



(ATINER)

The Athens Journal of Humanities & Arts



(ATINER)

Volume 7, Issue 2, April 2020

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Mission

ATINER is an Athens-based World Association of Academics and Researchers based in Athens. ATINER is an independent and non-profit **Association** with a **Mission** to become a forum where Academics and Researchers from all over the world can meet in Athens, exchange ideas on their research and discuss future developments in their disciplines, **as well as engage with professionals from other fields**. Athens was chosen because of its long history of academic gatherings, which go back thousands of years to *Plato's Academy* and *Aristotle's Lyceum*. Both these historic places are within walking distance from ATINER's downtown offices. Since antiquity, Athens was an open city. In the words of Pericles, *Athens "...is open to the world, we never expel a foreigner from learning or seeing"*. ("Pericles' Funeral Oration", in Thucydides, *The History of the Peloponnesian War*). It is ATINER's **mission** to revive the glory of Ancient Athens by inviting the World Academic Community to the city, to learn from each other in an environment of freedom and respect for other people's opinions and beliefs. After all, the free expression of one's opinion formed the basis for the development of democracy, and Athens was its cradle. As it turned out, the Golden Age of Athens was in fact, the Golden Age of the Western Civilization. *Education* and *(Re)searching* for the 'truth' are the pillars of any free (democratic) society. This is the reason why *Education* and *Research* are the two core words in ATINER's name.

The Athens Journal of Humanities & Arts
ISSN NUMBER: 2241-7702 - DOI: 10.30958/ajha
Volume 7, Issue 2, April 2020
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The current issue is the second of the seventh volume of the *Athens Journal of Humanities & Arts (AJHA)*, published by the [Arts, Humanities and Education Division](#) of ATINER.

Gregory T. Papanikos
President
ATINER



Athens Institute for Education and Research

A World Association of Academics and Researchers

11th Annual International Conference on Visual and Performing Arts **8-11 June 2020, Athens, Greece**

The [Arts & Culture Unit](#) of ATINER is organizing its **11th Annual International Conference on Visual and Performing Arts, 8-11 June 2020, Athens, Greece** sponsored by the [Athens Journal of Humanities & Arts](#). The aim of the conference is to bring together academics and researchers of visual and performing arts, and other related disciplines. You may participate as stream leader, presenter of one paper, chair of a session or observer. Please submit a proposal using the form available (<https://www.atiner.gr/2020/FORM-ART.doc>).

Academic Members Responsible for the Conference

- **Dr. Stephen Andrew Arbury**, Head, [Arts & Culture Unit](#), ATINER and Professor of Art History, Radford University, USA.
-

Important Dates

- Abstract Submission: **25 May 2020**
- Acceptance of Abstract: 4 Weeks after Submission
- Submission of Paper: **11 May 2020**

Social and Educational Program

The Social Program Emphasizes the Educational Aspect of the Academic Meetings of Atiner.

- Greek Night Entertainment (This is the official dinner of the conference)
- Athens Sightseeing: Old and New-An Educational Urban Walk
- Social Dinner
- Mycenae Visit
- Exploration of the Aegean Islands
- Delphi Visit
- Ancient Corinth and Cape Sounion

Conference Fees

Conference fees vary from 400€ to 2000€
Details can be found at: <https://www.atiner.gr/2019fees>



Athens Institute for Education and Research
A World Association of Academics and Researchers

5th Annual International Symposium on Religion & Theology 25-28 May 2020, Athens, Greece

The [Humanities & Education Division](https://www.atiner.gr/2020/FORM-REL.doc) of ATINER is organizing its **5th Annual International Symposium on Religion & Theology, 25-28 May 2020, Athens, Greece**. The aim of the conference is to bring together academics and researchers of Religion, Theology and other related disciplines. You may participate as stream leader, presenter of one paper, chair of a session or observer. Please submit a proposal using the form available (<https://www.atiner.gr/2020/FORM-REL.doc>).

Important Dates

- Abstract Submission: **11 May 2020**
- Acceptance of Abstract: 4 Weeks after Submission
- Submission of Paper: **27 April 2020**

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Social and Educational Program

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More information can be found here: <https://www.atiner.gr/social-program>

Conference Fees

Conference fees vary from 400€ to 2000€

Details can be found at: <https://www.atiner.gr/2019fees>

The *Bounty*'s Primogeniture and the Thursday-Friday Conundrum

By Donald Albert*

This is a biography of an obscure individual born of the ashes of the H.M.A.S. Bounty on the remote, inaccessible, and uninhabited Pitcairn Island in 1790. Thursday October Christian is best known to amateur and professional historians, philatelists, and others interested in the romance and adventure of the South Seas. He was eighteen years old when he first had contact with the outside world with the arrival of the American sealer Mayhew Folger of the Topaz in 1808. In the forty years of his life he would meet, greet, and otherwise interact with sealers, whalers, naval officers, traders, and others calling on Pitcairn. This article synthesizes these disparate encounters while exploring a name change conundrum revolving around the protagonist. Thursday October Christian was an ordinary person whose life story now lingers in disparate reports, notices, and accounts of archived and otherwise rare documents.

Introduction

On 28 April 1789 Fletcher Christian mutinied against Lieutenant Bligh, commander of the *Bounty*. Fletcher forced Bligh and eighteen crew into the *Bounty*'s launch around Tofua. Miraculously, Bligh sailed almost 6,000 kilometers to the Dutch settlement of Coupang, Timor. Fletcher and the mutineers, eventually (January 1790) encountered the mischarted, remote, and wave-inundated cliffs of Pitcairn Island (25° 04' S, 130° 06' W) in the South Pacific Ocean (Figure 1).¹ Fletcher Christian located Pitcairn Island even though his source had it located 342 km west from its actual location.² The

*Professor, Sam Houston State University, USA.

1. Caroline Alexander, *The Bounty: The True Story of the Mutiny on the Bounty* (New York: Viking, 2003); Robert Kirk, *Pitcairn Island, the Bounty Mutineers and Their Descendants: A History* (Jefferson, N.C.: McFarland & Co, 2008); Sven Wahlroos, *Mutiny and Romance in the South Seas: A Companion to the Bounty Adventure* (iUniverse.com, Inc., 2001); Spencer Murray, *Pitcairn Island: The First 2000 Years* (La Canada, CA: Bounty Sagas, 1992); Richard Hough, *Captain Bligh & Mr. Christian: The Men and the Mutiny* (New York, E.P.: Dutton, 1973).

2. John, Hawkesworth et al., *An Account of the Voyages Undertaken by the Order of His Present Majesty for Making Discoveries in the Southern Hemisphere, and Successively Performed by Commodore Byron, Captain Wallis, Captain Carteret, and Captain Cook, in the Dolphin, the Swallow, and the Endeavour: Drawn Up from the Journals Which Were Kept by the Several Commanders, and from the Papers of Joseph Banks, Esq.* (London: Printed for W. Strahan and

mutineers and their Polynesian consorts experienced tumultuous early years with deaths from accidents and murders, until settling down under the tutelage of the sole male survivor John Adams (aka Alexander Smith) around 1800. Fletcher's son, Thursday October, though born into infamy on the inconsequential and isolated mutineers' settlement of Pitcairn Island, entertained, guided, and hosted seafaring visitors from far and away.

It is unknown why Fletcher Christian named his son Thursday October Christian. Glynn Christian suggested that naming a child after the day and month of birth was a common form of protest among West Indian slaves.³ Most accounts place the month and year of his birth as October 1790; however, Ian Ball speculated that Thursday might have been born on board the *Bounty* in 1789.⁴ However, *The Pitcairn Island Register Book* contains several entries on Thursday October Christian, including his birth on the island during October 1790.⁵

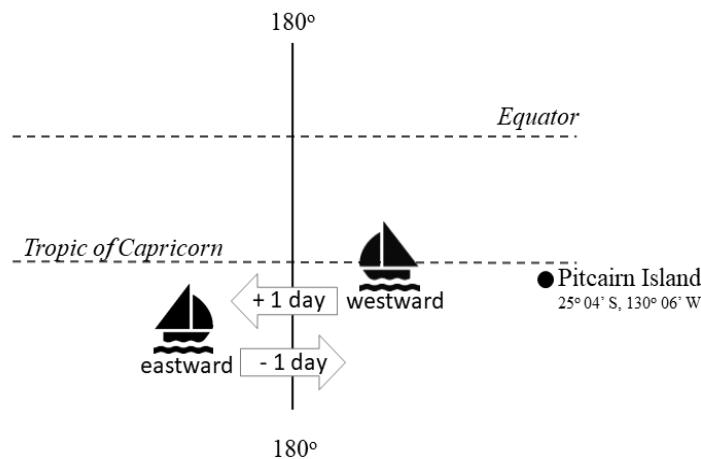


Figure 1. *Pitcairn Island, South Pacific: Map Reference and Date Line Crossing Mechanics*

Life Events and Visitors

Thursday October Christian was the son of Fletcher Christian and a full-blooded Tahitian named Mauatua (Isabella); he had two siblings, Charles and

T. Cadell in the Strand, 1773); Donald Patrick Albert, "Did or Could Seabirds 'Halo' Pitcairn Island for Fletcher Christian?" *Terrae Incognitae* 50, no. 2 (2018): 99–114.

3. Glynn Christian, *Fragile Paradise: The Discovery of Fletcher Christian, Bounty Mutineer* (United States: Bounty Books, 2005), 247.

4. Ian M. Ball, *Pitcairn: Children of Mutiny* (Boston: Little Brown, 1973), 113.

5. Charles Prestwood Lucas, *The Pitcairn Island Register Book* (London: Society for Promoting Christian Knowledge, 1929), 8.

Mary Ann.⁶ Thursday was almost three years old when his father succumbed as "some natives proceeded to shoot Christian; they found him clearing some ground for a garden."⁷ The next event is his marriage to Susannah in 1806, a full-blooded Tahitian and much older; he was around sixteen and she over thirty. The *Register* lists the birth of six children (Charles, Joseph, Mary, Polly, and Peggy), including a son born in 1820 whom he called "Thursday O. Christian," that is, the II.

Thursday October Christian entered the picture at aged 18 and 24 years, respectively, on the arrival of the *Topaz* (1808) and *Briton and Tagus* (1814).⁸ Mayhew Folger's rediscovery of Pitcairn Island in 1808 finds "three young men in a double canoe" paddling toward the *Topaz*.⁹ Presumably, one of these men was Thursday October Christian, at least according to Hough.¹⁰ Several accounts reiterate his physical appearance with "tall" reappearing more than once.¹¹ Six years later, the British Captain Pipon of the *Tagus* described Thursday October Christian as about six feet tall, "brown cast," with dark, deep black hair, again wearing the loincloth, hat with feathers, and "occasionally a Pauncho."¹² John Bechervaise of the *Blossom*, during a December 1825 visit, noted that Thursday was agile and powerful.¹³ The only depiction of the first-born is a sketch by Lieutenant Shillibeer during an 1814 visit of the H.M.S. *Briton* (Figure 2).¹⁴ Curiously, Lieutenant Shillibeer titled this portrait "Friday Fletcher October Christian."

6. Donald Albert, "Charles Christian and His Contributions to Pitcairn History," *The Pitcairn Log* 46, no. 2 (April 2019): 8–10.

7. See Appendix E: Jenny's Story (1829) reprinted from the *United Services Journal and Naval and Military Magazine*, 1829, Part II, 589–593 in William Bligh and Edward Christian, *The Bounty Mutiny* (New York: Penguin Books, 2001), 231.

8. Amasa Delano, *A Narrative of Voyages and Travels, in the Northern and Southern Hemispheres: Comprising Three Voyages Round the World, Together with a Voyage of Survey and Discovery, in the Pacific Ocean and Oriental Islands* (Boston: Printed by E. G. House, for the author, 1817), 126–131.

9. Bligh and Christian, *The Bounty Mutiny*, Appendix D, 215–227; Appendix D includes letters from Folger and Staines on encounters with Pitcairn Islanders published in *The Quarterly Review* 13 (1815): 374–383.

10. Hough, *Captain Bligh & Mr. Christian*, 271.

11. Harry L. Shapiro, *The Heritage of the Bounty: The Story of Pitcairn Through Six Generations* (New York: Simon and Schuster, 1936), 72; Hough, *Captain Bligh & Mr. Christian*, 271.

12. Rosalind Amelia Young, *Mutiny of the Bounty and Story of Pitcairn Island, 1790–1894* (Oakland: Pacific Press Pub. Co., 1894), 42.

13. John Bechervaise, *Thirty-Six Years of a Seafaring Life* (Portsea, England: W. Woodward, 1839), 169–170.

14. John Shillibeer, *A Narrative of the Briton's Voyage to Pitcairn's Island* (London: Law and Whittaker, 1817).

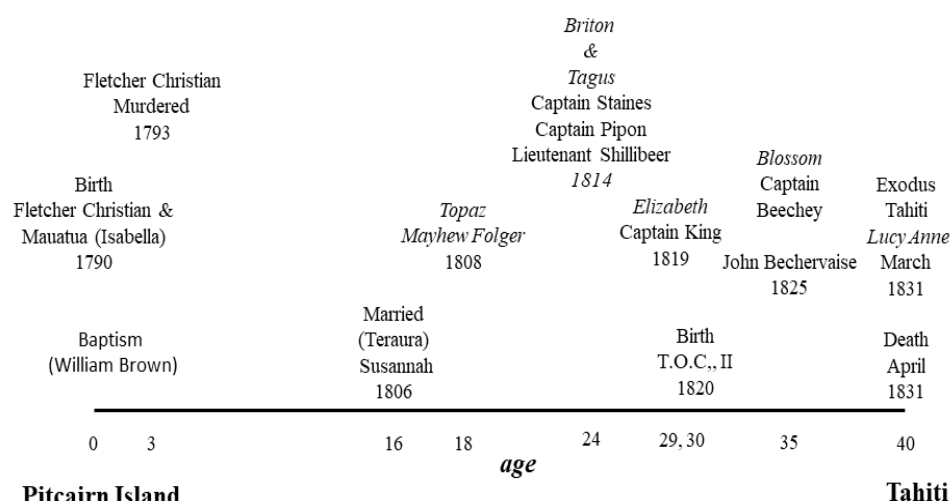


Figure 2. *Life Events: Thursday October Christian, 1790–1831*

While it is arguable that present-day authors can surmise an accurate persona from scouring the archives, there are numerous impressions of Thursday's interactions with his contemporaries that provide insight into his demeanor. He must have been an intrepid paddler being able to navigate the treacherous surf to greet Folger (1808), and later Staines and Pipon (1814). Pipon wrote that Thursday spoke English "in a manner vastly pleasing."¹⁵ He appears to have been generous with one account finding him offering a present of "some fruit and a hog"¹⁶ and another noting his hospitable, good humored and obliging nature.¹⁷ On bringing "refreshments" through the surf, Pipon observed that Thursday was a "most active and expert swimmer."¹⁸

On board the *Briton*, two observations recorded by Lieutenant Shillibeer offer another glimpse of Thursday's psyche. The first described Thursday as saying grace before and after meals; this stemmed from a conservative and devote Christian faith prescribed by John Adams. The second, his uneasiness when a black servant entered the gunroom. Thursday rose, and said, "I don't like that black fellow, I must go."¹⁹ Being in an unfamiliar situation, Thursday's reaction projects fear rather than prejudice.²⁰ Whether his attitude towards

15. Philip Pipon, *Capt Pipon's Narrative of the State Mutineers of H. M. Ship Bounty Settled on Pitcairn's Island in the South Sea*. Retrieved from <https://bit.ly/2l15TBG>.

16. See Appendix D: "The Quarterly Review on the Bounty" (1815) reprinted in Bligh and Christian, *The Bounty Mutiny*, 215–227.

17. Pipon, *Capt Pipon's Narrative of the State Mutineers*.

18. Pipon, "The Descendants of the Bounty's Crew: As First Discovered by the Briton and Tagus Frigates. – From the Unpublished Mss. of the Late Capt. Pipon, R.N.," *The United Service Journal* (1834), Pt. 1: 197.

19. Shillibeer, *A Narrative of the Briton's Voyage*, 89.

20. The suggestion that Thursday's reaction might have been attributed to fear rather than a racist prejudice came from an anonymous reviewer.

"blacks" changed during the remaining sixteen years of his life is unknown to the author.

American captain Henry King of the *Elizabeth* mentioned a feast given at Thursday's house on a visit 3 March 1819. Captain King witnessed the islanders performing grace before and after dinner, individually beginning with the most senior. The menu included a suckling pig, two fowls, yams, plantains, bananas, and a "species of apple peculiar to the island."²¹ Six years later, December 1825, English Captain Beechey of the H. M. sloop *Blossom* attended a dinner hosted by Thursday. Beechey found a table complete with an incongruous setting of plates, knives, and forks, which he described as "an unexpected sight" given their isolation and remoteness.²² During the *Blossom*'s visit from 5–21 December 1825, Thursday demonstrated his athletic and agile nature.²³ He impressed Beechey as a perceptive guide with the ability to hear faint signals sent from across the island.²⁴ At thirty-five years, he was still a vigorous individual able to run down wild goats, at least on level ground. Bechervaise of the *Blossom* recounts: "During my stay I saw October Christian and young Adams run down several, which were sent as presents to the seaman of the B."²⁵ Through all these encounters, beginning with Folger (*Topaz*, 1808) and continuing with Captain Staines, Captain Pipon and Lieutenant Shillibeer (*Tagus and Briton*, 1814), Captain King (*Elizabeth*, 1819), and then Captain Beechey (*Blossom*, 1825), Thursday's thoughtful, hospitable and an outwardly religious manner were manifest during his numerous encounters with those visitors (Figure 3).²⁶

21. "Extract from the Journal of Captain Henry King of the *Elizabeth*," *The Edinburgh Philosophical Journal* 3, no. 6 (Oct. 1820): 380–388.

22. Frederick W. Beechey, *Narrative of A Voyage To The Pacific And Beering's Strait, To Co-Operate With The Polar Expeditions: Performed In His Majesty's Ship Blossom, Under The Command Of Captain F. W. Beechey, R. N. In The Years 1825, 26, 27, 28*, vol. 1 (London: Henry Colburn and Richard Bentley, 1831), 101.

23. Trevor Lummis, *Life and Death in Eden: Pitcairn Island and the Bounty Mutineers* (London: Phoenix, 2000), 92.

24. Beechey, *Narrative of A Voyage*, 110–111.

25. Bechervaise, *Thirty-six Years of a Seafaring Life*, 173.

26. Shillibeer, *Narrative of the Briton's Voyage*, 82. Shillibeer used Friday even though Captain Staines on same visit reported Thursday.



Figure 3. Shillibeer's Sketch of Thursday October Christian, 1814

Source: Shillibeer, 1817, image between pages 96–97.

Fears that limited resources could support a growing population, especially during a prolonged drought, "could dry up the unreliable springs for good, shrivel garden crops upon which so much depended, and empty storage basins of drinking water."²⁷ Thursday October Christian, along with his namesake Thursday October the II, were among the roll of Pitcairn Islanders transported to Tahiti on the *Lucy Anne* in March 1831.²⁸ Thursday October Christian died on 21 April 1831, within one month of immigrating to Tahiti to an epidemic infectious disease (Figure 3). In two groups the islanders returned to Pitcairn Island with one smaller group arriving on 27 June 1831, and a larger group on 4 September 1831, respectively. Sixteen or one-fifth of the islanders population died from April to November as a result of this failed immigration attempt.²⁹

The archives support the supposition that *Bounty's* primogeniture was an exceptional human specimen confident in his abilities to interact with the wild waves and sheer cliffs that encase Pitcairn Island. His willingness to greet passing vessels indicates an articulate nature useful in communicating with strangers. The archives are replete with accounts of his helpfulness and generosity towards visitors. Though he might have been ignorant with respect to education and perhaps leadership potential, his personality exuded positive qualities that were a benefit to his family, friends, the Pitcairn community, and visitors too.

