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Reviewed work(s):

Source: *Early American Literature*, Vol. 22, No. 3 (1987), pp. 252-273

Published by: [University of North Carolina Press](#)

Stable URL: <http://www.jstor.org/stable/25056677>

Accessed: 16/04/2012 14:31

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THE CONSTITUTION OF NATURE:  
TAXONOMY AS POLITICS IN  
JEFFERSON, PEALE, AND  
BARTRAM

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*In every perception of nature there is actually present the whole of society. The latter not only provides the patterns of perception in general, but also defines nature a priori in relation to itself.*

T. W. Adorno (101)

Natural history," Benjamin Rush wrote, "is the foundation of all useful and practical knowledge." He made this remark in 1791, in the context of designing the proper education for the citizens of the new American republic. "By making natural history the first study of a boy, we imitate the conduct of the first teacher of man," Rush continued. "The first lesson that Adam received from his Maker in Paradise, was upon natural history. It is probable that the dominion of our great progenitor over the brute creation, and every other living creature, was founded upon a perfect knowledge of their names and qualities" (47–48). What Rush did not explicitly say—but what was implicit in his discussion, and in similar discussions of taxonomic natural history by other leading writers of early republican America—was that knowledge of the names and qualities of the beings in nature was not only the basis of the American's control over his environment, but might also be, in some sense, the foundation of the collective life of the new nation of which he was a member. Not only could it serve to make the elements of the new world familiar to him and render them useful for his purposes, but it could also help him to imagine the shape of the new society that he was then in the midst of making. Like the biblical Adam, whose precedent they commonly invoked, and who (Genesis 2:18–20) immediately upon naming the creatures became aware of his need of a compan-

ion—that is, commenced his life as a social being—so too did Americans in the early years of the republic engage in taxonomic construction as a rehearsal, so to speak, of social and political construction.<sup>1</sup> “In designating a thing I designate it to *the Other*,” as Emmanuel Levinas has written; the act of designation precedes *and founds* the social relation (209; emphasis added). This relation between the natural and the social—the grounding of social order in a posited natural order—is distinctly present in such early national writers as Thomas Jefferson, Charles Willson Peale, and William Bartram.

In the thought of cultural leaders of the early national period, there is a kind of automatic metaphorical exchange between images of natural order and ideas of social and political order.<sup>2</sup> The period is one of cultural “constitution” in a broad sense, and it is important to place the making of the written instrument of government—the Constitution—within the context of larger constitutive cultural processes. Certainly it was evident to an individual like Madison, for instance, that the logical problems affecting the construction of legitimate natural taxonomies were essentially the same as those affecting the delineation of legitimate political institutions. In the *Federalist* No. 37, Madison treated the construction of political forms—e.g., “marking the proper line of partition, between the authority of the general, and that of the State Governments”—as a version of the general epistemological effort “to contemplate and discriminate objects, extensive and complicated in their nature” (234–35). “The boundaries between the great kingdoms of nature, and still more, between the various provinces, and lesser portions, into which they are subdivided, afford another illustration of the same important truth,” he continued.

The most sagacious and laborious naturalists have never yet succeeded, in tracing with certainty, the line which separates the district of vegetable life from the neighboring region of unorganized matter, or which marks the termination of the former and the commencement of the animal empire. A still greater obscurity lies in the distinctive characters, by which the objects in each of the great departments of nature, have been arranged and sorted. When we pass from the works of nature, in which all delineations are perfectly accurate, and appear to be otherwise only from the imperfection of the eye which surveys them, to the institutions of man, in which the obscurity arises as well from the object itself, as from the organ by which it is contemplated; we must perceive the necessity of moderating still farther our expectations and hopes from the efforts of human sagacity. Experience has instructed us that no skill in the science of Government has

yet been able to discriminate and define, with sufficient certainty, its three great provinces, the Legislative, Executive and Judiciary; or even the privileges and powers of the different Legislative branches.

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Madison's expressed pessimism as to the probability of successful political delineations on the model of those of natural scientific taxonomy should not obscure for us, however, the ease and satisfaction with which he entertains such a possibility. *Kingdom, province, district, neighbouring region, and empire* are the terms—all of them borrowed from the political register—that he instinctively employs to characterize natural taxonomic differences. They enable his mind to pass smoothly from one realm to another, and they indicate a desire to constitute, despite the difficulty of such a project, a political order in which “all delineations” would be as “perfectly accurate,” as “natural” and as certain, as those inherent in the order of nature itself. To observe that such a project seeks to claim for the “institutions of man” an authority transcending the human is to recognize a familiar ideological device, one that has a particular power in the early American republic.

I

“A Society,” Durkheim wrote, “is not made up merely of the mass of individuals who compose it, the ground which they occupy, the things which they use and the movements which they perform, but above all is the idea which it forms of itself” (470). This observation—that a society needs to represent itself to itself in order to certify its existence and its legitimacy—is illustrated by the American republic in the immediate post-revolutionary period. As the heroic excitements of the Revolution receded into the past and were replaced by the domestic convulsions of the succeeding decades, it became apparent to observers that America lacked a compelling idea of its own coherence, a self-conception that would make it a genuine society—a nation—rather than a mere mass of individuals. Diversity characterized the American population, and instability characterized the state that had been formed to govern it. Operating after 1776 under a bad constitution that was not even adopted until 1781, and then replaced by 1789, the viability of the republic was very much in question for several decades following independence. The threat of monarchical counter-revolution or military putsch, local insurrections like Shays' Rebellion and the Whiskey Rebellion, several secessionist

movements, a series of treasonous plots against the state, and regular eruptions of mob violence were the conspicuous features of political life in the early republic. And there were, of course, even among the leaders who had joined to prosecute the Revolution, fundamental differences as to the proper form the state should take—differences that are sufficiently indicated by invoking the names of Jefferson on the one hand, and Hamilton on the other; Paine on one side, Adams on the other.

