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“Policies of Nature and Vegetables”: Hugh Anderson, the Georgia Experiment, and the Political Use of Natural Philosophy

BY MART A. STEWART

IN 1737, Hugh Anderson, a Scottish “gentleman” of “liberal education” who had come to the new colony of Georgia with his family two years earlier, joined his voice to those already complaining to the colony’s governing body. In so doing, he also attacked the Trustees’ plan for the colony and their land and labor regulations. Correspondence was the common medium in the eighteenth century for communication, for the diffusion of information, and for establishing, reinforcing, or questioning social, political, and economic relationships. Like the other colonists, Hugh Anderson used the letter of petition as a medium of protest. But Anderson’s voice was also distinctive among the Georgia colonists, especially in his letters to the leading Trustee in England, Sir John Percival, Earl of Egmont, for its use of both language and concepts from natural philosophy and natural history to organize and to express his discontent.¹

¹For the letters and contemporary observations about them: Hugh Anderson to Adam Anderson, June 15, 1738, in Mills Lane, ed., *General Oglethorpe’s Georgia: Colonial Letters, 1733-1743*, 2 vols. (Savannah, Ga., 1975), 2:338-42; Thomas Jones to James Oglethorpe, January 14, 1738, in Allen D. Candler, Lucien L. Knight, Kenneth Coleman, and Milton Ready, eds., *The Colonial Records of the State of Georgia*, 32 vols. to date (Atlanta and Athens, 1904-), 22: pt. 2, 17-18 (hereinafter cited as *CRG*); “The Plain Dealer” to James Oglethorpe, January 6, 1739, *Oglethorpe’s Georgia* 2:379-87; William

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Politics was not his game, Anderson explained at the beginning of the most thoroughly developed of these expressions, a letter he wrote to Egmont in March 1739, shortly before he and his family abandoned the colony and moved to Charleston: "I am no Politician and never entertain'd thoughts of meddling with Other policies than those of Nature and Vegetables."² But "policies of Nature" and the exchange of knowledge and of power in early eighteenth-century British and colonial American society were often interrelated. Anderson's disingenuous opening introduced, instead, a classic example of this relationship. In this letter, he analyzed the natural environment of Georgia and the possibilities it offered for development and sustenance, and then measured the Trustees' land and labor policies against this analysis. He also provided Egmont with an account of the colony's landscape that was useful purely as information; his description of the soils of the colony was impressive enough that the Trustees instructed William Stephens, the secretary of the Trust in Georgia, to investigate.³

At the same time that he used the language and concepts of natural philosophy and history as a vehicle for analysis and criticism, he also used them to affirm his relationship with his sponsor. Although Anderson shared some common experiences with settlers "on the charity" in Georgia, in social back-

Stephens' Journal, January 5-6, 1739, *CRG* 4: 256-58; Anderson to the Earl of Egmont, March 3, 1739, *CRG* 22: pt. 2, 93-105. Other relevant letters include Anderson to the Trustees, August 10, 1737, *Oglethorpe's Georgia* 1:314-16; Anderson to Egmont, August 10, 1737, *CRG* 21: 501; Anderson to Egmont, June 13, 1739, Egmont Mss 14204, Hargrett Rare Book and Manuscript Library, University of Georgia Libraries, Athens, Georgia. The author would like to thank Lester Stephens, Phinizy Spalding, James Harvey Young, Robert Silliman, Thad Tate, Randy Sparks, and the participants of the Oregon State University Faculty History of Science Seminar for reading and commenting on earlier drafts of this article.

²Anderson to Egmont, March 3, 1739, *CRG* 22:93. This was an opening meant to please, though Anderson was consistent in his commitment to natural philosophy as a conceptual ground for his petitions for redress. For example, in "The Plain Dealer" letter, in which he wrote a much sharper critique of the Trustees' regulations, he located his proposals for reform around references to the "order of nature" and a description of the Trustees' scheme as an "experiment" and a "hypothesis." Anderson to Oglethorpe, January 6, 1739, *Oglethorpe's Georgia* 2:379-87.

³Egmont passed Anderson's remarks about the soils around Savannah on to the Trustees; they instructed William Stephens to verify them: Harman Verelst to Stephens, September 14, 1739, *CRG* 30:89.

ground and interests this educated "gentleman" was closer to the Trustees.⁴ His relationship with them was more typical of a client's with a patron or a sponsor than of an indigent's with a charitable philanthropist. Indeed, the Trustees had sponsored Anderson because Egmont had been impressed with his abilities. After an associate had recommended Anderson, Egmont had acknowledged his social status by inviting him to dinner in London, after which he commended Anderson's education and assized him a "decent, considerate, and very intelligent gentleman."⁵

The Trustees agreed to sponsor Anderson, provided him with extra land for his servants, and gave him charge of the Trustees' Garden in Savannah, the latter also in recognition of his knowledge of natural history and natural philosophy. Anderson's engagement with nature earned him the support of Egmont and the Trustees in the first place; when he was disappointed in his expectations for the colony and for his own fortunes there, he began to apply that knowledge in his expressions of discontent. He continued to speak the language and exercise the knowledge that had first caught the attention of

"Gentleman" was a double designation. Egmont recognized this social status in Anderson, by virtue of his gentility and marriage. (His wife was the granddaughter of an earl.) The Trustees confirmed this status with support for Anderson's servants in Georgia and one of the larger land grants reserved for the "gentlemen," who were to be the natural leaders of the "unfortunate poor" in the colony.

⁵Though Anderson obviously spent some time in London, he sailed to Georgia from Cromarty in Scotland, where he may have been linked with the Andersons of Udol, possibly related to either or both James Anderson and Adam Anderson, natives of Aberdeen with strong connections with the Earl of Egmont. Verelst to Thomas Christie, April 19, 1737, *CRG* 29:188; Peter G. Vasey, assistant registrar at the National Register of Archives, Edinburgh, to author, October 5, 1990. For a portrayal of Egmont's part in the Georgia colony, see Betty Wood, "The Earl of Egmont and the Georgia Colony," in Harvey Jackson and Phiniza Spalding, eds., *Forty Years of Diversity: Essays on Colonial Georgia* (Athens, Ga., 1984), 80-96. For an account of Egmont's first impression of Anderson, see Historical Manuscripts Commission, *Diary of Viscount Percival, Afterwards First Earl of Egmont* (London, 1920-1923), 2:276. Anderson does not appear on the register lists for the University of Edinburgh or Aberdeen University (which James Anderson attended). Vasey to author, October 5, 1990. Among the social elite in Great Britain, however, a variety of other means for education, including tutors, private academies, and lecture series, were common, and an increasing number of eminent scientists in eighteenth-century Great Britain had no formal secondary or university education, but were self-taught or trained in an apprenticeship. See Nicholas Hans, *New Trends in Education in the Eighteenth Century* (London, 1951), 11-36, 136-60; Mrs. J. Currie, Edinburgh University Library, to author, September 11, 1990.



