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Charles Robert Cockerell's Formation of Architectural Principles

In contributing to the conference theme of the 'history of architectural and design education', this paper focuses on an aspect of Charles Robert Cockerell's career, which is the genesis of design principles, most significantly the human analogy. The architect's early ideas are worthy of consideration, because they remained vital to his mature work as Professor of Architecture at the Royal Academy in London. When lecturing at this institution from 1841 to 1856, he set out principles that had a significant impact on architects in Britain.

Cockerell's initial concepts will be identified in statements about sculptures and buildings, which were studied when travelling in Greece, Asia Minor and Italy. His responses to renowned ancient Greek and Renaissance works were recorded in letters and diaries. These offer insight into a principle, in which an architect imitates the 'human form divine' and historical monuments. Cockerell was especially impressed by the representation of human vitality in Greek figure sculptures, as well as the delicate curved line of a column. For him, this line can be incorporated in a building, which assumes a life-like appearance.

While only one facet of Cockerell's career is analysed, it served as a foundation for the theory of architecture set out at the Royal Academy. He endorsed the institution's ideals in lectures that emphasised connections between the arts of sculpture, painting and architecture. The underlying principle is the analogy between a human being and a building.

From 1841 to 1856, Charles Robert Cockerell set out his architectural theory in lectures at the institution of the Royal Academy. As Professor of Architecture, he stressed the relevance of classical principles to the education of modern designers. Cockerell defended a tradition of teaching that was instituted with the creation of academies in sixteenth-century Italy and seventeenth-century France.¹ He reiterated the central academic classical belief in ideal principles of design, which involved the imitation of the human body and exemplary buildings.

Cockerell's lectures gave him the opportunity to articulate ideas on architecture that he initially developed during his youthful Grand Tour. Between 1810 and 1817 he travelled in Greece, Asia Minor and Italy. Cockerell participated in significant archaeological expeditions and discovered what he saw as universal architectural principles in ancient Greek buildings. For him, classical theories also informed less pure and more varied later works, such as those of the Italian Renaissance.

By introducing students at the Academy to significant buildings, Cockerell explained that a design must be founded on the most perfect type, the human body. Architects translate qualities of the human form into architectural members. A good building exhibits life-like qualities. It takes on human attributes while also absorbing, in new combinations, forms from the past.

Cockerell also referred to the paramount significance of architectural treatises, most significantly Vitruvius' *The Ten Books on Architecture*, where the body was valued as a tangible statement of perfect beauty. Cockerell claimed that his buildings were based on the study of 'the human form divine', deriving their proportions and contours from this fundamental type of beauty.² Drawing on his study of texts and buildings, especially the ancient Greek monuments visited while travelling, Cockerell offered his students a thoughtful and lucid introduction to traditional academic principles.

Not long after leaving school in 1802, Cockerell began his architectural career in the office of his father, Samuel Pepys Cockerell. Samuel Pepys was then at work on a major commission from his brother, Sir Charles Cockerell, who had chosen to spend a fortune acquired in the East India Company on a grand home, Sezincote, Gloucestershire (1803).³ Although the Indian style of this building spoke of its owner's life, it was but one of a variety of styles valued primarily for their exotic and picturesque attributes. Of greater significance was Cockerell's work in 1809 under Robert Smirke; then engaged on the Royal Opera House in Covent Garden (1808-9). With its Doric portico, this building was also conceived in terms of a particular style, albeit one freighted with more moral weight.⁴ Even at this early stage, Cockerell surely felt that Greek forms were not to be valued in terms of associations, no matter how noble and relevant to modern society, but as statements of natural principles. In this sense he would be aligning himself with an earlier generation of theorists and architects, those Neoclassicists working in the second half of the eighteenth century, who were fascinated by the discovery of a pure source of architecture in a pre-Roman past.⁵

In setting out for Greece in 1810, Cockerell may have intended to contribute to this tradition through his own archaeological investigations, particularly as they lead to a better understanding of Vitruvius' theories. His father, who funded the journey, probably saw it differently, believing that knowledge of the actual sources of a style likely to have grown in popularity by the time of his son's return, would place him in the forefront of the profession.⁶ However, Cockerell was to spend seven and a half years on his Grand Tour, travelling through Greece, Asia Minor and Italy, in a search of sculptures and buildings that embody universal architectural principles. His correspondence from the journey introduces ideas that would later appear fully formulated as principles in the Royal Academy lectures.

