Description or Design

Debating Visual Truth at Stonehenge in the Seventeenth Century

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Abstract

Over the course of the seventeenth century, two representations of Stonehenge—one published in William Camden's Britannia (1600) and the other in Inigo Jones's Stone-heng Restored (1655)—were invoked repeatedly in an intensifying debate over the monument's origins. This debate engaged both the virtuosi community of the Royal Society and members of the closely related, fledgling world of English architectural discourse, and the two representations became the common ground for both conversation and contestation. This paper traces the entangled afterlives of these two images, and argues that their reproduction and reinterpretation by members of natural history, antiquarian, and architectural communities created both discord and new, collective knowledge. Drawing on recent work exploring how images produced for divergent purposes and audiences were integrated into natural philosophical study, I explore how, through their reproduction, alteration, and recontextualization, these images functioned as tools of both division and mediation, and created space for debate and new investigation.

Keywords

scientific images and knowledge making – early modern architecture – antiquarianism

1 Introduction

In 1600, a fifth edition of William Camden's Britannia was published in London, featuring a new frontispiece by William Rogers. In place of earlier edi-
tions’ graphical strapwork designs, the new composition featured a map of Britain, dotted with Latin place names and flanked by two figures representing the bounties of sea and land. Above, Britannia reclines, sword and shield in hand; below, medallions of a ship and a cathedral frame a central cartouche, which depicts a Roman bath, a farmhouse, and, deep in the landscape, a circle of stones, some standing vertically, others balanced atop them—a scene instantly recognizable to modern viewers as Stonehenge (Fig. 1). The monument’s inclusion on the frontispiece signaled the presence of another, full-page engraving of Stonehenge (also by Rogers) added to the 1600 Britannia, which shows the site from an imagined aerial view and captures its disarrayed ruins within the surrounding Salisbury plain (Fig. 2). That iconic image was the first of Stonehenge to circulate widely in England, and it remained in every edition of Camden’s Britannia published during the seventeenth century. Yet it was not the only representation produced, circulated, or printed in the period, one in which the origins and engineering of the monument were subject to increasing scrutiny. Around 1620, the architect Inigo Jones produced a full set of architectural drawings of Stonehenge, published posthumously in a treatise entitled The most notable Antiquity of Great Britain, vulgarly called Stone-henge on Salisbury Plain, Restored (1655). Representing the site in plan, section, elevation, and perspective—both idealized and in ruin (Figs. 3–5)—Jones made Stonehenge into an architectural antiquity on par with those of ancient Rome.

Unlike the Britannia Stonehenge, Jones’s drawings reached a small contemporary audience. But like Rogers’s engraving, his designs were reprinted, edited, cropped, copied, and described throughout the seventeenth century. This article traces these images’ entangled afterlives. An era of intense exper-

1 William Camden, Britannia (London: George Bishop, 1600), frontispiece.
2 Ibid, 219.
mention with the use of images in natural philosophical and antiquarian study, the seventeenth century was characterized by a striking multiplicity of visual means through which knowledge was produced, represented, and communicated. Recently, Sachiko Kusukawa, Matthew Hunter, and others have explored the heterogeneous "domain of images" that characterized and enabled 'scientific' study in this period, with particular focus on academic institutions like the Royal Society. This study shifts the lens away from a single scholarly circle to consider not just how visual representations were brought into and used within institutions like the Royal Society, but how images moved within and among scholarly networks.

Camden's and Jones's images of Stonehenge—originally produced for divergent audiences and purposes—were invoked again and again as evidence in the intensifying debate around Stonehenge's origins, both within the virtuosi community of the Royal Society and within the closely related, fledgling world of English architectural discourse. In the process, the two representations became the common ground for both conversation and contestation.


FIGURE 1  William Rogers, frontispiece of William Camden’s Britannia (London: Printed for George Bishop, 1600)
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With a dearth of written evidence about the monument to interrogate, observation became the primary method through which scholars could assess Stonehenge and integrate it into broader histories of England; thus arguments over its origins were at heart arguments over visual representation. Examining how Rogers's and Jones's images were made, remade, redeployed, and crucially, rewritten in the debate, this paper argues that the transposition of images among natural history, antiquarian, and architectural communities created both discord and new, collective knowledge. Spanning contrasting—and at times contradictory—forms of empirical inquiry, these images brought architectural and natural philosophical communities into (combative) conversation; through their reproduction, alteration, and recontextualization, they functioned as tools of both division and mediation, and created space for debate and new investigation.

2 The Description and the Design

When Rogers’s engraving of Stonehenge appeared in the 1600 edition of *Britannia*, it was part of an increasingly visual text, one which included an eclectic collection of maps, woodcuts, and engravings augmenting the written word with visual evidence. Yet among the growing number of images, the full-page Stonehenge stands out—the only architectural monument, the only object portrayed *in situ*, and the only image with an accompanying legend. In part, its unique form stems from its status as a copy; although the process of replication remains hazy, Rogers’s engraving closely resembles several drawings and prints circulating in the late sixteenth century. Drawn in aerial perspective, these images collapse several views of the monument into one to portray it from a single, imagined vantage point—as if drawn “on the spot,” one artist wrote. Rogers reproduces this aggregate view, with slight changes that further underscore his faithful visual representation. Figures wander, even climb on the ruins—as though he has captured a single lively moment—and the stones are more textured and weather worn than earlier representations. Rogers even

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uses the cartouche inscription at the bottom to present established facts about the monument—A and B the size of individual stones, C the location of discovered human bones.

Camden’s surrounding text emphasizes the accuracy and authority of Rogers’s image, obscuring its status as a copy. The author begins his section on Stonehenge with a description of the “insane” structure: constructed “in the manner of a crown,” the monument contains three circles of rough stones with others resting horizontally atop them, so that the whole work, he writes, “seems to hang.” After this brief attempt to translate Stonehenge into text, however, Camden succumbs to the failure of language: because the work “cannot be sufficiently expressed in words,” he has “taken care to subjoin here the work of the engraver.” Emphasizing the fallibility of words rather than images, Camden privileges Rogers’s engraving over his own textual account, and even acknowledges the expertise of the engraver, though leaving Rogers unnamed.