27. Murray, *Pitcairn Island: The First 2000 Years*, 78–79.

28. Walter Brodie, *Pitcairn's Island, and the Islanders in 1850* (London: Whittaker & Co., 1851), 72.

29. Kirk, *Pitcairn Island*, 80–81.

Name Change Confusion

Ian Ball referred to the first born as "Friday (soon to be Thursday)." He quotes Warren Clive Christian (1914–2003) stating that "Fletcher get Friday October, who we later called Thursday, and Friday/Thursday get Thursday October the Second."³⁰ One of the most intriguing paragraphs from *Pitcairn: Children of Mutiny* provides Ball's interpretation of this name-change conundrum:

On the day he came into the world, his father made a simple calendar error. The boy was first Friday October and continued to be known by that name until the skipper of the *Topaz* came ashore in 1808 and informed the islanders that, while their chronometer from the *Bounty* was still accurate and they had kept meticulous track of the days, months, and years, Fletcher had slipped up on one basic point. After deposing Bligh, and while the mutineers were sailing back to Tahiti, Fletcher forgot to record that they had crossed the International Date Line. His first son was born on a day the Pitcairn colonists observed as Friday. Actually, east of the Date Line, it was Thursday. Friday October thanked Captain Folger for pointing out this error, and henceforth was known as Thursday October.³¹

The *Guide to Pitcairn*,³² claims that Thursday October Christian was "Born in October 1790...was also known as Friday October Christian after 1814 when time was corrected." This quote gives the year 1814 and reason as a "time adjustment" for the change from Thursday to Friday. Further, the "also known as" suggests that both names were acceptable, that one did not negate the other. Allen Frost puts forth a reasonable argument for Friday first in his *Mutiny, Mayhem, Methodology: Bounty's Enigmatic Voyage*. He notes two eyewitness accounts (see Shillibeer and Jenny) referring to the protagonist as Friday. Further, Frost points to a trail on Pitcairn Island known to the islanders "into the 1970s" as Friday Road.³³ While not conclusive, Frost at least provided anecdotal evidence to consider.³⁴ However, most accounts, including Shapiro's, mention even if parenthetically, a name change: "The eldest was Thursday (Friday in the island records) October Christian, then eighteen years old and already a tall, powerfully built man."³⁵

30. Ball, *Pitcairn: Children of Mutiny*, 179.

31. *Ibid.*, 114.

32. *Guide to Pitcairn* (Adamstown, Pitcairn Island: Government of Pitcairn Island's Tourism Department, 2013), 14.

33. Alan Frost, *Mutiny, Mayhem, Methodology: Bounty's Enigmatic Voyage* (Sydney: Sydney University Press, 2018), 142–143.

34. Denning also supports the Friday to Thursday name change, see, Greg Denning, *Mr Bligh's Bad Language: Passion, Power, and Theatre on the Bounty* (Cambridge, England: Cambridge University Press, 1992).

35. Shapiro, *The Heritage of the Bounty*, 36.

Name Change in Context of International Date Line

Antonio Pigafetta, a survivor of Magellan's westward sailing global circumnavigation (1519–1522), provided proof positive the need for calendar adjustment on returning from such a journey. To Pigafetta's amazement, he thought it Wednesday, but to the Portuguese it was Thursday.³⁶ Thereafter, the Spanish demarcated a date line encapsulating the Philippines, placing it on the same date as South America. In the 1800s with Spanish colonialism waning in South America, the Philippine Adjustment (1845) repositioned its date line to align with Spain.

The International Date Line traces its inception, at least nominally, to the International Meridian Conference that convened in Washington, DC in 1884.³⁷ Here the delegates chose Greenwich as the Prime Meridian; 180 degrees away an empty ocean scattered with isolated islands provided an ideal region to first start the day, hence the International Date Line (IDL). In an east-west crossing the calendar increases one day, for example, Thursday advances to Friday; whereas, a west-east crossing the calendar decreases one day, Friday retreats to Thursday (Figure 1). The IDL operates under *de facto* rather than *de jure* status; hence, adjustments represent unilateral decisions of the involved countries.³⁸ The English, and even the French, maintained home dates during their exploration and colonization of the Pacific, and this is evident in examining the logs of Lieutenant Bligh. This problem of reckoning dates in Polynesia persisted into 19th century until even after the *de facto* recognition of the International Date Line in 1884. This generated Sabbath mismatches between indigenous residents (local) and their European visitors (British, French) with adjacent Sundays co-existing across the Society Islands (Tahitian Sabbath) and elsewhere.³⁹

Thursday or Friday?

Most accounts, including letters and extracts from Captains Pipon, Staines, Henderson, and King, report Thursday as the original name. For official documents, Thursday occurs in the *Pitcairn Island Register Book* and on the *Lucy Anne's* passenger list of emigrants to Tahiti. Just a few eyewitness

36. Laurence Bergreen, *Over the Edge of the World: Magellan's Terrifying Circumnavigation of the Globe* (New York: Morrow, 2003).

37. Dava Sobel, *Longitude* (New York: Walker and Company, 2007), 165–175.

38. Robert H. van Gent, "A History of the International Date Line," accessed January 13, 2019. Retrieved from <https://bit.ly/2n01OhC>.

39. John Davies and C. W. Newbury, *The History of the Tahitian Mission, 1799–1830: With Supplementary Papers from the Correspondence of the Missionaries* (Cambridge: Published for the Hakluyt Society at the University Press, 1961), 307.

accounts use Friday, one is from Lieutenant Shillibeer of the *Briton* and the other is from Jenny, the Tahitian and ex-consort of mutineers John Adams and Isaac Martin. Secondary sources often name only Thursday,⁴⁰ while others mention a name change from Thursday to Friday or back again to Thursday. Mutineer descendant and Pitcairn historian Rosalind Young (1853–1924) used Thursday throughout her now classic and rare book.⁴¹ Glynn Christian (b. 1942), another descendant, assigned the original dating error to Fletcher for not accounting for a date line crossing. When Thursday "learned," he promptly changed his name to Friday.⁴² This explanation is insufficient as it ignored the how, when, and where of this calendar error. Lummis purports Friday, but within parentheses "(his name was changed from 'Thursday' when it was discovered that the settlers were a day behind, having lost a day by nearly circumnavigation the world)."⁴³ Ball states that the name change was from Friday to Thursday. He said this occurred in 1808 during the visit of Mayhew Folger of the *Topaz*. Spencer Murray from *Pitcairn Island: The First 200 Years* provides still another explanation for the calendar correction:⁴⁴

It wasn't until 17 September 1814 (a true date taking into account the day-change calculation) and the arrival of two British ships at Pitcairn, HMS *Briton* and HMS *Tagus*, commanded respectively by Sir Thomas Staines and Philip Pison, that the calendar error was explained to the islanders. Fletcher's eldest son, named Thursday October Christian after the day and month of his birth in 1790, promptly changed his name to Friday (although he continued to be called Thursday by his fellows and named one of his sons Thursday as well). By proper reckoning, however, he should have been called *Wednesday*!

Wahlroos and Kirk agree that had there been an unaccounted eastward crossing of the "date line," a correct name change would be to Wednesday as stated in the preceding quote from Spencer Murray.⁴⁵ An eastward crossing of the date line results in a one-day subtraction from the calendar, so Thursday would become Wednesday (Figure 1).

Discussion

That there was a name change seems reasonable given eyewitness accounts from Lieutenant Shillibeer and two from Jenny, an original settler on Pitcairn

40. Alexander McKee, *H.M.S. Bounty* (New York: Morrow, 1962).

41. Young, *Mutiny of the Bounty*, 111.

42. Christian, *Fragile Paradise*, 337.

43. Lummis, *Life and death in Eden*, 181.

44. Murray, *Pitcairn Island: The First 200 Years*, 50.

45. Wahlroos, *Mutiny and Romance in the South Seas*, 325; Kirk, *Pitcairn Island*, 49.

Island for three decades. Although Shillibeer of the *Briton* (1814) did not leave the ship, he had the opportunity to meet at least two of the islanders. On encountering McCoy, a mutineer's son, Shillibeer asked him whether he knew Fletcher Christian. McCoy responded, "Oh yes...his son is in the boat there coming up, his name is Friday Fletcher October Christian."⁴⁶ The second usage of Friday was from Jenny, someone who would have known. Jenny was the only consort who left Pitcairn to return circuitously to Tahiti. There she gave two interviews with one appearing in the *Sydney Gazette* and other surfacing in the *United Service Journal and Naval and Military Magazine*, and later reprinted in Appendix E in Bligh and Christian's *The Bounty Mutiny*.⁴⁷ In the interview appearing in the *Sydney Gazette*, she mentions the birth of Fletcher Christian's son, Friday, and his marriage to Teraura. In Jenny's interview published in the *United Service Journal and Naval and Military Magazine*, she made a fleeting comment about Friday's birth and baptism on the island by William Brown. Her reference to Friday stimulated the editor to add the footnote, "This differs from all other accounts. His Name, according to Sir T. Staines and Capt. Folger, is Thursday October Christian."⁴⁸ This is a conundrum. Why Friday? Jenny's mention of Friday does give some credence that there is some truth to a name change. How is this possible? Since she left with Captain Reynolds of the American ship *Sultan* in 1817 her contact spans from 1790 to 1817.⁴⁹

Thursday appears several times in the *Pitcairn Island Register Book*, however, Friday does not occur. The change from Thursday to Friday gained usage in the aftermath of Captain Mayhew Folger's visit sailing on the American whaler, *Topaz* in 1808. However, there is no direct evidence, other than circumstantially, to substantiate that Folger initiated the calendar change. During the *Tagus* and *Briton's* visit in 1814, Lieutenant Shillibeer recorded Friday, and while the two English captains, Pipon and Staines record Thursday. Thereafter, Thursday gained prominence with the name surfacing on a list of residents compiled during the *Elizabeth's* visit in 1819,⁵⁰ and on a list of passengers sailing on the *Lucy Anne* to Tahiti in 1831. His use of Thursday for a son born in 1820 circumstantially supports Thursday over Friday.⁵¹ Finally, the *Register* records his death 21 April 1831 as Thursday October

46. Shillibeer, *A Narrative of the Briton's Voyage*, 82.

47. "Account of the Mutineers of the Ship *Bounty*, and their Descendants at Pitcairn's Island," *Sydney Gazette* (17 July 1819), 3; "Jenny's Story," *The United Service Journal and Naval and Military Magazine*, (London, 1829) Part II, 589–593 as reprinted in "Appendix E" of Bligh and Christian's *The Bounty Mutiny*, 228–234.

48. Bligh and Christian, *The Bounty Mutiny*, 231.

49. Herbert Ford, *Pitcairn: Port of Call* (Angwin, CA: Hawser Titles, 1996).

50. "Extract from the Journal of Captain Henry King of the *Elizabeth*," 388.

51. Thursday October Christian the II appeared in the *Pitcairn Island Register Book* and manifest from the *Lucy Anne*, see footnotes 5 (Lucus) and 28 (Brodie), respectively.

Christian. Still some doubt exists, with Shapiro, Ball, Denning, and Frost, all secondary sources, claiming Friday came first. Most eyewitness accounts refer to the first born as Thursday, including Staines, Papon, Bechervaise, the *Lucy Anne's* log, and the *Pitcairn Island Register Book*.

The calendar change probably originated during the short visit by Captain Folger in 1808 of the American whaler *Topaz*. Folger had crossed into the Pacific via the Cape of Good Hope and the Indian Ocean, and thought it Friday as opposed to Pitcairn's Thursday. Bligh, following custom of that era, ignored correcting dates on crossing the 180° meridian.⁵² Further, during the 1700s and 1800s British ship logs were kept according to nautical time; this adds another dimension confound factor. A nautical day begins at noon today and ends at noon tomorrow, but is given tomorrow's date.⁵³ On Friday, 19 September 1788 (nautical calendar), the *Bounty* was located at 178.7° west longitude; and on Saturday, 20 September 1788, the ship had sailed across the 180° meridian to 179.8 east longitude. Under the civil calendar, this same event began noon on Thursday, September 18, and continued to noon on Friday, September 19. Had Thursday October Christian been born at sea, this might have been another trifling point of confusion. Fortunately, Jenny, a former consort and eyewitness, said William Brown baptized the child on Pitcairn Island.⁵⁴ The mutineers would have converted from nautical to civil time sometime between taking the ship and settling on Pitcairn Island.

While the *Bounty* ventured close the 180° meridian after the mutiny, Maude's reconstruction (mapping) has the ship venturing just east of the 180th meridian (178° E), but not crossing, near Vatoa or Ono-i-Lau (Fiji).⁵⁵ This Maude gleaned from two eyewitnesses; one by the *Bounty's* boatswain's mate Morrison, and the other account from Jenny, previously mentioned.

The editors of the *Quarterly Review* mentioned being "favoured with some further particulars," presumably from Captain Papon, added comments on Pitcairn's calendar confusion.

This was occasioned by the *Bounty* having proceeded thither by the eastern route, and our frigates having gone to the westward; and the *Topaz* found them right according to his own reckoning, she having also approached the island from the eastward. Every ship from Europe proceeding to Pitcairn's Island round the cape of Good Hope will find them a day later, - as those who approach then

52. Neither did Captain Cook correct for crossing the dateline on his voyages across the 180th meridian. See James Cook, *The Journals of Captain Cook* (London, Penguin Classics, 2003), 68–73, 310.

53. Henry Harries, "Nautical Time," *Mariner's Mirror* 14, no. 4 (1928): 364–370.

54. William Brown, mutineer, was a gardener assigned to the *Bounty*; Bligh and Christian, *The Bounty Mutiny*, 231.

55. Henry Evans Maude, "In Search of a Home: From the Mutiny to Pitcairn Island (1789–1790)," *The Journal of the Polynesian Society* 67, no. 2 (1958): 126.

round Cape Horn, a day in advance, as the case with Captain Folger, and the Captains Sir T. Staines and Pipon.⁵⁶

It is interesting that only after Folger's 1808 visit does Thursday change his name to Friday, and this was substantiated in McCoy's introduction of "Friday October Christian" to Lieutenant Shillibeer in 1814. In assigning blame, credit Folger for adding a day to the island's calendar. Pipon emphatically blamed the "American Captain of the Topaz," Mayhew Folger for misleading the islanders.

Captains Staines and Pipon on their visit in 1814 realized that the islanders' needed to subtract one day from their calendar. Pipon placed blame on Captain Folger during his brief 1808 visit, he wrote that:

On our arrival here we found that John Adams was mistaken in the day of the Week & Month: he considered it to be Sunday the 18 Sept. 1814 & to his Credit they were keeping the Sabbath very properly making it a day of rest & prayer: whereas it was Saturday the 17th. By his account he had been misled by the American Captain of the Topaz when she touched here, & it was pleasing to observe, that they made the Sabbath day a day of rest, & set it apart for particular prayer & devotion.⁵⁷

It is ironic twist that from about 1808 to 1814 that these future Seventh Day Adventists were worshiping on Saturday. Interestingly, when the Pitcairners changed from Church of England *en masse* to Seventh-day Adventism in 1887, Pitcairn's Sabbath changed again from Sunday to Saturday.

Conclusion

Thursday October Christian was born in 1790 well east of the 180° meridian on Pitcairn Island. Bligh's *Bounty* did not correct for an eastward crossing of the 180° meridian in 1788. Supposing the IDL existed in 1789, in an eastward crossing, Thursday becomes Wednesday and not Friday. When Folger crossed into the Pacific via the Cape of Good Hope in 1808, he erroneously thought to advance the Pitcairn calendar one day; hence, a Thursday became a *faux* Friday, and so forth (i.e., Saturday became a *faux* Sunday). During 1814, Staines and Pipon learned that the Pitcairners were one day ahead on their calendar! With Staines and Pipon alerting the islanders of this predicament, Friday changed his name back to Thursday, and John Adams, the last surviving mutineer, returned to keeping the Sabbath on Sunday instead of Saturday until the adoption of Seventh-Day Adventism

56. Delano, *Narrative of Voyages*, 132.

57. Pipon, *Capt Pipon's Narrative of the State Mutineers*, page 11 of transcription.

when it ironically returned to Saturday.

Thursday October Christian is the name given to the first-born son of Fletcher Christian. That he might have changed his name to Friday after the arrival of Mayhew Folger in 1808, and later reverted to Thursday with a calendric correction suggested by Captains Staines and Pipon in 1814 is probable. Two of the eyewitness accounts support that a name change occurred, at least temporarily. How else does one account for Shillibeer's sketch titled Friday Fletcher October Christian, McCoy's introduction of "Friday" to Shillibeer, and Jenny reference to a son born to Fletcher Christian as Friday. Since Jenny left Pitcairn Island in 1817 she would have been around during the name change, and that might have remained the most vivid in her memory. However, after 1814, the name Thursday October Christian claims dominance; he even names a son born in 1820 Thursday October Christian.

Notwithstanding the Thursday or Friday conundrum, the first-born child of the mutiny on the *Bounty*, by all accounts, was an honest, hospitable, and thoughtful individual. During his lifetime of forty years (1790 to 1831), forty ships called on Pitcairn Island.⁵⁸ These ships started arriving during his eighteenth year and continued until his final departure on the transport *Lucy Anne* to Tahiti in 1831. This ordinary person, while living on an exceptionally remote island, managed to interact with American and British seafarers including sealers, whalers, merchants and traders, and naval officers. Today his legacy lives on among the Pitcairn Islanders and *Bounty* enthusiasts around the world. His memory is venerated Norfolk Island and Pitcairn Islands stamps. Even here, the enigma lives on with Norfolk Island using Thursday October Christian and Pitcairn Islands using Friday October Christian for their respective stamp issues.

Acknowledgement

The author is grateful for a Nancy and Jim Tiller Endowment Award that allowed travel to the Pitcairn Island Study Center at Pacific Union College, Angwin, California.

58. Shapiro, *The Heritage of the Bounty*, 1936, 107; Ford, *Pitcairn: Port of Call*, 3–16.

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***Pinocchio*, the Emotion of Shame and the Influence of Greek Thought**

By Simonetta Milli-Konewko*

*Considered a canonical piece of children's literature and one of the greatest works of Italian literature, *The Adventures of Pinocchio* written by Carlo Lorenzini is a universal icon that had a significant effect on world culture. According to Fondazione Carlo Collodi in 1990s the book has been adapted in 260 languages worldwide and, as of 2018, translated in 300 languages. The book offers a metaphor for the human condition and the historic time in Italy. This study analyzes Lorenzini's work through the emotion of shame and the influence of Greek classical literature. Shame, perceived as an act considered socially improper, is communicated by lowering the eyes as if to stop communication with others. But specifically, how does Lorenzini employ shame and for which reason? Which are the circumstances activating this emotion? To analyze these questions and others this article considers theoretical discourse on shame established, among others, by scholars of the emotions such as Aristotle, Dodds and Tomkins.*

Introduction

It was widely demonstrated that the Mediterranean culture has recognized, along the centuries, the values of honor and of shame as basic elements of its civilization. Studies by Barton, Horden and Purcell give us a wide demonstration of that component.¹ Carlo Lorenzini/Collodi² by validating the premises of this ancestral tradition, writes *The Adventures of Pinocchio* permeating it with such values. Collodi's masterpiece was first published, from 1881 to 1883, in the *Newspaper for children (Giornale per bambini)*³ but, as Prezolini declares, is a story for adults, a "tasting stone for foreigners," which communicates that sense of Italiennes. Those who understand Pinocchio's beauty, also understand Italy.⁴ In

*Associate Professor, University of Wisconsin-Milwaukee, USA.

1. Carlin Barton, *Roman Honor: The Fires in the Bones* (Berkeley, CA: University of California Press, 2001), 13; Peregrine Horden and Nicholas Purcell, *The Corrupting Sea: A Study of Mediterranean History* (Oxford, UK: Blackwell, 2000). All translations from the English texts are mine.

2. Collodi is the pen name used by Lorenzini to honor his mother's birthplace. See Carlo Collodi, *The Adventures of Pinocchio*, ed. Nicolas J. Perella (Berkeley, CA: University of California Press, 1986).