Throughout his life, Cockerell stressed the significance of Greek sculpture to Western art and architecture. Such a conviction was stimulated by being present when examples were uncovered.⁷ This occurred in April 1811 when, along with his cosmopolitan group of friends, including the German archaeologist and architect Carl Haller von Hallerstein,⁸ he was working on the Temple of Aphaia (then believed to be dedicated to Jupiter Panhellenius), on the island of Aegina:

a startling incident had occurred which wrought us all to the highest pitch of excitement. On the second day one of the excavators, working in the interior portico, struck on a piece of Parian marble which, as the building itself is of stone, arrested his attention. It turned out to be a head of a helmeted warrior, perfect in every feature. It lay with the face turned upwards, & as the features came out by degrees you can imagine nothing like the state of rapture and excitement to which we were wrought. Here was altogether a new interest, which set us to work with a will. Soon another head was turned up, then a leg and a foot, and finally, to make a long story short, we found under the fallen portions of the tympanum and the cornice of the eastern and western pediments no less than sixteen statues and thirteen heads, legs, arms &c. all in the highest preservation, not 3 feet below the surface of the ground.⁹

Cockerell went on to praise the high quality of the newly-discovered work: "the anatomy & contour ... are equal to anything I have yet seen. Our council of artists here considers them as not inferior to the remains of the Parthenon & certainly in the second rank after the [Belvedere] Torso, Laocoon & other famous statues".¹⁰ The strong impression that this discovery made on Cockerell is indicated by his decision to include casts of the pediment sculptures in his design for the Literary and Philosophical Institution at Bristol, in 1821.¹¹ His high opinion of the affective power of Greek art is confirmed by the entry in his diary a few years later, when he saw the casts again: "greatly struck with the sight of my Aegina casts. consider them calculated to inflame an artists imagination – where else can be seen such a groupe of living statues – their vigour, energy & beautiful drawing".¹²

Cockerell was to experience a similar thrill of discovery only a few months after leaving Aegina, in August of 1811, when he journeyed to the relatively unknown Temple of Apollo Epicurius at Bassae, in Arcadia. Along with Haller, he uncovered a bas relief, signaling the

existence of the full frieze. Although Cockerell was not present when it was excavated the following year, Haller sent him his notes on the progress of work. The frieze was purchased by the British Government in 1813.¹³ Once again, Cockerell's sense of personal involvement in the discovery was demonstrated in his later use of a cast of the Bassae frieze in the grand stair hall of the Ashmolean Museum and Taylorian Institute (Oxford, 1839-45).¹⁴

He was also impressed by the temple's precocious use of an internal Ionic order, characterised by its vigorously projecting volutes. Indeed, his fascination was so great that he took one of the capitals with him from the site, depositing it at some later date in the British Museum.¹⁵ This strange Ionic order made an unforgettable impact on Cockerell. Throughout his career, he used it almost as a personal signature, a means of stamping an aspect of his life or personality upon his buildings.¹⁶

Cockerell's fascination with the powerful curved volutes of the Bassae capital may well be connected to an interest in the Greek sculptors' treatment of the human form. In his view, Greek figure sculpture and architectural ornament both encapsulated a vital human presence. Interpreting form in this manner enabled Cockerell to perceive in the Greek columns their *entasis*, an attribute so subtle that it had previously passed unnoticed. As he argued in a letter sent to his father on December 23, 1814, "it is a most curious fact which has hitherto escaped Stuart & our most accurate observers – indeed it is so delicate that unless one measures it, the eye cannot perceive it".¹⁷ And Cockerell did measure it, including in this letter a page to be passed to Smirke, with a diagram of one of the Parthenon's columns demonstrating the curvature. The accompanying note explained his procedure:

