William Stukeley and the Origins of Architecture

Tessa Morrison

University of Newcastle

William Stukeley (1687-1765), fellow of the Royal Society, founding member and first secretary of the Society of Antiquaries and fellow of the Royal College of Physicians is best known for his archaeological investigations of Avebury and Stonehenge. He also, with some antiquarian friends, formed the Society of the Roman Knights which was dedicated to the preservation of Roman and Celtic remains in England. Stukeley's best known work is Stonehenge a Temple Retor'd. The original research and development of his plans for his reconstruction were executed in 1721-24. By the time it was printed in 1740 Stonehenge a Temple Retor'd had became a Druidic fantasy that Stonehenge still suffers from today. However, his original work on Stonehenge in the early 1720s was significant and his plans of the remains of Stonehenge were the most accurate of the time. Also, in the early 1720s Stukeley was working on a manuscript entitled The Creation, Music of the Spheres K[ing] S[olomon's] Temple Microcosm[sm]- and Macrocosm Compared &C. Here he delineated his theory of the development of sacred architecture and the origins of the art of architecture, which was influenced by his work on Stonehenge. In his reconstruction of Stonehenge the Druids had applied a basic knowledge of 'Vitruvian' principles, not from knowledge of De Architectura, but derived from nature. Stukeley argued that the oak groves were the first models of sacred architecture and that this was the model followed by the Druids in Stonehenge. However, it was in the Temple of Solomon that building became the art of architecture, and with it the development of the architectural orders and the norms of architecture which were later copied by Vitruvius in De Architectura. This paper examines the details and the basis of Stukeley's theories. Although these theories are fundamentally flawed, both historical and architecturally, they were significant to the history and development of ideas in the English Enlightenment.
The Origin of Architecture

From an early age Stukeley had an affinity with nature 1 and antiquities. He had a natural curiosity that lead to far ranging research in a significant period in human history. He wrote a book on the working of the spleen; he worked on cures for gout; he had an interest in comparative anatomy and even dissected an elephant; he collected antiquities; and he had a keen interest in design and architecture as well as astronomy and natural history. He was a true scholar of the English Enlightenment. Throughout his life Stukeley attempted to equate nature or ‘the vegetable world’ with religion and architecture as they were intrinsically connected and could only be understood holistically.

In the unpublished manuscript The Creation, Music of the Spheres [King Solomon's Temple Microcosm]- and Macrocosm Compared &C dated 1721-1724 Stukeley claimed that "it adds much to the glory of the vegetable world that they supply for the most part the material, & first gave the limits & ideas of these noble delightful arts, painting, sculpture & architecture." When mankind was deprived of these aesthetic pleasures, such as in winter, they endeavoured to mimic and represent their curious forms in an artificial manner. This led mankind to imitate nature in art which at length turned "small things to great science" because in art "the pencil at first in perpetuating those little fading works of nature has taught the artist by bolder strokes & finest tables to consecrate his own name & memory to immortality."

In Genesis 12:6-7 Abraham built his first altar in the Promised Land on the 'plain of Moriah.' Stukeley interpreted this as "the oak Grove of Moriah for such is the true interpretation of the words Genesis 12:6," and in Genesis 18 he again used the word 'grove' instead of 'plain.' Stukeley equated these Biblical 'groves' with the groves of the Druids.

In British oak groves our old naturalists, poets & priest the Druids inculcated the precepts of religion, studies the celestial sciences, reasoned of faith, providence, freewill the immortality of the soul, the nothing of death, & certain of a future state, & in all history sacred or profane the groves were places more immoderately consecrated to the adoration of the supreme being....Who can doubt that frequenting those places on an account of divine worship, first gave the model of the formation of their ancient temples. Thus the tall shaft of a column adored with a capital of foliage work, is a fine imitation of the body of an oak trimmed up with a few loose leaves left at the top, where the hypo-traction is supposed a ring of iron to present its weight. Thus the body of the temple were crowded with long rows passed with numerous colonnades of pillars double or treble porticos covered over with roofs laid on the cross architraves, which perfectly resemble a chapel in a wood beset with alleys made by old hoary trunks of oaks, forming a brown & venerable shade by their branching heads meeting above which too by a checkering of light & shade as they successively open & close perfectly exhibit the effect of the narrow lights of the ancients or the rib work arches of the Gothic cathedrals, & the dappled light as amazing for its quietness & form for its prodigious bulk as the exceeding richness of its materials & ornament."