These differences of political conviction, which were articulated with increasing insistence as the memory of the Revolution faded, were probably less threatening in the short run than the incidents of actual violence, but they were potentially at least as dangerous to the future of the republic. The linguistic violence of the 1780s and '90s—the “wordy battle, and paper war” that Irving satirized so effectively in *Salmagundi* (144)—was the audible evidence of the Americans' lack of a common idea of the kind of society they wanted. Dissensus then was as deep, as general, and as powerful as it has been at any other time in American history. The American republic was as yet a factitious entity, a concocted political framework that gathered together people whose primordial loyalties were attached to local, ethnic, sectarian, and linguistic communities, rather than to the vaguely conceived national society. Having established a new state, the revolutionary leaders discovered to their dismay that they had not succeeded in creating a new nation.

It occurred to some of them, in this situation, that nature might aid them in constituting the nation. A society that is in need of a collective self-conception will ordinarily find some ready-made structure close at hand that can provide a model of coherence—a *form* that, when apprehended, can be transferred to society itself. I want to claim that after the American Revolution, men like Jefferson, Peale, and Bartram found such a structure in nature; or, to be more precise, they found it in the taxonomic order that they represented nature as exhibiting: the visible order of identities and alterities that they believed nature displayed to the eye. The search for a total conceptual order is common to several of the well-known texts of post-revolutionary America. Let me begin with a characteristic exclamation from William Bartram's *Travels*, a passage that typifies not only his usual attitude toward nature, but that of many of his compatriots. “We admire the mechanism of a watch, and the fabric of a piece of brocade, as being the production of art,” he wrote, because they show the obvious presence of *design*: all parts in them appear to conspire toward a single end or effect. A similar kind of inner intentionality, he believed, was plainly to be seen in nature. “The animal creation also, excites our admiration. . . . [H]ow wonderful is the mechanism of these finely formed, self-moving beings, how complicated their system, yet

what unerring uniformity prevails throughout every tribe and particular species!" (xliv). The evidence of design was written on the face of nature, Bartram believed; in this he anticipated the view that Emerson would later take in his address on "The Method of Nature," where he claimed that "the spirit and peculiarity of that impression nature makes on us, is this, that there is in it no private will, no rebel leaf or limb, but the whole is oppressed with one superincumbent tendency" (121). What is striking about such a claim, I think, is that it assumes that this singleness of purpose is spontaneously presented to the eye and to the mind by nature in its ordinary appearance. There is very little in our everyday experience, I would say, to suggest that nature in all its parts is involved in a single task, that it is moving as a whole toward some goal; there is, on the contrary, everything to suggest otherwise. And the testimony of numerous others who recorded their impressions of American nature was that the appearance it presented was that of "the incredible, the immeasurable, the unpredictable, and the horrifying," to quote the apt summary of Howard Mumford Jones (61). Indeed, Bartram frequently found it so too; but here, at the beginning of his book, he assumed and claimed, nevertheless, that nature's surface was beautifully ordered. And he went on with utter confidence to draw inferences from his *a priori* assumption:

If then the visible, the mechanical part of the animal creation, the mere material part is so admirably beautiful, harmonious and incomprehensible, what must be the intellectual system? that inexpressibly more essential principle, which secretly operates within? (xliv)

This is an *a priori* assumption because, despite the determination with which he asserts it, Bartram nevertheless, in those places where he seems to have transcribed most faithfully (or unselfconsciously) in his prose the impressions nature made on him, described not a harmonious order of things, but a nearly random set of motions, a concatenation of fortuitous processes, an intersection of unpredictable transformations. That is, he observed a world of things that moved, a world of change and becoming, rather than one of static being.

This is not to say that the world appeared to Bartram in fact as a total flux of colored spots, strange noises, and sensations of warmth and cold—a world that would resist all logical formulation. But it appeared to him as something like the world John Dewey described as the "colored, resounding, fragrant, lovable, attractive, beautiful" world of objects as they are disclosed to the prescientific consciousness (98). That is, it appeared to him as it appears to us before science and philosophy abstract, simplify, reduce, quantify, control and possess it. I make a point

of emphasizing here that the world is never present to us as a sheer chaos of shifting impressions; even in the “natural attitude,” as the phenomenologists call it, we perceive a world composed of somewhat coherent arrangements of relatively well-circumscribed objects having more or less determinate properties. We are born into a world already largely preconceived: all perceptions, as William James said, are *acquired* perceptions (2:78). Perceptual chaos, when it is invoked—and here I anticipate my argument a little—is not a report of what the senses detect in the world, but is rather a *figure* for social anarchy—a trope of perception, as it were—and it is employed as such for particular rhetorical purposes. Likewise, a hard-set and fixed conceptual system is a figure for social order. The stiff and immutable world that men like Jefferson, Peale, and Bartram constructed was their rhetorical invention: it was a figure for social stability and—as I wish to claim—for an intensely desired end to the flux of revolutionary social-historical change.