You will say I ought to have done it more accurately, with more precision; if you will send me a couple of English carpenters I shall be able to do it better, with the difficulties met with here I have found no other means of ascertaining this curious point. the Temples of M. Polias, Erechtheum &c. are also swelled – I have just returned from a trip to Egina whither I took also my ladders. the anct Te of Jup: Panells has also the entasis in precisely the same proportion with Minerva, i.e. in a col 17.2 the swelling is half an inch at 6 ft. height from the base. in Theseus I have not been able to ascertain it from the ruined state of the cols: it is the case with the Corinthian Cols: of Hadrian, & I have no doubt that it was a general rule with the Greek architects.¹⁸

As he explained to his students many years later, in a lecture at the Royal Academy in 1842, "Wilkins, Smirke and others who had visited Greece before 1810" had failed to remark the presence of *entasis*, despite the description given in Vitruvius.¹⁹ It was to this lack of perception that Cockerell attributed the stiff and lifeless character of Greek Revival buildings in Britain: "its' [entasis'] extreme delicacy in the Greek example suited to the subtlety of Grecian eyes had escaped observation and consequently our practice in this country suffered in consequence for some years". Cockerell's pride in his discovery as a major contribution to the contemporary understanding of classical architecture is clear:

Being fortunate enough to be in Athens in company with English & other archs it was agreed that Entasis tho' delicate was discernible & accordingly I was left (by their illness & other circumstances) in charge of this observation which with great difficulty I effected in a country without carpenter & ladders – it is now published in the 4th vol. of Athenian Antiquities.²⁰

Cockerell related *entasis* to other Greek refinements like the tapering, inclination and thickening of forms. He was aware of Vitruvius' argument that these were necessary to placate the observer's eye, which "was always in the pursuit of beauty".²¹ A Greek architect introduced refinements so that a building appears correct when viewed from its proper vantage point. However, Cockerell never addressed the full significance of the Vitruvian account of the refinements as a distortion of forms that served to trick the beholder's eye, allowing perception of a transcendent beauty. This theory of the eye that could be confused to ensure the apprehension of a higher, divine meaning was inadmissible to Cockerell, who believed that the perception of beauty was based on the discernment of delicately curved forms. Eighteenth-century aesthetic theories had distanced him from Vitruvius' account of a relationship between the tangible form and the ultimate source of meaning, an insight into the divine realm.

Cockerell's view that curved forms were a source of beauty had more in common with eighteenth-century theorists like William Hogarth than with Vitruvius.²² Nevertheless, Cockerell could only formulate his argument that the architect's forms were connected to the human figure by referring to the ancient text. In a sense, he misread Vitruvius to argue that architectural refinements revealed an assimilation of the curves of the body. The Greek architects' use of refinements was unsurpassed because they closely followed the illustrious example of sculptors, who skillfully portrayed the human form. Cockerell's reworking of the Vitruvian analogy between the work of the sculptor and architect formed the core of a theory that stressed the potential of buildings to embody a vital, life-like character.

Cockerell left Greece for Rome in 1815, where he studied buildings, as well as paintings and sculptures held in renowned collections. His drawings and theories illustrating discoveries in Greece stimulated interest in Roman and expatriate artistic circles.²³ Cockerell's meeting with the painter Ingres – the famous French academician drew his portrait in 1817 – was particularly significant for the formulation of his ideas. Ingres' influence is clear in the emphasis he later placed in his Academy lectures on precise line drawing as opposed to colour as the foundation for the fine arts.²⁴

Cockerell also attracted attention for his novel ideas on certain famous antique works. In 1816, after a trip to Florence, he produced a reconstruction of the Niobe group in the Uffizi.²⁵ Cockerell questioned the free-standing organisation of the sculptures in the Uffizi, where Niobe was placed in the center of the room, surrounded by her daughters. Drawing on his recent analysis of the sculpture in the Aegina temple, he argued that the Niobe group belonged in a pedimental setting. An etching was produced and his reconstruction was widely acclaimed.²⁶

Cockerell began to question his career as an architect during his Grand Tour. Letters written to his father from Italy explain how his feeling for art had rendered him unsuited for architectural practice in England, where of necessity his best energies would be devoted to prosaic, business-like tasks. From Milan, in 1816, he wrote: “the more I know of myself the more I feel from a positive deficiency of every quality my total incapacity for every other occupation than that of an artist – the more I have seen of Italy the more I am persuaded that I was born a painter”.²⁷ Cockerell seems in the process of developing his self-image, as an architect who held aloof from the narrowly commercial concerns of contemporary society. He would pursue the same lofty principles that informed the works of painters and sculptors. He asked his father “that you will not make me a common man of business,” pointing out that “I shall be miserable if I am told to do business, get connexion, get rich”. Ultimately, however, he did stress that