The interest of Sir John Percival, the Earl of Egmont (above), and other Georgia Trustees in natural history led to Hugh Anderson's appointment as the supervisor of the Trust's Garden in the new colony, which in turn led to Anderson's spirited correspondence with Egmont. *Portrait from the Hargrett Rare Book and Manuscript Library, University of Georgia Libraries.*

Egmont and the Trustees, still aware of his obligation, as he explained in a letter to a friend, “to the Earl of Egmont’s good offices.” But he began to shift the “policies of nature” in a different direction. In his March 1739 letter, Anderson used natural philosophy and history not only to explain practical concerns about the “footing” of the fledgling colony, but also to diplomatically tussle with his sponsor.

Natural philosophy, especially as defined by Isaac Newton, had become part of the popular culture of educated men in England and Scotland in the forty years after the publication of Newton's *Principia naturalis principia mathematica* in 1687. Europeans had used natural philosophy to explain the relationship between God, man, and nature and the social and moral order long before Newton's work began to exert its influence. After the publication of the *Principia* and then the *Optics* (1704), however, Newton and his kind of natural philosophy became the subject of "near-idolatry" by some English intellectuals. Newtonian natural philosophy was used by various elements in English society, ranging from liberal Anglican churchmen to radical freemasons, to support definitions of social and political order and to reinforce social relationships. Natural philosophy, as the disciples of Newton and others applied it for practical purposes, also attracted the attention of the promoters of commercial and colonial ventures who sought to use it to achieve their aims. Natural history, which came from closely related but increasingly distinctive intellectual traditions, was made to serve many of the same purposes. By 1730, the concepts and methods of natural philosophy and natural history had become part of the social and political language of the educated British elite, and the practical science that emerged out of the culture of Newtonian philosophy had become braided into the web of connections and patronage among those who supported commercial and colonial projects.⁶

The interest of Egmont and other Georgia Trustees in natural history and natural philosophy and in the link between knowledge of nature and colonial development was already well established. A third of the original Trustees, including Egmont and James Edward Oglethorpe, were then or later Fellows of the Royal Society, as were several investors in the enter-

⁶Hugh Kearney, *Science and Change, 1500-1700* (New York, 1971), 222; Margaret C. Jacob, *The Newtonians and the English Revolution, 1689-1720* (Ithaca, N.Y., 1976); Margaret C. Jacob, *The Radical Enlightenment: Pantheists, Freemasons, and Republicans* (London, 1981). See Larry Stewart, "Public Lectures and Private Patronage in Newtonian England," *Isis* 77 (March 1986): 47-58, for an insightful discussion of Newtonian popular culture in Augustan England and its connection with the "transformation in the nature of . . . patronage" that occurred at the same time.

prise. Moreover, several of them had supported Mark Catesby's collecting expedition through Carolina and the Bahamas in the previous decade. These included Egmont, Sir Hans Sloane, the prominent London doctor and promoter of natural history, Dr. Stephen Hales, who made several contributions to both practical and theoretical knowledge, including a pioneering work in plant physiology and soil dynamics, *Vegatable Staticks* (1727), and Philip Miller, the director of the Apothecaries' Garden at Chelsea.⁷

Because the Trustees' plan for the colony included land and labor restrictions that would not only require the colonists to support themselves as small farmers but also produce valuable commodities for export, their political and commercial aims were tied to their enthusiasm for science. This enthusiasm was especially focused on the ten-acre Trust Garden in Savannah and was most clearly illuminated in their hopes for the garden. The success of their plan for Georgia would depend on the public gardeners' experiments with the propagation of both exotic and native plants. The garden would also serve as an essential nursery for plants—white mulberry trees to feed silkworms, and grapevines and olive trees—that would eventually yield valuable commodities when distributed to, and tended by, the settlers. The original purpose of the garden, the Trustees instructed Anderson, was “as a Nursery for such Productions as it is in the Interest of the Province to Cultivate.” The garden would be a colony for useful plants which would provide the material foundation for the larger colony around it. When they appointed Anderson “Inspector of the Public Gardens and of the Mulberry Plantations,” the Trustees expressed a commitment to him as a client qualified to bring these hopes for the garden and for the colony to fruition.⁸

⁷Raymond Phineas Stearns, *Science in the British Colonies of America* (Urbana, Ill., 1970), 326-27; E. John Russell, *A History of Agricultural Science in Great Britain* (London, 1966), 36.

⁸Benjamin Martyn to Anderson, May 19, 1738, *CRG* 29:260-61. Common Council Appointment of Hugh Anderson as Inspector, August 4, 1736, *CRG* 32:55. The Trustees granted Anderson the town lot in Savannah (lots were by 1736 in short supply) he had requested at the same time that they conferred the inspectorship upon him. Some scholars have disputed the commonly accepted notion that there was a “plan,”

Anderson's position was layered between the two levels of authority and expertise and of power and knowledge that the Trustees organized for the development of the garden. They made an agreement with a talented botanist, Dr. William Houstoun, a friend of both Sloane and Miller, to oversee the management of the garden and to collect botanical specimens to try out there. Houstoun had hardly begun his collecting expedition when he died "of heat" in August 1733 in Jamaica, only a few months after the Georgia colony was established. The Trustees appointed Dr. Robert Millar, a physician trained at the University of Edinburgh, to take his place. They also instructed Millar to collect plants for trial in the garden, but he failed to complete his mission and the Trustees withdrew their support of him in 1738. Neither Houstoun nor Millar ever actually visited Georgia, but sought to develop the public garden from abroad.⁹

In the colony itself, the development of the garden was the responsibility of a series of Trust gardeners. They were to plant the specimens that arrived from Houstoun, Millar and other contributors and from a parent garden in Charleston, take care of the native plants in another section of the garden, and tend the large nursery of olive trees, grapevines, and mulberry seedlings. In his position as "inspector," Anderson was an on-site supervisor, with the authority to oversee Trust gardeners in their tasks and to suggest larger improvements of the garden.¹⁰

