

**DRAFT: FORTHCOMING IN  
“IN SEARCH OF JEFFERSON’S MOOSE – NOTES ON THE  
STATE OF CYBERSPACE”  
[OXFORD U. PRESS, 2008]**

## PROLOGUE

# The Fox, the Hedgehog, and the Moose

“If the explorer of the past is wise, he will . . . attack his subject in unexpected places; he will fall upon the flank and the rear; he will shoot a sudden revealing searchlight into obscure recesses, hitherto undivined. He will row out over the great ocean of material, and lower down into it, here and there, a little bucket, which will bring up to the light of day some characteristic specimen, from those far depths, to be examined with a careful curiosity.”

LYTTON STRACHEY

“Life must be lived forwards, but it can only be understood backwards.”

SÖREN KIERKEGAARD

“There’s something funny going on, I can just feel it in the air.”

BOB DYLAN

PHILADELPHIA, 2008

It's a strange new place, this "cyberspace." It's not really a place at all, of course, more like a bunch of connections between places; as Gertrude Stein famously said of Oakland, California, there's no "there" there. But we talk about it as if it were and we experience it as if it were; we "visit" websites and then we "leave" them and "go to" others, we meet people "on the Internet," we talk of "entry" and "access," "portals" and "trapdoors," logging in and logging on, home pages and site maps.<sup>1</sup> Whatever it is, place or no-place, it is not quite like

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<sup>1</sup> David Weinberger, in his wonderful book "Small Pieces Loosely Joined," contrasts research in a realspace library with the same research on the Web:

"In both cases, you're reading documents, [following] links, and then reading the documents the links point to. The only difference is that in one case the documents are printed on paper and in the other they're sprayed across glass. Despite the similarities, our *experience* of these two situations will be quite different. Consider the language we'll use. In the first case, we'll *take* a book *from* the shelf, find a link, *get* another book and *put* the first one *back*. In the physical carrel, I'm the still center of the universe. I cause things to be brought to me and to be taken away when I have finished with them. Now consider the language we use to talk about the Web experience: we *go to a site*, we *browse*, we *surf*, we find a link and we *go to* it. When we're done, we *leave* the site. The library carrel is a place where we sit; the Web is a space through which we travel.

And it's not just a few casual words that happen to use spatial imagery. The economy of the Web is being built around the

anything, or any place, or even any bunch of connections between places, that we have encountered before. It has a strange new geography; the familiar lines on the map around which we organize so much of our lives –the lines around our cities, states, provinces, countries –are harder to discern, and seem to matter less, “there.” There are strange new things there, too –bots, crawlers, avatars, virtual agents, cookies, spiders, viruses. It is no-place, but it somehow seems to span the entire globe, and it keeps growing; as I write this, there are millions of people, from every corner of the planet, interacting with one another “there,” with room, it appears, for many more. We go “there,” and “back,” in an instant, sometimes without even noticing that we are doing so, and we “move about” there seemingly unencumbered by geography, gravity, or the other inconveniences of the real, tangible world. Every part of it seems equally close to every other part. And whatever it is, place or no-place, it has become, in an astonishingly short period of time, a global asset of incalculable value –worth, if we were to try to put a monetary value on it, literally countless trillions of dollars. We all spend increasing amounts of our lives “there,” yet I doubt that one person in ten

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idea that it's a space. We're building 'stores,' worrying about the impact of Web 'malls,' running ads to bring users 'in,' making our sites 'sticky' to keep users from 'leaving', providing aids so that users can 'navigate.' Space isn't a mere metaphor . . . our *experience* of the Web is fundamentally spatial. . . . With normal paper documents, we read them, file them, throw them out, or send them to someone else. We do not *go* to them. We don't *visit* them. Web documents are different. They're places on the Web. We go to them as we might go to the Washington Monument of the old Endicott Building. They're there, we're here, and if we want to see them, we've got to travel.”

thousand could even say what it is or how it works.

Who makes the rules “there,” if there’s really no there there, and what should they be? What does law look like there? How does it get made, and by whom? Who governs? By what means, and by what right? Online file-sharing, Internet pornography, virtual worlds, spam, online gambling, cyber-terrorism, anonymous remailers, encrypted communication, tele-medicine . . . ? What should the rules be, and who decides what the rules should be?

These are difficult questions –at least, I find them difficult, having spent the better part of the last fifteen years or so thinking about them. They’re difficult, but they’re also important; we have choices before us about the kind of place/thing we want this to be, and about the kind of law we want it to have, and the answers we come up with will affect everyone who uses this remarkable global communications medium –a category that will soon comprise, if current trends continue, almost everybody on the planet. We have a lot of hard thinking ahead of us if we are to resolve them, and if we don’t resolve them, we may squander a precious global resource as a consequence.

I need a guide to help me make my way through this strange new landscape with its thicket of hard questions, and I think that Thomas Jefferson will be a good one.