I have ... continued with attention to arche: only & all that is most immediately connected with the beautiful in that art & for this purpose I hope I am in some degree qualified. I state all this merely to impress on you the necessity of my appearing in this & only this – professor of the beautiful in architecture.²⁸

In fact he had been studying Italian architects all along; and wrote to his father from Venice about

the works of Palladio which I was extremely anxious to see & I am happy to find that (as with Michel Angelo) one may safely trust the reputation of men approved by ages ... Palladio is doubtless the greatest modern architect. I have found in his works many of the leading principles of ancient architecture, you will however smile when I say that still I am persuaded that the Greek remains may leave one a surer road, & that still he is deficient in some of the most important of their rules ...²⁹

Here Cockerell outlined a relationship between the essentials of architecture distilled by the Greeks and a richness and variety of forms characterising the works of Renaissance masters. His own work would strive for a synthesis, which was to challenge the otherwise barren and unsuitable Greek Revival of his day.

On June 17, 1817, Cockerell returned to London, to a society he believed is unsympathetic to elevated artistic values. Like Winckelmann, he assumed that the artistic achievements of the Greeks were inseparable from all aspects of Hellenic culture. At the same time, he remained convinced that their buildings might inspire artistic excellence in an age which failed to integrate architectural works into broader social, economic and political pursuits.

For Cockerell, success in architecture was dependent on knowledge of forms and principles formulated in the remote age of Greece. His early involvement in classical archaeology was to shape his career: whether designing or teaching, he strove to uncover the origins of architecture, concealed from view beneath layers of time and earth. Digging was necessary

because the search extended beyond architectural form to embrace sculptures of the human figure, which like those at Aegina, awaited his discovery. In this sense, archaeology was allied with a personal quest to grasp the origins of architecture that would illuminate its meaning.

According to Cockerell, such nineteenth-century investigations were inseparable from the only truly significant theoretical task, the interpretation of Vitruvius' treatise. A compendium of Greek doctrines and an explanation of their works, this ancient book was a 'bible' for architects.³⁰ As he told his students, Vitruvius was "one of the great founders & Doctors of our Faith".³¹ Cockerell's admiration for Vitruvius reinforced a love of Greek sculpture strongly influenced by Winckelmann's conception of beauty disclosed by the human form. Drawing on these sources, Cockerell developed a theory of architecture that was articulated in his lectures at the Royal Academy. This institution provided him with an appropriate platform; because it upheld the belief that painting, sculpture and architecture were 'sister' arts, linked by their relationship with the type of the human body.³²

With the appointment to the Academy, Cockerell was able to present his principles to an audience of architectural students. Although he had not received a systematic academic education, his European travels provided a foundation for his new role. Cockerell particularly admired Italian architecture because its practitioners were often skilled in painting or sculpture and therefore had been introduced to principles of design founded on the drawing of the body. During his travels in Rome and Paris, he would have become acquainted with French academic practice, where students began their studies by drawing from the model of Greek sculpture, and received an extensive course of lectures on architectural theory.³³

During his period at the Royal Academy, Cockerell stressed that British architectural education should be reformed on the basis of the French model. However, his efforts met with little success. At this date, in Britain, architects still acquired essential skills and knowledge by working for an established architect. Cockerell himself, for instance, may have been introduced to architectural principles through John Soane's Academy lectures, but his professional training was acquired in the offices of his father and Robert Smirke.³⁴

When Cockerell began lecturing at the Royal Academy in 1841, the education of architects involved just six annual public lectures. Thus, he emphasised the necessity of drawing the human figure from the antique and from the life-model, but could not ensure that his students acquired the actual skills. Architects in the Academy were introduced to theoretical principles outlined in the lecture hall and studied in the library. Because they generally worked in offices during the day, architects did not join their fellow students, the painters and sculptors, in receiving instruction from practitioners, employed as 'visitors' in studios.³⁵

Nonetheless, Cockerell believed that a regard for theoretical principles and past monuments was essential to the modern architecture. His early work, including studies of monuments in Greece, Asia Minor and Italy, has been considered in terms of its impact on the ideas explored in lectures at the Royal Academy. He explained that types, understood as both the human body and exemplary historical buildings, are vital to the design process.

