

A Humboldtian Explorer in New York¹

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In April, 1818, Secretary of State John Quincy Adams received a bizarre handbill in the mail, from a man called John Cleves Symmes, Jr., of Ohio. It was addressed “TO ALL THE WORLD!” In it, Symmes declared that “the earth is hollow, and habitable within...and that it is open at the poles 12 or 16 degrees.” Thus was born the Symmes Theory of Concentric Spheres.

“I pledge my life in support of this truth,” Symmes wrote, “and am ready to explore the hollow, if the world will support and aid me in the undertaking...I ask one hundred brave companions, well equipped, to start from Siberia in the fall season, with Reindeer and slays, on the ice of the frozen sea; I engage we find warm and rich land, stocked with thrifty vegetables and animals if not men, on reaching one degree northward of latitude 82; we will return in the succeeding spring.” Symmes also took the opportunity to announce his forthcoming “Treatise, on the principles of matter, wherein I show proofs of the above positions [and] account for various phenomena.” And, finally, Symmes listed his three “protectors:” the famous physical chemist Sir Humphry Davy; Samuel L. Mitchill of the New York Lyceum of Natural History; and “Baron Alex. de Humboldt.”²

It’s becoming more common to talk about Humboldt’s influence on various aspects of American culture in the mid-19th century: you can find it in mainstream writers like Emerson and Thoreau; artists like Frederic Church; the work of the U.S. Army Corps of Topographical Engineers; and the development of German-American communities and institutions. My own work has to do with Humboldt’s influence on American explorers, and here I want to focus on one in particular – someone closely associated with Symmes –

1. This paper is adapted from my Ph. D. dissertation, “The Humboldt Current: Avant-Garde Exploration and Environmental Thought in 19th-Century America,” filed in 2004, at Yale University, in the American Studies program. The book version is forthcoming in 2006, to be published by Viking Penguin.

whose career suggests that Humboldt was already an incredibly strong influence in the 18-teens, 20s, and 30s. This paper, then, lines up with research done by other scholars on Humboldtian elements in the early-19th-century careers of people like George Catlin, Washington Irving, and Albert Gallatin.³

Now Symmes, of course, was a total quack. Even Humboldt, normally so generous and open-minded in his treatment of aspiring scientists, wound up making fun of him: the infamous “hollow sphere,” Humboldt wrote, in the first volume of *Cosmos*, “has by degrees been peopled with plants and animals, and...it was further imagined that an ever-uniform temperature reigned in these internal regions...Near the north pole, at 82 latitude, whence the polar light emanates, was an enormous opening, through which a descent might be made into the hollow sphere, and Sir Humphrey Davy and myself were even publicly and frequently invited by Captain Symmes to enter upon this subterranean expedition: so powerful is the morbid inclination of men to fill unknown spaces with shapes of wonder.”⁴ Yet Humboldt himself had fed Symmes’ fire through his early publications by providing isothermal evidence that the equatorial regions were not always the hottest on the planet. One of Symmes’ most learned boosters even cited Humboldt’s description of fish being erupted from a volcano as possible evidence for Symmes’ idea that

2. The handbill, now in the National Archives, is reproduced in Herman J. Viola and Carolyn Margolis, eds., *The U.S. Exploring Expedition, 1838-1842* (Washington, D.C.: Smithsonian Institution Press, 1985), p. 10.

On Symmes in general, see Elmore Symmes, “John Cleves Symmes, The Theorist,” an article in three installments in the *Southern Bivouac*, New Series 2 (February, March, and April 1887), pp. 555-66, 621-31, and 682-93; Paul Collins, “Symmes Hole,” in *Banvard’s Folly: Thirteen Tales of People Who Didn’t Change the World* (New York: Picador, 2001), pp. 54-70; P. Clark, “The Symmes Theory of the Earth” *Atlantic Monthly* 31 (April 1873), pp. 471-80; E.F. Madden, “Symmes and His Theory,” *Harper’s New Monthly Magazine* 65 (October 1882), pp. 740-4; John Wells Peck, “Symmes’ Theory,” *Ohio Archaeological and Historical Publications* 18 (1909), pp. 28-42; and Reginald Horsman, “Captain Symmes’s Journey to the Center of the Earth,” *Timeline* (Sept./Oct. 2000), pp. 2-13.