The Order of Solomon

Although Stukeley claimed that the trunk of the tree and crowning foliage was the origin of the column and carved capital, it was not the origin of the orders. The Greeks had improved the three orders of Doric, Ionic and Corinthian overtime but the orders were of greater antiquity. Stukeley emphasized a natural development of the orders from trees, the foliage of the oak grove, and the scrolls of the ram horns to the eventual addition of architectural norm of proportions.

While the trunks of the tree and the crowning foliage were the origin of the column, the human figure provided the proportions to form the architectural column.

A column is an emblem as well as proper instrument of stability & strength is nothing but the body of a tree, its thickness at the bottom toward the root is very venus shape into a torus which is but a refinement rather than a corruption of the Greeks as the Tuscan & Composite orders are of the Roman. We are sufficiently satisfied that the Doric has no base in its first constitution which pleads strong in favour of its priority even in antiquity & the noble ornaments of its triglyph & moidion considered with its strength must needs render it preferable to all others, & the Corinthian capital seems entirely its property taken as we hinted from the leaves of a tree loft at top, the afterwards supported by cross architraves, resembled a chapel in the wood made of trunks of oak covered and shaded by the overhanging foliage. The dappled light that streamed through the foliage was heir to the painted windows of the Gothic cathedral.

To enforce the idea that the oak grove was the birth of sacred architecture Stukeley devised a scheme of a Temple in the Pycnostyle, which has two rows of pillars all around and ten at each end with a peristyle within six pilasters (see Figure 1). This temple, he claimed, has the "harmony of proportions which is the beauty of ordinance must be most conspicuous in the nearest conformity to nature." The union of simplest and grand majesty was derived from the oak groves. Stukeley claimed that it could clearly be seen from Figure 1 that "architecture is entirely an imitation of nature as is painting & sculpture" and "what can more perfectly represent a wood," than architecture.
Stukeley, Newton claimed that Solomon’s Temple was the oldest temple and it was the original model for all subsequent temples. He argued that the workmen on the Egyptian temples had come from Jerusalem and that they imitated the Temple of Solomon and also that the Greeks had borrowed their style of architecture from Solomon’s Temple. Stukeley claimed that the style of the Temple was Doric and that Newton agreed with him saying that, “the Greeks advanced it (Doric) into the Ionic and the Corinthian, as the Latins into the Composite.” As stated above Stukeley believed that the Tuscan order was designed by man and it was only a debasement of the original Doric order, which was of divine origin.

For Stukeley there was ample description of the two famous bronze pillars in the Scriptures to find the truth of the order of Solomon. He considered all of the Biblical verse on the bronze pillars and their decoration. Stukeley claimed on considering these verses that Doric is the most ancient and the most noble of the orders “invented by God himself...The Greeks whom they perceived its beauty, & excellence & put it onto practice presently adopted it for their own according to their practical custom.

The Temple of Solomon exhibited the whole ordinance of the Scripture that is “most truly and completely Doric of the ancient works of antiquity near Rome and Sicily.” The shafts of the columns in all probability were fluted after the Doric manner with twenty-four cavities; over every cavity hung a pomegranate in the capital. Stukeley illustrated them fluted (see Figure 3) which he copied from “an excellent Doric fragment of Greece... which is like-wise exactly of the same proportions.” This fragment was in the collection at The Spring Garden of Lord Arundel, an art collector and English courtier in the reigns of James I and Charles I as well as patron of Inigo Jones.

