



## CULTURE AND COSMOS

*A Journal of the History of Astrology and Cultural Astronomy*

Vol. 8 no 1 and 2

Spring/Summer and Autumn/Winter 2004

Papers from the fourth conference on the Inspiration of  
Astronomical Phenomena (INSAP IV), Magdalen College, Oxford,  
3-9 August 2003.

Published by Culture and Cosmos  
and the Sophia Centre Press,  
in partnership with the University of Wales Trinity Saint David,  
in association with the Sophia Centre for the Study of Cosmology  
in Culture, University of Wales Trinity Saint David,  
Institute of Education and Humanities  
Lampeter, Ceredigion, Wales, SA48 7ED, UK  
[www.cultureandcosmos.org](http://www.cultureandcosmos.org)

Cite this paper as: Steinhöfel, Antje, 'Art and Astronomy in the Service  
of Religion: Observations on the Work of John Russell (1745-1806)',  
*Culture and Cosmos* 8, nos. 1 and 2, Spring/Summer and Autumn/Winter  
2004, pp. 437–48.

British Library Cataloguing in Publication Data  
A catalogue card for this book is available from the British Library

*All rights reserved. No part of this book may be reproduced or utilized in any  
form or by any means, electronic or mechanical, including photocopying,  
recording or by any information storage and retrieval system, without  
permission in writing from the Publishers.*

ISSN 1368-6534

Printed in Great Britain by Lightning Source  
Copyright © 2021 Culture and Cosmos All rights reserved

## Art and Astronomy in the Service of Religion Observations on the Work of John Russell (1745–1806)

---

**Antje Steinhöfel**  
**University of Leicester**

**Abstract.** John Russell's lunar images have so far been neglected and misunderstood by both historians of art and of astronomy. On the one hand this is due to the fact that the images do not come within many current definitions of the notion of art, particularly when the function of art is seen as an agency of subjective experience. Ironically, the reverse of this argument explains why historians of astronomy neglected Russell's moon images. Compared with the more technical look of lunar maps, equipped with latitude and longitude grids as well as legends, Russell's 'photo-realistic' pastels came across as works of art. They were therefore neglected because of their very nature, their double identity combining aspects from both art and astronomy. On the other hand, the moon images have to be seen in the context of Russell's life and as more than just the work of an artist and astronomer, but also as the work of a Methodist. Russell's lifelong devotion to Methodism is well known. Never before, however, has this pivotal attitude of the artist towards religion been taken into account in connection with the study of his moon images. In my paper I argue that Russell was part of the movement that attempted to unite nature and religion in the late eighteenth century. While prominent artists such as William Blake argued that nature was the work of the devil and to study it was blasphemy, Russell shared his beliefs with other evangelicals who saw the study of nature in no contradiction with God at all. In fact, Russell actively searched for proof of God's part in the creation of the world and His presence within it. This association between God and nature has been termed natural theology and peaked in the late seventeenth century, with the work of Isaac Newton himself. I attempt to show that Russell conducted years of astronomical study, leading to the moon pastels, out of religious motivation. This contextualisation of Russell's work within the tradition that believed in the 'God of Nature', will, I hope,

---

Antje Steinhöfel, 'Art and Astronomy in the Service of Religion: Observations on the Work of John Russell (1745-1806)', *The Inspiration of Astronomical Phenomena: Proceedings of the fourth conference on the Inspiration of Astronomical Phenomena, Magdalen College, Oxford, England, 3-9 August 2003*, special issue of *Culture and Cosmos* 8, nos. 1 and 2, Spring/Summer-Autumn/Winter 2004, pp. 437–48.  
[www.CultureAndCosmos.com](http://www.CultureAndCosmos.com)

explain the previously unsolved puzzle of the artist's incentive to portray the moon.

William Blake (1757–1827) had a hostile attitude towards nature and its scientific investigation. He was convinced that ‘whoever believes in Nature [...] disbelieves in God – for Nature is the work of the Devil’.<sup>1</sup> In his print *The Ancient of Days*, Blake shows the creator handling a pair of dividers – an element of iconography going back to the Middle Ages. Blake used the old image and changed its meaning fundamentally, as he regarded that ‘measuring, law-giving God of Genesis [...] as the enemy of mankind’.<sup>2</sup> By imitating this devilish creator, as Blake saw it, scientists, like Isaac Newton (1642–1727), embody ‘the evil power of the measuring mind’.<sup>3</sup> This dismissive attitude towards materialism had, at the end of the eighteenth century, to battle against a strong tendency among evangelicals to consider the study of nature to be in contradiction with the worship of God. In fact, some actively searched for proof of God's creation of – and presence within – nature. This association between God and nature has been termed natural theology and peaked in the late seventeenth century, with the work of Newton himself.<sup>4</sup>