But if the world as we know it is composed of objects that are relatively stable, those objects do, however, despite our best intellectual precautions, tend to change over time and even vanish. They do not form a reality fixed and complete, rigidly categorized and statically exhibited to the eye of the mind. They form a world of some uncertainty, for a world in motion is a world about which people may hold conflicting opinions. A world that changes is one that invites different individuals to form different and perhaps incompatible judgments, and it invites even the same individual to form different, perhaps incompatible judgments at different times. In such a world, we are liable to lose faith in the unity of truth: as Melville asks in *Clarel*, “That stable proof which man would fold, / How may it be derived from things / Subject to change and vanishings?” (112). And if a more or less uncontroversial stock of knowledge is a necessary social resource—the foundation of basic agreement among men—then the transformations in nature, which inhibit the acquisition of uncontroversial knowledge, constitute a threat to social well-being. The scientifically formulated world, however, is essentially inert and is therefore a world about which there can be certain knowledge and about which there ought to be no disagreement. At least this is what the enlightened eighteenth-century philosopher believed: refusing to be distracted by the mutability of natural objects, he held that the Linnæan intellectual system represented the one true world, the fixed order of nature as it objectively subsisted. He was, we may say, mistaking the unchangeability of his concepts for the invariance of nature: we find him, in the person, for instance, of Bartram, in what may seem the rather comical act of strolling through the wilderness of Georgia, reciting to himself the scientific nomenclature of the animals and plants he finds,

not interested in them in their contingent and mutable specificity, but only in their conceptual universality: "Magnolia glauca, Itea, Clethra, Chionanthus, Gordonia lasianthus, Ilex angustifolium, Olea Americana, Hopea tinctoria," and so on (24).<sup>3</sup> This incantation, this ritual prophylaxis, invoked the complete and consistent set of categories that the eighteenth century employed to describe and construct nature. As such, it united Bartram, alone there in the wilderness, with the minds of other men, whom he met, as it were, in the integrated world of stable ideas that the Linnæan classifications constituted. As Durkheim said, the crucial fact about such a total intellectual system is that the world it describes is a world that no individual knowing subject, with his limited perspective on things, can contemplate; only society as a whole, the putative collective subject, can regard it. The Linnæan system, since it represents the whole natural world, necessarily exceeds the experience of any single knowing subject, since such an individual subject, no matter how extensive his acquaintance with the plants and animals of the earth, could still know only some of them. The natural world *in toto*, then, according to Durkheim, is "an object [that] can be embraced only by a subject which contains all the individual subjects within it." It is, we might say, an imaginary object, only visible to an imaginary subject—the collective subject. Durkheim, of course, in this connection concluded with a famous dictum: "The concept of totality is only the abstract form of the concept of society" (490).

It is taxonomy in this respect—as a total system of concepts exhaustively representing the world of natural things, and corresponding to the total form of society—that was particularly important to post-revolutionary America. Collective unity in the social moment of the synthesis of thought was what Bartram, along with Jefferson and Peale, aimed to stimulate. It might be possible to study certain particular parallels between specific social classes and specific natural categories, such as many cultures draw; such correspondences seem, however, to be severely attenuated in developed Western cultures. (They survive vestigially in such totems as the donkey and the elephant, representing the two established political parties in the United States.) It seems, rather, that the compelling feature of the Linnæan taxonomy was its comprehensive unity, and that in the modern West the expressive relation between nature and society operates almost exclusively at the level of the whole. This is where men like Jefferson, Peale, and Bartram focused their attention, anyway: they felt deeply the lack of social unanimity in late eighteenth-century America, and they imagined that in nature—prearranged nature—they saw a powerful totality that might be of use in constructing the collective American subject. This was the natural world that Bartram



went to Georgia, the Carolinas and the Floridas to find, and he found it; this world promised to be the unifier of minds. Implicitly present in Bartram's perception of nature, *actively determining* it, was the whole of society; or, since my argument is that we can't properly speak of a coherent society in America at the time, but only of a set of communities that cultural leaders were trying to tie together as a single society, I should say that what was present in Bartram's perception of nature was an *idea* of the whole of society, a *wish* for social unity that found its expression vicariously in his determination to see *in* nature the taxonomic scheme he brought to it.

In this connection, Bartram's obsessive habit of describing groups of animals and even plants as social groups is relevant: flowers "associate in separate communities" (114), fish comprise "nations" (101) and "bands and communities" (105), butterflies rally to their "kindred tribes" (106). Sometimes the metaphors are those of specifically military societies: "armies" of fish (111), "well disciplined squadrons" of cranes (121), a "company" of wolves (126).<sup>4</sup> And Bartram never hears the lowing of cows and fails to comment on their "cheerful, social voices" (120). He goes so far as to imagine that "different tribes and bands"—deer, wild horses, turkeys, cranes—will, upon the appearance of a predator, "draw towards each other . . . as it were deliberating upon the general good" (120). That verbal hedge—"as it were"—barely disguises the wish, discreetly present here, that diverse human groups may also find it possible, in America, to agree upon a general good or a common interest. But Bartram only imagines that the animals do so when confronted with the danger of an attack; and this circumstance recalls, without examining, the political problem American leaders faced in the period in question. For Americans—like Bartram's several species—*had* united when faced with a threat from outside; but when that threat was eliminated, their unanimity had dissolved. It is the restoration of that unanimity that Bartram seeks as he gazes at nature, subsuming its objects under his conceptual scheme, executing an act of consciousness on behalf of the society that he intended thereby to call into being, the society that alone could complete the act of total cognitive synthesis he was proposing. Bartram's contemplation of nature was the self-contemplation of the American nation at the moment of its creation.