If both word and image insist on faithful representation, these claims exist alongside another rhetorical function of the image—to underscore the site’s mystery. Rogers not only heightens the texture of the stones; he exaggerates their torque, imbuing them with writhing life. Simultaneously, he renders the people smaller, more diminutive in the face of these massive, misshapen stones; two figures dig up what appear to be human bones, adding to the chaos. The castle in the distance—which in earlier renderings possessed the form of a Roman earthwork—here takes on a regular geometric form, and the rectangular structure—in reality invisible from Rogers’s viewpoint—acts as a foil to Stonehenge’s disarray. Rogers’s processed, composite view, in other words, reminds the reader that the monument is a frenzied and inscrutable one.

Though it seems at odds with Camden’s attempt to precisely describe the monument, this mode of representation functions rather to support Camden’s descriptive efforts. After inserting the engraving, Camden proceeds to describe the wonder of the site and relay the conflicting theories of its origins—that it was constructed by Merlin, made out of sand, erected by Britons. He concludes, however, that it is “not for me” to dispute and debate these finer points, but rather “to lament more painfully that the authors of such a monument have


12 “Eius vero qualecumque delineationem cum verbis satis commode exprimi non potest, hic opera sculptoris subiuengendam curauimus.” Ibid., 219.
FIGURE 2  William Rogers, perspective of Stonehenge from William Camden's *Britannia* (London: Printed for George Bishop, 1630), 252

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been forgotten.”¹³ And if he “laments” the forgotten truth, his entire section on Stonehenge serves rather to emphasize the utter inscrutability of the site. Camden and Rogers revel in the mystery of the monument, and Rogers’s visual description serves as much to express Stonehenge’s monstrosity as to aid in its comprehension.

Likely drawn in the 1620s upon a commission from James I, Jones’s revisionalization offered a starkly different way of seeing the monument—through schematic representation. Whereas Camden had refrained from making any claims about the monument’s origins, Jones waded directly into the fledgling debate. Published after his death by his assistant John Webb, Jones’s Stone-heng Restored (1655) rejects the claims of several earlier works, ranging from Geoffrey of Monmouth to Britannia to a 1624 work entitled Nero Caesar, or Monarchie Deprav’d, and vehemently argues that Stonehenge was the work of Britain’s Roman occupiers.¹⁴

Immediately, Jones unites the construction of Stonehenge with the arts of mathematics, architecture, and “design.” Neither Druid nor Briton, he claims, had “great knowledge, practice or delight of Arts and Sciences.”¹⁵ Lacking any “Lectures in the Mathematiques” or “Academies of Designe,” how could such peoples erect a work like Stonehenge?¹⁶ Unsaid but already evident in these early pages is Jones’s association of these mathematical and architectural skills with the classical architectural tradition emerging out of Italy; even his use of the term “design”—a word only just coming into English use in the context of art and aesthetics—signals Jones’s effort to link Stonehenge to Vitruvian architectural theory.¹⁷ Underscoring the monument’s essential ties to the disciplines of art and design, Jones insists from the outset that his own work—like the building of Stonehenge itself—is a visual pursuit; his aim, he claims, is not only to “vindicate” the original builders but “to make truth, as far forth as possibly I may, appeare to all men [italics mine].”¹⁸

¹³ “De his non mihi subtilius disputandum, sed dolentius deplorandum obliteratos esse tanti monumenti authores.” Ibid., 220.
¹⁵ Jones, Stone-heng Restored, 8.
¹⁶ Ibid., 3.
¹⁸ Jones, Stone-heng Restored, 2.
Yet Jones does not leave truth to appear without his intervention; rather, the reader sees the monument through Jones’s own architectural eye. Describing his methodology, he writes:

... that it may be the more clearly demonstrated, (being by me, with no little pains, and charge measured, and the foundations thereof diligently searched) I have reduced into Design, not only as the ruin thereof now appears, but as (in my judgement) it was in its pristine perfection.¹⁹

Just as Camden insisted that images can convey what text cannot, so too does Jones use images to augment the written word. But here, in place of Camden’s visual description, Jones has “reduced [Stonehenge] into Design;” whereas Camden showed the monument as it stands ruined by weather and age, Jones portrays it “as (in my judgement) it was in its pristine perfection.” Following the architectural writers he read so closely, Jones recreates the monument with seven fold-out engravings following the orthographic sequence—plan, section, elevation, perspective.²⁰ Two plans—at scales of fifty and thirty feet—represent the monument’s geometrical footprint, each stone depicted as an unblemished rectangle; in the second, Jones has superimposed four equilateral triangles over the site, underscoring its precise ordered design (Fig. 3). The elevation, section, and perspective that follow reinforce the smooth and geometrical monument as Jones imagines it, with “pristine” tapered standing stones supporting a continuous outer circle of lintels (Fig. 4). Only in the two final images does Jones depict the monument-as-is, in plan and perspective; here sagging and misshapen stones signify the “violence of time, and injury of weather” that have eaten them away (Fig. 5).²¹

Only after presenting these annotated architectural drawings does Jones offer his own interpretation of Stonehenge’s origins—a claim that rests entirely upon the architectural logic of his drawings. The Romans, he asserts, also used the geometrical or “Architectonicall Scheam” of four triangles inscribed within a circle, a scheme which he himself imposed on Stonehenge. So too did

¹⁹ Ibid., 56.
²⁰ In so doing, he was following a long antiquarian tradition of sixteenth-century Italian architects going back to Raphael and Pirro Ligorio; see Alain Schnapp, The Discovery of the Past (New York: Harry N. Abrams, 1997), 122–126. On Jones and his relationship to the continental tradition, see Christy Anderson, Inigo Jones and the Classical Tradition (Cambridge: Cambridge University Press, 2007), ch. 3.
²¹ Jones, Stone-heng Restored, 63. As Wragge-Morley (Aesthetic Science, 81, n. 19) notes, Jones never referred to these images in the rest of the treatise.
Figure 3  Inigo Jones, inscribed plan of Stonehenge, from Stone-heng Restored (London: Printed by James Flesher for Daniel Pakeman, 1655), plate 38
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Figure 4  Inigo Jones, elevation of Stonehenge, from Stone-heng Restored (London: Printed by James Flesher for Daniel Pakeman, 1655), plate 41
COURTESY OF THE GETTY RESEARCH INSTITUTE
Romans create porticos inside their buildings, just like his imagined designers of Stonehenge. And Stonehenge followed the Roman rule of placing greater columns closer to one another than smaller ones; even the technique of constructing architraves without mortar was founded, Jones writes, on Roman antecedents. Each claim, supported by several ancient Roman examples, is rooted in Jones's architectural drawings, his point of departure for making historical comparisons.