One of those who revived natural theology with their evangelical enthusiasm, was John Russell. In this paper I argue that Russell conducted years of astronomical study, which led to his moon pastels, motivated by religion. I attempt to place these spectacularly lifelike pre-photographic images of the moon in the context of natural theology. This contextualisation of Russell's work within the tradition that believed in the God of nature, will, I hope, explain the previously unsolved puzzle of the artist's motivation for extensively portraying the moon.

Russell was born in 1745 and grew up in Guildford, Surrey.<sup>5</sup> In his mid-teens he was apprenticed to the pastel painter Francis Cotes (1726–

---

<sup>1</sup> Crabb Robinson on Blake, around 1825. Quoted in K. Raine, *The Human Face of God* (London: 1982), p 12.

<sup>2</sup> K. Clark, *The Romantic Rebellion. Romantic versus Classic Art*, 2<sup>nd</sup> edn (London: 1976), p 167.

<sup>3</sup> Clark, *The Romantic Rebellion*.

<sup>4</sup> J. H. Brooke, ‘Natural Theology in Britain from Boyle to Paley’, *New Interactions between Theology and Natural Science*, ed. J. H. Brooke and R. Hooykaas (Milton Keynes: 1974), pp 5–54.

<sup>5</sup> Still the most comprehensive work on Russell's life and his paintings is G. C. Williamson, *John Russell, R.A.* (London: 1894). For Russell's astronomical work, which is scarcely mentioned in Williamson's biography, see W. F. Ryan,

1770) and moved to London, where he was based for the rest of his life. He became an esteemed member of the Royal Academy and a fashionable pastel portraitist of the English 1780s and 90s, his clientele ranging from the royal family to the local penniless characters of his native Guildford area. The most outstanding feature of Russell's character was his wholehearted devotion to Methodism. In his diary he gives an extensive account of his religious views.<sup>6</sup> Russell's own conversion to Methodism was the sudden and emotionally overwhelming awakening typical for the evangelicals of his time. The opening page of the diary reads 'John Russell Converted September 30. 1764. aetat. 19. about half an Hour after 7 O'Clock in the Evening'.<sup>7</sup> The volumes of Russell's diaries, which still survive today, prove that his religious feelings were strong throughout his life. Here an early example: 'I do now Firmly & Steadfastly approve of my Choice, & do now dedicate myself unto thee afresh. I therefore unworthy wretch as I am do by thy Grace [...] Give my Soul my Body and my Spirit without any Reserve up unto thy divine Majestys Service [...]'.<sup>8</sup> Russell got involved with the key figures of early Methodist Britain, among them John Wesley (1703–1791) and his brother Charles Wesley (1707–1788), George Whitfield (1714–1770) and Selina Countess Huntingdon (1707–1791). In 1768 he confided to his diary that he was asked to give up painting, to become a preacher himself, and to join Lady Huntingdon's newly founded Methodist academy at Trevecca in Wales. Russell was, however, not tempted by this offer. He maintained that 'the mention of the thing made me very uneasy as I can by no means think myself a proper person for a preacher. Beside I am apprehensive I can have an opportunity of doing more good in the way I am in ever since I have been awakened'.<sup>9</sup> For the remaining thirty-eight years of his life, Russell would use any opportunity to passionately convey the message of God to his sitters and,

---

'John Russell, R.A., and early lunar mapping', *Smithsonian Journal of History*, (Berkeley CA: 1966), Vol. 1, pp 27–48.

<sup>6</sup> The diary, consisting of twelve manuscript volumes (including indexes and translations from shorthand passages) and kept at the National Art Library, London, covers the periods between 1766-79, 1780-89, 1801-02 [hereafter Russell, *Diaries*]. In quotations from Russell's diaries throughout this essay the original, often grammatically faulty version is retained.

<sup>7</sup> Russell, *Diaries*, Vol.1, first, unnumbered page, 6 July 1766.

<sup>8</sup> Russell, *Diaries*, Vol. 1, pp. 2–3, 6 July 1766.

<sup>9</sup> Russell, *Diaries*, Vol. 2, p, 185, 23 September 1768.

while travelling by coach, to his co-passengers.<sup>10</sup> More lastingly, however, he would preach through his art.