3. In the framework of literature for young people, many critics underline the originality of Collodi's text. See, e.g., Collodi, *The Adventures of Pinocchio*.

4. Giuseppe Prezolini, *La Cultura Italiana (Italian Culture)* (Florence: Società Editrice La Voce, 1906), 185.

agreement with this point of view, some scholars underline the epic character of the novel, suggesting some similarities between Pinocchio and Ulysses, Aeneas, Christ, Dante, Mazzini⁵ (Toesca, Wunderlich, Morrissey, Biffi). Beyond the multitude of different editions, reworked versions and rewritings of the story,⁶ a huge amount of critical material has been produced to support its comprehension. Bertacchini has collected the opinion of several scholars who have explored the issue whether the Italian national identity can be traced back to this text, or Italian people are really a population grown through the pains and sorrows experienced by Pinocchio.⁷ Spadolini, for example, by reconsidering the history of Italy through its most meaningful characters in the fields of theory, literature and politics, declares that Collodi's text offers Mazzini's philosophy about man's duties.⁸ According to Spadolini, Pinocchio's final salvation is to be found in the acquired notion of work and commitment, which Pinocchio can learn. This essay will demonstrate how Collodi uses the emotion of shame to build up Pinocchio's identity, to help him through his education to gain the values and virtues of the ideal citizen in the just constituted Italian Nation. I am going to examine Collodi's novel keeping in mind the theoretical studies on shame by – among others – Plato, Aristotle, Sophocles, Tomkins and Dodds.

E. R. Dodds in *Greeks and the Irrational* dedicates the first two chapters to a clarification of the culture of shame. According to the scholar, the society described by Homer was ruled by the feeling of shame, rather than the feeling of fear. The warriors' behavior and their dedication to their mission were regulated by the sense of honor. The desire to maintain their sense of decorum at high levels, and the consequent concern for public disdain disciplined their conduct and prompted them to maintain their perception of duty at a high level.⁹

5. Pietro M. Toesca, "La Filosofia di Pinocchio Ovvero l'Odissea di un Ragazzo per bene con Memoria di Burattino" ("The Philosophy of Pinocchio or the Odyssey of a Good Boy with Memory of Puppet"), *Forum Italicum* 31 (1997): 459–86. Richard Wunderlich and Thomas Morrissey, *Pinocchio Goes Postmodern: Perils of a Puppet in the United States* (New York, NY: Routledge, 2002); Giacomo Biffi, *Contro maestro Ciliegia. Commento Teologico a "Le avventure di Pinocchio"* (*Against master Cherry. Theological Commentary on "The Adventures of Pinocchio"*) (Milan, Italy: Jaca Book, 1977).

6. See, e.g., Giorgio Manganelli, *Pinocchio. Un Libro Parallelo (Pinocchio. A Parallel Book)* (Milan, Italy: Adelphi, 2002). Umberto Eco, *Povero Pinocchio (Poor Pinocchio)* (Verona, Italy: Comix, 1995); Stefano Benni, "Pinocchia," in *Teatro 2* (Milan, Italy: Feltrinelli, 2000).

7. Renato Bertacchini, *Le "Avventure" Ritrovate: Pinocchio e gli Scrittori Italiani del Novecento (Recovered "Adventures": Pinocchio and the Twentieth Century Italian Writers)* (Pescia, Italy: Fondazione Nazionale "Carlo Collodi," 1983).

8. Giovanni Spadolini, *La mia Firenze (My Florence)* (Florence, Italy: Le Monnier, 1995); Giovanni Spadolini, *Gli Uomini che Fecero l'Italia (Men Who Made Italy)* (Milan, Italy: Tea, 1999).

9. Eric Robertson Dodds, *Greeks and the Irrational* (Berkeley, CA: University of California Press, 2004).

Confirming Dodds' approach, the *Apology of Socrates*, written by a young Plato and highlighting Socrates' ideas, underlines the role played by the feeling of shame in the philosopher's life and philosophical mission. Plato reports that Socrates' speculative discussions enhance the value of shame, perceived as a fundamental emotion in order to lead a good life. Plato writes that Socrates, not knowing the distinction between teacher and pupil, invites the Athenians to overcome their cognitive shame and recognize gods' knowledge. According to Socrates, the only shame that can be considered appropriate is the sense of humility originated by the awareness of how irrelevant human knowledge is and by the feeling of reverence and dread towards gods' wisdom. Socrates instills shame in the Athenians, since they do not know the right principles of a moral and intellectual life and focus their attention on gathering material wealth and other futilities.¹⁰ He therefore claims that we need to preserve the honor of shame, that is: we should be ashamed when we give stronger importance to apparent rather than inner honor. Therefore, the shame he refers to concerns the emotional involvement of a person facing himself/herself and his/her conscience.

Some scholars underline the physical features that go together with shame, and they often connect it with a juvenile behavior. In the fourth book of the *Nicomachean Ethics*, Aristotle combines the concept of shame with that of modesty, and he describes it "as a sort of fear towards dishonor, which produces effects that are very similar to those created by fear for some dangers. In fact, those who feel ashamed, get red, while those who are afraid of death, turn white."¹¹ Aristotle describes it as a passion that only suits youth, since mature men should never perform a shameful action. Moreover, "shame is not characteristic of the virtuous man, if it is true that it raises as an effect of bad deeds (such deeds cannot be performed. Then, if some of them are bad, and others are considered as such by the opinion of people, that makes no difference: either the first ones or the second must not be performed, so we will not feel any shame¹²)." The shame suggested by Aristotle is an emotion that characterizes the individual who is not psychologically mature, yet. For this reason, he is not able to take mindful choices.

Other studies, although enhancing the meaning of the introspective side of this emotion, have also highlighted its connection with the outer world. Silvan Tomkins observes the personal nature of this emotion, when he informs us on how shame is, in contrast to all other affections, and experience of the self. When a person perceives shame, he/she feels it as an illness of his/her personality, and he/she feels it on his/her face – site of his/her bright eyes –

10. Plato, *Apologia di Socrate (Socrates Apology)* (Milan, Italy: Bompiani, 2000), 9.

11. Aristotle, *Etica Nicomachea (Nicomachean Ethics)*, ed. Claudio Mazzarelli (Milan, Italy: Bompiani, 2000), 9.

12. Aristotle, *Etica Nicomachea*, 9.

because that is the place where the self is expressed.¹³ On the other hand, the scholar analyzes shame also in connection with an individual's ability to be in relation with the others. He claims that this feeling represents a non-punitive answer to what is interpreted as a temporary interruption of communication.¹⁴ Moreover, Tomkins offers a kind of behavior connected to this emotion. Shame, felt as a feeling of failure and unworthiness, is a helping affection for interest and excitement, and is expressed by lowering the eyes, losing facial expression and releasing the neck's muscles, making our head bend down.¹⁵

Models of Shame

Pinocchio's growth from a wooden marionette to a boy goes through several steps, which teach and have their peak in the separation of the two entities in the final part of the story, when Pinocchio – amused by the sight of the marionette – is aware of his completed transformation. Collodi offers multiple occasions where Pinocchio is invited to grow from an emotional point of view, but every time it seems he does not recognize them. Pinocchio must accept his growth itself in order to become aware that he is not a marionette, but a free man.

On his search for Geppetto, Pinocchio arrives in the village of the Busy Bees, used by Collodi to represent the importance of commitment and work. While every person is active and bound to their occupation in that place, Pinocchio keeps refusing any task that is offered to him. Feeling the torment of hunger, he then thinks about begging.

Remembering Geppetto's teaching, the marionette knows very well that the only people deserving assistance are those who are condemned – because of their age or for illness – to the inability to work. Therefore, only "old and invalid ones"¹⁶ have the possibility to beg for mercy. Doing that would have been, for a young individual like Pinocchio, a shameful act.

The marionette does not adapt to Geppetto's teaching and when he sees a sweaty and flushed man carrying two carts full of coal, he chooses the shortest path in order to satisfy his hunger. "Pinocchio, considering him from his physical aspect as a good man, approached him and, lowering his eyes for the shame he felt, whispered: Could you mercifully give me a coin, because I feel

13. Silvan S. Tomkins, *Shame and Its Sisters*, ed. Eve Kosofsky Sedwick and Adam Frank (London, UK: Duke University Press, 1995), 134.

14. Tomkins, *Exploring Affect. The Selected Writings of Silvan S. Tomkins*, ed. E. Virginia Demos (Cambridge, UK: Cambridge University Press, 1995), 267.

15. Tomkins, *Exploring Affect*, 267.

16. Collodi, *The Adventures of Pinocchio*, 274.

like I am starving?"¹⁷ The man confirms Geppetto's principles: "Not a coin, the coalman answered, but I'll give you four, on condition that you help me dragging these two coal carts to my house."¹⁸ In half an hour Pinocchio asks other twenty people for money, but they all answer: "Aren't you ashamed? Instead of going around as a dawdler, go and look for a job, and learn how to gain your living!"¹⁹

In these examples Collodi describes a kind of shame that follows the behavioral pattern suggested by Tompkins. Pinocchio, feeling his own discomfort in performing an act that is not considered socially correct, expresses his anguish by lowering his eyes, almost as if willing to stop his communication with the others. By revealing the tight connection between shame and social behavior, the marionette feels shame, because he is aware that he has broken some cultural and behavioral rules.

It has often been declared that, speaking about shame, it is not the sensation itself, rather the authority that is outer. If the authority has been internalized, and if its rules or rituals are disobeyed, the individual loses his/her honor. For this reason, we can easily understand the strict consequences linked to remarkable transgressions. In fact, when the rules broken by an individual's actions are considered important in the structure of values of a community, then the judgement pronounced by others produces isolation and banishment. Heller's comparative study on shame and conscience is significant in order to understand the connection between shame and society. According to this scholar, shame is different from conscience, since these two emotions answer two different authorities. While the authority is, in the case of conscience, reason – a sort of inner voice – in the case of shame it is social customs, that is the set of rituals, habits and behavior rules that represent "other people's eyes."²⁰

Greek Patterns of Shame and Behavioral Standards

The *Iliad* offers clear examples, which explain how the feeling of shame is closely connected with the behavioral values that characterize a society. Through its protagonists – Hector and Diomedes – Homer conveys the implications pertinent to such emotional condition. Their decisions reveal the system of values that governs their demeanor. In a famous scene taken from Book Six, Andromache invites her husband Hector not to fight again, since her parents

17. Collodi, 274.

18. Collodi, 274.

19. Collodi, 274.

20. Agnes Heller, *The Power of Shame. A Rational Perspective* (London, UK: Routledge & Kegan Paul, 1985), 5.

and siblings are dead and he represents the only family she has, now.

Andromache begs her husband for mercy looking at her condition. She is afraid of becoming a widow and does not want her children to be orphan.²¹ Hector, although sharing his wife's concern, does not take into consideration her personal needs. He is aware of the emotional consequences caused by the decision his wife has suggested. In fact, if he avoided the war like a coward, his shame among Trojan people would be too heavy to bear.²² Andromache does not react to her husband's answer, thus showing the importance of public opinion in that historical background. Hector thinks he will feel ashamed, therefore losing the respect of Troy's citizens, if he fails to fulfill a precise obligation. This potential shame becomes an important instrument to measure and respect the values of his community.

In a similar way, Collodi represents the emotion of shame to describe the importance of other people's judgement and to underline how personal behavioral rules, not shared by the community, are broken. While Homer only imagines the emotion of shame and a consequent loss of respect, Collodi directly represents the negligence when it has already happened. They both clarify the importance of showing socially responsible demeanors, respecting other people's rights. They both describe the importance of taking into serious consideration one's own commitment, be it a war or working activity. While the Greek writer enhances the participation in the war as something promoting honor, Collodi suggests work commitment as an honorific value in the future of the new Italian Nation. The importance of this value is confirmed by the first article of the Italian Constitution, chosen by the fathers of the Constituent Assembly to highlight the working activity as a necessary basis of the new Italian State, rising after the tragedy of the war, thus confirming Collodi's precept.²³ "Italy is a Democratic Republic, based on work. People have sovereignty on it, and they perform it in the forms and within the limits of the Constitution."²⁴

Collodi does not use the emotion of shame only to divulge behavioral rules, but also to teach moral values. When Pinocchio finally seems to be reasonable and resolved in becoming a good boy, he probably faces his biggest temptation: following his friend Candlewick to the Land of Toys, where they can be free from any constriction and duty. After months of revelry, the two friends realize the consequences of their choice. The Land of Toys is a place of deceit,

21. Homer, *The Iliad*, ed. Herbert Jordan (Norman, OK: University of Oklahoma Press, 2008), 6431.

22. Homer, *The Iliad*, 6441.

23. The film created by Institute Luce in 1961 to celebrate the first fifty years of the Italian Unity confirms the importance of work as a form of progress for the commonwealth of the Nation. *L'Unità d'Italia*, Cinecittà Luce, 1961.

24. See Giorgio Ferrari, ed. *Codice Civile (Civil Code)* (Milan, Italy: Hoepli, 2010).

because it transforms the young people living there into donkeys. When Pinocchio looks at his body that is slowly turning, he is desperate and ashamed. "He soon went and looked for a mirror, filled the basin with water and looking at his image mirrored there, saw what he would have never wanted to see that is, his image adorned with a great pair of donkey ears. I let you imagine poor Pinocchio's sorrow, shame and desperation!"²⁵ The immediate reaction to such disorientation is a personal outburst: "He started crying, shouting and hitting the wall with his head: but the more he was desperate, the longer his ears grew, grew, grew and got furry towards their end."²⁶ Collodi reintroduces Aristotle's elements that give a definition of shame. Young Pinocchio, not being a mature and virtuous man yet, is vulnerable to shame, since he is not yet able to distinguish respectable circumstances from unworthy ones. He is overwhelmed by dejection and mortification when, looking at his reflection in the mirror, sees the donkey ears that mark, in this case, the feeling of shame instead of the facial blush considered by Aristotle.

The donkey ears become therefore the symbol of Pinocchio's transgression, of his inability to adapt himself to defined rules. Pinocchio feels ashamed because he has betrayed the Fairy's trust. While the woman wanted to celebrate his realization, Pinocchio has escaped another time, refusing his responsibilities again. With this example, Collodi condemns the marionette's decision and enhances the importance of a believable behavior, respectful of other people's feelings. Values such as loyalty and reliability are suggested as leading characteristics of the new Italy.

The Social Value of Shame

In the beginning, the writer presents shame as an individual event, while he later describes it as a social event. Pinocchio, after discovering and making direct experience of the deceit of the Land of Toys, understands his failure and would like to convince of that also his friend Lucignolo. However, he finds at first difficult to show his condition: "And he seemed to be willing to go out. But when he was at the door, he remembered he had donkey ears and, ashamed to show them in public, what did he think up? He took a big cotton hat and, after wearing it, he pulled it down, under the point of his nose."²⁷ As it is underlined more than once, shame arises the fear of being found, and therefore pushes people to go and hide themselves. Pinocchio's new condition, exemplified here by the physical transformation, is an obstacle because it is the sign of the violation and of a new position, thus more indeterminate and uncertain.

25. Collodi, *The Adventures of Pinocchio*, 372.

26. Collodi, 372.

27. Collodi, 372.

It was often underlined that "Shamed people dislike themselves and want to change, hide, or get rid of the self."²⁸ With the symbol of the donkey ears, and then with the complete transformation into a donkey, Collodi shows the implicit consequences associated with individuals' realization of their inadequacy and their desire for a change of both their physical appearance and conscience; the connected feeling of mortification expresses the adventure towards different spaces and the realization of how an individual is seen by others.

After making Pinocchio and Candlewick meet and talk about their homonymous misfortune, Collodi describes their dramatic transformation: "And while they were speaking, they both bent on all four on the ground, walking on hands and feet, swirling and running around the room. And while they were running, their arms became paws, their faces widened and took the shape of animal heads, and their backs filled with a grey, black and white fur."²⁹ The author then describes the culminating moment of their transformation process, by introducing the feeling of shame as distinguishing element of the event: "However, do you know what the worst moment was for those two scoundrels? The worst and most humiliating moment was when they felt a tail appearing behind them. Defeated then by shame and sorrow, they tried to cry and complain over their destiny."³⁰ Their mortification is enhanced when not just their physical aspect changes under their eyes, but also their voice becomes animal-like: "Had they never tried to do it! Instead of whimpers and complains, they emitted donkey brays. And soundly braying, they both sang heehaw, heehaw, heehaw."³¹

With this painful transformation, Collodi clarifies the social value of shame. The protagonists' anguish is originated by the materialized sight of what society saw in them. The transformation makes their choice and previous behavior apparent. In this context, shame is raised by their realization of the outer judgment. According to Sartre, shame is not a feeling raised by mere individual thought, but needs, on the other hand, other people's consideration.³² Pinocchio's shame, ascribable to the consideration the marionette must hold for the others and to the value given by others to his demeanor, shows the respect for the complex rules that regulate the relationships among new Italy's citizens.

The shame suggested by Collodi is in tight connection with the surrounding environment. Once turned into a donkey, Pinocchio is thrown at sea, and after being eaten by the fish and having gained his marionette shape again, he

28. Todd Kashdan, *The Upside of Your Darkside: Why Being Your Whole Self – Not Just Your "Good" Self – Derives Success and Fulfillment* (New York: Hudson Street Press, 2004), 3.

29. Collodi, *The Adventures of Pinocchio*, 384.

30. Collodi, 384.

31. Collodi, 384.

32. Jean-Paul Sartre, *Being and Nothingness*, ed. Haze E. Barnes (New York, NY: Routledge, 2003), 246.

confesses his story to his buyer, revealing that he was transformed into a donkey, complete with tail and ears, when he fled from his home, following bad companies. Pinocchio communicates the shame he felt after this transformation: "What a shame that was for me!...A shame, my dear owner, that I hope Holy St. Antony won't make you feel!"³³ The marionette describes then in detail the reasons of this shame: "Led to the donkey market to be sold, I was bought by the Director of a horse company, who decided to turn me into a great dancer and hoops jumper. But one night, during the show, I fell and was then with a limp on both legs."³⁴ Collodi describes with this example Pinocchio's mortification in becoming a public character, having to show his transformation to the outer world. As previously underlined, while shame usually reveals itself as a feeling of temporary detachment from other individuals, Collodi's example highlights, on the other hand, the union between the marionette and the community. Originated by other people's opinion as a manifestation, shame as Collodi intends it is shown towards the others, thus underlining the importance of accepting a vision of reality, although in contrast with our own.