The new supervisor made a strong start, and presented a slate of recommendations for improvement two months after

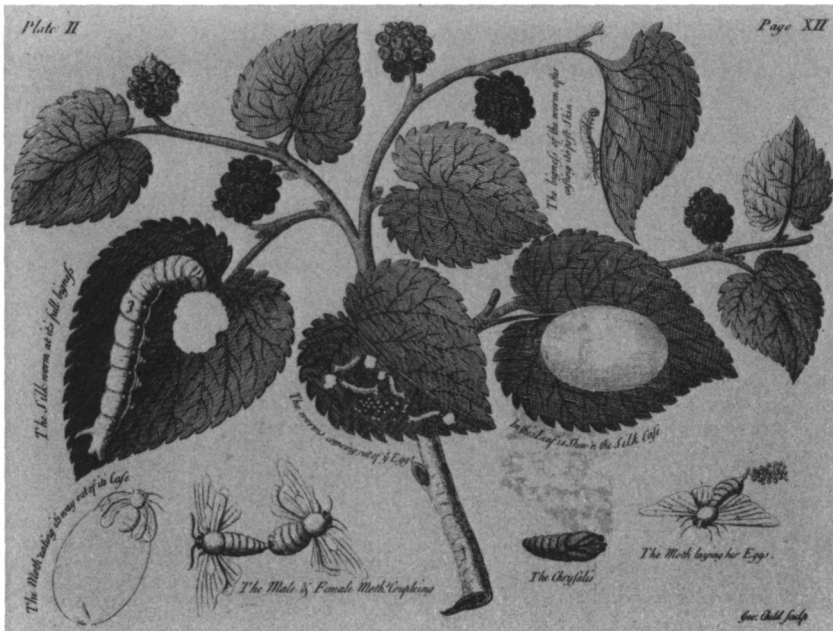
and argue that historians have read too much meaning into the first manifestations of a design that was several years in the forming. See Harvey H. Jackson, "The Darien Antislavery Petition of 1739 and the Georgia Plan," *William and Mary Quarterly* 34 (October 1977): 621; Clarence L. Ver Steeg, *Origins of a Southern Mosaic: Studies of Early Carolina and Georgia* (Athens, Ga., 1975), 75-90; Paul S. Taylor, *Georgia Plan: 1732-1752* (Berkeley, Cal., 1972), 3. Most historians of Trustee Georgia disagree, and Phinizz Spalding and Rodney M. Baine have recently confirmed this argument, by demonstrating that Oglethorpe was the author of a manuscript, *Some Account of the Design of the Trustees for Establishing Colonys in America*, which was written in 1731, before the first settlement was established at Savannah, and which contained the basic principles of the plan. See Spalding and Baine, eds., *Some Account . . .* (Athens, Ga., 1990), x-xxix.

⁹Stearns, *Science in the British Colonies*, 327-29; Edith Duncan Johnston, "Dr. William Houstoun, Botanist," *Georgia Historical Quarterly* 25 (December 1941): 332-37.

¹⁰Kenneth Coleman and Sarah Gober Temple, *Georgia Journeys, 1732-1754* (Athens, Ga., 1961), 122-39.



The Trustees' interest in silk production in Georgia is reflected in Anderson's title, "Inspector of the Public Garden and of the Mulberry Plantations." It is also apparent in the colonial seal (above) and the elaborate drawing (below) of the silk worm's life cycle, which appeared in a 1733 pamphlet, *A Compendious Account of the Whole Act of Breeding, Nursing and the Right Ordering of the Silk-Worm*, dedicated "To Lord Percival and the Trustees for Establishing the Colony of Georgia in America."



his arrival. In a letter to the Trustees in August 1737, Anderson described the deficiencies of the soils in the garden, made suggestions for improving them, and recommended enclosing the perimeter and various sections of the garden with hedges to protect the plants from the elements and from scavenging colonists. He also proposed an ambitious drainage project for the marsh to the east of the garden, recommended the construction of a greenhouse, a laboratory, and a gardening and agricultural library, advised the placement of a well and a pump in the upper part of the garden, and explained the advantages of improving another twenty acres with a cattle fold. The Trustees approved these recommendations but encouraged Anderson to calculate labor estimates, and confirmed their faith in him once again by granting an earlier request he had made for a five hundred-acre parcel of land for his son.¹¹

These recommendations for the garden's development were overly ambitious, at a time when the colony was struggling for survival and the prospect for the project as a whole was poor. Anderson was also diverted from more substantial achievements with the public garden by formidable difficulties in his attempts to carve out a living for himself and his family. These eventually inspired him to larger suggestions about the plan for the colony in general. He and his servants cleared and fenced fourteen acres of land and planted it in corn, peas, potatoes, and rice, constructed modest living quarters, put in a garden and nursery, and planted small amounts of cotton and tobacco "for experiments." But his efforts were not adequate to support his household.¹² His accomplishments were also compromised by a series of misfortunes, which included the death of four members of his household, the desertion of two servants, a lengthy illness, and a considerable financial loss from his first year of farming. These setbacks added a personal dimension to his increasingly unfavorable perceptions of the Trustees' policies in Georgia, so rather than assist in the fulfill-

¹¹Anderson to the Trustees, August 10, 1737, *Oglethorpe's Georgia* 2:314-16; Martyn to Anderson, May 19, 1738, *CRG* 29:260-61.

¹²Anderson to Anderson, June 15, 1738, *Oglethorpe's Georgia* 2:338.

ment of their prospect for the garden and the colony, Anderson now turned his abilities against it.¹³

Although other Georgia colonists voiced similar complaints, in his 1739 letter to Egmont, Anderson organized his analysis of the main problems of the colony—and of his own disappointments—into an idiosyncratic form that derived as much from the intellectual baggage he carried to Georgia as from his experiences on the land. Anderson structured the letter as a philosophical discourse, following the “rules of reasoning” that Newton had made clear, and that were by this time the stock-in-trade of amateur natural philosophers in Great Britain. “In experimental philosophy,” Newton had explained, “we are to look upon propositions inferred by general induction from phenomena as accurately or very nearly true, notwithstanding any contrary hypothesis that might be imagined, till such time as other phenomena occur, by which they may be either made more accurate, or liable to exceptions.” The main rule for inquiry, in other words, was that a hypothesis was only as good as the evidence it was inferred from or that supported it.¹⁴

After his gracious opening, in which he disavowed any political purpose, Anderson lectured Egmont in terms that echoed those of Newton: “The best Concerted Schemes are but Theories and can not arrive at Certainty untill put in Execution.”¹⁵ In addition, he explained, the Trustees’ project was not

¹³Anderson to Egmont, March 3, 1739, *CRG* 22:93.