The importance of the Methodists to Russell's life is reflected geographically in the choice of his working places. Though based in London, Russell spent a considerable time travelling for commissions.<sup>11</sup> Most often, the artist's travels took him to Methodist Yorkshire. Here, he portrayed evangelicals and made friends more easily than in London. From his diary we know that the 'blasphemous' and ever tempting society of the capital made Russell feel uneasy.<sup>12</sup> Rather than fitting in with the fashionable society – which is something one might expect from the painter of that very society – Russell devoted his life to serving God. Twenty years after his conversion he wrote in his diary, on Christmas Day 1785: 'I have trusted Him [God] though shamefully faint yet [...] Oh that I may use to His glory & my family's good what he is putting into my hands'.<sup>13</sup>

Among those things that God put in Russell's hands was a passion for astronomy. After a time of poverty due to a lack of commissions and after the family tragedy of the death of four of his children in four consecutive years, Russell's luck changed in the mid 1780s. It was during this time of improved living conditions and prestige, that he began his astronomical studies.<sup>14</sup> The outcomes of these studies of the night sky were sketches, pastels, prints and globes of the moon. The surviving sketches are bound in an album which is now at the Museum of the History of Science in Oxford. These sketches present a first clue at how Russell worked. He observed small parts of the moon at a time to gain detailed information about their structure. He also repeatedly observed the same area of the lunar surface under different light conditions. Finally, Russell tied the detailed observations of individual areas together by using the method of triangulation. He describes this method and the instruments he used in a letter to the Oxford Astronomer Thomas Hornsby in 1789:

As a painter it is no vanity for me to say, much may be done in regard to accuracy by the Eye only assisted by the Telescope. We are used to consider the size, form and proportion of parts, it is the first

<sup>10</sup> Williamson, *Russell, R.A.*, pp. 14–15.

<sup>11</sup> Williamson, *Russell, R.A.*, p. 63.

<sup>12</sup> Russell, *Diaries*, Vol. 6, p. 34, 18 October 1773.

<sup>13</sup> Russell, *Diaries*, Vol. 8, p. 70, 25 December 1785.

<sup>14</sup> J. and W. Russell, *A Description of the Lunar Planispheres, engraved by the late John Russell from his Original Drawings* (London: 1809), p. 3.

principle of our Art [...]; but [...] the Eye is capable of being deceiv'd, and as I want to approach as near as may be to perfection, I am induced to measure the distances of as many parts as will set the rest in their proper places. As I have no micrometer such as would describe minutes &c. [...] I have constructed one which serves my purpose.<sup>15</sup>

The sketches, however, are only the preparatory stage for pastels, engravings and globes. There exist several pastels of the moon, the largest one, measuring 4'4" x 5", is now located at the Museum of the History of Science in Oxford. A smaller version is held by Birmingham Museums and Art Gallery and is periodically on show at Soho House, Birmingham. Several pastel sketches are kept in the Science Museum and at the Royal Astronomical Society in London. Engravings of the surface of the full moon were published posthumously as *The Lunar Planispheres*. Russell also produced a globe, which he called *Selenographia*.<sup>16</sup>

It is possible that William Faden (1750–1836), Russell's brother-in-law and Geographer to George III, might have assisted the artist with the technical aspects of the globes and engravings.<sup>17</sup> In his observations and calculations Russell was certainly aided by distinguished astronomers, among them Astronomer Royal, Sir William Herschel (1738–1822).<sup>18</sup> The President of the Royal Society, Sir Joseph Banks (1743–1820), possessed copies of Russell's work. In 1788 Russell portrayed Banks holding one of the artist's own moon drawings. From these examples it emerges that eminent scientists followed the development of Russell's project, the outcome of which Russell intended to be useful to science. This was certainly his intention for the *Lunar Planispheres*. Here we are

---

<sup>15</sup> From Russell's letter to Thomas Hornsby, reprinted in E. J. Stone, 'Note on a Crayon Drawing of the Moon by John Russell, R. A., at the Radcliffe Observatory, Oxford', *MNRAS* (London: 1895), Vol. 56, p 94.

<sup>16</sup> For a detailed account of Russell's astronomical work see Ryan, 'Early lunar mapping'.

<sup>17</sup> See manuscript *Notes by Professor Rigaud copied from the manuscript obligingly lent by his son Major General Rigaud* (Oxford: Museum of the History of Science, 1824) [hereafter Rigaud, *Notes*], p. 2.