Collodi does not use the emotion of shame only to make the relationship with the others easier; he also uses it as an instrument to know ourselves. After the visit by the doctors, having taken the medicine and avoided his death, Pinocchio tells the Fairy several more lies and sees his nose grow longer, to the point he is unable to move. Pinocchio senses the Fairy's incredulity when she laughs at him and offers him an explicit explanation of the types of lies an individual can fall into: "...there are lies that get you nowhere, and lies with a long nose: yours are precisely of this second kind."³⁵

The Fairy's skepticism generates the marionette's mortification: "Pinocchio, with no idea about where he could shamefully hide, tried to flee from the room, without being able to do it. His nose had grown so much, that he couldn't go through the door."³⁶ The discovery of his lie allows him to focus on his behavior. The shame he feels enables him to develop awareness of his actions. Lewis says that emotions can be classified according to the relations they create with themselves. While some emotions – like fear, happiness, anger – do not require an inner exam, other emotions – like jealousy, envy, empathy, shame – need this inner analysis. For this scholar, the difference between the two groups of emotions consists in this self-referentiality.³⁷ The relation between shame and self-consciousness was further underlined in classical Greek works. The *Oedipus Rex*, for instance, written by Sophocles around 430 B.C., conquered generations of people and involved several

33. Collodi, *The Adventures of Pinocchio*, 408.

34. Collodi, 408.

35. Collodi, 210.

36. Collodi, 210.

37. Michael Lewis, *Shame: The Exposed Self* (New York, NY: The Free Press, 1992), 19.

scholars who wanted to fully understand its meaning. Oedipus, after killing his father and marrying his mother, reacts with a performance of violent imposition: he blinds himself and explains his behavior with the following words: "I don't know – if I could see – what sort of eyes I would have looked at my father with, once he descended into the Hades, or my miserable mother. Towards both of them I have committed actions for which hanging me would not have been enough. Or maybe I could wish the sight of my children, born as they were? No, really, never, for my eyes. Nor the city, nor the walls, nor the sacred images of the gods."³⁸ According to this model, the protagonist's shame highlights his awareness and is connected to the feeling of responsibility towards his behavior. In fact, it was observed that shame can be related to fear: "...the structures of shame contain the possibility to control and learn from fear, since they give an understanding of ethnic identity of an individual that gives no meaning to fear when the two are reciprocally related."³⁹

Oedipus, filled with anguish for not being able to avoid the oracle that was suspended over him since he was born, according to which he would have killed his father and married his mother, blinds himself with the buckles of the dress of the woman who was his mother and his wife as well. "In this way, screaming, he hit his eyes repeatedly, and not just once, with the buckle; and the bleeding orbs wetted his beard, not pouring liquid streams of blood, but a black rain, a bloody storm."⁴⁰ With this violent act, Oedipus expresses all the remorse because of his understanding and realization of the intolerable acts he committed. Oedipus feels ashamed because he was not able to avoid his own destiny, while Pinocchio perceives this same feeling only after he has been presented with the *fait accompli*, demonstrating the necessity of an open confrontation in order to establish real relationships and gain the protagonist's emotional growth.

In the final chapter, Collodi describes Pinocchio's awareness, how he stops being a marionette, becomes a good boy and finally understands the importance of respecting the others. He recognizes the value of the Cricket's advices and finally, able to understand the deceits performed by Cat and Fox, he devotes himself to his father's health. In exchange for a simple glass of milk, he decides to do the effort of turning the reel of the produce seller Gingio, where he also assists the death of his donkey. Pinocchio understands the dying beast is his friend Candlewick and he cries, confessing to the man that the donkey was once one of his classmates. The farmer, full of wonder for Pinocchio's words, answers in a mocking way: "What? Gingio shouted with a sounding laugh. What?! Did you have donkeys as classmates?...Just think how much

38. Sofocle, *Edipo re* (*Oedipus Rex*) (Milan, Italy: Mondadori, 1982), 1369–75.

39. Bernard Williams, *Vergogna e Necessità* (*Shame and Necessity*) (Milan, Italy: Il Mulino, 1979), 222.

40. Sofocle, *Edipo re*, 1369–75.

you should have studied!..."⁴¹ Pinocchio perceives the man's taunting and, humiliated by the farmer's reaction, stays first in silence, then he shows his attention and dedication towards his father. "The marionette, feeling mortified by those words, did not answer, but he took his glass of almost warm milk and went back to the hut."⁴² Collodi clearly explains that from that moment and for months after the marionette worked hard in order to help old Geppetto. "And since that day, for more than five months, he continued to wake up every day before dawn to go and turn the reel, and earn in that way his glass of milk, which was so good for his dad's delicate health."⁴³ Many events were necessary for Pinocchio's maturation, but it is significant that his change happens soon after the representation of his mortification. Collodi suggests shame as the element that triggers the marionette's redemption and his inner growth, showing how an emotional involvement can influence an individual's ethic behavior.

Greek Paradigm of Shame and Moral Progress

To understand Pinocchio's growth and the meaning of the feeling of shame, it is interesting to consider the teaching of an ancient famous Greek playwright. In *Philoctetes*,⁴⁴ a tragedy written in 409 B.C., Sophocles introduces meaningful situations that describe shame. Transposing a previous epic myth, the author tells the deeds of the famous archer Philoctetes, abandoned by his friends on the island of Lemnos, because of a horrible wound caused by a snake. However, the Greeks come to know, through an oracle, that they will not be able to conquer Troy without Philoctetes' bow. Neoptolemus, following Odysseus' advice, pretends he has argued with the Greek leaders and tries to gain Philoctetes' trust again, obtaining in the end his bow. The deceit works, Philoctetes gives him his bow but, in the final moment, Neoptolemus regrets his behavior. He takes the bow he had delivered to Odysseus and gives it back to Philoctetes.

Neoptolemus feels ashamed for the suggested deceit, and the performance of his dishonesty marks the beginning of his moral growth and his struggle against himself. Neoptolemus, young, naïve and eager of popularity, at first obeys those who give him orders. Only in a second moment he realizes that a true person cannot be a mere instrument in the hands of others. While at first, he accepts to act against his feelings, afterwards he finds the strength to refuse that hypocrisy. His internalized feeling of shame is significant, because it expresses his commitment towards personalized ethical standards. Through the feeling of

41. Collodi, *The Adventures of Pinocchio*, 450.

42. Collodi, 450.

43. Collodi, 452.

44. Sofocle, *Filottete (Philoctetes)*, ed. Pietro Pucci and Guido Arrigò (Rome, Italy: Fondazione Lorenzo Valla, 2003).

shame, that marks the disaster of Odysseus' cynical plan, Neoptolemus finds the strength to impose his personality and affirm the respect of a human moral.

However, Neoptolemus highlights a further aspect of shame. Neoptolemus's concern about keeping his sense of honor and decorum towards himself at high levels does not support the selfish chase of self-confirming aims. On the contrary, the anguish of safeguarding his own dignity generates apprehension for another individual. Because of his perceived shame, Neoptolemus develops a behavior that is respectful of other people's principles and inclusive of different ways of behaving. Shame highlights, moreover, the illegitimacy of a behavior that does not respect an individual's deep parameters and seeks success through indecorous, inadequate and improper means.

In the same way, although Pinocchio's maturation happened because of several conflictual steps and humiliating conditions, his spiritual growth immediately follows the representation of a mortifying situation for the marionette. The farmer Gingio's mockery initially generates the marionette's silent shame, a reflection upon his past, then his generous action towards his father, and finally his definitive transformation. Like Neoptolemus' shame, also Pinocchio's feeling highlights not just his mistake in following the Cat and Fox's plans, everlasting tempters for the marionette, but also the starting point for his moral growth and the struggle against himself. The young and inexperienced Pinocchio, like the Greek hero, is at first fascinated by the various seductions of life and, although understanding the several mistakes he has done, he is always overwhelmed by promises of richness or easy situations. Both protagonists are not able, at first, to identify themselves with the others' condition, since they are only interested in their personal satisfaction. The mortification for their default suggests the awareness of other people's sorrow and the ethic growth of their personalities through right and acceptable means, which respect other people's needs.

Results

Although inferring the values of a society from the exam of the representations of shame and of the marionette Pinocchio seems difficult, critical studies have widely demonstrated that emotions are socially and culturally built.⁴⁵

Moreover, it was also demonstrated that emotions, as source of knowledge, are in tight connection with values, and therefore they do not just change from

45. Catherine Lutz's work widely demonstrates that, *Unnatural Emotions: Everyday Sentiments on a Micronesian Atoll and Their Challenge to Western Theory* (Chicago, IL: University of Chicago Press, 1988).

a culture to another, but they undergo evolutions within those same cultures.⁴⁶ Aristotle clarifies this element in his *Rhetoric*, when he teaches young orators how to incite a particular emotion in their public. According to the Greek philosopher it is possible to urge or subdue emotions through the listeners' persuasion on specific elements connected to their condition.⁴⁷ For example, in order to generate fear, the scholar suggests convincing the public to believe in the possibility of future dangerous conditions. That shows the tight connection between emotions and principles and values.

By following the premises of the Mediterranean tradition, which recognizes honor and shame as essential qualities of their own civilization, the representations of shame in the novel *Pinocchio* highlight the different ways of using this emotion in order to underline values and virtues that are suggested as basic requirements for the new Italian citizens. Used by Collodi in order to highlight the importance of other people's judgment, shame can moreover underline the violation of behavioral rules that are not accepted by society. The writer uses this emotion in order to accept and propagate behaviors that are socially responsible and respectful of others, in order to teach and spread moral values such as loyalty and reliability, and to trigger the spiritual maturation of the marionette, and therefore also of the citizens of new Italy.

Collodi, justifying an individual's ability to feel shame, follows what Plato teaches in his *Laws*: he perceives this emotion as something which prevents man from committing dishonorable actions.⁴⁸ Connected to the principles of responsibility and dignity, and suggesting Sophocles' teachings, it is meant as a mechanism of moral safety, a symptom that can trigger one's self-awareness, others' sorrow and an individual's ability to ethically improve. This way of sensing shame suggests that, if this ability were denied, the individual – opposing every element that goes against his own vision of the world – could perilously diminish or even eliminate the meaning of reality.

46. Alison Jagger, "Love and Knowledge: Emotions in Feminist Epistemology," in *Gender/Body/Knowledge: Feminist Reconstructions of Being and Knowing*, ed. Alison M. Jagger and S. R. Bordo (New Brunswick, NJ: Rutgers University Press, 1989), 145–71.

47. Aristotle, *The Rhetoric of Aristotle*, ed. Lane Cooper (New York: NY: Appleton-Century-Crofts, 1932), II 1–11.

48. Plato, *The Collected Dialogues of Plato* (Princeton, NJ: Princeton University Press, 1961), 647a.

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The Romantic Landscape: A Search for Material and Immaterial Truths through Scientific and Spiritual Representations of Nature

*By Van Thi Diep**

Landscapes generally bring to mind images of mountains, meadows, and beaches. These images are usually associated in the mind with the beauty of nature. To many, an encounter with nature is an encounter with the divine. While landscapes may evoke notions of nature's beauty or divine mystery, this link is not always recognized consciously. The association derives from a practiced experience instilled by history and culture, particularly through the pictorialization of nature. Landscape imagery has been a significant part of the history of Western civilization but it was most celebrated during the age of Romanticism. While the distinction between art, faith, and science is part of our contemporary world, this segregation did not always exist. To the contrary, it was the interdependency between art, faith, and science in Romantic landscapes that shapes our perceptions of landscapes today. Subjectivity was pertinent to Romanticism, as the modern desire for authenticity and truth emerged from the regimentation of the Enlightenment. Religious faith was one way for the Romantics to obtain truth, particularly, a divine truth found in nature and art. The representation of sublime landscapes allowed Romantic artists to express their own interpretations of truth. Simultaneously, Romantic science provided alternative narratives for the wonders of the world and the truths of nature. Science influenced the perception of nature and the way it was represented. Artistic depictions of plant-life, geology, atmosphere, and the celestial moon show this connection. However, for the Romantics, it was not only landscapes that embodied the tripartite of science, art, and faith. The meaning of life was dependent on the search for revelation in the material and spiritual worlds. Landscape was a vehicle that allowed for this revelation.

Introduction

Awe-inspiring landscapes can sometimes trigger us to ponder about our existence in the world. To some, an encounter with nature is an encounter with the divine. Landscape, as an expression of nature, is often associated with beauty and divinity. The idea of landscapes generally leads to images of mountains, meadows, and beaches. However, the connection between landscape images and the intrinsic beauty of nature is not always a conscious phenomenon. It is partially a practiced experience instilled by history and culture. For example, mountains and waterfalls were not always as appreciated throughout Western history. It was the pictorialization of nature that changed our opinion toward

*PhD Candidate, York University, Canada.

these landscapes. Through pictures, we learn to find the beauty of landscapes: “we have defined and judged nature on the basis of its conformity with pictures.”¹

Landscape imagery has long been a significant part of Western civilization. Landscape, as a subject matter in art, flourished exceptionally during the time of Romanticism (c.1770-1850). Evernden described Romanticism as an approach to life.² The Romantic is not one of anti-reasoning, but rather a person who questions scientific authority for the sake of using personal experience to interpret and express reality. The Romantics desired a holistic connection to the world, particularly to nature, and yet paradoxically, the Romantic is a “perpetual outsider,”³ always observing the world at a subjective distance. Thus, landscape becomes the constructed image to represent this incomplete unity with nature. This nature is not just one of plants, trees, and rocks, but also one that corresponds to the relationship one has with the world, in material and immaterial ways. Science and faith allow for discovery in both of these aspects of life; accordingly, they are ways to interpret the physical and spiritual worlds, respectively.⁴

While post-modern society finds comfort in the distinction between art, science, and faith, this split was not yet fully realized during Romanticism. To the contrary, this paper argues that it was the interdependency between the three aspects that shapes our impressions of landscape imagery today. Through various Romantic landscape images, including the works of Caspar David Friedrich, Philipp Otto Runge, J.M.W. Turner, Robert John Thornton, and John Constable, nature is shown as represented through spiritual or scientific perspectives. On one hand, the representation of sublime landscapes allowed Romantic artists to express their interpretations of nature’s divine truth. On the other hand, Romantic science provided innovative narratives for the formation of the world’s wonders, leading to more methodological approaches of representing nature. However, in many cases, the dynamic is not one of either-or. Rather, the images convey a push-and-pull dynamic between rationality and faith. Romantic landscapes therefore embody this oscillating tension as Romantics (and modern humans) navigate between and across these two ways of seeing the world. The Romantic landscape was a balancing of the relationship between faith, science, and subjective experiences, a blending that could be found harmoniously in the works

1. Gina Crandell, *Nature Pictorialized: “The View” in Landscape History* (Baltimore: Johns Hopkins University Press, 1993), 3.

2. Neil Evernden, *The Natural Alien* (Toronto: University of Toronto Press, 1985).

3. Ibid, 31.

4. Faith, religion, and spiritual are referred to in this paper in the following ways: Faith is an individual’s belief system towards the divine; religion is the organization of specific doctrines of faith amongst a group of people (i.e. Christianity in the case of Romanticism); and the spiritual relates to the realm of the immaterial, including the divine.

of Johan Christian Dahl. While the Romantic era was a revolutionary time for landscape painting, it was not only landscapes that embodied the tripartite of art, science, and faith. The meaning of life, both practically and conceptually, was dependent on the search for revelation in the material and spiritual worlds. Landscape was a vehicle that allowed for this revelation.

Romanticism: The Search for Truth in Divine Nature

Within a Cartesian worldview, Romanticism is portrayed as idealistic, sentimental, and irrational. However, for the Romantics, their ways of life were the epitome of modernity and humanity. Romanticism reveals a paradoxically modern desire for individualism *and* connectivity to a world that is both material and metaphysical. As a reaction to the over-rationality of eighteenth-century Enlightenment, Romanticism arose to oppose “the disenchantment of the modern world”⁵ and the increasingly “routine, monotonous, and mechanical”⁶ regimentation of social life. Romanticism was in fact a movement to renew the wonders of life.

Koerner describes Romanticism as “simultaneously reading the world as if it were a book, and imagining, or writing, a book that would be consubstantial with the world.”⁷ This book is open ended. Thus, uncertainty was perceived as motivation against repressing Enlightenment ideals, in support of individuality and subjective freedom. Social and political instability existed in parallel to this intellectual impulse. The circumstances leading to and after the French Revolution created unsettling conditions that brought death, destruction, and the transience of power (themes common in Romantic art) to the forefront. Hence, the Romantics viewed themselves as the “heroes” who braved through the repressions of society and brought forth a modern mixture of sentimental passions and inquisitive wonder.

Early Romanticism (c.1790-1810) was an intellectual cultural phenomenon formed by a group of prominent poets and philosophers in Jena, Germany who were influenced by Immanuel Kant’s writings. These thinkers were not homogeneous in their philosophies, but they were similar in their interests in humanity’s internal and external nature, and the spiritual relationship that linked the two. Romanticism was an approach to understand what it meant to exist in the world. Literature was characterized by extreme individualism and dramatic feelings in the earlier movement called *Sturm und Drang* (“Storm and Stress”)

5. Deniz Tekiner, *Modern Art and the Romantic Vision* (Lanham, MD: University Press of America, 2000), 6.

6. Ibid, 7.

7. Joseph Leo Koerner, *Caspar David Friedrich and the Subject of Landscape*, 2nd ed. (London: Reaktion Books, 2009), 31.

(c.1770-1790). According to Friedrich Schlegel, Romanticism was found in "whatever shows us a sentimental subject in fantastic form...Everything that speaks to our sentiment –not our sensual, but our spiritual sentiment."⁸ This spiritual sentiment was not only about religious piety, the rejection of the modern city's progress, or the fascination for the natural world. The essence of Romanticism was about how the human spirit was stirred.

Considered as the second scientific revolution, late-eighteenth century Romantic science was based on social and personal enthusiasm for wonder.⁹ As with literature and philosophy, this excitement in science was aroused by the regimentations of the Enlightenment. The first scientific revolution in the seventeenth-century, most notably marked by Sir Isaac Newton's work on celestial mechanics and optics, rendered a world that could be resolved through deductive reasoning and objective rationality. As the French Revolution emerged from the political repression of a mechanical and regimented society, science took a turn for the organic as an awareness of the limitations of knowledge became apparent with the discovery of imperceptible phenomena such as electricity and electromagnetism.¹⁰ Limitation became opportunity and inspiration. The subject of this thirst for organic ungraspable knowledge was of course nature itself. Not only was nature dissected under the magnifying glass in the laboratory, it was also examined through philosophy, poetry, and painting.

The interest in nature was not based on pure objective curiosity. As a rejection of a mechanically operated nature, the Romantics were seeking for an intrinsic quality to nature that was more than human and more than machine. In other words, the Romantics were searching for a *nature of authority*. Underlying the goal of this expedition for nature's truth was the question of teleology: nature's purpose, and consequently, our purpose as humans in relation to nature.

As Richards summarizes, nature prior to Romanticism was "stripped of her authority" by first being separated from humanity as a female figure in contrast to an almighty male God, and then secondly, portrayed as "a fictive creature that disguised humanity's own hidden desires and inclinations."¹¹ By contrast, nature for the Romantics was both divinity and humanity. Nature's means of channeling divinity to humanity was through the creative process. It was through the creative "genius" that the Romantics saw nature's expression. According to Richards, Goethe believed that the genius not only existed in art, but also in science. The creative genius channeled nature's authority in the scientific endeavor to reveal

8. Quoted in Hubert Schrade, *German Romantic Painting* (New York: H. N. Abrams, 1977), 7.

9. Richard Holmes, *The Age of Wonder: How the Romantic Generation Discovered the Beauty and Terror of Science* (New York: Vintage Books, 2008).

10. William Vaughan, *Romantic Art* (New York: Oxford University Press, 1978).

11. Robert J. Richards, *The Romantic Conception of Life: Science and Philosophy in the Age of Goethe* (Chicago: University of Chicago Press, 2002), 404.

more laws of nature. Furthermore, intuitive intellect was considered as intrinsically human and archetypically natural. Thus, "God, nature, and intellect are one."¹² Products of human creativity or intellect, including art and scientific discovery, were indirectly products of a divine source.

Art: an Expression of Nature's Truth through the Sublime

While Romantic science was the seeking of truth by revealing God's creation in nature, Romantic art was the representation of God's creation through personal expression. Since God's message was delivered through the creative nature of a human genius, the artist's work must not be merely a work of imitation. Instead, it must be a work of subjectivity. Consequently, no consistent style is found in Romantic art. One constant feature is that these works embody the spirit of Romanticism: finding meaning between one's internal nature and the external nature that holds the world together. What the artist had to personally offer was most important. The notion of personal expression brings to the forefront a major question in the philosophy of aesthetics: what is the purpose of art? For the Romantics, humanity, spirituality, and freedom all played important parts in this question.