## II

In the first, formative stages of American nationality, as I have said, cultural leaders had to confront the threat of social disintegration that

was posed by the conflicting racial, ethnic, religious, linguistic, sectional, local, and ideological categories of self-definition and social loyalty that were inhibiting the formation of a genuinely national identity. As Jefferson wrote, "During the war of Independence . . . the pressure of an external enemy hooped us together. . . . The spirit of the people, excited by danger," produced a unanimity that "was a supplement to the Confederation," which was otherwise an inadequate political instrument (*Writings* 70–71). It was this inadequacy that the Constitution was intended to remedy, but the decades of reciprocal violence that followed the ratification of the Constitution showed that it was not the deficiency of the particular instrument of government that was the real problem, but rather a deficient "spirit of the people." There was no collective identity, no collective subject whose will the state could be considered to be expressing. In traditional societies, the existence of such a collective subject is a product of history and custom. All kinds of primordial attachments—blood ties (real or presumed), common racial characteristics, linguistic community, geographical concentration, religious orthodoxy, shared usages and practices—all of these enable spokesmen for historically-grounded, organically-evolved nations to use the first person plural with confidence: "We" do this or do that, are this or are that, believe this or believe that.<sup>5</sup> However, for Americans after the Revolution, too many kinds of cultural heterogeneity stood in the way of establishing an integral national self. Despite the grandiloquent gesture of the Constitution's opening—"We the People"—there was no "People" of whom "We" could speak.

It is in this context of threatened social disintegration that we must consider the meaning of the Jeffersonian generation's special affinity for natural history. Men like Jefferson, Peale, and Bartram saw in nature—nature as Linnæus constructed it—a promise of social unanimity that held a profound fascination for them. More often than not, ethnologists tell us, societies in search of images of ideal order will have recourse to zoological and botanical taxonomies, which are presumed to be objectively given in nature and which seem to provide man with what Lévi-Strauss has called "the most intuitive picture at his disposal" of a permanent order of things (137). We should not, then, be surprised to find that in the post-revolutionary period, Americans had such recourse. In so doing, it may be, they were acting in obedience to an essential human impulse that seeks to organize society as a reflection or projection of the natural world; and while we don't usually treat the Linnæan taxonomy of nature as the equivalent of the so-called "ethno-taxonomies" of other (presumably less "enlightened") cultures, it served much the same purpose. Like other collective representations or world-views, it was di-

rected not only against cognitive dissonance, but against social disintegration as well. In so functioning, it realized a particular late eighteenth-century conviction, part of the myth of enlightenment: the conviction that institutionalized science, as the organized discovery of truth, could serve as a model for the organization of state and society (Habermas 146). The advantage of science as a social model was its established procedures for reaching understanding, its methods for overcoming disagreements. Scientific societies were “always in peace,” as Jefferson said, “however their nations may be at war. Like the republic of letters, they form a great fraternity spreading over the whole earth” (*Writings* 1201). In the 1780s and ’90s, as it happened, classificatory natural science exemplified for Americans the ideal of scientific inquiry.<sup>6</sup> Jefferson remarked that while it was “impossible for a man who takes a survey of what is already known, not to see what an immensity in every branch of science yet remains to be discovered” (*Writings* 1064), natural science had the advantage over other branches of inquiry of having in the Linnæan scheme a “Catholic system,” a “universal language” that had obtained “the general consent,” thus “rallying all to the same names for the same objects, so that they could communicate understandingly on them” (*Writings* 1330–33). That is, while other sciences were as yet plagued by fundamental disagreements as to their proper objects and proper methods, natural history had what we might today call a paradigm or research program—what Jefferson called a “universal language”—that united its practitioners in an effective community of inquiry. Although he would eventually come to admit, with Buffon, that “Nature has, in truth, produced units only through all her works,” and that “classes, genera, species, are not of her work” but are constructions of human intelligence that “fix arbitrarily on such characteristic resemblances and differences as seem to us most prominent and invariable in the several subjects,” he nevertheless believed that to abandon the “received, understood, and conventionally settled” system of Linnæus would mean that we could “no longer communicate intelligibly with one another” (*Writings* 1329–31). And although his recognition of the arbitrary status of the Linnæan categories led him to confess that it was not “intrinsically preferable” to any other classification,<sup>7</sup> he definitely preferred it to what he derisively called “the no-system of Buffon, the great advocate of individualism in opposition to classification” (*Writings* 1331–33). This reference to *individualism* tells us something, for Jefferson began the letter from which I have been quoting by expressing his reluctance to discuss the “comparative merits of the different methods of classification adopted by different writers on Natural History,” since (as he said) his had been “a life of continued occupation in civil concerns,” which had taken him away