Why Jefferson? That one’s pretty easy. Jefferson has much to teach us about new worlds, and how to think about them; nobody in history, I think it is safe to say, thought more interesting thoughts, or asked more interesting questions, about New Worlds than he. He was – as even his most fervent detractors (of whom he has many) readily admit – an awfully smart and interesting guy. If, as Isaiah Berlin had it, the world of great thinkers can be divided into Foxes and Hedgehogs –between those who know Many Things and those who know One Big Thing -- Jefferson was both one of history’s great Foxes and one of history’s great Hedgehogs; with the sole exception of Charles Darwin,

I can't think offhand of anyone else who merits inclusion in both of those categories.

[\[Box 1 Here\]](#)

Jefferson-the-Fox knew an extraordinary amount about an extraordinary range of things –an entire library could easily be stocked with books about Jefferson the Architect, Jefferson the Botanist, Jefferson the Demographer, Jefferson the Philosopher, Jefferson the Inventor, Jefferson the Agronomist, Jefferson the Linguist, Jefferson the Paleontologist . . . *There is not a sprig of grass that shoots uninteresting to me, nor anything that moves*, he wrote to his daughter – and he meant it. Jefferson seemed to want to know (just about) everything about (just about) everything, and he came astonishingly close to doing so. Jefferson-the-Fox, in the words of a nineteenth-century biographer, could “calculate an eclipse, survey an estate, tie an artery, plan an edifice, try a case, break a horse, dance a minuet, and play the violin,” and it was Jefferson-the-Fox to whom President John F. Kennedy was referring when he remarked that a White House dinner with 49 Nobel prize winners in attendance was the “most extraordinary collection of talent, of human knowledge, that has ever been gathered at the White House -- with the possible exception of when Thomas Jefferson dined alone.” It was Jefferson-the-Fox who, among his many preoccupations:

- kept a detailed record, while serving as President of the United States, of the first (and last) appearance, each year, of 37 different fruits and vegetables in the Washington food markets;
- compiled grammars and vocabularies for over fifty Native American languages;
- took three months off, while serving as America's first Secretary of State under George Washington, to go “botanizing” in New England with his friend James Madison (with whom he had earlier engaged in lengthy and anatomically precise correspondence about the genitalia of the mole), the result

of which was a lengthy and detailed report on the natural history of the Hessian fly, a major agricultural pest;

- not only read (and understood!) Isaac Newton's *Principia Mathematica*, but designed a new kind of plow in accordance with the principles of Newtonian mechanics;
- kept up an extraordinary correspondence with a far-flung network of friends and fellow-scientists regarding agricultural matters as diverse as the advantages of agricultural societies, the construction of mills, the value of agricultural journals, soil erosion, the use of gypsum as soil treatment, the quality of manure (and the use of an "essence of dung" for the purpose), crop rotation, contour plowing versus deep plowing, the possibilities for native silk production, the study and control of insect pests, veterinary medicine, the common and the more scientific use of the word "paccan" (pecan), and the question whether the turkey and honey bee are native to America;
- filled the East Room of the White House with the fossil collection from Big Bone Lick in the Northwest Territory;
- kept several grizzly bears on the White House lawn while serving as President;
- took time out from the deliberations of the Continental Congress in June, 1776, to go see a monkey on display in downtown Philadelphia;
- smuggled several bags of rice out of northern Italy (at a time when doing so was actually punishable by death!) to send back to the United States for cultivation, and introduced dozens of other plant species, including the olive tree, several varieties of grape, vetch, Siberian barley, peaches, Jerusalem wheat (to resist the Hessian fly), yellow-flowered locust, cork oaks, Jamaican lima beans, Spanish broom, and Jerusalem artichokes, to the New World;
- delivered, upon his arrival in Philadelphia in 1797 to begin his service as Vice-President of the United States, the bones of what he believed to be

a new species, "*Megalonyx*," to the American Philosophical Society (of which he had recently been elected President), along with a scientific paper describing the new species (written, incredibly enough, the preceding Fall, when he was running for President of the United States);

- wrote , at a time when the mere act of putting pen to paper occasioned excruciating pain in his hand as a result of a broken wrist, a nine-page letter to the President of the French Academy of Sciences devoted entirely to the subject of wind.

And it was surely Jefferson-the-Fox who, on July 4, 1776, recorded the purchase of a new thermometer in his diary.

Jefferson-the-Fox had interesting things to say about pretty much everything. Law and governance, surely, but also (as we'll see) networks, and system design, and computer code, and distributed routing, and some of the other things we will need to understand in order to understand law and governance on the global network.

At the same time, Jefferson-the-Hedgehog had, to put it mildly, some very Big Ideas, and we can see now, in retrospect, that they were ideas that helped transform a world in which the conventional mechanisms of law-making and governance did not work into a world in which, by and large, they did, a few simple but powerful "self-evident truths" that he articulated in prose of great power: that governments "derive their just powers from the consent of the governed," that "all men are created equal," and that they all have "inalienable rights" to "life, liberty, and the pursuit of happiness."

So it's not too far-fetched, surely, to think that Jefferson will make a good guide, and that adopting the Jeffersonian perspective on things might help illuminate the strange goings-on in cyberspace in a fruitful way.