Kant, whose philosophies prompted the Romantic Movement, began the inquiry into art's purpose through the relationships among nature, self, and the divine. Vaughan suggests that Kant and his Romantic followers found in the contemplation of nature the existence of a subjective "moral law" that is associated with the divine.¹³ According to Vaughan, Kant acknowledged "that the qualities we recognize in nature are ones that are inherent within us, but also that the contemplation of nature can provide the deepest moments of self-discovery."¹⁴ Romantic art, particularly in the representation of nature, brought out these self-discoveries. Landscape was therefore a subject matter in art one could use to explore the connection between the self and nature. As Schelling stated, "In landscape painting, only subjective portrayal is possible, since the landscape itself possesses reality only in the eye of the observer." A landscape covers up and reveals a higher truth: "The true object, the idea, remains formless, and it is up to the observer to discover it from within the fragrant, formless essence before him."¹⁵

A similar connection between art and human potential is found in Hegel's concept of art. As opposed to philosophy, both art and religion provided ways of

12. Ibid, 90.

13. Vaughan, *Romantic Art*.

14. Ibid, 134.

15. Friedrich W. J. Schelling, *The Philosophy of Art*, ed. Douglas W. Scott (Minneapolis: University of Minnesota Press, 1989).

representing truth to humanity.¹⁶ Through beautiful art, humanity is aware of our freedom to sense, feel, perceive, and imagine.¹⁷ The beauty created by the human spirit originates from a quasi-imminent divine. For Hegel, the divine in nature is unconscious; the divine in the conscious human spirit is of higher value. Therefore, art's purpose is to "show us what divine and human freedom look like."¹⁸ For Hegel, classical art was the purest, since idea and form were at balance. Romantic art surpassed the classic phase, as "art transcend[ed] itself"¹⁹ to a point where the inner world cannot be merely represented in the outer world, and instead takes on ideal forms. Consequently, Romantic art relied on the ideal, or in some expressions, subjective feelings that were often fleeting and ungraspable.

The sublime is one form of subjective feeling that is both ephemeral and overwhelming. The sublime's relationship to landscape in the Western worldview is influenced by the shifting of modern Christian theology, which was affected by the Romantic notion that God, nature, and humanity were synonymous. Challenged by scientific discoveries, biblical narrations of creation and of a singular God increasingly became mythical. The Romantics put forward two variations of faith in divine nature: pantheism, in that God is nature; and panentheism, in that nature is both part of and somehow still separate from God. Pantheism, while not necessarily rejecting the existence of an almighty divine, at least diminished the concept of an external God figure: a position that was not without controversy. The pantheistic approach was more present in the works of later Romantic science and art, as the explicit reference to a Christian God became greatly reduced and was replaced with nature's materiality. For the most part, panentheism was a complementary position to take: one that established a strong connection between nature and God, and was expressed by a heightened awareness in sublime landscapes.

Historically, landscapes were used as backdrops to portraits or mytho-religious narratives. Claude Lorrain's (1660-1682) landscape paintings featured mythological or biblical figures, but his popularity helped to elevate the worth of "pure" landscapes in the seventeenth century. Protestant aesthetics also helped in the secularization of landscape painting, particularly with the theologies of Martin Luther (1483-1586) and John Calvin (1509-1564). While Lutheran theology allowed the memorialization of religious figures but warned against idolatry and the worshipping of images, Calvinism viewed all religious art as potentially

16. Stephen Houlgate, "Hegel's Aesthetics," *The Stanford Encyclopedia of Philosophy*, 2016, <https://stanford.io/36x5Lfa>.

17. Georg W. F. Hegel, *Introductory Lectures on Aesthetics*, ed. M. J. Inwood, trans. Bernard Bosanquet (London: Penguin Books, 2004).

18. Houlgate, "Hegel's Aesthetics."

19. Hegel, *Introductory Lectures on Aesthetics*, 87.

idolatrous.²⁰ Historical heroes began to replace religious icons, and nature became the new subject for religious narrative.

The shifting of the imaging of Christian faith from prescribed icons to a divine nature encouraged the sublime to be represented in landscape paintings. The secularization of landscape imagery also allowed for more individualistic expression. However, the philosophical concern behind the need to represent the sublime was always a question of humanity's relationship with nature. The contrast between Burke's and Kant's interpretation of the sublime can be found in the tensions expressed in Romantic landscapes. Burke's theories of the beautiful and the sublime were based on the polar emotions of love and hate.²¹ His notion of the beautiful included classical features such as lightness, smoothness, balance, and harmony. The sublime, on the other hand, is the opposite of the beautiful – here darkness, uncontrollability, and mystery flourish. For the Romantics, the “disturbing” became just as important aesthetically as the pleasant.²² Furthermore, as all things beautiful could be traced back to God's design, the sublime also meant for the Romantics the power of God. Fear and repulsion were the feelings evoked when a human is matched against divinity expressed in the form of dominating nature. Landscapes that represent nature's relentlessness, such as shipwrecks in stormy seas, portray this version of the sublime.

As a response to Burke's writings, Kant focused on the human response of the beautiful and the sublime as fundamental processes in human faculties.²³ Kant's beautiful and sublime celebrated humanity's power of rationality over nature. In particular, the sublime results from a complicated dynamic relationship between nature (the external reality and God) and humans. Kant presents two possible characteristics of the sublime. First, it is the mathematical, an element's immeasurability due to its greatness that overwhelms our imaginations; and second, the dynamic, one's realization of the physical limitations of external nature over one's internal self. In both cases reason takes over. For the mathematical, it is our judgement of size that determines what is sublime. We can reason over the immeasurable and unimaginable. In the dynamic sublime, we can engage in reasoning over the fact that humanity's inner nature does not need to submit to the powers of external nature. Thus, the Kantian sublime is a combination of pleasure, when reason surpasses nature, and displeasure, when imagination and physicality in turn becomes defeated by nature.

While many landscape paintings portray the theme of a powerful nature, the

20. Gene Edward Veith, *Painters of Faith: The Spiritual Landscape in Nineteenth-Century America* (Washington, DC: Regnery Pub, 2001).

21. Edmund Burke, *A Philosophical Enquiry into the Origin of Our Ideas of the Sublime and Beautiful, and Other Pre-Revolutionary Writings*, ed. David Womersley (London: Penguin Books, 1988).

22. Vaughan, *Romantic Art*.

23. Immanuel Kant, *The Critique of Judgement*, trans. James Creed Meredith (Oxford: Clarendon Press, 1952).

sublime in Romantic paintings was more than straightforward instances of Burke's or Kant's philosophies. Rather, they portrayed the abstracted notion of the sublime as a tension between the powers of nature and the capacity of humans to comprehend and ponder over these powers. The result was landscapes that oscillated between pleasure and displeasure. The Romantic artist who was most characteristic of this trait was the German landscape painter Casper David Friedrich (1774-1840).

Romantic Germany was inclined to mystical approaches of interpretation. While much of Romanticism was characterized by imagination, heroism, and fantastical picturesque ruins, the medieval revival in nineteenth-century Germany was partly a nationalistic endeavor. Like many other German Romantics, Gottfried Herder believed that Gothicism was part of an "innate national identity."²⁴ Herder's doctrine led German Romantics to believe that there was uniqueness to the German soul that was best expressed in literature and the arts. Not only did ruins of Gothic cathedrals appear often in Romantic paintings, the aura of many Romantic landscapes in Germany and throughout Northern Europe maintained a sense of Gothic mysticism and fantasy.

Friedrich's paintings are described as "inhospitable, ancient, and timeless, and in them mankind looks almost like an alien creature."²⁵ Human life is placed in contrast to expansive nature through allegories of lone figures in solemn contemplation against illuminated landscapes. Sometimes the human figure is replaced by a tree or the symbolic cross. In each case, we are exposed to the tensions between mysterious nature and relatable mortality, be it the human body, a personified tree, a ruined building, or a religious artifact. Sometimes Friedrich would use a set of paintings for a continuous allegorical narrative. For example, the hunter who is in harmony with nature in *Landscape with Oaks and Hunter* (1811) is found struggling and desolate in *Winter Landscape* (1811). Eventually he is at rest in *Winter Landscape with Church* (1811), adjacent to the symbolic cross and Christmas firs. The narrative is a metaphor for the man as a faithful servant of God, as well as a human in the face of nature.²⁶

24. Vaughan, *Romantic Art*, 107

25. Ernst W. Veen, "A Dream Comes True," *Casper David Friedrich & the German Romantic Landscape* (Aldershot, U.K: Lund Humphries, 2008), 11.

26. Koerner, *Casper David Friedrich and the Subject of Landscape*.



Figure 1. Caspar David Friedrich, *Cross in the Mountains*, 1808

Source: Wikimedia Commons.

Friedrich took traditional notions of ritual, pilgrimage, and church, and relocated them as ordinary encounters with nature. According to Rosenblum, Friedrich's "need to revitalize the experience of divinity in a secular world that lay outside the sacred confines of traditional Christian iconography" was a personal necessity that was shared by his contemporaries.²⁷ Koerner makes a comparison between Friedrich and Schlegel: "If Schlegel desired that his writings be Bibles, Friedrich fashions the Romantic painter's corollary aspiration: that his canvases be altars."²⁸ The *Cross in the Mountains* (see Figure 1) is an example of Friedrich's aspiration. The painting, framed as an altarpiece, presents landscape as secularized religious imagery. The piece not only ignited a controversial discourse concerning the (ir-)reverence of the divine in landscapes, it also setback Friedrich's artistic career.

Friedrich was not a popular artist during his lifetime, likely because of his reclusiveness and the religiously controversial aspects of his paintings. The increased appreciation for his artwork since the twentieth-century suggests a resonance between modern souls and his portrayal of humanity's vulnerable relationship towards nature.²⁹ In both *Woman before the Setting Sun* (see Figure 2) and *Wanderer above the Sea of Fog* (1818), the human figure stands before us the

27. Robert Rosenblum, *Modern Painting and the Northern Romantic Tradition: Friedrich to Rothko* (New York: Harper & Row, 1975), 14.

28. Koerner, *Caspar David Friedrich and the Subject of Landscape*, 34.

29. Henk van Os, "Casper David Friedrich and His Contemporaries," *Caspar David Friedrich & the German Romantic Landscape* (Aldershot, U.K: Lund Humphries, 2008).

same way we see paintings. The figures, symmetrically placed in the frame, obstruct the view of the scene ahead. We unavoidably identify with these solitary figures in front of infinite nature.³⁰ In contrast, Friedrich's *Monk by the Sea* (see Figure 3) overwhelms by inverting illuminated nature with dark mystery, as the lone monk stands diminutively in comparison to the expansive sea. In all cases, the sublime is found in the revelation of human presence against infinite nature.



Figure 2. Caspar David Friedrich, *Woman before the Setting Sun*, c.1818

Source: Wikimedia Commons.



Figure 3. Caspar David Friedrich, *Monk by the Sea*, 1809-1810

Source: Wikimedia Commons

While Friedrich's mysticism was as much contemplative as sensual, the work of Philipp Otto Runge (1777-1810), Friedrich's German contemporary, emphasized

30. Ibid.

the inexplicable aura of nature. Unlike the paintings of Friedrich in which the detailing never overpowers the structure, Runge's paintings feel like an over-sharpening of a moment in time. Thus, painted elements, including plants and children, seem to contain a supernatural character. *Child in the Meadow* (see Figure 4), a detail from the painting *The Morning*, has a similar feel to Friedrich's *Woman before the Setting Sun*. However, the use of the infant in contrast to the materiality of nature is unique to Runge: "the infant lying in the meadows at dawn with his hands opening before the light like the leaves of the shrubs, naturalism and symbolism become perfectly fused...emotion and idea are one; and Runge's complex mysticism is conveyed...as pure feeling."³¹

Like Friedrich, Runge was successful in the realm of the sublime through the evocativeness of his works. While Friedrich influenced many younger landscape artists, including Johann August Heinrich (1794-1822), Carl Gustav Carus (1789-1869), and Johan Christian Dahl (1788-1857), these painters opted for more naturalistic approaches. Reservations are even more apparent in the sublime of English Romantics. J.M.W. Turner (1775-1851) is perhaps the only comparable English landscape painter. Despite Turner's love of literally depicting "storm and stress" in his numerous storm ship paintings, his choice of colors and brushwork created an entirely different sublime. It was one that was more aligned with Burke's concept than Kant's. His rash blending of strokes and the tendency for softer radiant tones displaced the mysticism of the German sublime. Instead, the mystery of nature was unquestioned and accepted in its overwhelming physical powers.

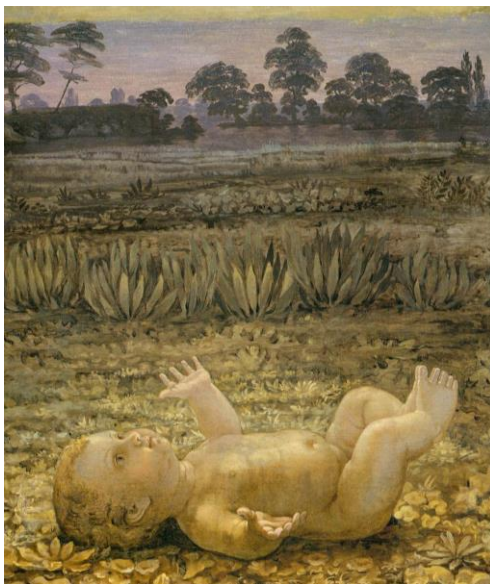


Figure 4. Philipp Otto Runge, *Child in the Meadow* (Detail of *The Morning*), 1809
Source: Wikimedia Commons.

31. Vaughan, *Romantic Art*, 142.

Science: An Analysis of Nature's Physical and Metaphysical Truth

The conventional notion of science as objective, clear, and methodical is often seen as incompatible with the subjectivity, vagueness, and fluidity of art and faith. Along with this incongruence, science is rarely considered "romantic." However, science in the age of Romanticism had its own sentimental and subjective qualities. Still, Romantic science was a delicate matter, particularly regarding religion. A fine line could make a separation between a science that "would promote safe religious belief or a dangerous secular materialism."³² For the most part, if the position wasn't close to atheistic radicalism, scientific discoveries could be looked on favourably. For the pantheistic or panentheistic Romantic scientist, no conflict existed between science and God. Rather, science was viewed as "a gift of God or Providence to mankind and its purpose was to reveal the *wonders* of His design."³³ Romantic science was considered a mission for truth – the truth behind nature, or more precisely, the truth of God's design of nature.

Despite the pervasive social doctrine of faith, individuals increasingly explored the idea of an atheistic scientific world. Nevertheless, the atheistic position offended both believers in the traditional faith in God and believers in the newly established faith in nature. The atheist who instead displaced his or her faith with objective mechanical science became the archetype for the stereotypical scientist who declares mysticism as ignorance and that all knowledge was within the grasp of human discovery. For instance, the English surgeon William Lawrence declared that science "must avoid 'clouds of fears and hopes, desires and aversions.' It must 'discern objects clearly' and shun 'intellectual mist.' It must dispel myth and dissipate 'absurd fables.'"³⁴ While Lawrence's stance is not much different from the perspective of science today, it was considered radical in the nineteenth-century. It was Lawrence's opposition to John Abernethy's life force theory, a notion that suggested a magnetism-like soul for organisms, which brought forth Britain's first scientific controversy in what was known as the Vitalism Debate.³⁵

The dispute over animal vitalism was not a discourse that was contained within the scientific sphere. It was likely science's contrast to Romantic notions of society, morality, and culture, particularly regarding the existence of "souls," that triggered Mary Shelley's idea for her book *Frankenstein or the Modern Prometheus* (1818). It was also probable that part of Lawrence is found in the fictional Victor Frankenstein, considering that Percy Shelley, her poet husband, had been a consulting patient of Lawrence for three years.³⁶ According to Holmes, the

32. Holmes, *The Age of Wonder*, 450.

33. Ibid.

34. Ibid, 313.

35. Ibid.

36. Ibid.

character's German background points to an even stronger resemblance to Johann Wilhelm Ritter, a German physiologist who had invented a dry-cell voltaic battery to experiment on the galvanic properties of animals. One theme of *Frankenstein* questions whether a soul exists, and if there is one, whether it can be created. As one of the earliest examples of science fiction, the novel presents critical doubt concerning humanity –the horror looming behind the physical potentials and moral limitations of human knowledge and scientific manipulation. The importance here in the context of Romantic art was not about whether nature ought to be examined via objective science or divine faith, but rather, it was the predicament of such opposing positions that brought about new desires and approaches to representation.

While objective science and pious faith occupied different ends of a spectrum towards attaining truths of the relationship between human and nature, a mixture of both positions can be found in Romantic landscape paintings. The mechanical vision and impartiality of the scientific process was considered appropriate for understanding nature and representing nature. When Ruskin boldly described Gaspar Poussin's (1615-1675) tree in *View of La Riccia* as a "carrot or a parsnip,"³⁷ we catch a glimpse of Ruskin's strong disdain towards trivial representations of nature. For Ruskin, if the Old Masters failed in attaining truth even with their laborious renderings of foliage, it proved either "their total bluntness of perception, or total powerlessness of hand."³⁸ It was the former reason that Ruskin believed to be of fault. Neglecting to properly observe and render the truths of nature was to disrespect nature and consequently God. While Ruskin most valued Turner's approach in representation (of experiential truth rather than detailed truth), Romantic artists in general were significantly more "truthful" in their paintings than classical painters as each artist revealed in their own way the processes of nature. The need for systematic observation is a law of objective science, but for Romantic artists, it was also a form of respect for nature's law.

The approach to representing nature truthfully came in the form of naturalism. While naturalism as a style was not uniform in presentation, naturalistic artists often selected practical views and experimented with varying techniques of observation and representation. The English painter John Constable (1776-1837) and the Norwegian painter Johan Christian Dahl were two of the most recognized Romantic artists of naturalism. Although artists such as Friedrich and Turner were not characteristically naturalistic, opting instead for symbolism and expressionism, the complex understanding of material nature was not beyond their artistic comprehension and abilities. In fact, Friedrich worked as a topographic draftsman³⁹ and Turner worked as an architectural

37. John Ruskin, *Modern Painters*. Ed. David Barrie (New York: Knopf, 1987), 162.

38. Ibid, 161.

39. Vaughan, *Romantic Art*.

draftsman⁴⁰ before establishing their careers in landscape painting.

The importance of scientific observation was relevant to naturalism. Not only did observation affect how landscapes were perceived and interpreted, the subject matter for paintings also changed to reflect the scientific developments of the time. While Romantic theories continued to suggest God's design of nature through plant ontology and earth formation, new perspectives in science also began to offer alternative narratives of nature's origins. As the ambitions of scientific knowledge increased and the relevance of divine narratives diminished, what was graspable by scientific observation increased in magnitude. With the aid of scientific approaches, the intangible, ephemeral, and once unattainable aspects of nature could be analysed and represented. Not only were the mysteries of nature unconcealable through the familiarity of a single leaf, they were also accessible through the representations of the faraway celestial moon.

Plant Ontology: Nature as God's Design

A philosophical topic that the Romantics paid much attention to was the question of natural teleology. Theories exploring natural teleology through archetypes and morphology were strong precursors to Charles Darwin's theory of evolution, which also influenced the way natural elements were perceived and portrayed. For example, a unique energy could be found emanating from the representations of plants and animals, recalling their unique ontologies and their essential teleological purposes. Goethe and Schelling were particularly influential in bringing their studies of natural sciences into the realm of philosophy and art. The foundation to Schelling's *Romantische Naturphilosophie* was the connection between mind and nature. Although the mind was a creation of nature, external nature was considered only a product of the mind. Thus, internal and external nature were considered a priori to consciousness and originated from an absolute ego.⁴¹ Stepping back into the absolute was the essence of identity: the archetype. According to Richards reading of Schelling, an organism evolved from its archetype; and for his reading of Goethe, the archetype was a dynamic force among species. He concludes that Goethe saw nature's morphological genesis from archetypes as not determinate – properties of each stage in succession can appear even when they did not exist before, suggesting the possibility of new organisms. From a teleological perspective, Schelling and Goethe's theories suggest that organisms have unique self-motivating essences. As in the Vitalism Debate, the existence of a soul was a question that persisted among Romantic thinkers. For some artists, such as Runge, the presence of a soul-like quality in plants was certain.

40. "Joseph Mallord William Turner (1775–1851)," *The Met's Heilbrunn Timeline of Art History*, accessed June 22, 2016, <https://bit.ly/2ta77hv>.