from natural science (*Writings* 1329). Relenting, however, he expressed himself on the subject anyway, and, when doing so, those "civil concerns" were still clearly present to his mind. Having concluded that "classes, genera, species" are human institutions, the simple basis upon which he decided the "comparative merits" of the different taxonomic systems was therefore necessarily a social one. "I adhere to the Linnæan because it is sufficient as a ground-work, admits of supplementary insertions as new productions are discovered, and mainly because it has got into so general use that it will not be easy to displace it, and still less to find another which shall have the same singular good fortune of obtaining the general consent" (*Writings* 1332-33). An attempt to replace it would lead, he said, "directly to the confusion of tongues of Babel" and to "schism" (*Writings* 1330-33). The one substantive merit of the Linnæan scheme that Jefferson was willing to specify was that it dwelt more consistently upon the surface appearances of things: it assigned particular things to particular categories according to outward features. This choice of "such exterior and visible characteristics as every traveller is competent to observe, to ascertain and to relate" (*Writings* 1331) made it that much easier for the principles and procedures of scientific cooperation to become the principles and practices of social intercourse in general, since the orthodox Common Sense epistemology of the Jeffersonian generation held that the act of knowing was analogous to the act of seeing.<sup>8</sup> Hence if a science that would yield certainty, and yield it to everyone, was needed, natural history of the Linnæan sort would be the best choice.

This preference for natural history, based on political considerations, was also present in the Reverend Nicholas Collin's *Essay on those inquiries in Natural Philosophy, which at present are most beneficial to the UNITED STATES OF NORTH AMERICA*, in which Collin, a Swede, posed as an appointed messenger of "the great Linnæus" himself: "I often heard [him] wish that he could have explored the continent of North America," Collin attested; "[M]ay this wish animate American philosophers" (xv). "Patriotic affections" were behind the privilege Collin granted to taxonomic investigations; he thought it relevant to refer to the "convulsion of public affairs, for a considerable time past, which occasioned many and great domestic distresses: the natural events of the late war are universally known" (vi). The inner relation between natural and political history emerged, as if automatically, within Collin's language: the "events of the late war" are called "natural," and when he goes on to remark that "numbers of virtuous citizens have also felt the dire effects of the succeeding anarchy, especially in the loss of property," he is preparing a set of political connotations that will be in place when,

turning to nature proper, he stigmatizes the “apparent disorders” that are observed in nature. He insists that they are merely that—*apparent*—and that nature in fact obeys “fixed principles,” so strongly fixed that “there can be *no chance* in it” (vi–xxvii). We encounter, once again, the strong prejudice in favor of the identical, the persisting, the solid—as opposed to the self-differing, and changeable, the chaotic—that operated nearly everywhere in American science at the time, a prejudice that is regularly reinforced by the ritual repetition of moments of transformation, turbulence, and sheer motion, moments which place the conceptual scheme (and the social order) at risk, but which provide the opportunity for its reassertion. I want to refer to some of these moments presently, but let me prepare my remarks by quoting again from Durkheim, who illustrates his thesis on the social reference in all natural classifications by means of imagery that uncannily repeats some of Bartram’s most vivid imagery. Durkheim is concerned to characterize the *concept* by defining it in opposition to sensual representations—sensations, perceptions, images—as basically *stable*:

Sensual representations are in perpetual flux; they come after each other like the waves of a river, and even during the time that they last, they do not remain the same thing. Each of them is an integral part of the precise instant when it takes place. We are never sure of again finding a perception such as we experienced it the first time; for if the thing perceived has not changed, it is we who are no longer the same. On the contrary, the concept is, as it were, outside of time and change; it is in the depths below all this agitation; it might be said that it is in a different portion of the mind, which is serener and calmer. It does not move of itself, by an internal and spontaneous evolution, but, on the contrary, it resists change. It is a manner of thinking that, at every moment of time, is fixed and crystallized. In so far as it is what it ought to be, it is immutable. (481)

Durkheim’s diction is very precise: “In so far as it is what it *ought* to be, it is immutable.” That is, in the permanence of the concept is invested a measure of society’s conviction that its ways are morally right. And Durkheim’s water imagery—the “flux,” “agitation” and “waves” versus the “depths” which are “serener and calmer”—jibes nicely with a typical feature of Bartram’s writing, for Bartram also characteristically uses imagery of watery flow and agitation (on the one hand) and glassy stillness (on the other) to represent, respectively, the intrinsic changeability of sensual experience and the relative permanence of conceptual order. Many times in the course of his travels he finds himself admiring the “polished surface” of a “peaceful stream,” looking through its “pellu-

cid" waters at the objects below (49). But almost without fail, the smooth surface then becomes "ruffled," and its "wavy surface disfigures every object, presenting them obscurely to the sight, and they at length totally disappear" (51). Inevitably, however, the "waters are purified" once again, "the waves subside, and the beautiful river regains its native calmness." And "so it is with the varied and mutable scenes of human events on the stream of life," Bartram adds, perhaps too explicitly. The "well contrived system at once becomes a chaos . . . every pleasing object is defaced, all is deranged . . . a gloomy cloud pervades the understanding" (52). At another place in the text it is not the ruffled surface of a stream but a heavy rain that interferes with Bartram's comfortable and secure relation to the world of objects: "such floods of rain fell . . . that every object was totally obscured . . . all seemed a frightful chaos. When the wind and rain abated, I was overjoyed to see the face of nature again appear" (142). Instances could be multiplied, but the essential point is, I trust, clear: in a book devoted to establishing the authority of a conceptual scheme, occasional ritual moments of perceptual disorientation are produced, then quickly followed by the restoration of conceptual security, which is an affirmation of the social structure to which the concepts belong.