The problem, though, is that there are so many different Jeffersons – Jefferson-the-Architect, Jefferson-the-Politician, Jefferson-the-Botanist, Jefferson-

the-President, Jefferson-the-Philosopher, Jefferson-the-Inventor, Jefferson-the-Farmer, Jefferson-the-Linguist, Jefferson-the-Gardener . . . – that it is difficult to find “the Jeffersonian perspective” on things. Jefferson-the-Thinker-About-New-Worlds is hidden somewhere amongst all those other Jeffersons, and uncovering it requires entering what Joseph Ellis has called “the labyrinthine corridors of Jefferson’s famously elusive mind.” No small task. Where do we start, and how do we follow, the Jeffersonian conversation?

Fortunately, Jefferson-the-Thinker-About-New-Worlds left us both a blueprint and a clue. The blueprint is his book, *Notes on the State of Virginia*; the clue is the moose that he brought to Paris.

## VIRGINIA, 1781: NOTES ON THE NEW WORLD

*I am presently busily employed for Monsieur Marbois without his knowing it, and have to acknowledge to him the mysterious obligation for making me ~~infinitely~~ much better acquainted with my own country than I ever was before.*

Jefferson to D'Anmours, November 30, 1781

[strikeout in original]

In the Spring of 1781, Jefferson was finishing up his second term as Governor of Virginia, the office to which he had been appointed following his service with the Continental Congress and his justly-celebrated work drafting the Declaration of Independence. It was a very difficult and unhappy time in his life. His infant daughter Lucy Elizabeth died in April; his wife Martha, who had never quite recovered from the pregnancy (her fifth in seven years), was also, slowly, dying.<sup>2</sup>

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<sup>2</sup> Martha Jefferson died the following year (September, 1782). Her deathbed scene is the stuff of legend. Just before she died, she scrawled an excerpt from Laurence Sterne's *Tristram Shandy* on a piece of paper:

Time wastes too fast: every letter  
I trace tells me with what rapidity  
life follows my pen. The days and hours  
of it are flying over our heads like  
clouds of a windy day never to return more —  
every thing presses on

In the almost unimaginably vast trove of Jeffersoniana out there, it is, other than a few inventory lists and the like, the only surviving item written in Martha Jefferson's own hand.

His tenure as governor, though not quite the miserable failure his political enemies called it, was hardly a resounding success, either. Virginia was at war, and the war was not going well. English forces, led by General Cornwallis and the American turncoat Benedict Arnold, had invaded Virginia the preceding Fall, and the government of the new State seemed too disorganized to mount any serious resistance. British troops stormed into the capital, Richmond, in January of 1781, and the entire State government, Jefferson included, abandoned the city rather ignominiously and fled West, to Charlottesville. The British continued their advance, and in early June entered Charlottesville. They had specific orders from General Cornwallis himself to capture Governor Jefferson, who was then living at nearby Monticello; as British troops were climbing one side of the hill

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Jefferson himself –whether before or after her death is not known –then wrote out the remaining lines at the bottom of the page:

*–and every  
time I kiss thy hand to bid adieu, every absence which  
follows it, are preludes to that eternal separation  
which we are shortly to make!*

Martha's death threw Jefferson into a depression from which friends feared he would never recover. "He kept his room for three weeks," his daughter Patsy wrote, and "walked almost incessantly night and day, only lying down occasionally, when nature was completely exhausted, on a pallet that had been brought in during his long fainting fit." When he at last he left his room, "he rode out and from that time he was incessantly on horseback rambling about the mountain on the least frequented roads and just as often through the woods." A "miserable kind of existence . . . too burthensome to be borne," Jefferson wrote, ". . . all my plans of comfort and happiness reversed by one single event and nothing answering in prospect before me but a gloom unbrightened with one cheerful expectation."

on which Monticello sits, Jefferson escaped on horseback down the other, and he hightailed it to his estate (little more than a cabin in the woods, really) at Poplar Forest 60 miles to the southwest.

It was not his finest hour. Within two weeks, the Virginia House of Delegates began a formal inquiry into his conduct as Governor. Although Jefferson was absolved of all charges that he had been derelict in the conduct of his duties, and the House of Delegates ultimately passed a Resolution thanking him for his “impartial, upright, and attentive administration whilst in office,” the entire affair left a very, very bitter taste in his mouth. He was, he thought, through with public service forever. *I think public service and private misery inseparably linked together*, he wrote to his friend James Madison; *I have taken my final leave . . . I have returned to my farm, my family and books, from which I think nothing will ever more separate me*. While at Poplar Forest, he turned his attention – with considerable relief, one imagines – to more engaging matters. *Nature intended me for the tranquil pursuits of science, by rendering them my supreme delight*. He had in hand a letter, forwarded to him by Joseph Jones, a member of the Virginia delegation to the Continental Congress, from Francois Marbois, recently appointed First Secretary of the French legation to the United States – in modern terms, Assistant to the French Ambassador. Marbois had been *instructed by his government to obtain such statistical accounts of the different states of our Union as might be useful*, and as he was preparing to leave France for the United States he drew up a series of twenty-two questions about life in the New World that he sent to officials in each of the newly-independent States.