41. Richards, *The Romantic Conception of Life*.

Runge was particularly interested in the mystical ontology of plants. He described them as “very understandable creatures”⁴² originating from a divine source. Runge studied flowers and plants as “a way to find the mysteries of the supernatural in the smallest of nature’s manifestations.”⁴³ Runge’s project, *Times of Day* (1805), a series of prints using the motifs of flowers, children, and religious symbolism to demarcate the moments of *The Morning*, *The Evening*, *The Day*, and *The Night*, gives insight to his unique beliefs in nature and faith. The precision and detailing of each element in the prints show the respect he paid to the materiality of nature.

While Runge’s approach to botanical representation is more easily explained through a mystical perspective, a direct link between science and botanical art is found in the prints of Robert John Thornton’s *The Temple of Flora* (1798-1807). Erasmus Darwin’s (grandfather of Charles Darwin) writings on plant and animal sensations from *The Botanic Garden* (1789) and *Zoonomia* (1794) were quite influential for Thornton.⁴⁴ While Darwin rejected the idea of electric properties within the nervous system, Thornton advocated for the theory in his series *A New Illustration of the Sexual System of Carolus von Linnaeus* (1798-1807). The first two parts of the publication dealt with Carolus Linnaeus’s taxonomy for organisms, while the third part combined botanical drawings with mythology and poetry. Although some of the prints were allegorical, most of the other prints consist of flower “portraits.” The images express the ontological presence of each flower with precise detailing. The flowers are rendered as specimen plants with clear anatomies, often in unnatural positions in order to provide the best view for identification.⁴⁵

The prints have a vague surreal quality to them. The flowers often seem to float in space in the foreground, while at other times they are drawn to grow in unrealistic conditions. The landscape settings behind the flowers act as backdrops similar to the landscape backgrounds of seventeenth- and eighteenth-century portraits. One interesting print is Philip Reinagle and Abraham Pether’s *The Night-Blowing Cereus* (see Figure 5). The moon cactus, a native of Jamaica and Cuba that is only grown in greenhouses in England, is shown in a riverside setting.⁴⁶ Bright yellow petals radiating behind the illuminated core, symbolic of the sun’s enduring rays, are contrasted with its night-blooming ephemeral qualities. The full moon, set at midnight, further emphasizes the sublime Gothic feel of the print. In contrast, Peter Henderson’s *The Quadrangular Passion-Flower* (see Figure 6) is placed in front of a ribbed column, giving the colourful flower a wallpaper-like background for a more whimsical feel.

42 Quoted in Rosenblum, *Modern Painting and the Northern Romantic Tradition*, 148.

43. Ibid, 47-48.

44. Charlotte Klonk, *Science and the Perception of Nature: British Landscape Art in the Late Eighteenth and Early Nineteenth Centuries* (New Haven: Yale University Press, 1996).

45. Ibid.

46. Klonk, *Science and the Perception of Nature*.



Figure 5. Philip Reinagle and Abraham Pether, *The Night-Blowing Cereus*, 1800
Source: Public Domain Review.

Whether it was the intention of Thornton to showcase the distinctive “souls” of different flowers or to characterize the flowers as unique beings from various environmental contexts, the result of *The Temple of Flora* is undoubtedly the personification of plant material, a common feature found in Romantic botanical paintings. For Rosenblum, Ruskin’s notion of the “pathetic fallacy” is descriptive of this attitude in Romantic art.⁴⁷ For Ruskin, this “falseness in all our impressions of external things”⁴⁸ is based on the notion that feelings triumph over any other literal truths. The fallacy entails the transference of subjective feelings for an imagined reciprocity of nature:

"accepting sympathy from nature, which we do not believe it gives, and giving sympathy to nature, which we do not believe it receives...we fall necessarily into the curious web of hesitating sentiment, pathetic fallacy, and wandering fancy, which form a great part of our modern view of nature."⁴⁹

While all plant material could be personified or portrayed with unique life energy, the tree is often considered to be a symbolic mediator between humanity and divinity. From the tree of life, to the verdant cross, to the cathedral grove, the tree is a sacred symbol.⁵⁰ Certain Romantic theories of the world’s origin help to

47. Rosenblum, *Modern Painting and the Northern Romantic Tradition*.

48. Ruskin, *Modern Painters*, 364.

49. Ibid, 374.

50. Simon Schama, *Landscape and Memory* (New York: Vintage Books, 1995).

put the importance of the tree in perspective. In the theory of *Bildungstrieb*, Johann Friedrich Blumenbach described a life force intrinsic to organisms that gave potential to new species.⁵¹ This natural world had divine origins but was self-organized. Alternatively, Johann Gottfried Herder had a similar cosmological teleology but with a specific end goal: "The whole development of the world, in Herder's religious cosmology, arched with deliberate intent toward the crowning achievement, human nature and the perfection of humanity."⁵²



Figure 6. Peter Henderson, *The Quadrangular Passion Flower*, 1802

Source: Public Domain Review.

As the hierarchical threshold between plant life and human life, the tree represented the perfect symbol of nature, humanity, and the aspiration towards the divine. For many Romantic artists, the tree represented human feelings, particularly the lonely human soul. In Friedrich's *Village Landscape in Morning Light (Lone Tree)* (see Figure 7), the tree stands in the centre of the painting like the human figure found in *Woman Before the Setting Sun*. Its rootedness in contrast with its dying crown emphasizes its melancholic situation. In Dahl's *Birch Tree in Storm* (1849), the tree withstands the powers of a greater nature, a circumstance shared by humans. Alternatively, Constable's *Study of the Trunk of an Elm Tree* (c.1821) is reminiscent of formal portraits, detailed but detached. For the Romantics, trees and flowers were much more than material nature – they had authoritative, discernable souls.

51. Richards, *The Romantic Conception of Life*.

52. Ibid, 223.



Figure 7. Caspar David Friedrich, *Village Landscape in Morning Light (Lone Tree)*, 1822

Source: Wikimedia Commons.

Geology: Alternative Narrations of the Earth's Creation

While the Romantics believed that plants held the genesis of the divine in material nature, the origin of the earth's formation also appealed to their curiosities. Prior to the eighteenth-century, the conventional belief was that the earth originated according to the Christian narrative of the Great Flood. With the development of scientific and mining methods for geological studies, debates increased over the religious narratives of the earth's origins. As nature tourism developed from the Grand Tour through scientific expedition and artistic travel, the representations of geological features also evolved. Mountains and icebergs were not sights only daring explorers could see. Ordinary inquisitive minds also became familiarized with these features. Instead of witnessing them in person, one could experience them through the works of artists.

Fingal's Cave, located in the Isle of Staffa west of Scotland, is a geological feature that showcases the evolution of representation as changing scientific perspectives emerged regarding the origins of the earth's rock formation. With its unique natural physical qualities, the cave has attracted visitors since the eighteenth-century. Earlier prints from Joseph Banks' expeditions suggest the cave as a divine architectural masterpiece.⁵³ The cave is represented as a rigid structure that is both orderly and overwhelming in its cathedral-like character (see Figure

53. Klonk, *Science and the Perception of Nature*.

8). Geologists argued over the structure's "neptunist" or "vulcanist" origins.⁵⁴ James Hutton, a supporter of the vulcanist theory, proposed a controversial theory that shifted the perception of geology and the representation of the cave: within the striatal layers of rocks were the answers to the mysteries of the earth's formation.⁵⁵ As an alternative to religious narrative, this theory was sacrilegious. However, for some people, it was an explanation that mirrored early morphology theories: God was still the divine designer. Regardless, the debate generated more interest in the rocks themselves. The increased interest to the material and spatial qualities of the cave, generated attentiveness to other potential perspectives and interpretations. Some artists approached the structure objectively, while others looked for picturesque or subjective qualities to represent. The extreme can be found in Turner's *Staffa, Fingal's Cave* (see Figure 9) in which the cave is barely visible behind the wind, mists, and waves.⁵⁶ The subjective experience of Fingal's Cave has been interpreted through music by Felix Mendelssohn (1809-1847) in his *Hebrides Overture* (also known as *Fingal's Cave*). The composition, as like other representations of the structure, further shaped the cave as Scotland's famous natural landmark.

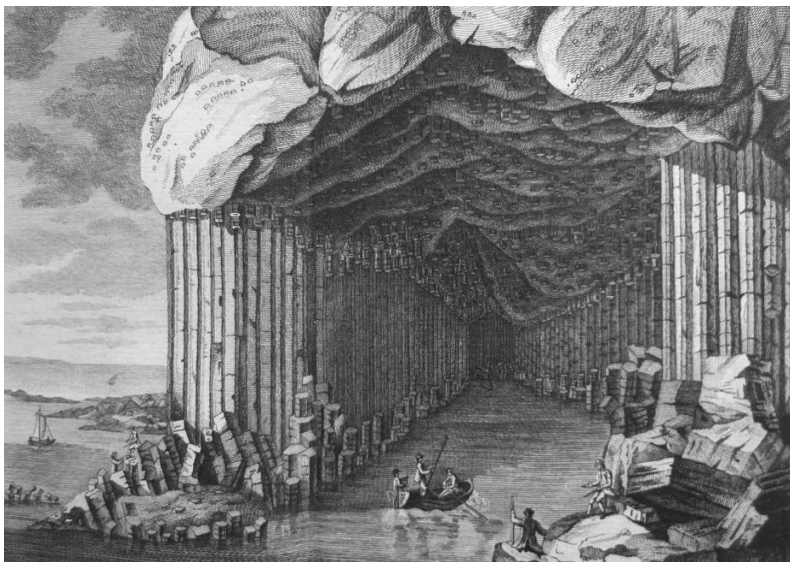


Figure 8. John Clevely, published in T. Pennant, *A Tour in Scotland, and Voyage to the Hebrides* 1772, London 1774

Source: Wikimedia Commons.

54. Neptunism was a theory proposing that primitive rocks (basalt in the case of Fingal's Cave) were formed by mineralization in water. Vulcanism, or plutonism, proposed that the rocks were formed by volcanic processes.

55. Klonk, *Science and the Perception of Nature*.

56. Ibid.



Figure 9. J.M.W. Turner, Staffa, Fingal's Cave, 1832

Source: Wikimedia Commons.

Atmosphere: Nature's Processes as Objective Analytical Phenomena

If rocks excited the spirits of Romantic artists, the ephemerality of the earth's atmosphere was certainly a phenomenon that was equally if not more enticing. Fog, mist, and the ever-changing arrangements of clouds were common subjects in landscape paintings. The obscure transience of the atmosphere in contrast to the rigour of scientific observation encouraged artists to observe and represent nature systematically through naturalism. The most popular subject matter for nature studies were clouds. Dahl, in particular, painted numerous open-air sketches of cloud formations in both daylight and moonlight. Presumably under the influence of Dahl, Friedrich also produced several cloud studies. Opposed to art as scientific representation, as evident from his refusal early in his career to paint cloud studies for Goethe's meteorological research,⁵⁷ Friedrich painted clouds to study changing moods. The relationship between artistic endeavor, scientific development, and approaches to representation was rather muddled. However, for Constable, the accurate portrayal of nature was most important.

Constable's early growth as an artist was mostly self-taught. He spent much of his training copying the works of famous masters, gaining the experience of acute observation and careful approaches to representation. For natural subject matter, he not only observed real specimens but also copied from books and illustrations.⁵⁸ Constable produced over fifty cloud studies during his visit to Hampstead in 1822.⁵⁹ While Constable's studies would have been considered

57. Koerner, *Caspar David Friedrich and the Subject of Landscape*.

58. Jonathan Wordsworth, Michael C. Jaye, and Robert Woof, *William Wordsworth and the Age of English Romanticism* (New Brunswick: Rutgers University Press, 1987).

59. Christopher Benfey, "Head in the Clouds," *Slate*, February 2, 2011, <https://bit.ly/38EORNR>.

scientifically ambitious, he was not interested in the taxonomy of cloud patterns. Instead, he was interested in the transience of the sky, marking each composition as a specific moment in time and space by its location, date, and weather conditions.⁶⁰

Rainbows were another atmospheric feature that intrigued Constable and other painters. As a traditional symbol of Christian faith, several Romantic paintings included rainbows as allusions to the divine. In Friedrich's *Mountain Landscape with Rainbow* (c. 1810), the rainbow is a radiant arc across the expanse of dark sky, symbolising the Christian promise of eternal afterlife.⁶¹ Turner's *Rainbow over Loch Awe* (c. 1831) is more suggestive of the symbolic halo, as it illuminates off the surface in an unnaturally tight radial arc. Constable, who went as far as to study prisms and the optics of light, still considered the concept of nature as a Godly creation.⁶² For Constable, painting nature accurately meant representing God's creation truthfully. Painting nature well meant to "understand it from every point of view, see it in scientific terms, and see it as the product of a moment of special intensity."⁶³ Instead of a symbol of divinity, his *Landscape with Double Rainbow* (see Figure 10) portrays nature as it is –the delicate blending of colours and its effect of transient light. To Constable, painting was both a science and an expression of feeling.⁶⁴



Figure 10. John Constable, *Landscape with Double Rainbow*, 1812

Source: WikiArt Visual Art Encyclopedia.

60. Vaughan, *Romantic Art*.

61. Koerner, *Caspar David Friedrich and the Subject of Landscape*.

62. Wordsworth et al., *William Wordsworth and the Age of English Romanticism*.

63. Ibid, 66.

64. Vaughan, *Romantic Art*.

Beyond Earth: A Conquerable Cosmos

For the Romantics, the mysteries of nature were expansive. Romantic art and science attempted to unravel the truths of nature through the mysteries of plant life, the mysteries of the earth, and finally the mysteries of the cosmos. In many cases, scientists and artists worked together in expeditions to reveal new discoveries of the world. Human perceptions of the sky, in unique circumstances like the Northern lights or in more common situations like a starry night, were sentimental to the Romantics. Mythological notions of the sky have existed for millennia. The night sky held stories of cosmic origins and guidelines to a harmonious life with nature. In most cultures, the sky was the heavenly home of godly figures. Alternatives to these mytho-cosmological narratives increased as new astronomic discoveries surfaced prior to and during the Romantic period. During the first scientific revolution, the laws of gravity and motion set a fundamental foundation for a new scientific narrative. In the second scientific revolution, the development of spectroscopy and astrophotography allowed the mysteries of the sky to be analysed and represented, generating a new array of themes and images.

The celestial body most commonly found in Romantic paintings was the moon. Twilight and moonlit landscapes provided both the symbolic reference to long-standing myths and the shifting worldviews of cosmological origins. For Friedrich, the moon was a sacred symbol with a similar purpose as the sun. In *Moonrise over the Sea* (c.1821) three contemporary figures sit contemplatively at the center of the painting awaiting the rising moon and the returning ships. Turner's *Keelmen Heaving in Coals by Moonlight* (1835) adds an element of social commentary, with the moonlight and industrial smoke becoming indistinguishable.⁶⁵ It was Dahl who popularized moonscapes in Romantic landscapes, as he painted numerous nocturnal scenes while he lived in Dresden, Germany, and also during his visits to Copenhagen and Italy. Dahl treated the moon as an atmospheric element. In *Mother and Child by the Sea* (1840) the ambiance of the scene is of an intimate repose. In other paintings, the moonlight sets a contrasting romantic tone to a modern city harbor.

The most common represented moon phase was the full moon. A full moon was associated with mystery and nostalgia, and was the phase that allowed for the most interesting lighting effects on the environment. As increasing studies were made with the availability of powerful telescopes, the moon's obscurities were increasingly demystified. With a reflector telescope made by astronomer Sir William Herschel, portraitist and amateur astronomer John Russell (1775-1806) set off to produce a detailed moon map in *The Face of the Moon* (see Figure 11). His painting is a realistic study of the moon in its gibbous phase, a position

65. Paul Spencer-Longhurst, *Moonrise over Europe: J.C. Dahl and Romantic Landscape* (London: Philip Wilson, 2006).

specifically chosen to capture the most interesting details of the moon's topography with distinct contrasts of light and shade.⁶⁶ By the mid-nineteenth-century, daguerreotype and early photography made it even easier to capture snapshots of the moon. Scientist and photographer John William Draper's (1811-1882) first images of the moon initiated the interest in astrophotography (see Figure 12). Consequently, the moon, which was once a mythological body, became a domesticated part of human scientific knowledge.⁶⁷



Figure 11. *John Russell, The Face of the Moon, 1793-1797*

Source: Wikimedia Commons.

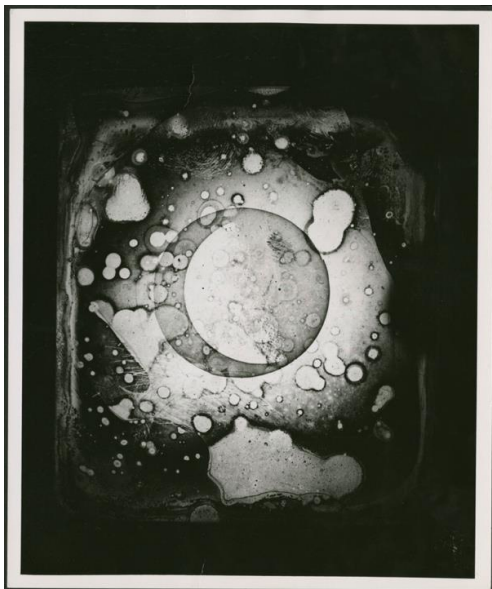


Figure 12. *John William Draper, Moon Daguerrotype, 1840*

Source: Wikimedia Commons.

66. Spencer-Longhurst, *Moonrise over Europe*.

67. Ibid.

Science, Faith, and Individualism: The Romantic Landscape Image

The secularization of religious imagery from idolatry to pantheistic/panentheistic interpretations of nature, the desire for truth in science, and the urge for self-expression all shaped Romantic art. On one level, the Romantics looked to nature for divine revelation. On another level, the objective observation of nature's material processes yielded truths into nature's divinity. Lastly, an individual's creativity, which was also seen as a gift from God, provided a means to return nature materially back into the world of humans. Romantic art, thus, had to balance between divine-spiritual connectivity, scientific accuracy, and personal expression. The Romantic artist who best represented the balance of these three aspects was Johan Christian Dahl.

Dahl, who was good friends with both Friedrich and Carus, sought a midpoint between Friedrich's mystic expressionism and Carus' scientific enthusiasm. Dahl was a prolific painter, producing numerous paintings that included many detailed study versions of repeated scenes during his lifetime. However, as productive as Dahl was, his humble craftsman background was maintained in his simple approach to art. Revealing nature's greatness, particularly influenced by the nostalgia for his native Norwegian landscapes, was the essence of his art. Unlike Friedrich, Dahl was not concerned with the transcendental aspects of the human-nature relationship. But in a down-to-earth way, Dahl did relate religious faith to nature by declaring "that the best writings and the most lucid religious ideas and feelings...[come] from statesmen, poets, speakers, and philosophers – and from those who study the natural sciences."⁶⁸ Like many other Romantics, Dahl believed that art and science, along with religion, aspired people to greater truth by "awakening [their] feeling[s] for nature" and that "apart from religion [art and science] are of great importance for the human condition in a spiritual as well as economic sense."⁶⁹

Dahl's beliefs on art and science were much aligned with the Romantic ideologies of his time. Moreover, his pictorial conventions were very picturesque. Like Constable, Dahl was an avid copier of Old Masters' paintings. His earlier works are often suggestive of Claude's pastoral idealism, the lighting effects of Danish painter Jens Juel (1745-1802), and the mountain and waterfall themes of Dutch painter Jacob van Ruisdael (1628-1682).⁷⁰ Dahl developed his own painting style as he matured as an artist, but his picturesque conventions remained consistent. With the support of many patrons, Dahl was considered a popular

68. Johan Christian Dahl, "Dahl's Statements on Art and Nature," *Johan Christian Dahl, 1788-1857: Life and Works*, trans. Marie Lødrup Bang (Oslo: Norwegian University Press, 1987), 247.