As has often been noted, Jones’s textual and visual argument is a circular one. His assumption that Stonehenge reflects the “Art of Design”—by which he means the rules of classical architecture—determines the geometrical form he imposes upon the monument in his drawings, which in turn serve as the evidence for his assertion of Stonehenge’s Romans origins. Commissioned by James I, who self-identified with Roman emperors and especially Julius Caesar, Jones had strong political incentives to make such a claim. Simultaneously, his was a creative as well as political project; Stone-heng Restored, it has been argued, was as much an architectural treatise—even manifesto—as

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22 Ibid., 68.
23 Ibid., 70.
24 Recently, see especially Wragge-Morley, Aesthetic Science, 76–83, and Roark, “Stonehenge in the Mind.”
a work of antiquarian investigation. Yet if Jones “instrumentalized Stonehenge” for his own architectural and political purposes, he also produced a diagrammatic rendering of the monument that shifted the field of vision from perspective to plan, description to abstraction. He thus simultaneously—if subtly—asserted the validity of architectural knowledge as a means of conducting antiquarian investigations.

Camden’s and Jones’s publications offered two distinct ways of seeing Stonehenge—the visual description and the ordered, abstracted design. In both cases, visual representation and rhetorical intention were co-dependent; the images cannot be disentangled from their authors’ epistemic claims. In Britannia, not only did Rogers’s engraving reproduce earlier views that claimed truth to life, but its evocative eeriness emphasized Stonehenge’s mysterious nature. Jones’s orthographic projection, by contrast, enabled its author to claim Stonehenge as a work of classical architecture. Separated from those authorial intentions, however, these two representations presented a conundrum. If, as Lorraine Daston has put it, epistemic images are characterized by their ability to substitute for as well as represent objects, how could these divergent representations be reconciled? In the debate that followed, both natural philosophers and architects grappled with these images’ incompatibility. Placed in different textual and interpretative contexts, Camden and Jones’s representations became the fodder for disputes over truth and trustworthiness, and served as the instruments through which the monument could be seen and comprehended; almost inadvertently, Camden (or rather Rogers) and Jones created the shared eyes through which later authors saw the site.

3 A Crisis of Description: The Debate of Walter Charleton and John Webb

Despite a small print run and poor sales, the publication of Jones’s treatise fueled a renewed debate about Stonehenge’s origins, starting with Sir Walter Charleton’s Chorea Gigantum, which appeared eight years after Jones’s Stonehenge Restored in 1663. Unlike Jones, an architect and fixture of Charles I’s

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26 Van Eck, Inigo Jones, 96–102; Roark, “Stonehenge in the Mind.”
29 Walter Charleton, Chorea Gigantum, or, The Most Famous Antiquity of Great Britan, Vul-
court, Charleton was a trained physician whose interests cut across the natural, theological, and philosophical; he was also one of the earliest elected members of the Royal Society. Though it deviated in subject matter from much of his work, from its opening *Chorea Gigantum* embedded itself within the experimentalist world of the Royal Society. In the dedicatory poem preceding it, John Dryden lauds Charleton’s success in recovering “truth” about the monument and sets him among England’s prominent “Asserters of free Reason”; others include Francis Bacon, Robert Boyle, and William Harvey—the most eminent recent and contemporary practitioners and advocates of empiricism.

In keeping with Dryden’s characterization and his own recent election as a Royal Society fellow, Charleton’s opening epistle emphasizes his empirical approach, insisting on his “strict Enquiry” and “diligent” study of the monument. This “strict” empirical practice was in reality a mixed-method and comparative approach, which he describes in the opening section:

[I] borrowed some hours, for the reading of such Authors, as well ancient, as modern, who have[...] treated of this venerable piece of Antiquity, or others resembling it; and equitably examined the respective probability, or improbability of their different opinions touching its Origine, by comparing them with the agreeableness, or disagreeableness they hold to the parts and proprieties of the building itself [...]

Rather than repeating inherited authority, albeit with a critical eye (Camden’s method), or conceiving of a theory into which to place the observed world (Jones’s), Charleton first reads the works of previous authors, then compares them to Stonehenge’s “parts and proprieties.” Charleton’s study thus privileges earlier investigations, using them rather than his own observation as a starting point. He even admits his own “slender Observations upon the place,” having only seen it, he says, “more than once or twice.”

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32. Ibid., “Epistle.”

33. Ibid., 7. For the thin and often porous line between antiquaries’ attention to material remains and to documentary sources, see especially Kelsey Jackson Williams, “Antiquarianism: A Reinterpretation,” *Erudition and the Republic of Letters* 2 (2017): 82–83.

34. Ibid., 13.
Despite claiming to treat several ancient and modern authors, Charleton addresses only two predecessors—Camden and Jones. He opens with a short quotation from Camden’s text, including his physical description of Stonehenge and his measurements of the stones. To this Charleton adds: “to illustrate his description, He subjoyns this Draught.”

Rendered here as a woodcut, Rogers’s engraving (attributed to Camden) is cropped to exclude the cartouche and the men digging bones on the bottom left of the image (Fig. 6).

Scrubbèd of human presence, and of the surrounding hills and Roman fort, the revision decontextualizes the site and eliminates its sense of scale. The rough hatching of the stones, necessitated by the woodcut format, adds to the sense of general confusion. The effect, of rudely drawn stones extending to the very edges of the drawing, is overwhelming, muddled, almost unreadable—an effect that supports Charleton’s concluding summary of Camden’s work. Highlighting Camden’s inconsistency—especially discrepancies in his measurements of stones—Charleton surmises that Camden’s description “comes short of that satisfaction, which is required to an exact survey of all parts of the wonder.”

The disorder of the image underscores Camden’s unsatisfactory description; it is a visual description, Charleton’s woodcut implies, that fails to describe.