3. See, for instance: Laura Dassow Walls, *Seeing New Worlds: Henry David Thoreau and Nineteenth-Century Natural Science* (Madison: U. Wisconsin Press, 1995), pp. 76-166; Kevin J. Avery, *Church’s Great Picture: The Heart of the Andes* (New York: Metropolitan Museum of Art, 1993), pp. 12-22; Kent Mathewson, “Humboldt and the Development of North American Geography,” paper delivered in Washington, D.C., June 4, 2004, at the conference “Alexander von Humboldt and North America,”; Andreas Daum, “Celebrating Humanism in St. Louis: the Origins of the Humboldt Statue in Tower Grove Park, 1859-1878,” *Gateway Heritage* 15 (Fall 1994), pp. 48-58; Ingo Schwarz, “Shelter for a Reasonable Freedom’ or Cartesian Vortex: Aspects of Alexander von Humboldt’s Relation to the United States,” *Debate y Perspectivas* 1 (2000), pp. 169-70; Schwarz, “The Second Discoverer of the New World and the First American Literary Ambassador to the Old World: Alexander von Humboldt and Washington Irving,” *Acta Historica Leopoldina* 27 (1997), pp. 89-97; Michael Anthony Wadyko, “Alexander von Humboldt and 19th-Century Ideas on the Origin of American Indians,” Ph.D. Dissertation, W. Virginia U., 2000.

4. Humboldt, *Cosmos*, Vol. 1 (Baltimore: Johns Hopkins University Press, 1997), p. 171.

another world existed inside the earth's core. Certainly, the Captain's contention that there were open polar seas rather than ice caps was based not on his imagination but on his compulsive reading of exploration narratives, many of which did mention that there were whales and seals and birds and even signs of vegetable life at the highest latitudes attained, and that the ocean was in fact more navigable once you passed through the thickest ice fields between about 60 and 65 degrees North or South.⁵

Indeed, Symmes actually achieved a degree of fame in the 1820s, and when his disciple J.N. Reynolds started lecturing about exploration and global dynamics in New York City, his ideas were warmly embraced by the intellectual community. The Yale chemist Benjamin Silliman, a devoted Humboldtian and probably America's leading scientist, noted publicly that "Mr. Reynolds...handled his subject like an accomplished scholar," and Silliman even invited Reynolds to his home in New Haven on a number of occasions. Reynolds's candle-lit lectures at New York's Tammany Hall in May and June of 1826 were the sensation of the season; they attracted many of New York's self-styled intellectual sophisticates. Here's a writer from the New York "Mirror" talking about himself in the third person:⁶

A gentleman of this city, who, never having heard the theory of the concentric spheres properly explained, had always viewed it as the wild chimera of a half-disordered imagination, lately attended one of Reynolds' lectures. He went, as he himself confessed, in hopes of hearing something sufficiently absurd to give good exercise to his risibles; but soon felt more inclined to listen than to laugh, and by the time the discourse was finished, became a thor-

5. Humboldt's most widely read study of isotherms is "Des Lignes Isothermes et de la Distribution de la Chaleur sur le Globe [On Isothermic Lines and the Distribution of Heat on the Planet]," in *Mémoires de Physique et de Chimie de la Société d'Arcueil* 3 (1817), pp. 462-602.

The Symmes supporter who cited Humboldt is James McBride, "Symmes's Theory of Concentric Spheres" (Cincinnati: Morgan, Lodge, and Fisher, 1826), p. 105. Belief in the Open Polar Seas lasted well into the 19th century: see Edward L. Towle, "The Myth of the Open Polar Sea," "Proceedings of the Tenth International Congress of the History of Science" (Paris, 1965), Vol. 1, pp. 1037-41. J.N. Reynolds discusses the possibility of an open sea in the Antarctic in his official report of 1828 to Navy Secretary Samuel Southard, "Pacific Ocean and South Seas", reprinted in 1835 as House Document 105, 23rd Congress, 2nd Session, p. 26. Of the sealers he interviewed who had been South of 70°, Reynolds noted: "They all agree that... the greatest impediment to navigation from ice will be found from 62° to 68° S." Also see his "Remarks on a Review of Symmes' Theory, which appeared in the American Quarterly Review" (Washington, D.C.: Gales and Seaton, 1827), p. 40. Edmund Fanning, in *Voyages Round the World* (New York: Collins and Hannay, 1833), pp. 473-4, notes: "The report of all (within the author's knowledge) that have passed beyond the 68th degree is, that above this degree of latitude, the sea was found to be mainly clear of ice, and the climate becoming more mild, with prevailing winds from the southward. "The report of that persevering navigator, Weddel, who has sailed farther south than any other navigator has been known to do, is this, viz., to the latitude of 74° 15' S., he states, that at this position the weather was mild as summer, the wind at the time being from the south, while the sea was clear in that quarter, as far as the eye could discern from the masthead."