69. *Ibid*, 246.

70. Marie Lødrup Bang, *Johan Christian Dahl, 1788-1857: Life and Works* 3 vols (Oslo: Norwegian University Press, 1987).

artist during his lifetime. By successfully enhancing the image of his native Norwegian landscapes, Dahl is celebrated as a significant cultural figure in his home country.⁷¹ However, in the grand narrative of European art, Dahl is often only mentioned in passing as Friedrich's Norwegian friend and is less studied than other Romantic landscape painters. Perhaps Dahl's style is considered less of a "breakthrough" than his contemporaries within the historical context of European art. Even though he does not represent the extremes of Romanticism, Dahl's paintings are the most demonstrative of the Romantic landscape image. His paintings reveal a mixture of overlapping Romantic concerns, including the search for truth in nature, an objective methodology in exploring this truth, and ways to express the subjective self.

Although Dahl was a son of a fisherman, he did not start painting seascapes until the 1820s when he was already an established artist. Unlike the common nautical prints of his time, Dahl's emphasis was on the contextual landscape instead of the ship.⁷² Shipwrecks were common subjects in his paintings. *Shipwreck on the Coast of Norway* (see Figure 13) shows a detailed scenario that takes place on a rocky coast. The crevices and formations of the mid-ground and background rocks are portrayed while the foreground rocks are in shadow, illuminating the wrecked ship like a theatrical setup. Waves of water and storm clouds are painted in extreme detail with careful use of colour. A sense of hope is felt as a glimpse of light breaks out behind the clouds. Here, like many of Dahl's paintings, the figures are anecdotal. While the boy and his dog were lone survivors in his 1819 painting *Morning after a Stormy Night*, here they sit quietly to the side as the men work diligently to recover their belongings from the wreckage.



Figure 13. Johan Christian Dahl, *Shipwreck on the Coast of Norway*, 1832

Source: Wikimedia Commons.

The theme in *Shipwreck on the Coast of Norway* is very typically Romantic. The

71. Bang, *Johan Christian Dahl, 1788-1857*.

72. Ibid.

notion of a shipwreck recalls the sublimity of nature – a power that makes humans vulnerable. While Dahl's paintings can be quite melancholic, this one is rather optimistic. The message here is that while nature is powerful, humans can often overcome its forces. Allusions to *The Tempest* are not only apparent in the subject matter but also in the theatrical setup that Dahl created from the spotlight on the working men. The dramatic emotions of the Romantic *Sturm und Drang* are recalled as themes of voyage, misfortune, and fate are explored.

Unlike Friedrich's symbolic symmetry, Dahl often chose standard "postcard" views for his landscapes. The view used in his 1839 version of *Dresden by Moonlight* (see Figure 14) was taken from a familiar vantage point across the river that is almost identical to Bernardo Bellotto's (1721-1780) *View of Dresden* from 1759.⁷³ In Bellotto's version, the details of Dresden's architecture are displayed in clear daylight. Dahl's version has a similar setup but is distinctly romanticized. The dimly lit Baroque architecture instills a sense of nostalgia. It is already dark, but the people on the bank are still working as if it were daylight.⁷⁴ The silhouettes of horses wading in the water and the figure of a woman sitting contemplatively at the bank emphasize the peaceful mood. However, the partially cloud-covered moon and its dazzling reflection on the water are the main highlights of the painting, creating a poignant romantic aura. Dahl painted numerous paintings of Dresden, but almost all were set under a moonlight setting. Although Dahl examined the moon through many sketch studies, he was mostly interested in the ambiance that could be generated in night scenes.



Figure 14. Johan Christian Dahl, *Dresden by Moonlight*, 1839

Source: Wikimedia Commons.

The subject matter in which Dahl's personal attachment to nature is most evident is in his Nordic landscapes. Ironically, Dahl spent very little time in

73. Bang, *Johan Christian Dahl, 1788-1857*.

74. Reiner Moritz, *Johan Christian Clausen Dahl: View of Dresden under a Full Moon* (ArtHaus Musik, 2012).

Norway as an adult after leaving to study in Copenhagen. Nostalgia for his home country was most likely the reason for this niche of images, as Dahl painted Nordic landscapes even during his visit to Italy in 1821. The soft bright light of Southern Europe likely helped him appreciate the “mood-inducing” Northern climate and “its pronounced seasonal changes.”⁷⁵ According to Bang, Dahl used stock images of Northern landscape elements such as mountains and waterfalls learned from copying works of Ruisdael, Lingelbach (1622-1674), and Lorentzen (1749-1828), to complete many imaginary Nordic scenes. Although these paintings were popular among patrons, they lacked the sense of place and the maturity found in his later Norwegian landscapes.

View of Øylo Farm, Valdres (see Figure 15) is one of multiple large-scale paintings that Dahl completed in his later years despite the lack of purchasers.⁷⁶ Detached from commercialistic pressures, these paintings showed Dahl’s true feelings for the landscapes of his home country. Compared to his earlier Nordic scenes, *View of Øylo Farm, Valdres* has a greater sense of depth, which is created by the receding tonality of the mountains in the distance. For his Norwegian paintings, Dahl generally preferred more distant views than focus on landscape features. For example, the waterfall in *View of the Feigumfossen in Lyster Fjord* (1849) is simply a part of the habitat where goats in the foreground live. Dahl’s wider views were chosen to showcase the splendour of nature through expansive landscapes.⁷⁷ While the landscape of *View of Øylo Farm, Valdres* is a composite of mountains (background), a flowing stream and a specimen birch tree (left), a group of conifers (midground), a rugged path leading to the farming huts (right), and the people and horses living at the farm, each element is painted convincingly.



Figure 15. Johan Christian Dahl, *View of Øylo Farm, Valdres*, 1850

Source: Wikimedia Commons.

75. Bang, *Johan Christian Dahl, 1788-1857*, Vol. 1, 50.

76. Ibid.

77. Ibid.

For Dahl, the landscape features, the animals, the people, the changing clouds and the atmosphere are particular to a place: "Every region, or subject has its particular poetry which is often more or less local, even the weather and the form of the clouds – therefore one must study these especially and in each region in particular."⁷⁸ In order to bring out the essence of a region, it was important for Dahl to render every element truthfully. Dahl's inventory of study included the people he placed in his scenes. Though his costumed figures often feel like accessories in the landscape, Bang argues that Dahl's intentions were more than cultural nostalgia. Instead, "he wanted to evoke a feeling of nature's grandeur and dignity incarnated in the life of the inhabitants" and that his "figures belong and are bound to the landscape."⁷⁹ According to Dahl, nature cannot be "transcribed" literally; it can only be referenced through a certain kind of poetry.⁸⁰ The way to overcome the limitations of representation was by careful observation and artistic practice.

Conclusion

When we think of landscapes, we often conjure up images of certain landscape scenes. These images are influenced by memories of places we have experienced and landscape images we have seen. The preconceptions that we have of landscape images subconsciously affect our ordinary responses to landscape itself, for example, the desire to capture a "postcard image" at a scenic tourist destination. The images from the golden age of Romantic landscape art were particularly influential. During a time when life was infused with science, faith, and art, and further infused with a deep notion of the self in contrast to nature, Romantic painting established strong conceptions of a particular landscape idea.

While unraveling the mysteries of the human spirit was most important for the Romantics, the answers always traced back to nature as a divine source. Thus, science and art both became means of exploring the truths of the human spirit, nature, and God. As much as the human mind thirsts for truths, these realities could only be comprehended through representation. As a powerful form of representation, the picture holds tremendous significance. The picture is the most primitive way we visualize and communicate. For the Romantics, the landscape picture embodied truth. Even as worldviews changed from religious to secular, and from mythological to scientific, the landscape image continued to embody the truth of humanity's existence. Furthermore, the practicing of picturesque gardening, nature photography, and mass tourism has made the landscape image

78. Dahl, "Dahl's Statements on Art and Nature," 249.

79. Ibid, 134.

80. Ibid, 249.

into reality. Thus, the picturesque, beautiful, and the sublime are not just ways to appreciate landscapes; for the modern individual, they are the attributes of landscapes themselves.

Glenn Parson in *Aesthetics and Nature* questions whether we ought to appreciate the starry night sky as a mythological creation, a scientific phenomenon, or a visual pattern.⁸¹ Parson argues that nature should be appreciated *as nature*, in particular, rejecting mythological or religious narrations and formal (visual) acts of appreciation. If we consider the Romantics' appeal to nature and their representations of nature through landscapes, we would hesitate to confirm the validity of Parson's claim. In fact, I would argue that there is no singular way in which we *ought* to appreciate nature. In reality, we *do* appreciate nature because of multiple associations. We may be accustomed to seeing the world through the different lenses of faith, science, and art, but in the context of Romanticism, nature was all of three perspectives collapsed into one.

Even though faith and art have been split from science and are delineated as subjects that are secondary to the essence of modern life, landscapes continue to suggest the connection. No matter how rational the modern mind may be, humans are beings of memories. A large part of cultural memories is formed by images. Particularly, our modern concept of nature is shaped by the history of landscape images. The idealization of landscapes since the Romantic Movement has shaped the way we think and behave in landscapes today. Furthermore, a significant part of the history of Western civilization rests on a continuous exploration of the relationship between humanity and nature. For Schama, these recollections from this ever-shifting relationship are the baggage we cannot let go of as humans.⁸² Landscapes not only retain the memories of the land but also the representations of our historical conceptions of nature. Consequently, we cannot see a landscape separately as myth, science, or image. Each one of these perspectives feeds off the other two. The Romantic landscape image was created from mythical, religious, and scientific ideals. In turn, the Romantic landscape image encouraged certain cultural ideals of nature and beauty. Thus, the Romantics fully acknowledged the power of landscape images and the connection to their self-identities as humans.

Acknowledgements

This paper was completed as part of my PhD research, which is supported by the Social Sciences and Humanities Research Council of Canada through the Joseph-Armand Bombardier Canada Graduate Scholarship. I would also like to acknowledge the support of my PhD comprehensive committee, Peter

81. Glenn Parsons, *Aesthetics and Nature* (New York: Continuum, 2008).

82. Schama, *Landscape and Memory*.

Timmerman, Laura Taylor, and George Kapelos, for the original comprehensive exam version of this paper.

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Does Religion Harm Science? The Case Study of the Institut Supérieur Pédagogique of Mbanza Ngungu in the Democratic Republic of Congo

*By Joel Mbongi Kuvuna**

Religion and science are an expression of human existence. However, consistent with Freud's view of religion as elusive and childish, many institutions of higher learning have omitted religion from their curriculum and consider religion as harmful to the pursuits of their departments of science. This is evident in the Democratic Republic of Congo where the secularisation of public institutions in the 1970's has resulted in the exclusion of religion as a study subject and the disappearance of theological departments in secular institutions. Secularisation seems to be misunderstood as a need to avoid any spiritual dimension, rather than in its true meaning of expressing non-religious belonging. This study explores the interface between science and religion and the apparent conflict between these disciplines at the Institut Supérieur Pédagogique (ISP)/Mbanza Ngungu, one of the secular institutions of higher learning in the Democratic Republic of Congo. The findings of the study indicate that academics use science as a general concept, or an umbrella, in resisting religion or theology. On the other hand, religious believers use religion in a similar way to fight natural science. This reflects the apparent existence of a conflict between religion and science. Thereby, the fact that religion and natural science offer a different outlook on the world is negated. Although human knowledge is limited in its capacity to understand and explain the transcendental God, the theological understanding of God can fit into the scientific model. However, in the important body of knowledge represented by natural science, there is weakness. Part of this weakness lies in its ignoring of theology as a science in the field of religion. As regards the apparent conflict between religion and science, the respondents in the present study did not express perceptions of a significant incompatibility that could determine a negative relationship between science and religion. In fact, the interdependence of science and religion had been noticed and ascribed to the binary nature of human beings.

Introduction

A discussion between clergies and theologians has been opened on the possible establishment of a chaplaincy in the academic institution devoted to, *inter alia*, the study of the sciences and called *Institut Supérieur Pédagogique (ISP)/Mbanza-Ngungu*. Similar debates are taking place in all such institutions in the Democratic Republic of Congo (DRC). One theologian voices his opinion in favour of a spiritual service in the academic institution while a representative of the clergy protests that the presence of such a service would not only be useless

*PhD Student, University of KwaZulu-Natal, South Africa.

but even harmful in the context of scientific disciplines. Finally, the voice rejecting the establishment of a chaplaincy gets the overhand and the plan to offer services in the academic institution is suspended. The opponent argues that the academic arena must be devoted solely to scientific activities and be free from aspects of spiritual life or religion. This suggests that the debate between science and religion or faith is not just based on perceived differences between the atheism of the scientist and the spiritual views of the theist, but that Galadari is right when he states in his reflection on "Science versus religion: The debate ends," that it is also a conflict between different categories of theists.¹

Based on the apparent antagonism separating science and religion, I choose as a starting point for the present paper the hypothesis that there is a lack of confidence between religion (faith) and scientific commitment. In this context the following five questions arise.

- Is it possible to separate spirituality and science?
- Can a spiritual man be separated from a scientific one?
- Is science incompatible with religion?
- Is there any science in religion or theology, and conversely is there any spirituality, religion or theology in science?
- In what way could religion harm science?

Another point to be considered at the outset of this paper is the question to which area of study science and religion do belong? The fact is that both science and theology employ scientific instruments (for example, research questionnaires) to collect data. Additionally, theology is often referred to as the Science of Religious Studies, an expression that combines the two terms, science and religion. Dealing with this topic does not imply the total negation of the tension between religion (faith) and science. One professional scientist who is passionate about both science and Christian faith qualifies some degree of tension as inevitable in the relation between science and faith.²

Defining Science and Religion

Science comes from the Latin *scientia* and is defined as a system of knowledge that is concerned with observation and experimentation in the physical world.³ Science has always maintained an interrelation with culture.

1. Abdulla Galadari, "Science vs. Religion: The Debate Ends," *International Journal of Science in Society* 2, no. 2 (2011): 2.

2. Rebecca Bouveng and David Wilkinson, "Going beyond the How and Why of Science-Religion? Senior Christian Leaders on Science and Personal Faith," *Science & Christian Belief* 28, no. 2 (2016): 105.

3. Jacob E. Safra, "Science," in *The New Encyclopaedia Britannica*, ed. Jacob E. Safra (Chicago: Library of Congress Control, 2005), 504.

Religion, on the other hand, is part of culture. Religion refers to a system of thought, feeling and action shared by a group.⁴ Diamond defines religion as a "presumed distinction between humans and so-called animals, and a presumed uniqueness of humans in the universe."⁵ By contrast, he defines science as "our body of knowledge about the reality of the world as best we can understand it." Referring to the above understanding, Levin considers science and religion as two worldviews used to interpret the universe.⁶ Moreover, Harrison states:

"The modern terms science and religion evolved from the earlier *scientia* and *religio*, both virtues or intrinsic personal characteristics that ideally lead to particular mental dispositions: *religio* is a moral virtue like the inner piety, and *scientia* is an intellectual virtue or habit of mind."⁷

Debate on Science and Religion

The debate on science and religion has been influenced by, among others, three scientist-theologians, namely Ian Barbour, Arthur Peacocke and John Polkinghorne, between 1970 and the early 2000's when Peacocke and Polkinghorne were priests in England.⁸

Arguing for the supremacy of religion over science, Seung posits that natural science was born in the Christian world.⁹ This means that religion has existed for ages. Part of the history of science is the statement that the priest and the scribes were responsible for record keeping, land division, and calendar determination. They also developed written language and early mathematics.¹⁰ Talking of science and religion seems to be posing limits to the discussion. Is it not better to talk of natural, or secular, science and religion?

Considering problems of a universal nature, scholars list some of life's big questions concerning, *inter alia*, the beginning and the end of the universe, the compatibility of evolution and creation, the laws of nature and miracles, the nature of space and time, the problematic nature of soul, the claim of science being the only sure path to truth, the possibility that science could enable a belief

4. Barbara A. Chernow, "Religion," in *Columbia Encyclopedia*, ed. Barbara A. Chernow and George A. Vallasi (USA: Columbia University Press, 1993), 2300.

5. Jared Diamond, "Science & Religion in the Rough," *Humanist* 76, no. 6 (2016): 13.

6. Jeff Levin, "The Territories of Science and Religion," *Christian Century* 133, no. 4 (2016): 46.

7. Levin, "The Territories of Science and Religion," 47.

8. Christopher Southgate, "Science and Religion in the United Kingdom: A personal view on the contemporary scene," *Zygon: Journal of Religion & Science* 51, no. 2 (2016): 363.

9. Kim Seung Chul, "Śūnyatā and Kokoro: Science-religion dialogue in the Japanese context," *Zygon: Journal of Religion & Science* 50, no. 1 (2015): 158.

10. Henri Poincare, "Science," in *The Columbia Encyclopedia*, ed. Barbara A. Chernow and George A. Vallasi (USA: Columbia University Press, 1993), 2452.

in God.¹¹ Science and religion are concerned with (conceptual) views of the world. This would seem to reduce both to their cognitive contents or beliefs: science to scientific theories and religion to theological views.¹² Sheahen argues that "science and religion are the two essential perspectives that allow us to see the universe."¹³ In his view, "science takes things apart to see how they work, and religion puts things together to see what they mean." There is a partial debate argued by some scholars, raising the religion question "why?" while science asks "how?"¹⁴ On his side, Luyaluka understands that religion is one of the three epistemic components in the approach of science; thus, religion can be expressed in scientific mode.¹⁵ His understanding of the Black-African holistic epistemology affirms that the unity of science and religion can be understood by the centrality of the notion of God in understanding the world.¹⁶ Science and religion are thus understood as virtues since different points of view are needed to approach an understanding of the world and of human existence in it.¹⁷ Reflecting on natural science and Scriptures, Galileo states that both are subject to re-interpretation. He argues that the rational reasoning for God's existence does not differ from the rational explanation of the existence of gravity. Therefore, the power of reason used by atheist scientists to deduce the working of gravity is the same power used by theistic scientists to support their belief in God.¹⁸ God can be active in the creation of life as well as in guiding life-forms persuasively towards certain goals.¹⁹

In the science-religion relation, major religious Scriptures do not condemn science. The fanaticism of followers is manifest in the generalized use of religion or science to condemn each other.²⁰ Some scientists are convinced that science is

11. Southgate, "Science and Religion," 364.

12. Zainal Abidin Bagir, "The 'relation' between science and religion in the pluralistic landscape of today's world," *Zygon: Journal of Religion & Science* 50, no. 2 (2015): 406.

13. Thomas P. Sheahen, "The Great Partnership: Science, Religion, and the Search for Meaning," *National Catholic Bioethics Quarterly* 16, no. 2 (2016): 355.

14. Pat Bennett, "Turning stones into bread: Developing synergistic science/ religion approaches to the world food crisis," *Zygon: Journal of Religion & Science* 49, no. 4 (2014): 951.

15. Kiatezua Lubanzadio Luyaluka, "Comparative Theology: Sumer, Memphis, Kongo Religion and Natural Systematic Theology," *Journal of Religion and Theology* 2, no. 1 (2018): 42.

16. Kiatezua Lubanzadio Luyaluka, "Religion and science conversion possibility: towards the formulation of a systematic theodicy of african traditional religion and its reinterpretation of empirical cosmology," *The Journal of Pan African Studies* 7, no. 7 (2014): 108.

17. Peter Harrison, "The modern invention of 'science-and-religion': What follows?" *Zygon: Journal of Religion & Science* 51, no. 3 (2016): 752.

18. Galadari, "Science vs. Religion," 1

19. Jeffrey Tripp, "A New Look at the Relationship between Science and Religion, Clifford Chalmers Cain," *Reviews in Religion & Theology* 23, no. 4 (2016): 455.