Marbois’ questions read a bit like something an ambitious junior high school student might send to the Governor’s Office in each State as part of a class project (especially if that junior high school student had only a rough command of the English language): What are the “limits and boundaries” of your State? What are its “counties, cities, townships, and villages?” What is the “number of

its Inhabitants?" What are their "particular customs and manners"? How is the State governed? What are its laws? What are its "rivers [and] rivulets, and how far are they navigable?" What kinds of "trees, plants, fruits, etc." does it have? What are its "best sea-ports, and how big are the vessels they can receive?" What kinds of "mines and other subterranean riches"? Mountains? Cascades?<sup>3</sup>

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<sup>3</sup> Marbois' original queries, in full, were as follows:

"Articles of which you are requested to give some details:

1. The Charters of your State.
2. The present Constitution.
3. An exact description of its limits and boundaries.
4. The Memoirs published in its name, in the time of its being a Colony and the pamphlets relating to its interior or exterior affairs present or ancient.
5. The History of the State.
6. A notice of the Counties Cities Townships Villages Rivers Rivulets and how far they are navigable. Cascades Caverns Mountains Productions Trees Plants Fruits and other natural Riches.
7. The number of its Inhabitants.
8. The different Religions received in that State.
9. The Colleges and public establishments. The Roads Buildings &c.
- 10 The Administration of Justice and a description of the Laws.
12. The present State of Manufactures Commerce interior and exterior Trade.
- 13 A notice of the best Sea Ports of the State and how big are the vessels they can receive
14. A notice of the commercial productions particular to that State.
- 15 The weight measures and the currency of the hard money.
16. The public income and expences.

Marbois received nothing of value from his correspondents in 12 of the former Colonies. Only Governors John Sullivan of New Hampshire and John Witherspoon of New Jersey even bothered to respond at all, and then only with perfunctory replies – a “nice to hear from you, welcome to America, sorry I can’t be of much help” sort of thing.

No surprise there; after all, answering Marbois’ questions involved more than just sending off a pamphlet or two, accompanied by the official road map and an article from the World Book Encyclopedia. Most of the information Marbois was looking for was simply not available anywhere in 1781, and most of what was available was scattered in a thousand different places. (Not to mention the fact that the United States was, at the time, still in a state of war with Great Britain, and the officials to whom Marbois directed his queries might, understandably, have been preoccupied with other matters, too busy to undertake the massive effort that would be required to respond adequately to any of Marbois’ questions, let alone to all of them.)

But with correspondent number 13, Marbois hit the jackpot. Jefferson, in what historian Donald Jackson nicely calls his “dogged way,” took Marbois’

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17. The measures taken with regard to the Estates and Possessions of the Rebels commonly called Tories.

18. The condition of the Regular Troops and the Militia and their pay.

19. The marine and Navigation.

20. A notice of the Mines and other subterranean riches.

21. Some samples of these Mines and of the extraordinary Stones. In short a notice of all what can increase the progress of human Knowledge

22. A description of the Indians established in the State before the European Settlements and of those who are still remaining. An indication of the Indian Monuments discovered in that State.”

request as a golden opportunity:

*I had always made it a practice, whenever an opportunity occurred of obtaining any information of our country which might be of use to me in any station public or private, to commit it to writing. These memoranda were on loose papers, bundled up without order, and difficult of recurrence when I had occasion for a particular one. I thought [Marbois' request] a good occasion to embody their substance, which I did in the order of Mr. Marbois' queries, so as to answer his wish and to arrange them for my own use.*

“Just pullin’ together some stuff I’ve got lyin’ around.” Ha! In fact, his response, delivered to Marbois in December, 1781, was a veritable encyclopedia about the New World: over 200 pages of text with responses to all of Marbois’ questions, containing information on everything from the length and navigability of Virginia’s rivers to a description of the different languages spoken by the Native American inhabitants, from the location of all known veins of gold, iron, lead, copper, coal, marble, granite, limestone, salt, and sulfur to a comprehensive list of Virginia’s native plants (divided into four categories: *medicinal, succulent, ornamental, and useful for fabrication, with the scientific and popular name of each*), from the quantity and dollar value of Virginia’s trade in tobacco, wheat, Indian corn, tar, pelts, flax seed, sturgeon, brandy and whisky, to the historical rainfall patterns across the Virginia Piedmont, from the number of inhabitants in each of Virginia’s counties to the enactments of the English parliament relating to the colonization of the New World and the history of the Constitution of Virginia, . . .

Who else, then or now, could possibly have pulled it off? Marbois, surely, could not reasonably have expected anything remotely like it, and one can only

imagine his reaction when he received it.<sup>4</sup>

Jefferson kept a copy of his responses to Marbois's questions (no small task in those pre-photocopying days!) for his own use. He spent the next few years revising and expanding and updating the material, finally publishing the whole thing in 1785 –anonymously, in a private printing of 200 copies –as *Notes on the State of Virginia*. It was one of only two books he would publish during his lifetime.<sup>5</sup>

Like everything Jefferson wrote, it contains prose of great majesty and beauty. [[Box 2 Here](#)] But, in truth, not that much of it –certainly not when

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<sup>4</sup> For the “What Goes Around Comes Around” file: Jefferson’s generous act of providing Marbois with this storehouse of information about the new country to which Marbois was traveling did not go unrewarded. Twenty years later it was none other than Marbois, at that time the French Minister of Finance under Napoleon, who negotiated the sale of the Louisiana Territory to the United States – which was led, of course, by then-President Jefferson. One can only speculate on whether residual feelings of goodwill had anything to do with the almost unbelievably good bargain that the Americans obtained in those negotiations.

