme, which was focussed on empirical work to delineate the successive strata. Their bedrock approach was deemed safer, because it left little room for wanton speculation or the wild social or theological extrapolation which came from the extremist fringes. It shunned anything that might fan the flames of scepticism, transmutation, or discontent. And in 1848, with troops on the streets, Europe ablaze and the Chartists massing, stability seemed doubly important. The Geological Society was tacitly

consumption, the flow keeping his financial head just above water; and even easier when Phillips's justified publishing one republican paper with the excuse that "politics were as profitable an article as he could deal in" (*GM* 14 [Aug. 1840]: 212).

93 Saull's paper, "On the Supposed Action of Water in Geological Formations, and the Position of the Poles of the Earth", was read but not printed: *Report of the Twenty-Second Meeting of the British Association for the Advancement of Science; Held at Belfast in September 1852*, (1853): 61; *Athenaeum*, 18 Sept. 1852, 1015. Granite: *Civil Engineer and Architect's Journal*, 15 (Nov. 1852): 383-84.

94 Saull 1853, iv-vi, 19.

policed by its elite. Saull's paper was not published, merely glossed in an abstract.⁹⁵

Saull took matters into his own hands and published it in full in 1853. And priced two shillings, it was clearly not aimed at his penny trash people.⁹⁶ Tacked on to this *Essay on the Connexion Between Astronomical and Geological Phenomena* was a giveaway introduction. It made a final plea that science should have a social(ist) meaning. By revealing the planetary laws, it should give secular certainty to life's direction. It was barely coded to bolster an old Enlightenment determinism and rule out a capricious creation. He spelled out the social consequence: this "sublime" astronomical approach, "if properly carried out and expanded in accordance with the universally recognized law of progress, must decidedly be productive of the most beneficial results, by inducing men to conduct themselves in accordance with the bountiful arrangements of nature". The 'is' of science, which revealed "universal harmony", led to the 'ought' of conduct. Why? Because "informed minds adopting these ideas as governing principles" (that is, the geological guardians) will want to allow "participation" in their endeavour to all classes, "and especially to those ... placed in less favourable circumstances". It would lead to a democratizing and secularizing of knowledge to spread social harmony, the Owenite goal.

But the gentlemen had long discarded this Enlightenment non-sequitur. Moreover, any propagandist science designed to steer "our social conduct" in an obscene socialist direction doubly damned itself.⁹⁷ Many of the geological knights, like Sir Charles Lyell, had a horror of "mob-rule". The Tory imperialist Sir Roderick Murchison slammed socialism and the assault on ancient aristocratic lineages as "detestable".

95 Saull's paper, "An Elucidation of the Successive Changes of Temperature and the Levels of the Oceanic Waters upon the Earth's Surface, in Harmony with Geological Evidences", was left as an abstract in the *Quarterly Journal of the Geological Society* 5 (1849): 7; *Literary Gazette* 1634 (May 1848): 328. Even if the President, Sir Henry de la Beche, did now look wider in his yearly address, it would be to discuss the explanations of axial rotation by the socially and scientifically acceptable banker Sir John Lubbock: *QJGS* 5 (1849) lxxxiv-lxxxix. A later President Edward Forbes (*QJGS* 10 [1854], lxxvi) dismissed Saull's paper outright.

96 *Reasoner* 16 (5 Mar. 1854): 176. It was for sale amid Owenite and dissolvent theological works in Holyoake's 147 Fleet Street shop.

97 Saull 1853, vi-ix.

Saull's dinosaur expert Richard Owen had enlisted in the Honourable Artillery Company, the gentry's volunteer regiment, which supported the police during the 'riots'. The clubbable Tory geologist Edward Forbes also enrolled as a special constable as the Chartists massed on Kennington Common (these specials were singularly hated by Chartists). And the "Government hammerers"—the earth science specialists at the Museum of Economic Geology—took up cutlasses supplied by Scotland Yard.⁹⁸ The geological gentry simply stood on opposite sides of the barricades.

Citizen Saull, composing his paper in March 1848, was simultaneously drafting the Finsbury Institute's proclamation on the French revolution, and sending fraternal greetings on the revolutionaries' "glorious accomplishment",⁹⁹ while his patron, Robert Owen, was in Paris sharing a platform with the French communists.¹⁰⁰ At the same moment, there was Murchison, geologizing in Italy, outraged by the pistol-toting, tricolour-waving revolutionaries, and declaring that were such rioters to gain the upper hand in Britain "our ruin would be complete".¹⁰¹ Saull's socialist seeds in the *Essay* were cast on barren ground. Neither the gentry's geology nor its antiquities were about to be purloined to unshackle the masses.

Saull's purview was better suited to Continental radicals (indeed, the *Essay* cited his friend Ami Boué). Saull knew it and accordingly addressed the *Essay* to the geologists of "Europe and America". For all that, there *was* a growing feeling in the British periodicals that planetary perturbations would sooner or later have to be taken account of to explain some of the large-scale geological events. Perhaps it was the liberality of the fifties kicking in. The *New Monthly Magazine* knew that connecting geology with astronomy was "treacherous", and that Saull "boldly ventures into the tabooed field of speculation". But he "had as much right as any one else, sufficiently acquainted with the subject, to enter upon the inquiry, and he appears to have conducted it in a sufficiently close and philosophical spirit".¹⁰² Even the *Gentleman's Magazine* concluded that the carefully marshalled facts meant that "his

98 Wilson and Geikie 1861, 433; Desmond 1989, 331–32; Geikie 1875, 2: 87–90; J. A. Secord 2014, 142.

99 *La Voix des Femmes* 7 (27 Mars 1848): 2.