Charleton’s quotation from Jones is lengthier—two pages rather than eleven lines—but similarly selective. He collapses text from both Jones’s general description of the monument and his labels for individual designs, making no distinction between them, and though he pulls from the labels describing Jones’s reconstructed ‘original’ Stonehenge, he includes none of those speculative architectural drawings, which he briefly dismisses as “some other Designs, that he fancied correspondent thereunto.” Instead, he inserts only one image of Jones’s—“The Ruine yet remaining drawn in Prospective,” here rendered as a fold-out woodcut. Though represented more faithfully than Camden’s engraving, the translation of Jones’s engraving into woodcut has a similarly roughing effect; he furthermore eliminates the scale, the very basis of Jones’s visual genre of the architectural drawing. And by excluding Jones’s representations of the monument as he imagines it, Charleton prevents the reader from seeing the monument through Jones’s conventions of classical architecture. Representing it only as a ruin, in perspective, Charleton favors immediate visual experience over architectural abstraction.

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35 Ibid., 8.
36 Ibid., 8–9.
37 Ibid., 9.
38 Ibid., 11.
39 Ibid., 10–11; Jones, Stone-heng Restored, 63.
With these two rival representations laid out for the reader, Charleton wallows in the crisis of interpreting them. He identifies key differences in the descriptions and representations—the number, shape, and size of the stones; the presence or lack of an altar-stone—and balks: “Behold, here, a notable Example of the discrepancy of Mens judgements, even in things easily determinable by the sense! and how hard it is to discern truth with others eyes!”40 Charleton’s rhetorical exclamation betrays a certain irony; while Charleton insists on the role of direct observation in discerning truth, he simultaneously exposes his own reliance on the “eyes”—or representations—of Camden and Jones. Trying to reconcile their disparate views, Charleton compares the two authors’ reputations (both sparkling), their abilities in the “Art of Designing” and surveying (equally great), and their relative position in history (nearly contemporary). Finally, he assesses their “veracity,” concluding that they share “so

40  Charleton, Chorea Gigantum, 12.
great devotion and reverence toward the majesty of Truth” that they would not dare deceive the world.41 As both the learned antiquary and the eminent architect are valid members of Charleton's trusted community, he is at a loss.

To overcome the impasse, Charleton relies on the images themselves. He assures his reader that during his (few) visits to the monument, he “with all possible attentiveness of mind contemplated the form, order, and parts of it.” And it is Camden's engraving, he claims, that comes “much neerer in resemblance” to the monument and “to the idea thereof formed in my Imagination out of its ruines.”42 Treating imagination, like Thomas Hobbes, as fading reflections of immediate sense perceptions—and thus subsequent to experience—Charleton prefers Camden's disordered perspective, the visual mode that reflects his own observations.43 Though Jones's representation is more “elaborate,” Charleton rejects its “Architectonical Principles” in favor of a view “rude and simple, such as my Eyes delivered to my Brain.”44 Charleton thus ties Jones's flawed interpretation to his architectural expertise. Not only has Jones “adjusted [Stonehenge] by the maxims of Geometry,” but he had depicted the monument as none would see it, in plan, section, and elevation. Charleton makes this point more explicitly further on, claiming that Jones's “fruitfull Imagination seems to have given birth [to his scheme], and His ample skill in Architecture, credit.”45 Jones's unmatched architectural knowledge and ability, that is, has enabled the wayward fancies of a “fruitfull Imagination.” Putting order before evidence, Jones has thus followed a deductive Cartesian method—an approach explicitly rejected by the Royal Society.46 Charleton's own interpretation, by contrast, depends upon his own physical and visual experience of the ruins.

Such a claim was convenient for Charleton's argument, as his theory—that Stonehenge was constructed by Danes—rested upon the monument's visual similarity to structures existing in Denmark. These Danish stone circles had recently been described by Ole Worm in his Danicorum monumentorum libri sex (1643)—and visualized in a remarkably similar mode.47

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41 Ibid., 13.
42 Ibid., 13.
44 Charleton, Chorea Gigantum, 13.
47 Ole Worm, Danicorum monumentorum libri sex (Copenhagen: Joachim Moltke, 1643). On Worm's use of engravings, see Peter Burke, “Images as Evidence in Seventeenth-Century
many woodcuts of single stones inscribed with runes, Worm’s work includes one representation of the standing stones at Västra Strö in Sweden, which zooms out to capture the entire ring of seven stones in a perspectival view and, like Charleton’s reproduction of Camden’s print, communicates a disordered mass of misshapen rocks (Fig. 7). Given that it was both the “Bulk and Rudeness” as well as the “Order and Manner” of the stones that Charleton found similar to their Danish counterparts, his reliance on Camden, and his scathing critique of Jones, seem to be meant as much to visually link them to the stone circles described and depicted in the Danicorum monumentorum as to provide an accurate representation.48 Yet in rejecting Jones’s reconstructions in favor of Camden’s engraving, Charleton is also subtly pitting the visual practices of the empiricist community of the fledgling Royal Society—and its associates like Worm—against the architectural modes of knowledge that Jones’s drawing exemplifies.49 By insisting that images should reflect one’s observed experience, he embraces the perspectival, descriptive views used by his English and Danish predecessors, and he implicitly rejects architectural drawing as a valid mode of producing knowledge about a site such as Stonehenge.

Like Jones’s treatise, Charleton’s Chorea Gigantum was broadly derided by contemporaries. The fiercest rejection of his hypothesis, however, came from Jones’s assistant John Webb, who published A Vindication of Stone-heng Restored only two years later; he claimed to have begun writing even before Charleton’s treatise appeared in print.50 An older contemporary of Charleton, Webb was, like his former teacher Jones, a practicing architect, and he operated at a distance from the experimental community within which Charleton was so deeply embedded.51 Webb emphasizes that distance in his opening to the

48 Charleton, Chorea Gigantum, 30.
49 Charleton emphasized this division elsewhere in his work. In The Darkness of Atheism Dispelled by the Light of Nature (London: Printed by J.F. for William Lee, 1652), he unfavorably compared architectural feats with those of nature: “the Heart of a Pismire hath more of magisterial artifice, then the Eschurial; the proboscis or trunk of a Flea more industry [...] then all the costly Aquaeducts of Nero’s Rome [...]”, 66.
Vindication, distinguishing himself from “some Friends of mine, who seemed much to know the Author of it, Dr. Charlton.”52 And it was in defense of his former teacher that Webb undertook a renewed argument for Jones’s Roman hypothesis as well as a scathing critique of Charleton.