¹⁴Isaac Newton, *Sir Isaac Newton's Mathematical Principles of Natural Philosophy and his System of the World*, trans. Andrew Motte in 1729, trans. rev. Florian Cajori (Berkeley, Cal., 1934), quoted in Keith Tinkler, “Worlds Apart: Eighteenth Century Writing on Rivers, Lakes, and the Terraqueous Globe,” in *History of Geomorphology: From Hutton to Hack*, ed. Keith Tinkler (Boston, 1989), 40. As Tinkler explains, these “rules” were not new with Newton, but his clear statement of them and the prestige he gave them made them articles of faith among contemporary British natural philosophers. He made a clear distinction between the possibilities asserted in a “hypothesis” (a label he rejected in his own work especially if it had no clear link with verifiable facts) and experimental laws that were demonstrable from the evidence. When he made a “hypothesis” in his own work, he regarded it as highly provisional until it could be modified, verified, or rejected by experiment. See also Edwin Arthur Burt, *The Metaphysical Foundations of Modern Physical Science* (Garden City, N.Y., 1954), 215-20, 271. For a full discussion of the nuances of Newton’s use of “hypothesis,” see J. B. Cohen, *Franklin and Newton* (Philadelphia, 1956), chaps. 5-6 and Appendix 1, *passim*.

¹⁵Anderson to Egmont, March 3, 1739, *CRG* 22:95-96. See also “The Plain Dealer” to Oglethorpe, January 6, 1739, *Oglethorpe's Georgia* 2:382. Anderson stated the princi-

appropriate to actual conditions in Georgia. He sketched out their vision for the colony, which if successful, would have included healthy towns and villages, fortifications against the Spanish, and rivers "Coverd with Vessells and made a New Azilum for Britttish Ships." These hopes had not been realized, however, and the colony had quickly fallen into decay. The scheme that the Trustees had devised to execute them, he suggested, contained major flaws.¹⁶

The fault was not with the colonists, Anderson argued. Indeed, they had nearly exhausted themselves in attempting to "prosecute the Experiment." The evidence supported another explanation for failure, when "the labours of the Industrious has sooner exhausted their Substance than Idelness." The terrain, the soil, and the climate of Georgia could not yield a basic subsistence, because the Trustees' land and labor policies restricted certain kinds of exploitation. Unless the Trustees changed the policies, Anderson averred, the colony would not survive, let alone thrive.¹⁷

Anderson enlisted natural philosophy and natural history to make his argument about terrain, soil, and climate, and at the same time asserted a comprehensive explanation of land formation on the Atlantic coastal plain that, in general terms, was uniquely dynamic. The land, he explained, had been formed by the action of water in a previous inundation:

It appears from a Simple view of the Surface of the Soil of this Province and all the Maritim Coasts of America that we are now possess of the Spoils of the Ocean which Certainly at Some time Cover'd all this part of the Continent, the Particles of Matter while in a State of fluidity by their Mixture with the Water Sub-sided according to their Specifick gravity and upon the Retiring

ple more benignly in an earlier letter to Egmont, when he said he would write his observations of "the Kingdom of Nature" and would "always endeavor to recommend mine [observations] more by their truth and exactness than by the Accuracy of my Disquisitions." Anderson to Egmont, August 10, 1737, *CRG* 21:501.

¹⁶Anderson to Egmont, March 3, 1739, *CRG* 22:95.

¹⁷*Ibid.*, 96.

of the Sea exhibits a levell surface of Sand, of which Consists the greater part of our farm land.¹⁸

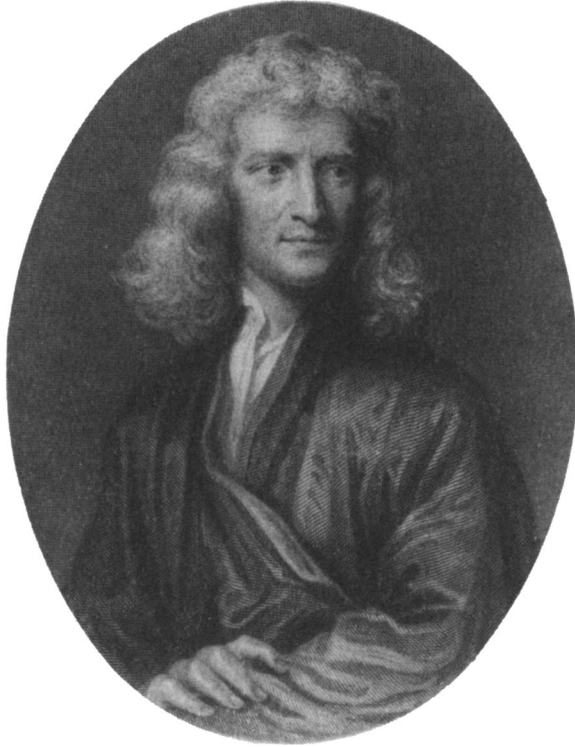
Anderson was not clear about the extent of the inundation, nor would he have needed to be. Agreement about the Deluge as the primary formative event in the history of the Earth was common among contemporary British and American natural philosophers and historians.¹⁹ Mark Catesby and John Lawson, who had earlier written much more static accounts of the coastal plain just north of the Savannah, for example, simply referred to the great Flood in Genesis as an understood event, and then cited the discovery of deeply buried sea shells, pottery, hewn timbers, and "elephant" teeth as further corroboration of the event.²⁰

Even if Anderson only alluded to a specific action of the sea in this passage, he clearly indicated his view that the earth had been shaped by Newtonian philosophy. The emergence of comprehensive explanations of the formation of land forms in the late seventeenth century and during the first decade of the eighteenth century in England, in the first place, owed something to the comprehensive Newtonian explanation of natural processes governed by universal laws. These theories also derived more specific elements from Newtonian philosophy, such

¹⁸*Ibid.*, 97. For a review of views of land forms of the Atlantic coastal plain contemporary to Anderson's, see Richard Beale Davis, *Intellectual Life in the Colonial South*, 2 vols. (Knoxville, Tenn., 1978), 2:876-81. Perhaps as early as William Strachey's *Historie of Travell into Virginia Britania* (1626), colonial observers in southern North America, including John Lederer, John Clayton, Robert Beverley, John Lawson, and Mark Catesby, distinguished between the coastal plain and the mountains to the interior, and sometimes indicated evidence that the land had once been immersed. But none attempted a comprehensive explanation of the process by which coastal topography developed. Anderson's account was unique because it was not simply a description of the "present state," but attempted, even though this was not Anderson's larger purpose, an explanation of the process that led to the "present state."