- 1 For the history of academies, see Quentin Bell, *The School of Design* (London: Routledge and Kegan Paul, 1963) and Stuart Macdonald, *The History and Philosophy of Art Education* (London: University of London Press, 1970).
- 2 Cockerell discussed 'the human form divine' in a lecture of 1848. See RIBA Library, Box 3, Folder 1, COC 1/32, p. 210: 1848, Fourth lecture, January 27 (written by a scribe). The Vitruvian sources for Cockerell's notion that ideal beauty is encapsulated in a human being have been analysed in Peter Kohane, "Architecture, Labor and the Human Body: Fergusson, Cockerell and Ruskin" (PhD dissertation, University of Pennsylvania, 1993). The particular interpretation of Cockerell's theory has been endorsed in later scholarly writings.
- 3 David Watkin, *The Life and Work of C. R. Cockerell* (London: Zwemmer, 1974), 3-4. On Sezincote, see John Summerson, *Victorian Architecture: Four Studies in Evaluation* (New York: Columbia University Press, 1970), 479-80.
- 4 Discussed and illustrated in Joseph Mordaunt Crook, *The Greek Revival: Neo Classical Attitudes in British Architecture, 1760-1870* (London: John Murray, 1972), 119-21, figs. 180-81. On the Greek Revival in general, see Crook, *The Greek Revival*, 63-153; Summerson, *Victorian Architecture*, 497-524; and Dora Wiebenson, *Sources of Greek Revival Architecture* (London: Zwemmer, 1969).
- 5 See Hugh Honour, *Neo-classicism* (Harmondsworth: Penguin, 1977), 122ff; and Robert Rosenblum, *Transformations in Late Eighteenth Century Art* (Princeton: Princeton University Press, 1967), 146-91.
- 6 See Watkin, *The Life and Work of C. R. Cockerell*, 5.
- 7 It is worth noting that Cockerell had shown an interest in Greek sculpture prior to his Grand Tour, requesting permission to draw the Parthenon sculptures in Lord Elgin's home. See Watkin, *The Life and Work of C. R. Cockerell*, 96.
- 8 See Watkin, *The Life and Work of C. R. Cockerell*, 7.
- 9 Letter [1811?], quoted in Watkin, *The Life and Work of C. R. Cockerell*, 9-10. On this fifth-century BC temple and its celebrated pedimental sculptures, see Arnold Walter Lawrence, *Greek Architecture* (Harmondsworth: Penguin, 1983), 174-8, figs. 143-6.
- 10 Cited in Watkin, *The Life and Work of C. R. Cockerell*, 10.
- 11 Watkin, *The Life and Work of C. R. Cockerell*, 96 and pl. 35.
- 12 Watkin, *The Life and Work of C. R. Cockerell*, 96.
- 13 Watkin, *The Life and Work of C. R. Cockerell*, 13. The notes were ultimately used in Cockerell's book, *The Temples of Jupiter Panhellenius at Aegina, and of Apollo Epicurius at Bassae*, 1860; for two engravings from this book, see Watkin, *The Life and Work of C. R. Cockerell*, pls. 3, 4. On the temple at Bassae, see Lawrence, *Greek Architecture*, 231-4, ills. 202-5.
- 14 See Watkin, *The Life and Work of C. R. Cockerell*, pl. 115.
- 15 Watkin, *The Life and Work of C. R. Cockerell*, 13.
- 16 The Ionic Bassae order can be found in the Grange Park dining room, in the interiors of the Cambridge University Library and the Sun Fire office, and on both the interior and exterior of the Ashmolean Museum and Taylorian Institute.
- 17 Letter [1814?] to his father, quoted in Watkin, *The Life and Work of C. R. Cockerell*, 17. For a recent account of Cockerell's study of entasis, see Frank Salmon, "C. R. Cockerell and the Discovery of Entasis in the Columns of the Parthenon," in *The Persistence of the Classical: Essays on Architecture Presented to David Watkin*, ed. Frank Salmon (London: Philip Wilson, 2008), 106-123.
- 18 Watkin, *The Life and Work of C. R. Cockerell*, 17.
- 19 This and subsequent quotations from C. R. Cockerell, Royal Academy [RA], 1842, Second lecture. Vitruvius discusses *entasis* in Book 3, Chapter 3.
- 20 The fourth volume of the *Antiquities of Athens* was published in 1814; Cockerell himself worked on the fifth, which appeared in 1830. See Crook, *The Greek Revival*, 15.
- 21 Vitruvius made this statement at the conclusion of Book 3, Chapter 3.
- 22 See William Hogarth, *The Analysis of Beauty. With the Rejected Passages From the Manuscript Drafts and Autobiographical Notes* (Oxford: Clarendon Press, 1955).
- 23 In addition to Ingres, expatriate artists whom Cockerell would have met included Canova, Thorvaldson, Cornelius, Overbeck, Shadow, Hess, Vogel, the brothers Riepenhausen and Knoering. See Watkin, *The Life and Work of C. R. Cockerell*, 18.
- 24 Ingres was at the French Academy in Rome from 1806 to 1824.