100 *UR*, 19 Apr. 1848, 41; 3 May 1848, 45.

101 Geikie 1875, 2: 87–90.

102 *New Monthly Magazine* 100 (Jan. 1854): 125.

essay will be read with interest", even if the authorities demur.¹⁰³ Not, of course, that any respectable reviewer burnt his fingers by touching Saull's inflammatory socialist deductions.

Saull stated that this was to be his last publication, his time being increasingly taken by the 'Metropolitan' to house his museum.¹⁰⁴ The geologists guarding the peace and confronting the Chartists would have been just as unsympathetic to this, an institution promoting irreligious Owenite ideals. The gentry, disagreeing on the social function of science, could give a very different meaning to fossils. When the Museum of Economic Geology was moved from Charing Cross to Piccadilly, it was rebranded the Museum of Practical Geology on its opening by the Prince Consort in 1851. The professors here were required to give evening lectures to local artisans. One of them, Edward Forbes, told his fustian auditors in 1852 that fossils were collected for two reasons, to elucidate the strata, and to help discover coal and minerals. He added that his listeners should collect fossils to make a bit of money by selling them on (tacitly disparaging his audience as the hodmen of geology). Strung together by an expert, these fossils were ultimately a way of "tracing the perfection of the Creator."¹⁰⁵

The reverse applied to Saull's exhibition. This reflected, in Thomas Cooper's words, Saull's "persevering attachment to the cause of mental and political liberty".¹⁰⁶ Saull tailored his presentation accordingly. He portrayed the self-development of life and society as the liberation of the downtrodden from a conceited Monarch of Creation, whose reflected perfection was mistakenly seen in fossils. With the overthrow came the illegitimization of His policing priests, the state-paid power brokers on earth. Life's self-generating push came from below, where sovereign power lay, not from any Godhead through his supposed agents.

103 *GM* 41 (Feb. 1854): 168. Even at the end of the forties more latitude had been evident. *Chambers' Edinburgh Journal* thought that the "question is a promising one, and if steadily pursued, will lead to something more than speculation" (as we might have expected given the *Vestiges* connection): *Chambers' Edinburgh Journal* 253 (Nov. 1848): 297.

104 Saull 1853, ix.

105 *Working Man's Friend* n.s. 1 (28 Feb. 1852): 338–39. In these early years the lectures were not a success, and they were said to have been "of little value" to working men: Ludlow and Jones 1867, 163.

106 *Reasoner* 13 (22 Dec. 1852): 446.

Saull's *Essay* showed the museum still expanding, and it revealed the latest donors. To prove that the Arctic had once been warmer, Saull noted his new acquisitions. Naval vessels returning from their search for Sir John Franklin's missing Arctic expedition brought fossils from these high latitudes. Captain Erasmus Ommanney, in H.M.S. *Assistance*, had been the first to find traces of Franklin's lost crew. That was at Cape Riley. Ommanney returned in October 1851 with a consignment of Cape Riley fossil corals, new tropical species, embedded in what looked like Silurian rock, which went into Saull's museum. Admiral Sir John Ross, the expedition's leader, also used the museum as a repository for his polar corals, illustrating, again, its importance.¹⁰⁷

With the assemblage at bursting point, Saull and his Metropolitan trustees stepped up a gear to finance their "central citadel". By August 1852, they were taking sixpenny deposits on £1 shares to let the industrious classes buy into the project.¹⁰⁸ In January 1853 the trustees held their first public meeting, and soon after were holding revenue-generating tea parties in John Street. But it was slow going. They had only sold 2,000 shares in July 1854, and, by the rules of the company, they could not start building until half, 2,500 shares, had been taken up. This forced them into the ignominious step of sending a lithographed circular letter to MPs, authors, and other gentlemen to plead for help in shifting shares. Old Joseph Hume, as ever, responded enthusiastically, although apparently without any cash.¹⁰⁹

The 'industrious' were not picking up the tab, and despondency set in. At a shareholder's meeting on 8 January 1855, Saull, by now tagged with the soubriquet "venerable", and speaking for "the old reformers", made the sad admission that "we could not touch the basis of society", working men. President of the Metropolitan Company, Henry Tyrrell, an expert on Shakespeare and the Devil, talked more starkly of the "apathy of the toilers". Now and then, Saull had a "good round sum brought him to be placed at the bankers", but they had still only sold 2,092 shares and had to hold off from building. They did what they could to keep the

107 Saull 1853, 15. Other donations went to the Museum of Practical Geology. Ommanney: *North British Review* 16 (Feb. 1852): 476–77.

108 *Reasoner* 13 (11 Aug. 1852): 144.

109 *Reasoner* 17 (27 Aug. 1854): 138; (2 July 1854): 10; 14 (23 Feb. 1853): 127; (16 Mar. 1853): 175; *Reynolds's Newspaper*, 30 Jan. 1853.

pot boiling, firing off letters to the liberal press and scouting out suitable land. The last word was left to Saull on that cold January day. "He had never deviated from the cause, and, while life lasted, he never would." But life is short, and that was to be his epitaph.¹¹⁰

110 *Reasoner* 18 (21 Jan. 1855): 38–39. Henry Tyrrell was actually Henry Tyrrell Church, although he dropped the "Church" for obvious reasons. He was just taking over St George's Hall, near the Elephant and Castle.