Webb’s treatise has been described as “sprawling, shapeless, repetitive, and add[ing] very little to the case argued [by Jones].”53 Unfolding over more than 200 pages, the work weaves back on itself, refracting Webb’s argument through an overabundance of references to classical architectural authorities, historical sources, and Jones’s treatise. But throughout, Webb is doggedly concerned with discrediting Charleton’s argument, and he couches his attack in the visual representations of Camden and Jones. After a long-winded opening reflection on the historical ubiquity of monuments, he turns to the argument of his predecessor, starting with Charleton’s selection from Camden. After quoting, like Charleton and Jones before him, directly from Camden, Webb adds: “This Draught the Doctor [Charleton] hath annexed, leaving out what he thought fit.”54 Though noting that Rogers’s engraving (once again attributed to Camden) diverges in significant ways from “our Antiquity,” Webb focuses instead on the several ways in which Charleton has both misread and misrepresented the Britannia engraving. Not only has Charleton caused the original print “to be made as rude and deformed as possibly he could invent,” but he has wrongly claimed that Camden’s image and his textual narrative do not match.55 And Charleton’s reconstructed woodcut also changes the nature of certain stones,
muddling the measurements of the inner and outer stones.\textsuperscript{56} In other words, Charleton has entirely misunderstood Camden’s draught and its labels. To clarify his argument, Webb inserts an engraving based on both Camden’s engraving and Charleton’s woodcut, which he uses to systematically demonstrate Charleton’s observational flaws (Fig. 8). Though he maintains Charleton’s cropping, Webb inserts a detailed set of labels highlighting Charleton’s errors—from A, representing twelve-ton course stones, to K, a stone “omitted by Dr. Charleton.”\textsuperscript{57} Thus if it mirrors Charleton’s woodcut (and through that Rogers’s engraving) in form, Webb’s annotated image negates Charleton’s insistence on the inscrutability and rudeness of Stonehenge, and rather follows Jones in attempting to impose strict order on the monument. Charleton’s misreading of the image, Webb implies, betrays a misunderstanding of that order, so much that Webb can only conclude that Charleton “hath not seen Stone-Henge ... or at least not thoroughly considered [it].”\textsuperscript{58} By adhering to Charleton’s own visual mode, then, Webb destroys his observational trustworthiness.

Having invalidated Charleton’s woodcut, Webb compares Camden’s and Jones’s original representations. Camden’s “draught,” he notes, lacks dimensions, obscuring the clear division of the monument into four courses; Jones’s “design,” however, includes the heights, depths, and breadths of every stone, as well as the proportions of the entire work.\textsuperscript{59} And Camden’s depiction, unlike Jones’s, leaves out many of the remaining stones, which stand “even at this Day.”\textsuperscript{60} Jones’s work is thus the more accurate as well as complete representation. Webb attributes the images’ discrepancies to the authors’ disciplinary “spheres.” While acknowledging Camden’s stature as a scholar, historian, and genealogist, he claims that in Camden’s day “the Art of Design, was scarcely known in this Kingdom.”\textsuperscript{61} Only with Inigo Jones did this art emerge in England, and none since, he claims, have equaled Jones in architecture and “designing with his Pen.”\textsuperscript{62} Therefore, “by how much soever Antiquities of this kind were out of Mr. Camden’s Element, so much the more they fell within the Compass of Mr. Jones his Sphere.”\textsuperscript{63} Representing the monument and possessing architectural expertise, Webb claims, are one and the same, and investigating antiquities should be the work of architects rather than antiquaries.

\textsuperscript{56} Ibid., 7.
\textsuperscript{57} Ibid., 14.
\textsuperscript{58} Ibid., 8.
\textsuperscript{59} Ibid., 16, 20.
\textsuperscript{60} Ibid., 20.
\textsuperscript{61} Ibid., 11, 19.
\textsuperscript{62} Ibid., 8.
\textsuperscript{63} Ibid., 11.
"A", Stones called Confessiones, weighing twelve Tun, carrying
in Height twenty four Foot, in Breadth seven Foot, in Compass
seven
"B", Stones named Cremat, of six, or seven Tun Weight.
C, Two of the Stones of the outward Circle.
D, One of the Stones of the inner Circle.
E, Two Stones of the greater Hexagon.
F, One of the Stones of the inner Hexagon.
G, One of the Stones of the inner Circle, as it lies along on
the Ground.
H, The Architraves (or Stones) which Mr. Camden calls over-
twentieth Pieces, lying upon the erected Stones twenty eight Foot high.
I, The two Stones of the Entrance from the North-East, stand-
ing on the Inside of the Trench.
K, The Stone omitted by Dr. Charleton.
But to proceed, he tells us,
2. "The former faith, all those three Courses are circular: The
latter faith, of his four, two only are circular, the other two
hexagonal.
This, I conceive, makes them both accord, more rather than dis-
agree, in their Descriptions; for, first, Mr. Camden (borrowing the
Expiation from Polydore Vergil) delivers, that the general Aspect
of our Antiquity bears the Form of a Crown; and Mr. Jones faith,
the whole Work in general is of a circular Figure; and who knows
not

FIGURE 8 John Webb, perspective of Stonehenge after Camden and
Charleton, from A Vindication of Stone-heng Restored
(London: Printed by R. Davenport for Thos. Bassett,
1665), 14
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As such, if he begins by attacking Charleton’s ability to read an image, he continues by undercutting Camden’s and Charleton’s architectural expertise. Just as Charleton attributed Jones’s flaws to his profession as an architect, so too does Webb discredit both Camden’s and Charleton’s knowledge of architecture. In addition to critiquing Charleton’s misuse of architectural terms—column and pilaster, the Tuscan order, porticoes—Webb also identifies several misquotations (“corruptions” and “falsifications”) from both ancient and modern architectural writers. How is it, he asks, that “Dr. Charleton in this manner should so grossly err?” He provides his own answer: “he either doth not, or will not understand the Business.” And he concludes: “as I intend not to write of Physick, being not within my Sphere; So, I would advise others, not to intermeddle with Architecture, unless they knew better what belonged to it.” Webb’s vigorous defense, then, is a rebuttal for architecture as a distinct and autonomous “sphere” as well as a defense of Jones’s hypothesis. And Webb’s treatise marks an attempt to defend the validity of architectural modes of representation for antiquarian study, as well as to claim both drawing and antiquities for the discipline of architecture.