- 25 On the fame of this group, and the various opinions as to their artist and date, see Frank Haskell and Nicholas Penny, *Taste and the Antique: The Lure of Classical Sculpture 1500-1900* (New Haven: Yale University Press, 1981), 274-9, figs. 10, 143-7. By the early nineteenth century, most scholars agreed that the sculptures were Roman copies of Greek originals.
- 26 As he wrote to his father, "I was flattered, invited, and made much of ... I have presented [the etching] to Madame de Stael, and my friends have sent it to all parts of the continent". Letter of May 7, 1816, quoted in Watkin, *The Life and Work of C. R. Cockerell*, 23. Many subsequent scholars have agreed with Cockerell's suggestion of a pedimented setting, although others have argued for a similarly planar but free-standing composition. See Haskell and Penny, *Taste and the Antique*, 277-8 (where the date of Cockerell's reconstruction is erroneously given as 1836, instead of 1816).
- 27 Letter of November 6, 1816, to his father, quoted in Watkin, *The Life and Work of C. R. Cockerell*, 34. The same sentiments were expressed in a letter of late December of the previous year, sent from Rome, quoted Watkin, *The Life and Work of C. R. Cockerell*, 22.
- 28 These quotations from Watkin, *The Life and Work of C. R. Cockerell*, 35 and 34.
- 29 Letter from Venice, October 5, 1816, to his father, quoted in Watkin, *The Life and Work of C. R. Cockerell*, 31.
- 30 Cockerell, RA, 1842, First lecture: "Vitruvius, Alberti and Vignola had produced 'our bibles'."
- 31 Cockerell, RA, 1842, Third lecture.
- 32 Cockerell, RA, 1842, First lecture.
- 33 On the French Academy, see Macdonald, *The History and Philosophy of Art Education*, 25; and Richard Chafee, "The Teaching of Architecture at the Ecole des Beaux-Arts," in *The Architecture of the Ecole des Beaux-Arts*, ed. Arthur Drexler (Cambridge, Mass.: MIT Press, 1977), 61-110. Cockerell had visited Paris in 1815 and again in 1824. See Watkin, *The Life and Work of C. R. Cockerell*, 36-7, 84-90.
- 34 Watkin, *The Life and Work of C. R. Cockerell*, 105.
- 35 On the teaching of painting and sculpture students at the Royal Academy during this period, see Macdonald, *The History and Philosophy of Art Education*, 28-9. Also see, Pierre de la Ruffinière Du Prey, *John Soane: The Making of an Architect* (Chicago: University of Chicago Press, 1982), 59-60, which provides an insightful discussion of the education architects received at the Royal Academy in the early 1770s, at the time when Soane was a student. Du Prey refers to the curriculum for architects organised by the Council of the Royal Academy. This recognised the importance of work carried out in architectural offices, noting that "In regard to the students in architecture, it is expected from them that they attend the Library and Lectures, more particularly those on Architecture and Perspective." Quoted in Du Prey, *John Soane*, 59.