ough believer in what he had lately derided. Such sudden conversions, perhaps, are not the most permanent; but they are sufficient to prove that the above theory is more worthy of investigation than of ridicule.”

Of course, there were also listeners who were content to respond with ridicule. Reynolds had become increasingly popular in part because he had aligned himself with New England’s whaling and sealing industries and had begun lobbying for an expedition directed toward the South Pole, leaving the North to the British and to Captain Symmes, with whom he had broken. Symmes in fact felt so betrayed by Reynolds that he challenged him to a duel. Reynolds refused, but one newspaper editor suggested that the U.S. government could step in and resolve the dispute: all Congress had to do was “grant two appropriations, one to Reynolds for the antarctic regions, another to Symmes for the arctic regions, furnish them with cannons, and let them fight their duel” through the earth’s hollow core, using “snow-balls as ammunition.”⁷

Reynolds simply ignored such abuse and continued laying down the core principles of his science, based squarely on Humboldt’s cosmopolitan empiricism: we don’t know what’s out there and how it all fits together, Reynolds argued, so we’d better join the universal effort to collect facts, make contact with other nations, and start figuring out the best ways of living in harmony

6. New York *National Advocate*, May 28, 1828, cited in Elmore Symmes, p. 565; *New-York Mirror* 3 (June 17, 1826), p. 375. For more coverage of Reynolds and Symmes in New York, also see the *Mirror* of April 15 (p. 303) and May 27 (pp. 350-1). Silliman quote is from the *New England Palladium and Commercial Advertiser*, June 16, 1826, p. 1; also see Philip I. Mitterling, *America in the Antarctic to 1840* (Urbana: U. Illinois Press, 1959), p. 86. For more on Silliman and Reynolds, also see Reynolds, *Address on the Subject of a Surveying and Exploring Expedition to the Pacific Ocean and South Seas. Delivered in the Hall of Representatives on the Evening of April 3, 1836* (New York: Harper and Brothers, 1836), pp. 112-15. For more on Silliman and Humboldt, see Benjamin Silliman, *A Visit to Europe in 1851*, Vol. 2 (New York: George P. Putnam, 1853), pp. 317-22. For background on Reynolds, the best source is an unpublished biography, the typescript of which is in the Special Collections at the Princeton University Library: Richard G. Woodbridge III, *J.N. Reynolds – American*. Woodbridge has made snippets of his research more readily available in Woodbridge, “J.N. Reynolds: Father of American Exploration,” *Princeton University Library Chronicle* 45 (Winter 1984), and Woodbridge, *Condensed Biography of J.N. Reynolds – American*, typescript (Princeton, 1995), New York Public Library. There’s also an important cache of Reynolds’s letters in the Samuel L. Southard Papers, Special Collections, Princeton University Library. Other Reynolds sources include: Kenneth J. Bertrand, *Americans in Antarctica, 1775-1948* (New York: American Geographical Society, 1971), pp. 144-97; Robert F. Almy, “J. N. Reynolds: A Brief Biography with Particular Reference to Poe and Symmes,” *Colophon* 2 (New Series) (Winter 1937), pp. 227-45; Aubrey Starke, “Poe’s Friend Reynolds,” *American Literature* 11 (May 1939), pp. 152-9; William Coyle, ed., *Ohio Authors and Their Books* (Cleveland: World Publishing Co., 1962), pp. 523-5; and Henry Howe, “The Romantic History of Jeremiah N. Reynolds,” in Howe, *Historical Collections of Ohio in Two Volumes: An Encyclopedia of the State* (Columbus: Henry Howe and Son, 1889), Vol. I, pp. 430-2. Most scholars refer to Reynolds as Jeremiah, but he always referred to himself by his initials, and there is good reason to believe that his real name was probably James Neilson Reynolds.