In The Creation, Music of the Spheres King Solomon’s Temple Micromacrocosm and Macrocosm Compared & the connection of the Druids’ Temples and Solomon’s Temple is obscure. For although Stukeley claimed that the Druids’ style of Temple, such as Stonehenge, was a forrunner to Solomon’s Temple through the oak groves of Israel and England it is not clear how this was achieved. This question was answered forty years later in Palaeographia Sacra or Discourses on Sacred Subject. Stukeley claimed that the vegetable world was so represented in the Temple of Solomon it was a fit concomitant to the heavenly inhabitants.

This earthly Tabernacle, was a house, to be honoured with the presence of the supreme, the invisible deity! So that the deity himself may here be said literally, to dwell in a wood or grove: as formerly in that famous oak grove of Beersheba, planted by the illustrious patriarch, and first Druid, Abraham: and from whom our celebrated British Druids came; were of the same patriarchal, reformed religion; and brought the use of sacred groves, to Britain.

Stukeley outlined Druid rituals, which he perceived as being quasi-Christian—even though the Druids were pagans “they were of the first, and patriarchal religion.” In Abury a Temple of the British Druids published 1743, he quoted Exodus 24:4; after descending Mount Sinai Moses built an altar at the base of the mount with twelve pillars. Stukeley added “which we have no reason to doubt (that they) were set up in a circle.” This pattern of temple was copied by all the countries around and it was the first type of Patriarchal temples but they were converted to idolatrous purposes. By way of opposition to the heathen temple the Mosaic Tabernacle was square and covered.
Also in Aubry he outlined three kinds of Druidic Temples in Briton; the round form, the Dracontium and the Alate form. He continued to work on this architectural development for many years and returned to it in the 1760s in a small manuscript entitled The Order of the Pillars of Solomon’s Temple. Here he outlined the natural development of architecture that was related to the Scriptures. He gave a chronology of the development of Patriarchal temple as

I. The round form, like our Stonehenge & innumerable more, [are] appropriate to the public Solemnity of the vernal equinox (Figure 4).

II. The Alate temple, circle & wing, dedicate to the summer solstice festively, such that at Barrow Lincolnshire on the banks of the Humber another at Nevvestock on Epping Forest (Figure 5).

III. The consecrated oak grove, the only Temple of Homer, from Abraham. These belong to the public sacrifice of the autumnal Equinox. Such [as] the practice of the British Druids.

IV. The Dracontium temple, or snake transmitted through a circle, assigned to the sacred panegyric of the winter solstice, such our Aubry in Wilshire, & Shap in Cumberland (Figure 6).

V. The Covered temple of the Mosaic tabernacle, such [as] the Antium Nymphpharum & Ithaca, the Mithrias caves of Persia.

VI. Solomon’s Temple, the original of all ancient covered Temple (Figure 7).

These six points represented the development of architecture. The first five points represented the natural development and the sixth is the first artistic development.

He explained that Homer did not mention temples but often wrote of groves. The altar to Horcean Jove in ancient Troy was in the open court surrounded by a circle of upright stones, like the ancient Druid temples. Another example of this form of temple, which Stukeley called ‘patriarch temples,’ was at Pylos where King Nestor celebrated public sacrifices. Sicily, the country of the race of the Cyclops, had a serpentine style temple of the patriarchs and these Stukeley called ‘dracontium’. Examples of these could also be found in Britain, as in the hill at Avebury, which is the head of the great serpentine temple. A third form of patriarch temples was the Alate temple, which consisted of raised banks in a circular form. These three patriotral temples were dedicated to idolatry. For this reason God ordered the covered temple of the mosaic Tabernacle, as a contradiction to the original open temple.