## III

A similar affirmation can be seen in Jefferson's *Notes on the State of Virginia*. The book's ostensible motive is to record and promulgate a certain organized body of knowledge respecting the flora, fauna, geography, and human and social institutions of Virginia. It illustrates the standard anthropological dictum that "Any culture is a series of related structures which comprise social forms, cosmology, the whole of knowledge and through which all experience is mediated" (Douglas 128). There is a relation between the concepts of nature that are so prominent in the book and the ideas of historical self-understanding that Jefferson adhered to. We know that the dynamics of social change often aroused in Jefferson a reactionary anxiety. Despite a few well-known expressions of a contrary opinion, he could scarcely conceive of social process—the movement of a nation through time—except in negative terms, that is, as decay, corruption, and degeneration (McCoy 13–47). The only kind of society that had any chance to forestall the process of corruption was one that was conflict-free: a homogeneous, egalitarian, agricultural republic. "It is for the happiness of those united in society to harmonize as

much as possible in matters which they must of necessity transact together. Civil government being the sole object of forming societies, its administration must be conducted by common consent" (*Notes* 84). It was therefore crucial that the American population not be "a heterogeneous, incoherent, distracted mass," as it might very well become if emigrants, who "will bring with them the principles of the governments they leave," were allowed to "warp and bias its direction" (*Notes* 85). In order that the republic might be "more homogeneous, more peaceable, more durable," it was necessary that precautions be taken to insure uniformity of sentiments and conceptions among the people.

It is this uniformity that the overwhelmingly static, synchronic presentation of knowledge in the *Notes on Virginia* was intended to foster. The predominant manner of presentation was in the form of charts, diagrams, tables, and lists—that is, in graphic, two-dimensional formats—all of which explicitly exclude the possibility of change or development. Indeed, we know that Jefferson, in his one scientific paper, on the megalonyx or great-claw (an animal known only from its fossilized remains), could not bring himself to believe that this particular species was no longer in existence. Having discussed its bones, one by one; having classified it with "the unquiculated quadrupeds"; having estimated its size, and given it a name, he finally had to face the "difficult question" that he conceded "now presents itself. What is become of the great-claw?" ("Memoir" 251). His conclusion: "In fine, the bones exist; therefore the animal has existed," and since the only motions present in nature are movements "in a never ending circle," it followed that "if this animal has once existed, it is probable on this general view of the movements of nature that he still exists" ("Memoir" 255). Jefferson reasoned along the same lines with respect to the mammoth, when he discussed it in *Notes on Virginia*: "It may be asked," he wrote to justify his having included the mammoth in the table that exhibited the hierarchy of species of quadrupeds, "why I insert the Mammoth, as if it still existed? I ask in return, why I should omit it, as if it did not exist? Such is the oeconomy of nature, that no instance can be produced of her having permitted any one race of animals to become extinct; of her having formed any link in her great work so weak as to be broken" (*Notes* 53–54). The same taboo on change in the order of nature informed Jefferson's refusal to countenance Buffon's theory that the species degenerated in America. Although it is usually thought that Jefferson's response to Buffon was a simple expression of resentment at the suggestion that nature in America was smaller and weaker than nature in Europe, I think, instead, that it is best interpreted as a rejection of the possibility of change or evolution *per se*, since such change would imply that the

supposed invariability of nature, and hence the stability of its conceptualization, were in error. And what was at stake in such a matter was not only the validity of the intellectual system, but also that of the social regime of which the intellectual system was the abstract equivalent.

In addition to this general theme running through the *Notes on Virginia*, there is a specific occasion when Jefferson allows the world of natural objects to appear in its changeability, a moment when the adequacy of his concepts is at risk. The moment comes under the head of Query VII, which asks for "A notice of all what can increase the progress of human knowledge?" (*Notes* 73). "Under the latitude of this query," Jefferson wrote, "I will presume it not improper nor unacceptable to furnish some data for estimating the climate of Virginia" (*Notes* 73). This may seem a peculiar choice; why should information about the climate contribute especially to the total of human knowledge? The chapter is perhaps the most curious in the book, since it calls into question the validity of assertions that are made prominently in the rest of the work. That is, in this chapter, ostensibly devoted to increasing knowledge, Jefferson instead, perversely, includes a passage that calls the very possibility of certain knowledge into question. He describes the strange optical phenomenon of "*looming*," a familiar phenomenon at sea, but one that is unaccountable, Jefferson says, in the present case. Standing upon the elevation of Monticello—which, in this passage, and, indeed, in Jefferson's life in general, represents for him the neutral, disinterested standpoint posited by the specular rationality of the Enlightenment—he finds that "in opposition to the general law of vision" that makes distant objects diminish in apparent size, looming makes them appear larger, and it makes them change their shapes:

There is a solitary mountain about 40 miles off, in the South, whose natural shape, as presented to view here, is a regular cone; but by the effect of looming, it sometimes subsides almost totally into the horizon; sometimes it rises more acute and more elevated; sometimes it is hemispherical; and sometimes its sides are perpendicular, its top flat, and as broad as its base. In short it assumes at times the most whimsical shapes, and all these perhaps successively in the same morning. (*Notes* 80–81)

Philosophy has not accounted for this phenomenon, Jefferson says; it is behind the seamen, no less, for philosophy has not even *named* this phenomenon officially. And despite having introduced this discussion under the rubric of climate, he says he can "remark no particular state, either in the weight, moisture, or heat of the atmosphere, necessary to produce this. . . . Refraction will not account for this metamorphosis.