7. Elmore Symmes, p. 623.

with nature. "Inquiries concerning the figure of the earth we inhabit, are among the noblest speculations of the human mind. They enlarge our views, and frequently bring remote parts of the earth into a knowledge and interchange with each other." In the end, the proposed expedition could help us acquire "much useful information in the hydrography and geography of the Antarctic regions; as well as many important and interesting observations on the atmospherical, magnetical, and electrical phenomena, which cannot fail materially to advance the science of Meteorology; and also in many valuable collections of objects in natural history, which inhabit a part of the globe, where few researches have yet been made in this branch of science."⁸

A little later in his career, Reynolds made his Humboldtian program of research even clearer: he wished "to collect, preserve, and arrange" specimens from all over the globe, "from the minute madrapore to the huge spermaceti," and figure out how they connected to each other and to "man in his physical and mental powers, in his manners, habits, disposition, and social and political relations"; scientists should feel duty-bound "to examine vegetation, from the hundred mosses of the rocks, throughout all the classes of shrub, flower, and tree, up to the monarch of the forest," all in relation to "the phenomena of winds and tides, of heat and cold, of light and darkness." And, indeed, in lobbying for the scientific exploration of the South Seas throughout the 1820s and 30s, Reynolds frequently cited Humboldt explicitly, and between 1829 and 1834 he actually got to follow in Humboldt's footsteps – sailing along the South American coast taking temperature and pressure readings and also climbing some Andean volcanoes.⁹

I want to say a little more about his experiences in South America, but first let me just explain my own background understanding of Humboldt's significance in the realms of environmental history and colonial politics. I think Humboldt was clearly the first ecologist, and I also consider him a fairly radical critic of colonialism and defender of native cultures. This perspective flies in the face of a fair amount of scholarly literature, and especially Mary Louise Pratt's scathing critique of Humboldt in her now-canonical book, *Imperial Eyes*.¹⁰ But I've tried to establish my own position in an article that came out last December in a special environmental issue of the journal *History and Theory*.¹⁰

8. Reynolds, "Remarks on a Review of Symmes' Theory", pp. 42 and 69

9. Reynolds, "Address", p. 72. For a couple of direct citations of Humboldt, see Reynolds, *Voyage of the United States Frigate Potomac, under the command of Commodore John Downes, during the Circumnavigation of the Globe, in the years 1831, 1832, 1833, and 1834* (New York: Harper and Brothers, 1835), pp. 438 and 445.

10. Aaron Sachs, "The Ultimate 'Other': Post-Colonialism and Alexander von Humboldt's Ecological Relationship with Nature," *History and Theory* 42, Theme Issue on the Environment (Dec. 2003), pp. 111-35.

And this perspective on Humboldt has in turn led me to re-evaluate the scholarly assumption that all 19th-century American explorers were essentially agents of empire and the exploitation of peoples and resources.¹¹ I think people like J.N. Reynolds went out into the world eager to question their assumptions and expose themselves to new perspectives and especially to the power of Nature. And I think Reynolds's responses to South America and the South Seas bear this out.

For one thing, Reynolds followed Humboldt in quite simply celebrating "the Titan scale upon which nature has operated, and is continuing to operate in these regions." Also, despite having very little scientific training, he did with islands, reefs, rocks, winds, currents, and marine mammals what Humboldt had done with mean temperatures and vegetation patterns. His efforts to collate data even led him to perhaps the first American statement of concern about the limits of natural-resource extraction: he calculated in 1828 that American whalers were killing some 10,000 whales a year, and thus decimating certain whaling grounds. Fascinatingly, he became America's foremost proponent of scientific exploration, but at the same time he railed against capitalist expansion: "what place is exempt," he asked, "what creature safe, from the intrusion of man! Boast as he may of his humanity, he is in a state of perpetual warfare with every living thing which can satisfy his wants or pamper his appetite, for luxuries; and his path, almost the world over, may be tracked by blood."¹²