<sup>5</sup> The other “book” Jefferson published was the pamphlet he published in 1812 bearing the catchy title “The Proceedings of the Government of the United States, in Maintaining the Public Right to the Beach of the Missisipi (sic), adjacent to New Orleans, against the Intrusion of Edward Livingstone” – “dry legal argument not at all suited to popular reading,” historian Dumas Malone called it. In effect, a copy of the legal brief he wrote in response to a lawsuit filed against him by Edward Livingstone, a somewhat shadowy character living in New Orleans, involving some actions Jefferson had taken while serving as President in regard to boundary lines in New Orleans. [The episode is described in Dumas Malone, “The Sage of Monticello” (1981)]

measured by the exalted standard Jefferson himself set in his other writing. Not to put too fine a point on it, *Notes on the State of Virginia* is a pretty dull read; even Jefferson, it turns out, can't make data on rainfall and wind velocity, or the relative sizes of European and American tree squirrels, sing in the ears of the reader.

It is, though, where he answered the question: What does someone trying to understand this "new world" need to know about it? What's it really like over there?

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And that moose?

## PARIS, 1787: THE MOOSE ARRIVES

*Is not the Caribou and the Black Moose one and the same animal?  
Is not the grey Moose and the Elk one and the same Animal and quite different  
from the former?  
What is the height of the grey Moose at the weathers, its length from the Ears in  
the root of the Tail, and its circumference where largest?  
Has it a Sollid or Cloven Hoof?  
Do their feet make a loud rattling as they run?  
Is the under part of the Hoof covered with Hair?  
Are they a Swift Animal?  
Do they sweat when hard run or only drip at the tongue?  
At what season do they shed their Horns, and when recover them?  
Has the Doe Horns as well as the Buck?  
How many young does She produce at a time?  
What is their Food?  
How far southward are they known?  
Have they ever been tamed and used to any purpose?*

1787 was a truly remarkable year in human history. On one side of the Atlantic, delegates were gathering in Philadelphia to begin deliberating over a new Constitution for the recently-formed United States of America. On the other, rioting to protest the rising cost of food had begun in the streets of Paris, signalling the opening chapter in a complex and bloody chain of events that would tear European society to pieces and fundamentally alter the course of the modern world.

Jefferson, recently installed as the United States' Minister Plenipotentiary to France, was probably the only person on the planet with close links to both events, the one central node in a trans-Atlantic network of revolutionaries. He was more of a virtual participant in the Philadelphia convention; he didn't actually attend any of the sessions (he didn't return to the United States until 1789), but his ideas were surely there, largely because James Madison, his disciple and close friend, was there, and would end up playing a critical role in

formulating the structure of the new government.<sup>6</sup>

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<sup>6</sup> The relationship between the elder Jefferson and the younger Madison –who, in the words of Jefferson biographer Joseph Ellis, “probably knew Jefferson as well or better than anyone else alive” –was one of the more extraordinary collaborations in American history; John Quincy Adams would later call it “a phenomenon, like the invisible and mysterious movements of the magnet in the physical world.” While Jefferson was stationed in Paris the two men had kept up a lively stream of correspondence about matters great and small –constitutional theory, the price of food, political developments, Virginia’s weather, the prospects for a European war, how Jefferson’s children were getting on, etc. – and it was to Jefferson that Madison turned for help, in 1785, when he began formulating his ideas about the structure of a new government for the United States. Recalling Jefferson’s earlier offer to “procure me such books as may be *‘either old and curious, or new and useful,’*” Madison sent “a catalogue of my wants”: “treatises on the ancient or modern federal republics, the law of Nations, and the history natural and political of the New World,” along with “such of the Greek and Roman authors where they can be got very cheap, as are worth having and are not on the common list of School classics.”

Jefferson, who needed few excuses to buy books in prodigious quantities, sent back over 250 volumes: the collected works of David Hume and Voltaire, the first 37 volumes of Diderot’s “Encyclopedia,” De Solis’ “Conquest of Mexico,” Smith’s “History of New York,” and many others. [It wasn’t just books, either; the complete list of the items that Jefferson sent to Madison from Paris is truly extraordinary, including such things as the newly-invented phosphorous matches (*by having them at your bedside with a candle, Jefferson wrote his friend, the latter may be lighted at any moment of the night without getting out of bed!*); a pedometer; a new kind of oil-burning lamp (the “Argand cylinder lamp,” *thought to give light equal to six or eight candles*), pamphlets on ballooning and animal

And in France, when, in the winter of 1787, a beleaguered King Louis XVI, his government bankrupt and the French economy in free fall, convened a special gathering of the French nobility –the so-called “Assembly of Notables”<sup>7</sup> – for the purpose of securing funds from the nobles to prop up the regime and stave off financial collapse, Jefferson found himself –put himself –at the center of events. He attended most of the Assembly sessions, and he was there when the Marquis de Lafayette –a member of Jefferson’s inner circle in Paris, and a leader of what came to be known as the “Patriot Party,” with whom Jefferson had forged close ties and for whom he was serving as unofficial advisor<sup>8</sup> –stood

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magnetism, a pocket compass, a wristwatch, and a telescope fitted inside a hollow cane (for use on Madison’s country rambles)].