When Solomon built his Temple on the place where the consecrated grove of Abraham was, then mankind began to copy it, including the Persians, the Egyptians and the Greeks. All of these temples were "imitations of groves, and groves, we may conclude, gave occasion to the invention of architecture." 30

Stonehenge

Stukeley was not the first to investigate and consider the origins of Stonehenge. In the mid-seventeenth century Trigo Jones reconstructed Stonehenge and concluded that it was of Roman origin. 31 This sparked a controversy on who the builders were and what was the date of its origins. In 1665, Walter Charleton, physician to Charles II, published Chorea Gigantum (Giant’s dance) claiming that Stonehenge was of Danish origin. 32 John Aubrey (1626-97) was the first to ‘discover’ the megalithic remains at Avebury and gave the ancient stone circles which were dotted around Britain a Druid origin. 33 Edmund Gibson’s 1696 edition of Camden’s Britannia contains several explanation of the origins of Stonehenge including the Arthurian legend that

Fig 6. The Dracontium temple.

Fig 7. Stukeley’s reconstruction of the Temple of Solomon.

Fig 8. Stukeley’s ground plan of his survey of Stonehenge undertaken in the early 1720s.

Fig 9. Stukeley’s ground plan of his reconstruction of Stonehenge executed after his survey.

Aurillanus Ambrosus, or Uther his brother, erected it with the help of Merlin the mathematician, to the memory of the Britains who were slain by the treachery of the Saxons. 34 By the end of the seventeenth century the myths that surrounded Stonehenge were given equal consideration to the science of the time.

Stukeley’s research on Stonehenge begun in the early 1720s and there are existing manuscripts that contain his work from this time. 35 His initial ideas of Stonehenge in those brief visits were that

the whole work is an oval and no part of a circle; that the compases or sides of the cell are of different heights rising gradually towards the upper and or altar, as likewise the small obelisks accompanying them. That the second range of lesser stones does not consist of pyramids, but flat stones, and several other particularities of this nature which I can only hint at present. 36

There was no doubt in Stukeley’s mind that Stonehenge was a Druid temple that had been derived from the patriarchal religion of Abraham “at least in the early times and worshipped the supreme being in the same manner as he did and probably according to his example or the example of his and their common ancestors.” 37 Thus Stonehenge was a precursor to the Tabernacle and the Temple of Solomon.

It was not until July 1723 that he was able to undertake a full survey of the monument. He recorded in his dairy that he took over 2000 measurements. 37 He claimed that these measurements demonstrated that the Druid cubit, was the measurement used at Stonehenge. However, there is no record of these measurements. He did, however, execute a detailed ground plan of the survey (see Figure 8) which is now in the Bodleian Library. 38
This ground plan of this survey was excluded from the published work of 1740, which led to criticism particularly from his most ardent critic John Wood of Bath. However, his ground plan of the survey is extremely accurate and its exclusion seems to be a strange oversight since its omission does give the impression that his reconstruction did not consider the remaining ruins within its whole context.

Stukeley skilfully attempted to show the reader how Stonehenge is and what it was. He provided four sections of his reconstruction and compared them with sections of the ruins that he had executed in the early 1720s.

In the section of the front of Stonehenge the strict geometry is clear but in order to make the aperture of the entrance grand it was wider than the rest. Stukeley referred to Vitruvius' De Architectura III, 2.

But alas, our British priests knew nothing of Vitruvius; they deduced this knock from an authority much ancients that this, viz from pure natural reason and good sense. Nor does this hurt the whole of the work. The aperture ought strictly to have been two cubits equal to the rest, but they advanced it to two cubits and a half. This only crowds the next intervals on each side a small matter nearer, the rest preserving their true distance quite round. And in the work itself it's obvious enough to the natural eye.

Conclusion
William Stukeley was a polymath of the Enlightenment with a natural curiosity that led him to study diverse fields of interest. Although his interest in the Druids led him to fanciful invention this should not devalue his work. His drafting skills accurately recorded ancient and Roman buildings around the English countryside that no longer exist. His surveys and fieldwork at Stonehenge and Avebury were systematically recorded in his drawings, layouts and plans of these monuments, which were the earliest and most thorough at the time. Above all Stukeley aimed at the truth. His search for the origins of architecture and the lost ancient knowledge that was bound up with ancient religion, was an important topic and research of the time.