Perhaps most importantly though, Reynolds followed Humboldt in attacking colonial governments – including that of the United States – for their brutal exploitation of native peoples. When Reynolds returned from his expedition in 1834 to find that President Jackson had forced through the Indian Removal Bill in 1830, he felt it was his duty to point out that throughout the world, "the kind reception and hospitality of the natives have been requited by acts of rapine, cruelty, and oppression." Indeed, Reynolds hoped that by pointing out the admirable qualities of native peoples around the globe, he might elicit more sympathy among his fellow-citizens for "the much wronged and oppressed aborigines of our own country." Taking his cue directly from Humboldt's writings, Reynolds even compared the United States' treatment of Indians to that of Spain, and made explicit the systematic connection between resource extraction and violent repression: "From whence issued those immense streams of wealth which flowed from the colonies into the lap of the mother country, during the three hundred years of her

11. See, for instance, John L. Allen "Where We Are and How We Got There: Surveying the Record of Exploration Studies," in Edward C. Carter III, ed., *Surveying the Record: North American Scientific Exploration to 1930* (Philadelphia: American Philosophical Society, 1999), pp. 3-18.

12. Reynolds, "Leaves from an Unpublished Journal," *New-York Mirror* 15 (April 21, 1838), pp. 340-1; Reynolds, "Pacific Ocean and South Seas", p. 3.

tyranny and dominion, but from the poor and subjugated Indian? Who can reflect, without horror, on the destruction of eight millions of these wretched beings, who, in Peru alone, perished under the cruel and unjust exactions of the *Mita*?"¹³

Reynolds's own experiences among native peoples in Peru, and especially Chile, had convinced him for good that it was only on frontiers that you could judge the true character of your civilization. Reynolds knew that the Indian Removal Bill had passed only by the skin of its teeth – a the vote in Congress was 103-97 – and he felt sure that if the people's representatives had better understood the possibility of white-Indian consort and cooperation, they never would have passed such an abominable law. So in his speeches and the narratives he wrote of his expedition, Reynolds consistently evoked his own finding that native peoples tended to be not warlike brutes, nor merely noble savages, but members of reasonable, complicated, generally peaceful communities.

The Araucanians had a particularly savage reputation, and the first chief Reynolds meets, whom he at first describes as "warlike" and "splenetic," paces and mutters when he hears that Reynolds wants to explore in his area – but then Reynolds suddenly realizes, with the help of his interpreter, that Uai-quimilla's rage is "related to the former wars of his people with the Spaniards, and his belief that we, like them, were come to search for gold and silver."¹⁴ So the violence of these Indians is not some sort of natural characteristic, but a moral response to a political situation, and it is now incumbent on the invading white man to prove that he is not like the Spanish gold seekers – or even, say, like American sealers, intent upon extracting valuable natural resources from distant lands.

The rest of Reynolds' experience among the fierce Araucanians turns out to be essentially a pastoral gambol. You thought they were savage hunters? No – their "farms displayed a perfection of agriculture that would have done credit to a civilized people." Native communities feed him dinners of lamb and green peas, and in the morning the entire village comes to see if he has slept well in the humble bed they have provided. And besides being hospitable, they seem amazingly savvy in the political realm: "These people...not only kept aloof from the colonial contests, but, what is better and more wonderful, they have continued almost from time immemorial at peace with all their neighbors. They lived comfortably on the fruits of their industry." The Araucanians were even "well clothed: indeed we had not seen an Indian

13. Reynolds, *Voyage of the United States Frigate 'Potomac'*, pp. 81, 105, and 478.

14. Reynolds, "Rough Notes of Rough Adventures," *Southern Literary Messenger* 9 (December 1843), p. 709.

poorly clad since crossing the river Imperial.” It is only the touch of Empire, in other words, that turns Indians into warring savages.¹⁵