The dispute between Charleton and Webb thus reveals how the visual representations presented by Camden and Jones became both contradictory facts and the shared material for an impassioned debate, one which rested largely on the validity of previous authors’ images. For Charleton, the more disorderly but realistic depiction of Camden’s work better reflected his own experience of the site—as a place of disorder and chaos, misshapen rocks and crags. Webb, in response, recreated that same visual representation, this time to reject Charleton’s argument and demonstrate its inferior empirical value. And if Webb did not reprint any of Jones’s figures, he referred to them throughout his treatise—pointing to individual stones, even specific numeric labels—as though the two works were to be read side by side. Unlike Camden or Charleton’s representations, Jones’s needed no revision or clarification.

64 Ibid., 32, 66, 72.
65 Ibid., 38.
66 Ibid., 125.
67 This claim is particularly notable given the recent, and implicit, incorporation of methods of architectural representation into contemporary antiquarian drawing and engraving, notably in the works of William Dugdale. See, for instance, Marion Roberts, Dugdale and Hollar: History Illustrated (Newark: University of Delaware Press, 2002), 46–103; Alexandra Walsham, “‘Like Fragments of a Shipwreck’: Printed Images and Religious Antiquarianism in Early Modern England,” in Printed Images in Early Modern Britain: Essays in Interpretations, ed. Michael Hunter (Farnham, Surrey: Ashgate, 2010), 87–104.
At the same time, entwined in this debate over images was another, closely related debate over architectural and empirical knowledge. Emphasizing the link between observation and truthful representation, Charleton pits empirical inquiry against the imagination and fancy—the Cartesian leanings—of the architect. But for Webb, representing antiquities, interpreting antiquities, and the “Art of Design” are entangled practices, inaccessible to the mere physician; only an architect has the expertise to measure, represent, and therefore interpret Stonehenge. At stake was thus not just how images represented and communicated truth, but also who—the physician or the architect—had the authority to make and read images. If Camden’s and Jones’s representations were shared among experimentalists and architects, their interpretation divided the two communities.

4 The Design and the Antiquary

At the same time as Charleton and Webb were producing their irreconcilable interpretations, another Royal Society member was undertaking his own, very different analysis of the site. Prepared in the 1660s but never published, John Aubrey’s *Templa Druidum* was based upon its author’s careful surveys of Stonehenge and other English megalithic sites, and it claimed these ruins were the remains (as the title suggests) of Druidic temples. Aubrey’s work expanded over the next thirty years into a much larger antiquarian project, collectively entitled *Monumenta Britannica*, which sought to analyze not only Druidic stone circles but also Roman sites, archaeological objects, architecture, and other “antiquities” of Britain. The *Monumenta Britannica* epitomizes Aubrey’s lifelong commitment to the study of antiquities; antiquarianism was a thread that ran through all of Aubrey’s work, which touched on subjects spanning education, natural history, biography, linguistics, and medieval church architecture.

Much of that work was undertaken under the auspices of the Royal Society. Elected as a member in 1663, Aubrey presented papers on winds, Wiltshire springs, and a ‘cloudy star’ that appeared in the 1660s, and it was to the Royal Society that he submitted the manuscript of his *Naturall Historie of Wiltshire*

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Aubrey's antiquarian investigations intersected with a strong thread of inquiry among Royal Society members such as Martin Lister, Ralph Thoresby, Christopher Hunter, and Edward Lhwyd; the early Philosophical Transactions were peppered with accounts of British antiquities. See especially Michael Hunter, Science and Society in Restoration England (Cambridge: Cambridge University Press, 1981), 114–115; Matthew Walker, Architects and Intellectual Culture in Post-Restoration England (Oxford: Oxford University Press, 2017), 107–119.


This has been recently studied in Walker, Architects and Intellectual Culture.

While Matthew Walker has insisted on the independence of the emergent architectural
A close friend of Evelyn, Hooke, and Wren, Aubrey was perennially engaged in the questions which fascinated these architectural empiricists, especially when those questions offered him a chance to merge the architectural with the antiquarian. Within the Monumenta Britannica is a section entitled “Chronologia Architectonica,” which Aubrey intended as a “visual history” of English architecture, from Roman to modern.\(^{75}\) He only ever completed an introductory “diatribe” and an illustrated study of medieval window styles, which have been interpreted as embodying the empiricism of the fledgling Royal Society.\(^{76}\) Yet its aspirations also speak to Aubrey’s preoccupation with the architectural. In the “Diatribe,” Aubrey echoes works from Henry Wotton’s Elements of Architecture (1624) to Evelyn’s A Parallel of the Antient Architecture with the Modern (1664), tracing a fall from the Roman period into the “barbarous” Gothic, which continued until Inigo Jones revived classical architecture in England.\(^{77}\) If such a claim reads as disingenuous from a man so drawn to antiquities (one who proceeded to trace the genealogy of that “barbarous” Gothic), his rehearsal of this line marks his immersion in Restoration London’s emergent community of architectural discourse. His other writings underscore this fascination; he not only espoused the study of architecture in unpublished works like the Idea of education of young gentlemen, but even produced a full set of architectural drawings for his ancestral home at Easton Piercy, pulling details from Sebastiano Serlio’s Tutte l’opere d’architettura et prospetiva (1600) and recent English buildings.\(^{78}\)

\(^{75}\) Bodleian ms Top.Gen.c.25, ff.152–179.


Existing within the nested communities of the Royal Society and its architectural circle, Aubrey drew on both traditions in his study of Stonehenge. In his opening letter to the reader, Aubrey dismisses earlier books on the monument—“much differing from one another, some affirming one thing, some another”—and repeatedly insists on his own unmediated study of Stonehenge and other stone circles around England and Wales. 79 Relying on “my owne Eiesight,” he claims to have written his comparative work “upon the spott, from the Monuments themselves,” letting the “Stones give evidence.” 80 Yet if he dismisses other authors, he lauds both Charleton and Jones for the “great deal of Learning” contained in their books. 81 And following these writers, Aubrey is collecting surviving remains and comparing one to another, using material ruins to construct an original typology. 82 Even his insistence on unmediated observation recalls the earlier works; both Charleton and Jones made precisely the same claim.