In what historian Douglass Adair nicely called “the most fruitful piece of scholarly research ever carried out by an American,” Madison distilled this “literary cargo” into two essays, “Notes on Ancient and Modern Confederacies” and “Vices of the Political System of the United States,” outlining his thoughts on the defects of the government under the Articles of Confederation and the possible remedies for those defects. These essays, which he sent to Jefferson for review and comment during the Winter and Spring of 1787 (accompanied by “a few Peccan nuts” from his Virginia farm for Jefferson to nibble on, in case he was feeling homesick) contained Madison’s first tentative sketch of the “foundation of the new system” that he would champion at the Constitutional Convention.

<sup>7</sup> The Assembly of Notables, Lafayette wryly noted in a letter to George Washington, was composed primarily of people “not able” to do much of anything.

<sup>8</sup> Famously, Jefferson collaborated with Lafayette on the draft of a “Charter of Rights” for the French government, which would serve as the basis for the “Declaration of the Rights of Man” that Lafayette presented to the National Assembly in 1789.

up and demanded a true National Assembly, a representative body constructed along the lines of the British House of Commons or the U.S. Continental Congress.<sup>9</sup>

And as earth-shaking as these events proved to be, they were hardly the only things on Jefferson's mind in 1787. He was working hard (and, ultimately, with some degree of success, though less than he had hoped) to negotiate a new trade pact that would reduce France's prohibitively high tariffs on imported American goods (notably, tobacco, fish, and whale-oil), and to organize collective military action against the Barbary pirates, who were then plundering American and European vessels along the coast of North Africa (again, with some degree of success). There were, also, negotiations with the bankers to keep him busy. Obtaining credit for the newly-formed United States was of the gravest importance in the 1780s; many believed then and many historians believe now that the very survival of the new nation was at stake, that without an additional infusion of cash the new nation was about to go bankrupt. The debts incurred to pay for the War of Independence –loans from the French and Dutch governments, and from various private interests, including a syndicate of Amsterdam bankers who negotiated a deal with John Adams in 1782 to float a 5 million florin (\$1.5 million) note on behalf of the U.S. –were coming due, and the new government was having problems coming up with the cash.<sup>10</sup> (And just to

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<sup>9</sup> The King, upon receipt of Lafayette's demand, promptly dissolved the Assembly of Notables and sent everyone home. It is one of history's truly delightful coincidences that on the very day that the King dissolved the Assembly –May 25, 1787 –delegates to the Constitutional Convention in Philadelphia convened their opening session

<sup>10</sup> *Among the debilities of the government of the [Articles of] Confederation*, Jefferson wrote later, *no one was more distressing than the utter impossibility of obtaining, from*

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*the States, the monies necessary for the payment of debts, or even for the ordinary expenses of the government. Some contributed a little, some less, & some nothing, and the last furnished at length an excuse for the first to do nothing also.*

From the moment he arrived in Paris, Jefferson found himself . . . *daily dunned by a company who had formerly made a small loan to the U S., the principal of which was now become due. Our bankers in Amsterdam had notified me that the interest on our general debt would be expected in June, [and] that if we failed to pay it, it would be deemed an act of bankruptcy and would effectually destroy the credit of the U S. and all future prospect of obtaining money there.*

Rumors that the new government of the United States was insolvent, unable to pay off even the debt previously accumulated, let alone new credit – were widespread (and, in retrospect, not that far off the mark). The official depository of U.S. funds in Paris – the bank belonging to Emperor Ferdinand the Great of Prussia – began refusing Jefferson's requests for funds to cover his expenses.

*The moment of paying a great sum of annual interest was approaching. There was no money on hand; the board of treasury had notified [us] that they could not remit any, and the progress of the loan which had opened [in Amsterdam], had absolutely stopped. Our bankers there gave me notice of all this, and that a single day's failure in the payment of interest would have the most fatal effect on our credit.*

And to make matters worse, in 1787 John Adams, Jefferson's counterpart as U.S. Ambassador to England, announced that he would be returning to the United States the following year, throwing Jefferson into something of a panic. The details of banks, bonds, re-financings, and the like were never his strong suit – *the money negotiations in Holland, he wrote to James Madison, is a business for which I am the most unfit person living; I do not understand bargaining nor possess the dexterity requisite to make them . . .* He was well aware that he lacked Adams'

top things off, he had fallen in love –with Maria Cosway, the wife of British painter Richard Cosway, with whom he carried on a pretty torrid affair during 1786 and '87.)