In 1834, when he got back to the United States, Reynolds stopped briefly in Boston and deposited his collections with the Boston Society of Natural History. But then he settled back in New York and continued lecturing and writing on scientific exploration. There were articles about him in periodicals like the *New-Yorker* describing the apartments where he lived and did his work (one on Astor Place, for instance), with books and Congressional reports scattered all around him.¹⁶ In 1835, he received an honorary degree from Columbia (a small college just north of CUNY), which put him in the company of many other Humboldtians, including Gallatin and Irving.¹⁷ He corresponded with Poe, and Poe stole passages from his work to use in his own imaginative writings, especially his only novel, *The Narrative of Arthur Gordon Pym* (and it is worth noting here that Poe’s final book, *Eureka*, was dedicated to Humboldt “with very profound respect”).¹⁸ In 1839, when Herman Melville was just 19 and still hadn’t even set out on his own South Seas adventures, Reynolds published *Mocha Dick*, about an aggressive white whale that swam the Humboldt Current near the Isle of Mocha just off the Chilean coast.¹⁹ And from various lecterns in New York, Reynolds became the foremost proponent of what eventually became the famous United States Exploring Expedition (often called simply the Ex Ex, or the Wilkes Expedition, of 1838-42), which confirmed the existence of the Antarctic continent. Because of various political conflicts and controversies during the preparations for the expedition, however – Reynolds attacked Wilkes for, among other things, failing to stock the ships’ libraries with a complete set of Hum-

15. *Ibid.*, pp. 711-12.

16. See J.F. Otis, “Current Calamosities,” *Southern Literary Messenger* 5 (April 1839), pp. 254-6; reprinted in the *New-Yorker* 7 (April 27, 1839), p. 100.

17. On the 1835 Commencement, see the *Columbia University Annual Commencement Scrapbook, 1830-1849*, in the Columbiana Archives, Columbia University. The scrapbook also has a clipping from the *New York Evening Post* of October 8, 1835. Also see *Minutes of the Trustees of Columbia College*, Vol. 3, Part 2 (May 6, 1828, to December 4, 1837), p. 1618 (typescript in the Columbiana Archives). I am grateful for the skillful assistance of Jocelyn Wilk, Assistant Director of the University Archives and Columbiana Library. For the honorees, see the *Columbia University Alumni Register, 1754-1931* (New York: Columbia U. Press, 1932), pp. 594, 723, and 1182-3. Also see Reynolds’ letter to Columbia President William A. Duer, dated October 13, 1835, New York, in the College Papers, Special Manuscript Division, Columbia University.

18. Poe, “Eureka”, in James A. Harrison, ed., *The Complete Works of Edgar Allan Poe*, Vol. 16 (New York: AMS Press, 1965), pp. 179-315, quote on p. 181. Also see Almy; Starke; Robert Lee Rhea, “Some Observations on Poe’s Origins,” *University of Texas Bulletin, Studies in English* 10 (July 8, 1930), pp. 135-46; J.O. Bailey, “Sources for Poe’s ‘Arthur Gordon Pym’, ‘Hans Pfaal,’ and Other Pieces,” *PMLA* 57 (June 1942), pp. 513-35; Keith Huntress, “Another Source for Poe’s ‘Narrative of Arthur Gordon Pym,’” *American Literature* 16 (March 1944), pp. 19-25; and Randel Helms, “Another Source for Poe’s ‘Arthur Gordon Pym,’” *American Literature* 41 (January 1970), pp. 572-5.

19. “Mocha Dick: Or The White Whale of the Pacific: A Leaf from a Manuscript Journal,” *Knickerbocker* 13 (May 1839), pp. 377-92.

boldt's writings – Reynolds himself got left off the expedition, and quickly faded into obscurity.²⁰

It's my opinion that Reynolds did more than anyone except Humboldt himself to establish the significance of scientific exploration in American culture in the 19th century. This conference represented an important effort to begin restoring Humboldt's legacy – and it seems to me that a huge amount of work also remains to be done to recapture Reynolds's significance.

20. See William Stanton, *The Great United States Exploring Expedition of 1838-1842* (Berkeley: University of California Press, 1975), esp. pp. 8-72; William H. Goetzmann, *New Lands, New Men: America and the Second Great Age of Discovery* (Austin: Texas State Historical Association, 1995; originally published 1986), pp. 273-97; and Nathaniel Philbrick, *Sea of Glory: America's Voyage of Discovery, The U.S. Exploring Expedition, 1838-1842* (New York: Viking, 2003), esp. pp. 3-41. For the reference to Humboldt, see Reynolds, *Exploring Expedition Correspondence*, undated pamphlet, copy consulted at Beinecke Library, Yale University, Letter 6, July 28, 1837, New-York, pp. 39-41.