Yet Aubrey shares not just methods with earlier writers on Stonehenge, but the same visual material—in particular, the schematic rendering produced by Jones more than thirty years earlier. From the beginning, Aubrey signals his debt to Jones. If both Jones and Charleton contain much learning, Aubrey emphasizes Jones’s learned approach far more emphatically. He read Jones’s work, he recalls, with “great delight,” and the book displayed “so much Learning and Ingenuity, ... [that] had I not carefully surveyeed it [Stonehenge] my selfe, I should have with much satisfaction acquiesced in this account of it.” 83 But he then tempers his celebratory tone: “[...] having compared his scheme with the monument itself, I found he had [...] framed the monument to his own hypothesis, which is much differing from the thing itself.” 84 This claim (which, echoing Charleton, again links Jones to Cartesian methods) has often been cited as a key point of distinction between Jones and Aubrey—the one was driven by hypothesis, the other by material observation. 85 Yet Aubrey’s words also undermine his assertion that he relied solely on the stones and his own eyes. It was, he admits, with Jones’s satisfying scheme that he approached the monument, and only through a comparison between Jones’s designs and the stones did Aubrey come to reject Jones’s hypothesis, a rejection that gave Aubrey “an edge to make more researches.” 86

79 Aubrey, Monumenta, 24.  
80 Ibid., 25, 32.  
81 Ibid., 19, 85, 25.  
82 On Aubrey’s comparative antiquity, see Schnapp, The Discovery of the Past, 191–196.  
83 Aubrey, Monumenta, 19, 43.  
84 Ibid., 19–20.  
86 Aubrey, Monumenta, 20.
The extent to which Aubrey's research on Stonehenge was grounded in Jones's designs emerges in his long description of the monument, which extends over several manuscript pages. He opens the section:

I am now come to Stone-henge [...] The Prospect whereof I give in Plate vi: and the Ichnographie double in Plate the viith [...] one being that of Mr Inigo Jones in Mr Webs Stoneheng restored, being an handsome harmonical figure: But the Cell is absolutely false: the other (fig. 2) being that which I tooke my selfe from the place, and according to the truth.\textsuperscript{87}

He begins, then, by setting Stonehenge out in visual form, in perspective and in plan—or “ichnography,” to use Aubrey’s proper architectural term. Though he attributes only the plan to Jones, in fact both plates vi and vii are drawn from Stone-heng Restored; the “prospect” he includes is Jones’s depiction of Stonehenge in ruins, the same image inserted in Charleton’s Chorea Gigantium. Here redrawn across two full pages, the perspective includes no comments, no corrective gestures, and only a single label, never discussed in the text; it is thus presented as an accurate depiction of the monument. Unlike Charleton, Aubrey was a skilled draughtsman, but like Charleton, he opts not to produce his own drawing “upon the spott.” Instead, he re-represents Jones’s earlier design; if Aubrey takes issue with Jones’s scheme, it does not extend to this aerial view.\textsuperscript{88}

Aubrey’s intellectual engagement is rather with Jones’s reconstructed plan, which Aubrey has also reproduced (Fig. 9). Though rougher than Jones’s engraving, the copy is exact, utilizing the same system of shading, hatching, and labelling. But Aubrey has made his own interventions. Below the plan are three renderings of the central cell, which appeared in Jones’s plan as a perfect hexagon. In the furthest to the right, Aubrey recreates Jones’s hexagonal cell and inscribes an equilateral triangle within it. In the two drawings to the left, however, Aubrey has represented the cell as “it should be” and as the “Remains” now stand.\textsuperscript{89} In the accompanying description, he works through these drawings in detail, noting what each of his marks and letters signify and comparing Jones’s account to reality. Addressing, for instance, the supposed altar-stone in Jones’s plan, he writes: “I find the middle of the whole monument voyed.”\textsuperscript{90} Yet as he rejects Jones’s scheme, point by point, he exposes

\textsuperscript{87} Ibid., 74.
\textsuperscript{88} For his drawings, see especially Aubrey, Villa.
\textsuperscript{89} Aubrey, Monumenta, 75.
\textsuperscript{90} Ibid., 75.
his debt to this representation. By reading, assessing, and revising it, he has internalized Jones’s image, and used it to read the monument anew. This debt becomes even more evident in a second version of the Stonehenge plan on the following page (Fig. 10), in which Aubrey has redrawn the plan using Jones’s conventions. Retaining the same system of shading, Aubrey redraws in identical form the two outer circles of stones, except that some have been struck out; these, he writes, “should be placed over the stones of the outer circle.”\footnote{Ibid., 80.} Noting also that the outer ditch was “made by him [Jones] perfectly circular: whereas in truth it is rude,” Aubrey stretches it to make it slightly oblong.\footnote{Ibid., 74.} Aubrey also revises the shape of Jones’s cell, although the lightly dotted stones grasp towards regularity, indicating an effort to make reality adhere to Jones’s ordered design. This discomfort with asymmetry is echoed in the description, where he notes that the stones cannot “be forced to touch a Circle.”\footnote{Ibid., 75.}

Ultimately, Aubrey rejects Jones’s representation as well as his interpretation, and he uses the labelled plans to differentiate his own reading of Stonehenge from the architect’s. Yet Jones’s plan is his central visual reference, directing his survey and clarifying his analysis; it is Jones’s architectural way of seeing the monument—his abstracted architectural design—that Aubrey builds on, and that he uses to, ultimately, move beyond Jones’s survey and interpretation. Thus unlike Charleton—who rejected out of hand the schematized architectural mode as untrue to the eyes—and Webb—who used images only to invalidate his predecessor’s argument—Aubrey uses the architectural mode of representation, in particular the plan drawing, as a tool for his own archaeological work; he integrates architectural drawing as a tool of empirical practice, observation, and experiment. Rather than rejecting architectural knowledge as a valid means of understanding the monument, as Charleton did, Aubrey embraces Jones’s abstracted visual ordering, and even his architectural language—words like “ichnography,” “pilaster,” and “designe.”\footnote{Ibid., 74, 75, 81.}