That only changes the proportions of length and breadth, base and altitude, preserving the general outlines,” while in this case it is the very shape itself that appears to change (*Notes* 80–81). So not only is this a phenomenon that tends to defeat the project of knowledge-acquisition, it is also a phenomenon that it is, evidently, impossible to know in itself. It interferes with the relation of mind to object, and it is itself also an obscure object. Jefferson is present in this passage as the ideal knowing subject, whose effort is directed toward taking what is presented to sight and assimilating it to several ideal categories of objects—in this case, certain geometrical forms (cone, hemisphere, square). That is what knowledge consists in, for him; and it is a view of knowledge that the book as a whole tries to promote: to know is to overrule the sensibly intuited bodies in nature by means of a universally-available, all-encompassing conceptual system that, not incidentally, makes time stand still.

Charles Willson Peale is the taxonomist par excellence. And his natural history museum, installed in the Pennsylvania State House, made most explicit the relation between taxonomic natural science and political order. He hoped, in fact, that his museum would serve as an effective apparatus of the national state, and he was bitterly disappointed when its efficacy went unrecognized by the government. The specimens he mounted and displayed were arranged, in the museum’s rooms, in the perfect visual order of the Linnæan pattern. And at the top of the hierarchy—in two rows along the ceiling above the cabinets—were displayed the portraits Peale had painted of the heroes of the Revolution, presiding over the rational order of things, of which they were the superior extension. The portraits recalled the lost unanimity of the Revolutionary moment, but Peale seems actually to have believed that the majestic taxonomy of his exhibit would have the effect of restoring that unanimity if people came to see it and allowed it to impress its message upon their minds.

One very important effect may be produced,—persons having different sentiments in politicks, being drawn together for the purpose of studying the beauties of nature, while conversing on those agreeable subjects, may find a concordance of sentiments, and most probably from a slight acquaintance, would think better of each other, than while totally estranged. (*Discourse* 39)

But this was not mere conjecture on his part, as he attested:

An instance of this is in the memory of my hearers. The chiefs of several nations of Indians, who had an historical enmity to each other, happened to meet unexpectedly in the Museum in 1796 . . . sur-

rounded by a scene calculated to inspire the most perfect harmony, the first suggestion was,—that as men of the same species they were not enemies by nature; but ought forever to bury the hatchet of war. (*Discourse* 39–40)

The political design of the museum is clear: it was “calculated to inspire the most perfect harmony.” And within the museum, as within the texts of Bartram and Jefferson, there were produced certain ritual dissolutions and restorations of its conceptual order. In Peale’s case, he devised a magic lantern show—an “Exhibition of Perspective Views, With Changeable Effects; or, Nature Delineated, and in Motion”—which represented a series of scenes (both natural and social) involving perceptual transformations. By means of painted transparencies illuminated from behind, and shifted in a coordinated manner, illusions were created involving the coming of dawn, the arrival of dusk and the lighting of street lamps, a storm gathering over a view of architectural forms, a rushing stream turning a water-wheel, a battle between ships at sea, and, tellingly, the raising of Pandemonium as described by Milton (*Descriptive Catalogue*). Each sequence of images delineated a movement, but ended (when the final image was resolved) in stasis; a stasis that returned the viewers, when the show was ended, to the ordered environment of the museum itself. The museum, of course, was a display of certainties: it was a world free of ambiguities, obscurities, and difficulties, and hence a world about which there was no reason ever to disagree: a world of perfect consensus. “Facts, and not theories, are the foundation on which the whole superstructure is built,” Peale claimed. “Not on theoretical, speculative things, but on the objects of our sight and feelings” (*Discourse* 41). But even Peale—otherwise the least likely individual to entertain nominalistic doubts—wondered, perhaps unconsciously, whether his assured, static view of the world wasn’t, in fact, an illusion. When the trustees of the museum commissioned him, late in his life, to paint a self-portrait that would then form part of the museum’s exhibit, he complied by producing the painting known as “The Artist in His Museum,” which depicted him, full-length, standing before the main room of the museum, raising a curtain with his right hand to reveal, at his back, the ordered realm of knowledge it had been his long effort to construct. The portrait is dramatically lighted, and the attitude in which Peale placed himself is less that of a scientist than that of a showman; the whole composition, in fact, is governed by a theatrical metaphor that insinuates a terrible doubt of appearances into what is meant to be a reassuring picture of the world as it really, indubitably exists. And this again raises the question of whether all these attempts to present something as reconciled that actu-

ally is not—whether it be the heterogeneous elements of nature, or the social diversity and conflict that natural disorder represented for the authors I have treated—isn't one of the standard ideological reflexes of the period. For each of the writers I have considered, classificatory schemes are figures for social order, and while the pragmatic status of those schemes is here and there conceded—more willingly by Jefferson than by either Bartram or Peale—they are nevertheless held to be necessary, and whatever would falsify them is held to be dangerous. The watery dissolutions of perceived objects in Bartram, the looming in Jefferson, and the unwitting confession of the artificiality of classification in the theatricality of Peale's representation of his museum—these moments operate to reinforce the mind's attachment to the images of order they temporarily put at risk.