<sup>18</sup> See letter from 12 April 1799 in which John Russell thanks William Herschel for providing him with a telescope. I thank Peter Hingley for pointing me towards this letter in the collection of the Royal Astronomical Society library.

told that ‘it is hoped they [the engravings] will not only prove of great utility to the Astronomer, but lead to very important speculations in Natural Philosophy’.<sup>19</sup> The diary of the well-known gossip collector Joseph Farington (1747–1821) gives evidence for the appreciation Russell’s work received from the astronomers of the day, when he writes in November 1796, ‘I went with Russell to his House [...] He shewed me his new invented globe of the Moon, with the Brass Apparatus for which He has obtained a Patent. – Dr. Herschell [sic] has examined it 2 Hours, and said Astronomers could not now do without it’.<sup>20</sup>

Russell’s moon pictures did not live up to these claims to usefulness. Despite their lifelike appearance, the pastels were of no use in a scientific context. As they possessed neither grid nor legend, they did not qualify as maps.<sup>21</sup> Even Herschel’s comment that astronomers could no longer do without one of Russell’s globes did not prove to be true. Despite the fact that the globes were more technical and functional than the two-dimensional images, they failed to become the indispensable piece of equipment Herschel had heralded. This is probably due to one simple but crucial circumstance: in the late eighteenth century, the moon was out of fashion with astronomers. While encouragement from eminent scientists to pursue his imaging the moon was probably based on their private curiosity, the professional side of astronomy at this time was beginning to focus on the exploration of deep space.<sup>22</sup> One could argue that amateur astronomers, so numerous in the late eighteenth century, have always been interested in the moon and that they should have been attracted to Russell’s images and globes. They did not, however, warm to them either, as is reflected by the fact that Russell kept all the pastels to himself and that only seven fully equipped copies of the *Selenographia* are known to have ever been produced.<sup>23</sup>

---

<sup>19</sup> Russell, *Lunar Planispheres*, p. 3.

<sup>20</sup> K. Cave and K. Garlick, eds, *The Diary of Joseph Farington, Vol. III Sept. 1796-Dec. 98* (New Haven CT and London: 1979), p. 695 [hereafter Farington, *Diary*].

<sup>21</sup> This issue has previously been raised in R. Olson and J. Pasachoff, ‘Moon-Struck: Artists rediscover nature and observe’, *Earth, Moon and Planets* 85-86 (Dordrecht: 2001): p. 336.

<sup>22</sup> M. Hoskin, ed., *Cambridge Illustrated History of Astronomy* (Cambridge, 1997), Chapter 7: ‘The Astronomy of the Universe of Stars’, pp. 198–255.

<sup>23</sup> So far, no satisfactory account of the number of globes Russell produced has been published and a full investigation of Russell’s moon globes is still outstanding. Williamson’s statement, in *John Russell, R.A.*, p. 103, that only

The real inspiration behind the astronomical effort of spending an average of six hours per day, or rather per night, on this project, I believe, is not to be found in the usefulness of the moon images to astronomy, but in their relevance to Russell's religious beliefs.<sup>24</sup> In the *Evangelical Magazine*, a dissenting monthly publication commencing in 1793, coinciding with the peak of Russell's astronomical studies, the purpose of Russell's work on the moon is indirectly explained and justified. In the first issue of this magazine a series of short essays is set up, entitled *On Christian Philosophy* and signed 'Consector'. In the introductory chapter, the author outlines his fundamental belief that God is visible in nature and that it is therefore the Christian's duty to investigate nature.

If the invisible things of God are clearly seen by the things that appear [...] it must certainly be the duty of Christians, who have the Bible in their hands, so to observe the wonderful works of God, that they may give him the glory due to his name. [...] "See that thou magnify his works which men behold," is an injunction with divine authority: But a superficial observation of them is insufficient. God, who has filled the universe with a vast variety of beings, has confined to man the superior ability of investigating their properties and design [...].<sup>25</sup>

By investigating nature in detail, so the essay suggests, man can enhance the understanding of God's creation and can draw nearer to God himself. In the following year the essays become more detailed and discuss, among other things, the moon's place in God's great plan. 'The moon is

---

three complete *Selenographia*'s were ever produced, is outdated. My research into Russell's astronomical work led to the following preliminary result. Seven fully equipped globes are still in existence. Two globes are placed at the Science Museum, London. One exemplar of the *Selenographia* is held at each of the following: the Museum of the History of Science, Oxford, the British Library, Burghley House, Lincolnshire, the National Maritime Museum, Greenwich, and at the Observatorio Astronómico Nacional, Madrid. There are further globes without brass frames at the Royal Astronomical Society and at Soho House, Birmingham. Furthermore, I am aware of a manuscript globe at the Science Museum, and a globe fragment at the Royal Institution, London. Again, I am greatly indebted to Peter Hingley for his competent advice and help in locating these globes.