20. Galadari, "Science vs. Religion," 1.

true, and religion is false. Conversely, theologians may be tempted to see religion as the truth and to declare science wrong. Many scientists unfortunately support Freud (1927), considering religion as an illusion and as childishness that ought to be overcome.²¹ The interaction between faith and knowledge can be approached differently. Quoting Pantinga, Ruse argues that, "there is a superficial conflict but deep concord between science and theistic religion, and superficial concord but deep conflict between science and naturalism."²²

In accordance with the above statements, people seem to try and get a grip on this problem by positing: "Science is here, and religion is here." We have now got to somehow bring the two together. And, it is important to bear in mind that both science and Christian faith are complex notions and, indeed, contested cultural spaces.²³ The historian of science, John H. Brooke, claims that science and religion must each be understood in their historical and social contexts. In addition, when considering the science-religion controversy, we need to take into account that, with time, the boundaries between their domains have shifted.²⁴ Levin, on the other hand, opines that religion and science will always be in conflict. He considers religion as a "primitive state of consciousness" which has succumbed to several centuries dominated by victories of rationalism and empirical science.²⁵

This research also lays on Luyaluka understanding of the Afrocentric idea to revisit the Eurocentric hegemony and epistemological view imposed on other cultures.²⁶ The African culture on science-religion relation is positioned on epistemology, arguing four assertions which are, all reality is in God and is spiritual, any knowledge is comprised within the knowledge of God, any truth is revelation, and the matter is only a limited perception of spiritual reality.

Is there any Connection between Religion and Science?

This section discusses attempts to determine the connection between science and religion. In the words of Russels, the connection can be made apparent by looking upon the world as a pluralistic landscape. This implies being aware of the world in a more inclusive way, characterized by Russell as a worldview with an international, intercultural, interreligious, and

21. Galadari.

22. Michael Ruse, *How Not to Solve the Science-Religion Conflict* (USA: Oxford University Press, 2012), 620.

23. Bouveng and Wilkinson, "Going beyond," 105.

24. Bouveng and Wilkinson, 105

25. Levin, "The Territories of Science and Religion," 46.

26. Kiatezua Lubanzadio Luyaluka, "African renaissance, a solar epistemological and religious imperative for afrocentricity," *The Journal of Pan African Studies* 12, no. 5, (2018): 89-92.

interdisciplinary scope.²⁷ The present researcher agrees with Bagir that it is negative to define science by distinguishing it from religion and by showing the two as being in conflict.²⁸ Before the nineteenth century, when science emerged as a modern discipline, there was no conflict between science and religion. Many scholars argue that the problematic categorisation of science and religion came about in a Western Christian context.

Based on a consideration of the views of various scholars, four expressions can be distilled that summarize the relation between science and religion:

1. *Acceptance of diversity.* Acceptance of diversity implies a tolerance of variety in a general sense, including a variety of opinions. Scholars argue that the divide characterizing the relationship of science and religion, is a construct that emerged after the eighteenth century. In order to find common ground in respect of the opposition between science and religion the acceptance of diversity is one of the procedures employed. To accept diversity is not unrelated to embracing pluralism. While we may provide justifications for the wider use of both the terms diversity and pluralism in today's world, the concept of pluralist awareness may require some further thought.²⁹ In religion, the diversity of views is a fact that has to be underlined. Each religion traditionally emphasizes different aspects of belief and religious practice and of the interplay between them. Each religion may also have its own view on scientific claims. Acceptance of diversity may be applied as long as, in respect of religious diversity and perceptions of science, basic tenets of beliefs are acknowledged.
2. *Dialogue.* Science, religion, and art are believed to have similar roots.³⁰ Bouveng and Wilkinson maintain that science and religion are distinct but equal and encourage dialogue.³¹ In their research a number of interviewees embrace science and did not see faith and science as being in conflict.³² There is an opinion, that the problem is not located either in science or in religion, but that it is caused by fundamentalist thinking. A holistic approach to science and religion could lead to an acceptance of the different ways of each to express reality. One possibility to enable dialogue is to avoid fundamentalism on both sides of the divide between religion and science. Fundamentalism constitutes an obstacle to a true engagement with the relation between science and faith.
3. *Relationship.* One of the more prominent views on the divide between science and religion is concerned with the concept of relation. Drees thinks that the

27. Bagir, "The 'relation' between science and religion," 403.

28. Bagir, 408.

29. Bagir, 405.

30. Margaret Boone Rappaport and Christopher Corbally, "Matrix thinking: An adaptation at the foundation of human science, religion, and art," *Zygon: Journal of Religion & Science* 50, no. 1 (2015): 85.

31. Bouveng and Wilkinson, "Going beyond," 100.

32. Bouveng and Wilkinson, 104.

typology does not present science and religion as being in conflict.³³ They surely are independent, capable of maintaining dialogue and ready for integration.

Science and religion understand the world according to their cognitive contents or beliefs. Science relies on scientific theories and religion on theological views.³⁴ The question arises if theology is a science. If so, how can science be disconnected from religion?

The experience of the Ammatonia people in Indonesia shows that their religion is also their science, as it gives people understanding of nature and tells them how to behave and "exploit" it. Religion is a source of social-political governance as well.³⁵ This use of religion is also found in the Christian tradition of the Old Testament in the Bible.

4. Collaboration. Fuller's study, "Into Terra Incognito," proposes that scientific and theological practitioners should find a way to collaborate in dealing with practical problems,³⁶ while Robert Boyle describes scientific investigation as "reasonable worship."³⁷ In the opinion of Sheahen, only belief in a transcendental God can render human existence other than tragic.³⁸

A major concern is to bring together the reflections of scientists, philosophers and theologians with efforts that contribute to the welfare of the human community, as suggested also by Bagir.³⁹ An Indian conception is that science and religion are not in opposition but represent forces that together could create a world in which persistent epistemological and ethical problems get resolved to the benefit of humanity. In Indian thought, rationality and spirituality are not viewed as antagonistic.⁴⁰ In this context, Leidenhag reasons that God can interact with the world without breaking natural laws.⁴¹

33. Willem B. Drees, "Rich religion and science: Asian religions, Ian barbour, and much else," *Zygon: Journal of Religion & Science* 48, no. 4 (2013): 853.

34. Bagir, "The 'relation' between science and religion," 406.

35. Bagir, 415.

36. Michael Fuller, "Into terra incognita: Charting beyond Peter Harrison's the territories of science and religion," *Zygon: Journal of Religion & Science* 51, no. 3 (2016): 729.

37. Harrison, "The modern invention of 'science-and-religion'," 752.

38. Sheahen, "The Great Partnership," 355.

39. Bagir, "The 'relation' between science and religion," 416.

40. Anindita Niyogi Balslev, "'Science-religion Samvada' and the Indian cultural heritage," *Zygon: Journal of Religion & Science* 50, no. 4 (2015): 877.

41. Mikael Leidenhag, "The relevance of emergence theory in the science-religion dialogue," *Zygon: Journal of Religion & Science* 48, no. 4 (2013): 967.

Briefing of School Laity in the Democratic Republic of Congo

Although the majority of the DRC population (85%) are Christians, the constitution underlines the laity of the state along with freedom of religion. Maybe different contexts require that governments are secular in order to maintain neutrality when they are confronted with issues of faith (Conkle 2000). In the DRC, the secularisation of public institutions in the 1970's has led to the exclusion of theological departments and of religion as a study subject from public universities, based on the argument that the academic sphere ought to be secular. Seminaries for theology have been established independently from public institutions of teaching, although churches themselves have actually founded many universities where science is taught as it is in public universities. From the seventies onward, on the other hand, there has been no state university with a theological department in the DR Congo. The term secular has become confusing. It is as if the concept of God has in the eyes of scientists become something of an oddity. On this phenomenon, Makanzu writes "*Quand Dieu te gêne*" ("When God embarrasses you"), referring to the age of Enlightenment in which science has developed to a surprising degree while religion seems to have declined.⁴² God appears to have been rejected from nature and God's knowledge has by humanity been replaced with its own wisdom.

The present research involves a case study of the *Institut Supérieur Pédagogique* of Mbanza Ngungu and makes clear that the opposition of science and religion is not only a Western problem. The case study was conducted in the context of Christianity. It seeks to find answers to the following questions. How do people of faith relate to science and how do scientists relate to faith? The association of Christians with science started in 1944, inspired by, *inter alia*, the Research Scientists' Christian Fellowship is one of the inspirations of the science-religion debate.⁴³

The Institut Supérieur Pédagogique of Mbanza Ngungu

The ISP of Mbanza Ngungu is the first public college in the Province of Kongo Central in the Democratic Republic of Congo. It was established in 1969-1970 as a fusion of the Catholic institution *Ecole Normale Moyenne de Boma* and the Protestant institution *Ecole Normale Moyenne de Kimpese*. The ISP of Mbanza Ngungu is thus the first and oldest public institution for tertiary education in the province. It consists of more than ten departments and has in 2018 around 1,200 students. Since 1995, the institute has organised a spiritual service (chaplaincy) for students and academic staff. Catholic and Protestant

42. Mavumilusa Makanzu, *Quand Dieu te gêne (When God hinders you)* (Wuppertal: Editions VEM, 1986).

43. Southgate, "Science and Religion," 362.

services are held, serving different groups of students. As the Protestant chaplaincy was better organised than the Catholic one. The Protestant chaplain was for many years granted an office in the institution. After a change of the directing team, the spiritual service was no longer allowed to take place in the area devoted to the study of science. Spirituality seemed to be perceived as a threat, by then religion seemed to harm science.

Methodology of the Research

The method of selecting participants in the research involves the use of purposive sampling. Purposive sampling is widely used in qualitative research for the identification and selection of information-rich cases and for the effective use of limited resources. The methodology is based on identifying and selecting individuals or groups that are especially knowledgeable on, or experienced in relation to, the subject of the research.⁴⁴ Palinkas distinguishes many purposeful sampling designs.⁴⁵ The technique is widely used but poses many challenges such as the range of variation which is often not really known at the outset of a study, and the non-existence of an insignificant number in the qualitative methods field which resists systematic sampling.

Thus, students and lecturers at the college were chosen and an invitation to participate in the research was sent to explain that interviews would be based on the interface between science and faith and focus on the question how religion might harm science in the institution.

Eighty-five persons were invited of which 72 responded and accepted. The interviewees included ISP lecturers and students from first to fifth year. 21 participants were female and 51 males. The sample consisted of 7 lecturers and 65 students of which 7 were first-year students, 33 were in second year, 5 in third year, 18 in fourth year and 2 were fifth-year students. The sample was religiously mixed and included 59 Christians, 2 Muslims, 6 people practising a traditional religion and 4 with no religion. Ten research assistants were appointed. The average length of the interviews was 30 minutes. The research was conducted in a period of approximately two weeks. The ISP of Mbanza-Ngungu was chosen for the study because it is the first public institution in the province. The aim of the research is to understand how the respondents' commitment to science relates to their faith and if they perceive religion or faith as causing harm to science.

Among the main questions were the following. How do students and lecturers relate to matters of faith? Do they consider religion or faith as a threat to their academic careers? What do they think of a spiritual service being offered on

44. Lawrence A. Palinkas et al., "Purposeful sampling for qualitative data collection and analysis in mixed method implementation research," *Administration and Policy in Mental Health* 42, no. 5 (2015): 533-44.

45. Palinkas et al., "Purposeful sampling."

their campus? Is there, in the context of their studies, an interface between religion (faith) and science? The outcome of the interviews clarifies how the respondents understand the relationship between science and faith or religion.

Results

The outcome of the fieldwork is shown below.

- Is There any Incompatibility in Being a Scientist as well as a Religious or Spiritual Person?

Only 9% of the respondents said there is incompatibility. They mentioned some contradictory theories of science and of religion such as evolutionism and creationism. Respondents who saw science and religion as compatible referred to the supremacy of God and looked upon spirituality as the mother of natural science. Religion does not oppose scientific knowledge which helps faith.

Looking at the position of church leaders in the United Kingdom in relation to science, it is found that a majority of senior leaders expresses the wish for a "science-faith relation," defined by compatibility, mutuality and/or complementarity.⁴⁶ For many scientists, the discovery of God in a scientific context is a way of worshipping and praising God.

- Can an Academic Sphere also Be Spiritual?

Most respondents were of the opinion that nothing could embarrass them and make them refrain from expressing their belief on campus. Those who were of the view that a scientific milieu can also be religious argued that the supremacy of God dominates above all and hence freedom of expression and religion are paramount. They stated that spirituality makes a good scientist and the supernatural status of the human being implies that humanity must not be considered as only material but also spiritual in nature.

The opponents of the idea that the scientific sphere has also spiritual aspects, said that, while encountering in their study environment a diversity of scientific and spiritual considerations, they had found that each needs to be dealt with on its own merits, in its own time. Many respondents seemed to be confused about the difference between church and spirituality. They also confused church attendance with spirituality, emphasizing that there is a time for everything. In my opinion, there is no need for church services to interfere with times set apart for lectures. Spirituality is part of the human being. The rejectors also posited that in science there is evidence of facts whereas religion is based on faith. Finally, they stated that an encounter between science and religion might result in faith becoming weakened.

46. Bouveng and Wilkinson, "Going beyond," 114.

In interviews with church leaders in the United Kingdom, a majority of senior leaders stipulated that "no scientific discovery could shake my faith," even though they acknowledged the existence of tensions between faith and Scriptures, science and reason, as manifested in numerous questions in connection to, for example, the miracles, the future of the universe, evolution and creation.⁴⁷ The researcher came to the conclusion that the academic sphere has to be considered multisectoral, as it centers on the nature of the human being.

- Can Scientists in their Scientific Explorations Be in Need of Religion, and Vice Versa?

The majority of respondents was in agreement about the interdependence of science and religion because, it was argued, every human being is endowed with an openness to the supernatural, or with a religious inclination. The universe is interconnected. Our ancestors respected the signs of time and space and the Bible suggests adding science to faith. Religion follows some rules and is thus also a science. Often biblical statements are confirmed by science. Science without morality destroys the soul. However, some respondents placed religion above science. Others expressed the opinion that religion needs science, or, to the contrary, that science needs religion but that there is no reciprocal need.

- Can Science and Faith Be Equal Partners or Not?

The interviewees were divided in this respect. Some stated that science and religion can match for three reasons.

1. The first one, God is the source of intelligence while being omnipotent, omniscient, and omnipresent.
2. Secondly, science and religion operate in different fields. Each needs to respect the principles of the other as they deal in different ways with human beings. As in the words of Harrison, science and religion are seen as different lenses used for interpreting the universe.⁴⁸
3. And lastly, the practice of faith also requires knowledge. While the study of science is relatively new, belief has existed since times immemorial.⁴⁹ The Bible refers to aspects of biology, geography, and history. Science can deepen faith which, in turn, enlightens science when working for faith, even while using opposite methods.

Those interviewees who thought that religion and science cannot be equal partners, advocated for a parallel position of the two. In their view, science relies on logic, criticism and verifiability, while religion is governed by faith and feeling. In other words, science is directed by the evidence of fact whereas religion by

47. Bouveng and Wilkinson, 113.

48. Levin, "The Territories of Science and Religion," 48.

49. Chul, "Śūnyatā and Kokoro," 158.

contrast is dominated by faith and the supernatural. This view can obviously be criticised. It seems that faith has no space for rationality but, in fact, when people engage in a discussion of faith, they base their arguments on rationality.

Karl Popper's perception of rationality is fascinating. He understands rationality as acting so as to introduce a change into one's world or in one's view of the world. To refrain from acting is to leave one's world or one's view of the world unchanged. In this way, even faith becomes a rational act. In Christine Korsgaard's thought, to act for a reason necessitates that one starts by determining what one's reasons are. As she puts it, not every human impulse is a reason to believe, nor is every desire a reason to act.⁵⁰

- The Common Points Between Science and Religion Considered.

The respondents were almost in total agreement on the key points that science and religion have in common. Four points were identified as the following.

1. Firstly, the search for truth and knowledge. Truth is one of the main themes of Jesus in the Christian tradition. Pilate asked Jesus what truth is (John 18:38). The human being wants to know, to discover. Religious people want to know and discover truth by faith. Scientifically inclined people want to know and discover by way of experimenting.
2. Secondly, the transcendental God. God is not experienced through and explained by human knowledge. Faith in God does not depend on human experience. The coming to God can be explained neither by science nor by religion. God, being supernatural, is beyond all-natural expression. Talking about the transcendental God, Sheahen states: "Only something or someone outside the universe can give meaning to the universe. Only belief in a transcendental God can render human existence other than tragic."⁵¹
3. Thirdly, the human being. Humanity is at the centre of the cosmos. The human being should not be used as an object of experimentation, because dignity has been bestowed on him or her. God put a sacred seed of worth in human beings that must be protected. The dignity of human and other beings must be protected. Otherwise, the result would be deeply offensive to God. The Psalms describe human dignity as follows.

What is Man that you are Mindful of him, and the Son of Man that you Visit him?
For you have made him a little lower than the angels, and you have crowned him
with glory and honour. You have made him to have dominion over the works of
your hands; you have put all *things* under his feet (Psalms 8: 4-6).

4. And fourthly, the law and rules that convey the scientific character. There are some rules in every searching for God, and in any experimental, scientific step.

50. Menachem Fisch, "Science, Religion, and Rationality: A Neo-Hegelian Approach," *Toronto Journal of Theology* 29, no. 2 (2013): 320.

51. Sheahen, "The Great Partnership," 355.

- The Importance of the Spiritual Structure in an Academic Environment.

The majority (91.7%) of respondents appreciated the importance of a spiritual structure in the academic sphere which in their view would empower scientific values and good morality. To exclude the spiritual dimension in human existence is to miss a part of human reality. We do not only need to feed the mind, but also the heart. Science without consciousness ruins the soul. In fact, the ISP (*Institut Supérieur Pédagogique*) of Mbanza Ngungu should consider spiritual life or engagement as part of nurturing the humanity of its students and staff.

- How Can a Scientist be Involved in Religious Matters?

This question is not only concerned with atheism and theism. The involvement of scientists in religious matters depends on how one conceives of involvement. The respondents in the present study suggested that the scientist who is also religiously involved, needs to have a clear vision of what science offers and what religion represents. A profound understanding of the two approaches to life would motivate one to adopt the right attitude towards handling apparent confusion in respect of science and religion by separating contradicting theories on religion and by explaining natural facts such as rain or lightning. The religious scientist must demonstrate, in his or her behaviour and in the use of natural science, respect for human dignity.

Conclusion

This paper started by mentioning an ongoing debate between clergies on religion and science in academic institutions. The research was aimed at determining ways in which religion could be perceived as being harmful to science. In discussions on the relationship between religion and science, many scholars argue that religion and science represent two different views of the world.

The connection between the two disciplines can be seen by considering the world as an inclusive, pluralistic landscape that encompasses intercultural, interreligious, and interdisciplinary relationships. To deal with the reality, four qualities have been emphasized, namely acceptance of diversity, dialogue, relationship and collaboration. The research that was conducted at the *Institut Supérieur Pédagogique* of Mbanza Ngungu, reveals that respondents did not see religion as having harmful effects on science. Some people apparently follow Freud's view and consider religion as elusive and childish. If religion would have caused any harm at the ISP, it would have been a result of scientific fanaticism that uses science as an umbrella for an overall condemnation of religion.

Far from closing the debate, the present reflection on science and religion

describes both disciplines as forms of science, characterized by their own modus operandi which they apply to increase their understanding of reality. Similarity is no necessary condition for collaboration as differences are a part of diversity.

The present researcher, finally, supports the concepts of natural science and religious science. The question how to connect the two may find the beginning of an answer in the following statement.

"Even a detailed account of the history of science cannot be complete, for scientific activity is not isolated but takes place within a larger matrix that also includes, for example political and social events, development in the arts, philosophy and religion, and forces within the life of the individual scientist. In other words, science is a human activity and is affected by all that affects human being in any way."⁵²

Science and religion should not be antagonistic disciplines but could represent forces to create a world in which persistent problems get resolved for the benefit of humanity. Furthermore, in the context introduced by Kiatezua L. Luyaluka, it is natural for African to perceive no conflict between religion and science.

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52. Poincare, "Science," 2454.

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