The obsession with natural harmony that marks this period in America would seem to mask an anxiety about the political dissonance that also marks the period. The power of the cultural presence of natural classification as a representation of social order may be best appreciated when we observe that it makes possible the elaborate humor of Hugh Henry Brackenridge, when, in *Modern Chivalry*, he has Teague O'Regan, the “bog-trotting Irishman” who is his figure of social transgression, be mistaken for “a monster in creation, or at least a new species of animal, never before known in these woods” (317) when he is found, tarred and feathered, by two hunters who see him in a tree. He is captured, caged, and exhibited as a natural curiosity; the Philosophical Society hears of him, and sends two representatives to examine him scientifically and make a report to be published in their transactions; in a preliminary determination of his genus, they offer the opinion that “it is an animal of a species wholly new, and of a middle nature between a bird and a beast,” and that it “would seem to form the link between the brutal and the human species” (320). He is shipped to France to be exhibited to the learned societies, but upon coming ashore the tar and feathers have worn off his backside; he is mistaken for a sans-culotte, and the mob rises and frees him. The narrator concludes the episode by remarking of this unclassifiable creature that it is not certain “whether he joined the army of the patriots, or is on his way home again to this country” (324). But evidently a being that disrupts the ordered categories of nature is bound to make political trouble somewhere.

## NOTES

1. The myth of Adamic naming is a familiar and persistent one in American culture and in studies of American culture. It is usually identified, of course, with writers of the American Renaissance like Emerson, Thoreau, and Whitman; but it is present even in less obviously imaginative writers—like those under discussion here. It survives even in recent academic studies. In his otherwise quite prosaic narrative of American scientific developments in the early republic, Greene opens his chapter on “Natural History in a New World: Botany” with these words: “Like Adam in the garden of Eden, the naturalists of the infant American republic faced the exhilarating task of naming, classifying, and describing the plants and animals of a new world” (253). Needless to say, this sort of wholesale appropriation of the Adamic myth is intellectually suspect, for it perpetuates several fallacies: that there were no human subjects on the scene before European settlers arrived; that the objects of the natural world were therefore unnamed until those settlers arrived; that the scientific project of those settlers—their taxonomic construction—was undertaken *de novo*. Of course there were human subjects on the scene, and they had their own names for things; and the scientific project of the later settlers consisted mostly in reconciling new objects to old categories.

2. Since writing this essay, I have found that a recent historian of the early republic has reached similar conclusions. Robert H. Wiebe characterizes the mental habits of the cultural leaders of the early republic in these terms: “The gentry reasoned by formulating broad categories, sorting information into them, then explaining the information through the rules governing their categories. . . . Nothing better exemplified their ideal than the magnificently arching branches of biological classification: phylum down to genus to species to subspecies, ordering all of life in one grand pattern. . . . Whatever rules governed the natural sciences covered politics and the arts as well. . . . Just as categories of knowledge molded their data, so in the end structures of government would mold their people” (7–11).

3. As Prigogine and Stengers have maintained, the trajectory of modern physical science has been away from the “rather naive assumption of a direct connection between our description of the world and the world itself” (54–55), which had been the assumption of classical science, and toward a recognition that “randomness, complexity, and irreversibility” (54)—that is, temporality—are proper objects of natural scientific knowledge, not just illusions of a phenomenal order that distract us from true knowledge of substances. Classical science, they say, is “the mythical science of a simple, passive world” (55), while modern science is “rediscovering time” (xxviii) and studying a world that is intrinsically active. On the importance of the concept of temporality for the transition to modern scientific inquiry, see also Collingwood.

4. As John Arthos shows, the conventional diction of eighteenth-century English poetry includes countless such figures; poets of the time “exploited a stable language because they believed that the design of the world was stable” (vii), and, since the “sure constancy of things was the charm of nature” (viii), political and social terms could both lend and borrow connotations of stability from the natural objects they were made to represent. See his Appendix A for instances of the use of such words as *Band* (106), *Citizen* (114–15), *Empire* (156–57), *Kingdom* (232–34), *Nation* (255–56), *People* (271–73), *Race* (281–82), *Reign* (294–95), *Tribe* (332–34), and *Troop* (334), among other terms.

5. See Geertz, “After the Revolution,” for an illuminating analysis of the cultural politics of post-revolutionary nationalism. I have found this essay, and also his study of the “Integrative Revolution,” particularly suggestive and helpful for the present study.

6. Boorstin *passim*; Sheehan ch. 1.

7. Taxonomic realism—the view that there is one unambiguously correct taxonomic theory, which could successfully distinguish “real essences” or “natural kinds”—has been largely given up by scientists, in favor of an attitude that recognizes the pragmatic value of a commonly-accepted system of classification while granting the arbitrary status of its terms and their extensions. This pragmatic-relativistic position was the result, obviously, of the competition between taxonomic representations that commenced in the late eighteenth century. The secondary literature on this development is extensive but fragmentary.

8. The reign of Common Sense philosophy in eighteenth-century America has been extensively documented in recent works by White, Wills, and others. The privilege enjoyed by the faculty of sight—its status as a figure for certain knowledge—is perhaps most unambiguously stated in Thomas Reid’s *An Inquiry into the Human Mind*, where it is claimed that sight is “without doubt the noblest” of the senses. But “it is looked upon, not only as more noble than the other senses, but as having something in it of a nature superior to sensation.” Reasoning from ordinary language, Reid goes on to notice that the “evidence of reason is called *seeing*, not *feeling*, *smelling*, or *tasting*” (145, 147–48). A general study of “the domination of the mind of the West by ocular metaphors” (13) is Rorty, *Philosophy and the Mirror of Nature*.

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