<sup>24</sup> Farington, *Diary*, Vol. 1, p. 110, 9 December 1793.

<sup>25</sup> *Evangelical Magazine* (London: 1793), Vol. 1, pp 22–23.



an opaque body, having no light of her own, but reflecting that of the sun; - a lively emblem of the church, illuminated indeed, and illuminating others, but only by reflecting the rays of Jesus, the “Sun of Righteousness”.”<sup>26</sup> Conspector compares the sun, the source of all light in our solar system, with Jesus Christ, the ‘sun’ of the people on earth. While the moon reflects the sunlight, providing light in the darkness of the physical night, the church illuminates the metaphorical darkness of humankind. Both, moon and church, are regarded as tools of illumination.

It is likely that the composer of the essays *On Christian Philosophy* in the *Evangelical Magazine* was John Russell himself. He was involved with the illustration of the early issues, which include engravings after Russell’s portraits of evangelicals. Russell’s nineteenth century biographer, George C. Williamson, stated that, besides those illustrations, Russell contributed a small number of articles for the early issues of the magazine.<sup>27</sup> However, most relevant in the question of a possible authorship of *On Christian Philosophy* are the artist’s diaries and sketchbooks, as they indicate that Russell and Conspector’s understanding of the relationship between God and nature were the same. For example, when visiting Hawkstone in the summer of 1780, Russell summarized his impressions of the park as having ‘been indulged with the works of the God of nature’.<sup>28</sup> A few weeks later, Russell records a visit to the Malvern Hills, ‘this place where the wonders of God are to be seen in the great work of nature’.<sup>29</sup> A further example of Russell’s conviction that nature itself contained immediate proof of God’s involvement with it is the collection of Russell’s anatomical studies.<sup>30</sup> In one of his sketchbooks is a sketch of a skeletal upper body, surrounded by shorthand descriptions of the drawing. Opposite this page is placed an inscription by the artist which declares that it was the ‘God of Nature’ who determined the length of the muscles around the skull to the most beneficial effect.<sup>31</sup> These examples indicate that Russell’s thoughts, when studying nature in whatever form, wandered off towards the Creator.

<sup>26</sup> *Evangelical Magazine* (1794), Vol. 2, p. 67.

<sup>27</sup> Williamson, *Russell, R.A.*, p. 95.

<sup>28</sup> Russell, *Diaries*, Vol. 8, p. 11, 12 August 1780.

<sup>29</sup> Russell, *Diaries*, p. 19, 13 September 1780.

<sup>30</sup> Twelve of Russell’s sketchbooks survive in the collection of Birmingham Museums and Art Gallery. Volumes 120.51-122.51 contain anatomical studies and drawings after the antique, while volumes A-I feature land- and townscapes as well as more detailed studies of plants and architecture.

<sup>31</sup> Birmingham sketchbook 120.51, opposite p. 6.

Seeking to establish the existence and continuous operation of God in nature, Russell is not only likely to have composed the series of essays entitled 'On Christian Philosophy' but he can be named a Christian Philosopher himself. I hope to have shown that behind his study and imagery of the moon stands a passionate Methodist, who, ever since his 'awakening', was on a lifelong quest to learn about God by observing His creation. In his diary Russell noted as early as 1766 the power which the night sky had for him to reveal God's presence: 'Prayer has been without Power my Soul has not been much distressed but my Spirits has [sic] been low. [...] Contemplation on seeing the Moon to night was with Satisfaction as it Enliv'ned my faith and Prayer has been at Night with Power'.<sup>32</sup>

The understanding of Russell's association of God with every dead and living thing in the surrounding world, and with the moon in particular, is for us the key to a more successful interpretation of the work of this artist and Christian Philosopher. William Blake, around that time, began his powerful and public argumentation against an investigation of nature in the name of God. Russell, much less audibly than Blake, steered in the opposite direction, arguing that Nature was indeed the work of God. His moon images can therefore be understood as acts of worship of the God of Nature.

---

<sup>32</sup> Russell, *Diaries*, Vol.1, p. 210.