¹⁹For the diluvianist stream of thought among the British, see Gordon L. Davies, *The Earth in Decay: A History of British Geomorphology, 1578-1878* (London, 1968), 37-40.

²⁰John Lawson, *A New Voyage to Carolina Containing the Exact Description and Natural History of that Country* (London, 1709), 169; Mark Catesby, *The Natural History of Carolina, Florida, and the Bahama Islands*, 2 vols. (London, 1743), 2:4-7; Stearns, *Science in the Colonies*, 319. Lawson was the surveyor-general of Carolina who also probably had the backing of the Temple Coffee House Botany Club in London. Catesby, who was the most prominent naturalist who explored the region previous to the Bartrams, was supported by the Royal Society. Davis, *Intellectual Life* 2:840-41, 846-48.



The natural philosophy espoused by Anderson and several of the Georgia Trustees was inspired by the published work of Sir Isaac Newton a generation earlier. *Engraving of Newton from frontispiece of Correspondence of Sir Isaac Newton and Professor Cotes (London, 1850).*

as the principle that matter was hard, inert, without force, motion, or life, and that it was organized and acted upon by larger, sometimes providential, forces that could be described by universal laws. Newton's disciples took this principle even further. For example, in his *New Theory of the Earth* (1696), William Whiston described a geometrical cosmogony in which the Earth was a passive lump of matter shaped by cosmic forces.²¹

²¹Roy Porter, *The Making of Geology: Earth Science in Britain, 1660-1815* (Cambridge, Mass., 1977), 33, 72-78.

Anderson's notion that the particles of the Earth were suspended by the Flood and then settled out according to their "specific gravity" strongly suggests that he knew about John Woodward, another English natural philosopher who was directly influenced by Newtonian science and who also went out in the field to observe geological processes firsthand. In his *Essay Toward a Natural History of the Earth* (1695), Woodward explained his observations on the presence of strata in the post-diluvian Earth and speculated that suspended sediments settled out of the Flood according to their specific gravities in different arrangements and at different elevations, in a kind of re-creation, and improvement, of the original Creation. Anderson was not seeking to make a full explanation of the development of the Earth in this letter, but his brief explanation meshed with a larger universe of philosophical discourse in Great Britain at the time about the shaping of the Earth.²²

Once again, water, pulled by gravity, was the prime force, in the process of creating relief from this flat plain of sand and development within the larger scheme that emerged from the Flood:

The Rivers proceeding from the distant mountains in their naturall tendency to the Ocean where they mett with resistance bedded, and dilated their waters forming Swamps and Morasses untill their Swelling and proper gravity overpowering all resistance diggd out those Channells in which now they flow, And therfore the Second and lowest levell of this Country is equall to the Surface of the Rivers and Consists of Savannahs, Swamps, Morasses, and Cane and Cypress galls many of which afford the most Valuable Soil the Violent Course of the Rivers having Carried off the Moveable Sand and discoverd the Clay and loamy Strata that lay underneath, and of Such generally are the Rice grownds.

Anderson maintained that the various features of the coastal plain, low, high, and flat, had been gouged and molded by the rivers and their "proper gravity." The river had also dug down into the strata left by particles that settled out during the Deluge, and exposed the richer soils beneath the sand.²³

²²Porter, *The Making of Geology*, 77-78, 60-61; Davies, *The Earth in Decay*, 63-69, 80.

²³Anderson to Egmont, March 3, 1739, *CRG* 22:97.

Here, most of all, Anderson revealed the nature of the concepts that drove his explanation. Mark Catesby, who by comparison was more natural historian than natural philosopher and who did not attempt to make logical, comprehensive explanations of the local topography, instead gave an account of what he observed and reported, more accurately, that the rich bottomland soils—"the Rice grownds"—came from sediments deposited, rather than cut into, by the rivers.²⁴ Anderson's explanation made perfect sense, however, within the larger conceptions of land formation that shaped his own. He recognized implicitly one of the most perplexing dilemmas confronted by the Earth-philosophers. The processes of erosion and deposition, indeed, of any kind of gradual, geomorphic formation, presented a problem to late seventeenth- and early eighteenth-century cosmogonists and natural philosophers who sought to explain the variety of land forms on the Earth. The Creation and the Deluge were the two major forces in its development, and subsequent changes that did not come so directly by Divine plan were problematic to thinkers who sought to use natural philosophy to elaborate on Scripture. Those students of the Earth, like Woodward, who had done considerable fieldwork, were also troubled by the problem of reconciling the apparent slowness of natural processes, the extensiveness of the effects of these processes, and the short time span that Scripture allowed for the development of the Earth.

The Earth-philosophers either devised schemes for accommodating these conceptual difficulties or they ignored the problem altogether. By accepting the notion that the strata were first formed by the Deluge and then sliced through in some places—in a postscript to the Flood—by the action of water, Anderson avoided the problem that an argument of a

²⁴Catesby, *Natural History* 1:iii. In his history of the area just north of the Savannah River, Catesby relied almost exclusively on observation, was more interested in collecting and cataloging data than explaining it, and focused his observations primarily on life forms. Some system and assumptions about the structure of nature—a "grammar," Kevin McNamara calls it—are inherent in the names Catesby affixed to the organisms he identified, but not in the manner of a comprehensive explanation, McNamara: "The Feathered Scribe: The Discourses of American Ornithology Before 1800," *William and Mary Quarterly* 47 (April 1990): 226.

more gradual process of erosion and deposition would have posed. He was thus able to explain what he had noticed from firsthand experience—that is, that the flood plain soils were the richest and the best for growing rice—within this larger conceptual framework and without rejecting the contemporary view of the short span of biblical time.²⁵

Anderson's depiction of Georgia's vegetation, the nature of the soil, and the climate rounded out this impressive explanation of geomorphology and completed his presentation of "evidence" about the physical conditions—the "Natural Landskip"—of the colony's environment. His description of these other physical conditions was also clearly imbued with conventions from contemporary natural philosophy and history.²⁶ First, Anderson reminded himself, and Egmont, that all natural processes are primarily moved by God: "The face of the earth Naturally Sowd with the Seeds By the hand of the Almighty. . . ."²⁷ These seeds germinated from "the fertilizing dewes and warmth of the Sun," and produced the proper vegetation for the local soil and climate. Over "many Centuries," he continued, this vegetation might have deposited a layer of leaves that would have constituted a "fertile Crust of Rolled Manure." The evidence demonstrated to the contrary, however, that the "Absorbing Nature" of the roots of the trees and plants in the locale and the "exhaling heat" of the sun was sufficient to prevent organic material from accumulating on the surface of the soil.²⁸

²⁵Davies, *The Earth in Decay*, 114-25.