But in the midst of it all, he managed to have the complete carcass and skeleton of an American moose, 7 feet tall at the shoulders and with skin and antlers attached, shipped to him in Paris and re-assembled and installed in the entrance hall of his residence, the elegant Hotel de Langeac in the center of town.<sup>11</sup>

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talents in this regard, and he wrote to Adams for help: *Your knowledge of the subject enables you to give the best opinion, and your zeal for the public interest, and, I trust, your friendly dispositions towards me, will prompt you to assist me with your advice on this question.*

The two arranged to meet in the Hague in the spring of 1787, on Adams' way home, and to travel together to Amsterdam to meet with the bankers:

*The danger of our incurring something like a bankruptcy in Holland, which might have been long, and even fatally, felt in a moment of crisis, induced me to take advantage of Mr. Adams's journey to take leave at the Hague, to meet him there, get him to go on to Amsterdam, and try to avert the impending danger. A consultation with [Adams] was indispensable, while we could yet avail ourselves of his powers, for when they would be gone, we should be without resource.*

The mission was a success; the two were able to persuade the bankers to execute an additional loan for 500,000 florins – in effect, rolling over their existing debt by advancing them additional money to retire the previous debts that had then come due. It was probably, for Jefferson, the most significant achievement of his years in Europe.

<sup>11</sup>Jefferson's residence – "luxurious," his daughter Patsy would write, "even for Paris!" – was a new and magnificent structure, designed by the architect of the new tower on the nearby church of Saint-Sulpice, with modern amenities like

What, as they say these days, was up with that? It's not like he had a lot of time on his hands, and getting a moose from the North American woods to Paris in 1787 was an awfully difficult business –as it would be, come to think of it, even today. You can't just shoot it, stuff it in an envelope, and send it off by overnight express; it has to be skinned, dismembered, and cleaned; a preservative has to be applied to the skin to keep it from decomposing; the whole thing –bones, skin, and antlers –has to be placed in boxes strong (and watertight) enough to survive a long ocean journey in the hold of a sailing vessel; ocean transportation to Le Havre has to be secured, along with ground transportation from Le Havre to Paris; and finally, someone in Paris has to re-assemble the whole thing. It had taken him years, and considerable personal expense – *the experiment*, he wrote later, *was expensive to me, having cost me hunting, curing, and transporting, 60 guineas* (roughly equivalent to several hundred dollars today) –to get the thing done.<sup>12</sup>

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running water, a lovely view of Paris, and surrounded by fine gardens.

Jefferson, typically, began a major remodeling project immediately after moving in.

<sup>12</sup> In 1786, Jefferson had written to Gov. John Sullivan of New Hampshire:

*The readiness with which you undertook to endeavour to get for me the skin, the skeleton, and the horns of the Moose . . . emboldens me to renew my application to you for those objects, which would be an acquisition here more precious than you can imagine. Could I chuse the manner of preparing them, it should be to leave the hoof on, to leave the bones of the legs and of the thighs if possible in the skin, and to leave also the bones of the head in the skin with the horns on, so that by sewing up the neck and belly of the skin we should have the true form and size of the animal. However I know they are too rare to be obtained so perfect; therefore I will pray you to send me the skin, skeleton and horns just as you can get them.*

Sullivan went to work. The first specimen he procured for Jefferson was

What was he up to? This is not, after all, some randomly-chosen 18th-century eccentric we're talking about here; this is the author of the Declaration of

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unsatisfactory; it would not "meet your Expectations," he wrote to Jefferson, because "the bones not being left in the skin, or proper Care taken to preserve and dress the skin with the hair on, . . . no proper resemblance of the Animal could be had."

Sullivan's second moose was only marginally better; by the time it reached Sullivan in Portsmouth, New Hampshire, the "remaining flesh [was] in a state of putrefaction." But, he told Jefferson,

"Every Engine was [then] set at work to preserve the Bones and Cleanse them from the remaining flesh, and to preserve the skins with the hair on, with the hoofs on and Bones of Legs and thighs in the skin without putrefaction, and the Jobb was both Expensive and Difficult, and such as was never before attempted, in this Quarter. But it was at Last Accomplished exactly agreeable to Your Directions . . . I am much mortified and no doubt you will be greatly surprized at the Expençe of what I now send. . . ."

When it finally arrived in Paris, it was, Jefferson reported back to Sullivan, *all in good enough condition*, except that *a good deal of the hair had fallen off*. What remained, though, was *still enough to give a good idea of the animal*. Jefferson was a bit disappointed that the *horns are remarkeably small*, and he asked Sullivan to keep his eyes open for a better specimen; *should a pair of large horns of the Moose fall into your way by accident I would thank you to keep them till some vessel should be coming directly from your nearest port to Le Havre, for I understand they are sometimes enormously large indeed*.

But please – *I would ask these things only on condition they should occasion you no trouble, and me little expense*.

Independence, the Summary View of the Rights of British America, soon-to-be Secretary of State, and later the third President, of the United States. Even allowing for hyperbole, what could possibly have made a moose skeleton, of all things, *an acquisition more precious than you can imagine?* Was he serious?