Fifteen years after Stukeley's death, Henry Hurle formed The Ancient order of the Druids which was charitable association and a Freemason's offshoot that is still in existence today. The website of the organization states that its object "is to preserve and practice the main principles attributed to the early Druids, particularly those of justice, benevolence and friendship,"14 in reality what the main principles of the Druids were is unknown, but the main principles of justice, benevolence and friendship were attributed to the early Druids by Stukeley.

One of the greatest recognized legacies of Stukeley's work is his influence on the work of William Blake, the great artist and visionary poet. Blake was born in 1757, and he was familiar with Stukeley's work and he absorbed the Druidic lore which became part of his intricate mythology. Blake's Jerusalem is strongly influenced by Stukeley's work. Stukeley identifies the Druids with the Patriarchal pillars and Oak groves to the whole Earth witness to this day.14 The link between Jerusalem and England throughout Blake's work is an essential element to the prophetic and mythological theme of his art and writings.

Stukeley's interest in architecture is mentioned, but its importance to his work is largely ignored by his biographers, and the contribution of it to his life's work is mainly unrecognized. Yet his interest in architecture promoted a significant understanding of ancient buildings and monuments in the eighteenth century. He brought a new element of appreciation to antiquarians' knowledge of ancient buildings and although Stukeley did excavate ancient sites his general understanding of these ancient monument came from his surveys, architectural examination and consideration of their reconstruction. Although many of his assumptions were mistaken, he nevertheless greatly broadened the architectural interests and approach of British antiquarians of the eighteenth century and subsequent generations.

Endnotes
5 Stukeley, "The Creation, Music of the Spheres &c [S[olomon's] Temple Microco[m] and Macrocosm Compared &c, 32.
7 Stukeley, "The Creation, Music of the Spheres &c [S[olomon's] Temple Microco[m] and Macrocosm Compared &c, 34.
8 Vitruvius, The Ten Books of Architecture, I, I.
9 Stukeley, "The Creation, Music of the Spheres &c [S[olomon's] Temple Microco[m] and Macrocosm Compared &c, 35.
10 Stukeley, "The Creation, Music of the Spheres &c [S[olomon's] Temple Microco[m] and Macrocosm Compared &c, 76.
11 Stukeley, "The Creation, Music of the Spheres &c [S[olomon's] Temple Microco[m] and Macrocosm Compared &c, 78.
12 Stukeley, "The Creation, Music of the Spheres &c [S[olomon's] Temple Microco[m] and Macrocosm Compared &c, 76.
13 He originally writes Gracian but this is clearly a mistake.
14 Stukeley, "The Creation, Music of the Spheres &c [S[olomon's] Temple Microco[m] and Macrocosm Compared &c, 1 fol. 37.
15 Stukeley, Memoirs of Sir Isaac Newton, p.18.
16 Stukeley, "The Creation, Music of the Spheres &c [S[olomon's] Temple Microco[m] and Macrocosm Compared &c, 76.
17 Stukeley, "The Creation, Music of the Spheres &c [S[olomon's] Temple Microco[m] and Macrocosm Compared &c, 76.
18 Kings 7:15; I Kings 7:16; I Kings 7:17; I Kings 7:18; I Kings 7:19; I Kings 7:20; I Kings 7:21; I Kings 7:22; I Kings 7:41; I Kings 7:42.
23 Ernest B. Gilman, Recollecting the Arundel Circle (New York Peter Lang, 2002).
24 William Stukeley, Palaeographia Sacra or Discourses on Sacred Subjects, (London, 1738), 7-8.
25 Stukeley, Palaeographia Sacra or Discourses on Sacred Subjects, 54.
27 Stukeley, "The Order of the Pillars of Solomon's Temple," 5.
28 Stukeley, Palaeographia Sacra or Discourses on Sacred Subjects, 17-18.
32 John Aubrey, *Monumenta Britannica; or, a Miscellany of British Antiquities* (Sherborne: Dorset Publishers, 1982).