²⁶That Anderson used the word "landskip" indicates that he had kept abreast of current intellectual fashions. The word had only recently crossed the channel from the Netherlands to England, and had already come to refer to shaped landscapes and arranged prospects (meant to be observed), as in the new art of landscape gardening. Anderson qualified his use of the word with "Natural." See John R. Stilgoe, "Landscape and Linearity: Two Archetypes of Landscape," *Environmental Review* 4 (Summer 1979): 3; J.B. Jackson, "The Vernacular Landscape," in Edward C. Penning-Roswell and David Lowenthal, eds., *Landscape, Meaning, and Values* (London, 1986): 65-69.

²⁷Anderson to Egmont, March 3, 1739, *CRG* 22:98. As Margaret Jacob explains, the crucial difference between moderate Newtonians and those who used Newton's natural philosophy as part of a radical social ideology was just this: the moderate Newtonians insisted on the supernatural and providential origins of order in the universe; the radicals argued that nature was the only force: Jacob, *The Radical Enlightenment*, 85-87. This statement puts Anderson on the moderate side of the fence.

²⁸Anderson to Egmont, March 3, 1739, *CRG* 22:98.

Anderson's understanding of the nature and value of "manure" could have come from almost anywhere in eighteenth-century Great Britain. Agricultural reformers had often speculated about the relative value of different manures in agriculture, but practicing, and unread, English and Scottish farmers had for many generations applied a staggering array of them, concocted from peat, marl, and shell deposits, barnyard offal, and the byproducts of cottage industries or larger forms of production.²⁹ Once again, however, Anderson followed a Newtonian convention in his explanation of the interaction between manure and soil, and assumed that the earth was made up of inert matter and acted upon by external forces. Fertility came not from the soil, but from deposits of organic material and from the action of the "dews" and the sun. When these deposits disappeared, they did so not because of specific properties of the soil but because of the kind of vegetation that grew upon it and because of the powerful action of the sun. Even on the best soil that produced oak and hickory trees, he explained, organic deposits had darkened only a "few inches" of the topsoil. Any kind of agriculture on such soil, he argued, would require unavailable supplies of "dung and proper manures."³⁰

Anderson followed commonly held conventions in his analysis of the climate of Georgia and its unsuitability for Englishmen:

It will easily be believed that a removal from Brittain to So Southern a Latitude must very Sensibly affect the Constitution, and that the excess of heat in the Summer disables the Servants from working in the Middle hours of the day, but to explain how the heat may occasion those many diseases that they are Subject to is the Province of a Phisician Only. this I know that it visibly affects the Barameter in a Surprising manner, Occasions a violent perspiration and lanquor of the Animall Spirits and relaxes all the Sollids of the body.

²⁹Eric Kerridge, *The Agricultural Revolution* (New York, 1968), 240-50; J. A. Symon, *Scottish Farming: Past and Present* (Edinburgh, 1959), 113-15; Russell, *A History of Agricultural Science*, 26-47.

³⁰Anderson to Egmont, March 3, 1739, *CRG* 22:98.

The sun not only speeded the exhaustion of the soil, Anderson explained, but it enervated servants whose “constitutions” were already taxed by arduous labor.³¹

British expectations about the North American climate from the beginning of the colonial period had been founded on the assumption that parallel bands of similar weather patterns and temperatures, marked off by latitude, encircled the globe. They were unaware of the differences in climate between the eastern and western shores of continents and paid little attention to local conditions—ocean currents, topography, and so on—that affect regional weather patterns. Because southern North America lay in the same latitudes as southern Europe, the Middle East, and North Africa, British promoters of colonization portrayed the southern colonies as a sunny and verdant paradise. Because of a season’s experience with the stifling summer weather in the Savannah area, Anderson knew better, but retained the latitude paradigm of climate in the explanation of his experience.³²

Concepts of climate were closely connected to notions about health, and a basic principle of equilibrium dominated eighteenth-century theories of health and disease and was deeply embedded in English culture. The body was commonly seen as made up of parts, of “humours” or different “spirits,” related each to the other. It was also seen as a system that took

³¹*Ibid.*, 99.

³²Karen Ordahl Kupperman, “The Puzzle of the American Climate in the Early Colonial Period,” *American Historical Review* 87 (December 1982): 1262-65; Klaus E. Knorr, *British Colonial Theories, 1570-1850* (Toronto, 1944), 52-54, 81-83; Thad W. Tate, “The Discovery and Development of the Southern Colonial Landscape: Six Commentators,” *Proceedings of American Antiquarian Society* 93 (October 1983): 291-309. The promotional literature for Georgia was emphatic about the felicity of the climate. James Edward Oglethorpe, “A New and Accurate Account of the Provinces of South Carolina and Georgia,” in Trevor Reese, ed., *The Most Delightful Country of the Universe: Promotional Literature of the Colony of Georgia, 1717-1734* (Savannah, Ga., 1972), 123; and Benjamin Martyn, *Reasons for Establishing the Colony of Georgia*, in *Promotional Literature*, 163-67. Anderson’s description of the Georgia weather was not inconsistent with the reverse side of the English idealization of these latitudes as paradise: the English also feared these climates as destructively hot. See Karen Ordahl Kupperman, “Fear of Hot Climates in the Anglo-American Colonial Experience,” *William and Mary Quarterly* 16 (April 1984): 213-40; H. Roy Merrens and George D. Terry, “Dying in Paradise: Malaria, Mortality, and the Perceptual Environment in Colonial South Carolina,” *Journal of Southern History* 50 (November 1984): 533-50.