Though most pronounced in his study of Stonehenge, Aubrey’s use of architectural representation also infuses his other archaeological investigations, especially those of Avebury. While Stonehenge was England’s most well-known “English Wonder,” it was Avebury, an even larger stone circle twenty miles north of Stonehenge, that inspired Aubrey’s 	extit{Templa Druidum}, and that most enam-
John Aubrey, plan of Stonehenge after Jones, from Monumenta Britannica. Bodleian Library, MS Top. Gen. c. 24, f. 62r

*Image reproduced through the Creative Commons licence CC-BY-NC 4.0.*
Figure 10  John Aubrey, plan of Stonehenge, from Monumenta Britannica.
Bodleian Library, MS Top. Gen. c. 24, f. 64v
IMAGE REPRODUCED THROUGH THE CREATIVE COMMONS LICENCE CC-BY-NC 4.0.
In his opening letter to the reader in the *Monumenta*, Aubrey recounts his first encounter with the stones of Avebury in 1648, as well as his first archaeological inquiries of the monument in the 1650s—made, he notes, after reading Jones’s work on Stonehenge. He presented a drawing of these early investigations—“done by memory only: but well enough resembling it”—to the king in 1663, and this drawing, surviving in the Royal Society archives, carries traces of Aubrey’s typical representational mode. A mix of plan and perspective, Aubrey has added details of fallen stones added in a corner, out of scale with the rest of the image (Fig. 11). But the logic of Jones’s representation of Stonehenge reverberates. Like Jones’s designs, the circle of Avebury is here pictured as a perfect circle. A darker shaded line marks the outer ditch; rectangles denote stones; the whole work is portrayed as four concentric rings. Drawing “by memory,” Aubrey uses Jones’s engraving as a model, one “well enough resembling” the monument. This image differs markedly from Aubrey’s later representation of the site in the *Monumenta*, which recasts the circular outline as irregular, and scatters the four rings of stones into two separate semi-circles. Yet even here the shading remains consistent with Jones’s drawings, and Aubrey produces a section or “profil” of the ditch, for which he uses the proper military architecture term “rampire.” In other words, both Jones’s drawings and a broader architectural logic seeped into Aubrey’s surveying and representational practice.

Thus if Charleton rejected the plan view out of hand as a work of “fancy,” and Webb wielded the perspectival one to insist on the validity of architectural abstraction for antiquarian investigation, Aubrey rather grounded his empirical approach in the conventions of architectural representation. Despite dismissing his hypothesis, by relying on Jones’s architectural scheme Aubrey confirmed the validity of architectural expertise for undertaking an investigation of English antiquities, and he integrated architectural knowledge into his own natural history and antiquarian study. As a man facile with both empiricist methods and architectural conventions, Aubrey managed to overcome the impasse between the two modes of seeing, of representing, and thus of interpreting Stonehenge. And it was Jones’s architectural drawing, along with

95 On Avebury, see especially Peter J. Ucko et al., *Avebury Reconsidered: From the 1660s to the 1990s* (London: Unwin Hyman, 1991).
Aubrey’s own surveying ability, that enabled Aubrey to see, and to study, the site in an entirely new way. Architectural abstraction could be transformed into archaeological investigation.

5 Conclusion

Aubrey’s was not the final word in the debate over Stonehenge’s origins. In 1676, Aylett Sammes asserted in *Britannia Antiqua Illustrata* that Stonehenge was built by ancient Phoenician settlers, but he included no visual representations of the monument. And though Aubrey lent notes for a revised edition of Camden’s *Britannia* printed in 1695, the conclusion of Thomas Tanner, who wrote the section on Stonehenge, was that the monument was constructed after and in imitation of Roman architecture. If the claim seems like a marriage of


100 William Camden, *Camden’s Britannia Newly Translated into English, with Large Additions*
Jones and Aubrey's theories, however, the accompanying plate adhered to the visual mode of Camden and Charleton. A new engraving by Johannes Kip, produced for the 1695 edition, recreated Rogers's perspectival print, though the stones are even rougher, culminating in jagged points, as though Stonehenge has taken on an emaciated, ghostly demeanor. Aubrey's use of Jones's architectural designs to produce new archaeological knowledge was thus merely one among the multiple afterlives of the two representations of Stonehenge presented by Camden and Jones—afterlives which continued into the eighteenth century not only with the reprinting of Jones's, Charleton's, and Webb's treatises in a single volume in 1725 (with “four new Views of Stone-henge,” all perspectival), but most famously in the work of William Stukeley, whose approach was deeply indebted to Aubrey, and through Aubrey, Jones. In fact Stukeley's plan drawing recreates not only Jones's precise circle but also his commitment to geometrical logic, exemplified in Stukeley's insistent but chaotic efforts to impose symmetry on the monument.

If not decisive, what emerges from this moment in the prolonged dispute over Stonehenge's origins is neither a shift from one representational mode to another, nor Aubrey's decisive departure from the methods of his forebears. Instead, the use and reuse, reproduction and adaptation of these two representational modes reveals how images stood in—problematically—for the monument, and in doing so delimited how the site could be interpreted and understood, so that what was ostensibly a debate about Stonehenge was, in essence, a debate about its representation. And underlying that debate was another over how to—and who could—comprehend antiquities. As a visual description, Rogers's engraving "resembled" Stonehenge and emphasized its experiential mystery; this view came to represent an empirical approach in which the image should reflect ocular experience. Jones's drawings also made empiricist claims, but sought to schematize the monument and claim it for Architecture. Ridiculed by Charleton for its attempt to make order out of chaos, Jones's work in turn informed and enabled Aubrey's archaeological surveys and thus new interpretative paths. The images of Camden and Jones therefore spanned the overlapping spheres of antiquarianism, architecture, and empiri-
cism, and as they were put forward, rejected, and reproduced, the images both brought to light the divergent empirical practices of these communities and acted as a common source of evidence that brought them together. The mobility of these images—their ability to be taken out of one context and set freely into another—made them uniquely poised to both incite and facilitate debate; at the same time, their reuse and reinterpretation spurred the production of new knowledge—knowledge that drew upon, and integrated, antiquarian, natural philosophical, and architectural methods and practices.