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So here's my plan. I want to put Jefferson's ideas to work, to use them to help think about cyberspace, following his blueprint – asking the questions he asked about his complicated, strange place to help us understand ours: “Notes on the State of Cyberspace.” Along the way, we'll keep our eyes out for any moose we see along the side of the road.

Cyberspace, of course, is not Virginia; its moose won't look exactly like Jefferson's moose, a Jeffersonian natural history of cyberspace won't look exactly like Jefferson's natural history of Virginia, – and I, needless to say, am not Jefferson. If I am not up to this task, so be it; I'm not sure anyone is really up to this task, but one has to start somewhere. The goal is to explore, to try to understand something about the way life proceeds there, so that we can begin the process of imagining, and perhaps bringing into being, the new structures and institutions that can help to govern it wisely and well. [\[Box 3 Here\]](#)

## [BOX 1 – Hedgehogs and Foxes](#)



The distinction comes originally from the Greek poet Archilochus -- “The fox knows many things, but the hedgehog knows one big thing” -- and it marks, Berlin wrote, “one of the deepest differences which divide writers and thinkers, and, it may be, human beings in general.”

The metaphor loses much of its force with non-European readers because so many of us haven’t the faintest idea what a “hedgehog” is. The European hedgehog (*Erinaceus europaeus*), pictured above, is an insect-eating mammal belonging to the same Order (Insectivora) as the more familiar voles and shrews. It is the most common small mammal in England. Weighing in at around 4 pounds, and growing to about a foot in length, it hunts at night, eating beetles, worms, caterpillars, slugs, and pretty much anything else that it can catch, and sleeping in underground nests during the day. Its hunting method is straightforward, basically consisting of: 1. Move forward. 2. If you encounter anything alive, eat it. 3. If not, return to Step 1. Although the hedgehog is not closely related to the porcupine, it is covered with porcupine-like quills; when startled, it rolls itself into a ball, protecting its head and body from attack. The hedgehog gets its name from a combination of its tendency to be found near

hedges and its pig-like snout. While its odd shape and short legs give it a clumsy walk, the hedgehog can move with surprising speed. When it encounters a steep downward slope, it forms itself into a ball and rolls down the hill (a quality that inspired the video game "Sonic the Hedgehog.")

Hedgehogs, Berlin wrote, see everything in terms of "a single central vision, one system less or more coherent or articulate, in terms of which they think and feel—a single, universal, organizing principle." They pursue a Big Goal; their ideas and their thoughts move centripetally, always pointing inward towards the one central vision, the "single, universal, organizing principle." Think Dante, or Plato, or Martin Luther King, men or women who burn with a single-mindedness of understanding and purpose.

Foxes, on the other hand, "pursue many ends, often unrelated and even contradictory, connected, if at all, only in some de facto way." Their world is all complexity and diversity, even chaos, and their thoughts move centrifugally, outwards towards the margins, to contemplate the world's dazzling variety. For the Fox, God is always in the details; the essence of the human condition is that there is no essence of the human condition, no single overarching vision or principle or system that can comprehend the world or our place in it. Think Shakespeare; to ask "what is Shakespeare's vision?" is to have already missed Shakespeare's vision, which is that there is no single vision that can ever make sense of it all.

## BOX 2—The View at Harper's Ferry

My personal favorite passage in *Notes* is Jefferson's description of *one of the most stupendous scenes in nature*, the confluence of the Shenandoah and "Patowmac" (Potomac) Rivers near what is now Harper's Ferry, West Virginia:

*You stand on a very high point of land. On your right comes up the Shenandoah, having ranged along the foot of the mountain a hundred miles to seek a vent. On your left approaches the Patowmac, in quest of a passage also. In the moment of their junction they rush together against the mountain, rend it asunder, and pass off to the sea. The first glance of this scene hurries our senses into the opinion that this earth has been created in time, that the mountains were formed first, that the rivers began to flow afterwards, that in this place particularly they have been dammed up by the Blue ridge of mountains, and have formed an ocean which filled the whole valley; that continuing to rise they have at length broken over at this spot, and have torn the mountain down from its summit to its base. The piles of rock on each hand, but particularly on the Shenandoah, the evident marks of their disrupture and avulsion from their beds by the most powerful agents of nature, corroborate the impression. But the distant finishing which nature has given to the picture is of a very different character. It is a true contrast to the fore-ground. It is as placid and delightful as that is wild and tremendous. For the mountain being cloven asunder, she presents to your eye, through the cleft, a small catch of smooth blue horizon, at an infinite distance in the plain country, inviting you, as it were, from the riot and tumult roaring around, to pass through the breach and participate of the calm below. Here the eye ultimately composes itself; and that way too the road happens actually to lead. You cross the Patowmac above the junction, pass along its side through the base of the mountain for three miles, its terrible precipices hanging in*

*fragments over you, and within about 20 miles reach Frederic town and the fine country round that.*

*This scene is worth a voyage across the Atlantic.*

BOX 3

“Landing on this great continent is like going to sea . . . We must have a compass, some friendly directing needle; or else we will uselessly err and wander for a long time, even with a fair wind.”

Jean de Crevoceur, Letters from an American Farmer (1782)