in and passed out substances that affected the body's equilibrium. What influenced the body from without and what moved it from within had to remain in balance for the body to remain healthy. The maintenance of equilibrium was thus crucial to one's health. Balance and a good temper depended upon a climate and a diet that were proper to each "constitution" and the appropriate equilibrating output of excretion, perspiration, and ventilation. The consumption or intake of anything that might cause violence or sudden tumult in the system endangered the health of the individual. Intemperance, for example, was debilitating; it disrupted the body's harmony. Seasonal changes or sudden climatic changes could also cause imbalance in the "constitution" of parts, and thus cause disease. Hot, humid weather, for a constitution that was unaccustomed to it, could liquify both strength and resolve, as well as the "Sollids" of the body, and open a window to disease.³³

Cool breezes could always modify the effects of heat, but, Anderson explained, the Trustees had not developed appropriate regulations. Since they had not required the settlers to clear "contiguous" fields, broad swaths of trees had not been removed in the dense forests surrounding Savannah, and refreshing breezes that would break the stifling summer heat had no entry. In every way, then, the experiences of the settlers with the soil, terrain, and climate of Georgia had disproved the suitability of the Trustee's plan for developing the colony.³⁴

With this description and explanation of the physical environment of the colony, Anderson laid the foundation for the remainder of his critique of the experiment. The colony was

³³Herbert Leventhal, *In the Shadow of the Enlightenment: Occultism and Renaissance Science in Eighteenth-Century America* (New York, 1976), 200-205; Charles E. Rosenberg, "The Therapeutic Revolution," in Morris J. Vogel and Rosenberg, eds., *The Therapeutic Revolution: Essays in the Social History of American Medicine* (Philadelphia, 1979), 5-12. "Animal spirits" to an educated man in the eighteenth century referred to those energies that had their seat in the brain. It commonly meant "nerve," or "sinew": *Oxford English Dictionary* (New York, 1971, compact ed.), 1:84. Eighteenth-century Englishmen and colonists applied this understanding of health and disease in the human body in diagnoses of the body politic. Rhys Isaac, *The Transformation of Virginia, 1740-1790* (Chapel Hill, N.C., 1982), 51-52. Anderson makes this connection in "The Plain Dealer" to Oglethorpe, January 6, 1739, *Oglethorpe's Georgia* 2:380.

³⁴Anderson to Egmont, March 3, 1739, *CRG* 22:99.

not doing well, largely because the Trustees' plan did not acknowledge basic conditions of the physical environment and restricted the settlers from the means they needed in order to adapt successfully to it. The Trustees had forbidden the colonists the use of African slaves who could, he wrote, endure the summer labors "fatal to a British Constitution"; the expense of maintaining servants was too great for settlers who could barely support themselves. They had also granted land without consideration to variations in the quality of the already deficient soil. Finally, the colony could not expect to develop a healthy export economy when neighboring colonies could produce valuable commodities so much more cheaply. Anderson did not ostensibly propose an alternative plan, but merely identified the errors in the prevailing one and called on Egmont's humanity, generosity, and sagacity to provide solutions. "It is sufficient to the Skillfull Phisician," he wrote, "that the Circumstances of the Patient be clearly and justly represented[.] To prescribe the method of Cure were superfluous." His message was clear, however. The experiment was breaking down, and the colony would fail unless the Trustees modified the regulations they had imposed upon the colonists. Simply put, he concluded, "this Collony Cannot Subsist upon the present footing."³⁵

Language, as Kenneth Burke has remarked, is "a species of action" and can be used as a tool. Meaning does not simply come from the text itself, but also derives from motive and context.³⁶ Anderson's March 1739 letter to Egmont was de-

³⁵*Ibid.*, 99-104.

³⁶Kenneth Burke, *Language as Symbolic Action: Essays on Life, Literature and Method* (Berkeley, Cal., 1966). See especially two of the essays in the book, "Terministic Screens," and "What are the Signs of What? (A Theory of 'Entitlement')," 44-62, and 359-79. The quoted statement is on page 15. Quentin Skinner has spoken more specifically to the importance of motive and context in establishing the meaning of political language in texts from the past in "Some Problems in the Analysis of Political Thought and Action," *Political Theory* 2 (August 1974): 277-89 (see especially 283-89). Skinner and the "contextualist" approach to meaning in language—or, at least, an approach to the analyses of texts that includes historical context—appear to have survived a decade of attacks by deconstructualists and their emphasis on only the text itself. See David A. Hollinger, "The Return of the Prodigal: The Persistence of Historical Knowing," *American Historical Review* 94 (June 1989): 610-21, and Joyce Appleby, "One Good Turn Deserves Another: Moving the Linguistic; A Response to David Harlan," *American Historical Review* 94 (December 1989): 1326-32.



The maintenance of silkworms and mulberry leaves was laid out in a series of engravings in *A Compendious Account . . .*, including the depiction above. Anderson argued that so involved a process would never allow Georgia to compete with the cheaper and more easily produced exportable commodities of neighboring colonies.

signed not simply to communicate information. It was not a letter to a member of the Royal Society, discoursing on the natural history of Georgia, intended for publication in the Society's *Philosophical Transactions*. Nor did Anderson intend the letter only as an explicit political argument, challenging the basic assumptions of the Trustees' plan for Georgia. Egmont was an important patron of science, who had sponsored Anderson because he had been impressed with his civility, intelligence, and education. This was a letter designed to consolidate and affirm intellectual and social connections at the same time that it questioned political ones. Anderson used natural philosophy and natural history, in form and in content, not just to make a case and to impart information, but to remind Egmont of their common ground.³⁷

³⁷A recent relevant work that argues that the language of natural history contained hidden cultural assumptions and that demonstrates this argument with an analysis of

Anderson's interests in natural philosophy and natural history, as revealed in his letters, also provide a point of entry into the culture of naturalists in early America. Most were amateurs who combined other activities with the study of nature. They sent a stream of seeds, specimens and information to natural philosophers and historians in Great Britain, often in exchange for useful information and favors. Throughout the period, an intellectually vibrant community of such gifted amateurs lived or spent a portion of the year in Charleston, where they were in contact with each other and with naturalists in the northern colonies and in Great Britain. Anderson moved easily into the intellectual life of Charleston when he settled there in 1739, at a time when several amateur scientists, among whom Scottish intellectual and educational influences were prominent, were very active there. He was never a member of the Royal Society, nor was he a naturalist of the order of Mark Catesby. He left no permanent mark on the development of eighteenth-century natural philosophy or natural history. And the surviving evidence names none of his intellectual contacts in Charleston, except the other Scots who were part of the circle of "Malcontents," the clique of Georgia colonists who launched a series of polemics against the faltering Georgia plan and who by that time had all removed themselves from the colony. Yet Anderson, and many nameless amateurs like him, were part of the cultural context in Charleston and in the colonies in general, and of the scientific community out of which the accomplishments of better-known scientists—such as Charlestonian Alexander Garden—developed.³⁸

the natural history writings of William Bartram, St. Jean de Crevecoeur, and Thomas Jefferson (with a deft consideration of context) is Pamela Regis, *Describing Early America: Bartram, Jefferson, Crevecoeur, and the Rhetoric of Natural History* (DeKalb, Ill., 1992). For a discussion of the connection between political attitude and an approach to scientific inquiry by one of Charleston's most prominent eighteenth-century scientists, see Nina Reid, "Loyalism and the 'Philosophic Spirit' in the Scientific Correspondence of Dr. Alexander Garden," *South Carolina Historical Magazine* 92 (January 1991): 5-14.

³⁸As Michel Foucault has explained, each scientific development includes a "field of memory," much of which does not help define "either a body of truth or a domain of validity" that must be recovered before the unique individuality—and "historical discontinuity"—of the development can be understood. Each development stretches

Records of Anderson's activities after he left Georgia are scarce, but the extant sources confirm the above interpretation of his temperament and motives. He moved to Charleston soon after his letter to Egmont, ending any further connection with the Trustees and with his sponsor. He continued to seek sponsorship and support from a variety of sources, and continued to use the study of nature to do so. Shortly after he moved to Charleston with his family, he was invited to give lectures in natural philosophy, agriculture, gardening, and natural history, and was supported by another form of patronage through the subscriptions of forty "gentlemen." Three months later, he advertised lectures that would "explain and teach the Doctrines of the Globe and the science of Geography." He also received an appointment as the master of the Free School of Charleston, and was active as a member and an officer—eventually, as Master—of Solomon's Lodge, Free and Accepted Masons. The Masonic lodges were yet another agency for disseminating natural philosophy and consolidating social ties in both Great Britain and the colonies, so this latter position may have provided Anderson with another increment of sponsorship. Just two months before his death in November 1748, he engaged in a

out into a field of discourse which includes discussions that do not have as a deliberate purpose the advancement of knowledge but interacts with discussions that do. See Michel Foucault, *The Archaeology of Knowledge*, trans. A. M. Sheridan Smith (New York, 1972), 56-58, 68-70. For specific, and much more concrete, renderings of this insight in regard to eighteenth-century geology, see Roy Porter, *The Making of Geology*, 79; and to ornithology, see McNamara, "The Feathered Scribe," *passim*. For an appraisal of recent discussions in the social history of science, see Charles Rosenberg, "Science in American Society: A Generation of Historical Debate," *Isis* 74 (September 1983): 356-67; and "Woods or Trees? Ideas and Actors in the History of Science," *Isis* 79 (December 1988): 565-70. The line between amateur and professional in eighteenth-century science was blurred and often nonexistent. Stearns, *Science*, 534. The importance of correspondence in the diffusion of knowledge and in the development of a "community" of natural philosophers and scientists in early modern Europe and in the colonies cannot be overestimated. Some natural philosophers developed important, albeit "halting," communities of correspondents with whom they exchanged ideas and more often, empirical data, without face-to-face contact: Porter, *The Making of Geology*, 27; Kearney, *Science and Change*, 150-51; Stearns, *Science*, 325-26, 533-34; Richard Brown, *Knowledge is Power: The Diffusion of Information in Early America: 1700-1865* (New York, 1989), 6-7, 44-46; Joseph Kastner, *A Species of Eternity* (New York, 1977), 18-20. For correspondence and sponsorship networks between Great Britain and the southern colonies in the eighteenth century, see Davis, *Intellectual Life* 2:838-59. For scientific activities in Charleston, see Stearns, *Science*, 593-619; and Davis, *Intellectual Life* 2:859-64.

more tangible means of introducing culture from abroad, when he entered the booksellers' trade with "several hundred Volumes of Books in different Languages and Faculties, many of them lately imported from Great Britain."³⁹ Other than his notorious—and probably, tenuous—connection with the Malcontents, he did not involve himself overtly in politics.⁴⁰ Anderson remained active as a progenitor of natural philosophy and history, however, and though he may have studied nature more than politics, the two were too closely connected for him to practice the role of the disinterested scholar. "Policies of Nature" were deeply intertwined with the nature of politics and patronage in early eighteenth-century British and colonial society, and this student of nature was always in need of a patron.

³⁹Anderson to the Earl of Egmont, June 13, 1739, Egmont Mss 14204; Hennig Cohen, ed., *The South Carolina Gazette, 1732-1775* (Columbia, S.C., 1953), 31, 69, 77, 123-24, 134; Albert G. Mackey, *The History of Freemasonry in South Carolina* (Charleston, 1956), 11-20; Steven C. Bullock, "The Revolutionary Transformation of American Freemasonry, 1752-1792," *William and Mary Quarterly* 47 (July 1990): 348-53. Different groups of Freemasons used Newtonian ideas of order as a basis for both conservative and radical social and political ideologies. Jacob, *The Radical Enlightenment*, 109-181.

⁴⁰Clarence L. Ver Steeg makes a convincing argument that Anderson was not the central figure the Trustees made him out to be in the Malcontents' opposition to the Trustees. See "Introduction" to Patrick Tailfer, Hugh Anderson, David Douglass, and Others, *A True and Historical Narrative of the Colony of Georgia, With Comments by the Earl of Egmont*, ed. Clarence L. Ver Steeg (Athens, Ga., 1960), xvii-xx. The volume, a satirical polemic against the Trustees and their plan for Georgia, included a classification of the soils, vegetation, and climate in the "present state" of Georgia, which is much more static than Anderson's descriptions of dynamic geomorphic process in his letter to Egmont (*True and Historical Narrative*, 136-40). Several studies discuss the Malcontents; the most comprehensive is Milton Ready, "The Georgia Trustees and the Malcontents: The Politics of Philanthropy," *Georgia Historical Quarterly* 60 (Fall 1976): 264-82. Anderson gained Egmont's permanent enmity when he associated himself with the publication of the *True and Historical Narrative*, though he had already lost his support. Egmont had invested a great deal in the Georgia enterprise, and was furious that his efforts were not appreciated by the colonists. Egmont recorded reports of political trouble-making in Charleston by Anderson, but his notes on those he blamed for the problems in the colony, including Anderson, were bitterly one-sided. See, for example, Egmont's Journal, October 6, 1741, *CRG* 5:559.