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Benjamin Smith Barton, "MD"
The American Performance of Scientific Authority in a Trans-Atlantic World

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In the Early Republic, the scientific world was in flux. American scientists had not yet become professionals. They did not yet count themselves among the ranks of valued members of productive society. Instead, they fought for legitimacy in a new nation that had developed no system of official support for science and did not yet assign a market value to scientific ideas. How was a man whose passion turned toward the scientific to support himself in this period? Benjamin Smith Barton came up with one answer. As he lied and cheated his way into the center of elite, learned culture in Early Federal Philadelphia, Barton demonstrated the fragility of systems of scientific authority in this period. Despite a non-existent medical degree, crippling debts, and, by all accounts, a rather acerbic personality, Barton was able to secure himself an enviable position at the peak of Philadelphia society. How he was able to do so is the subject of this thesis.
In January of 1798, George Washington, former President of the United States, wrote the following letter to the notary Colonel Clement Biddle, Marshal of the Pennsylvania District Court:

Inclosed is a letter, and receipt of Doctr. Barton’s for Sixty dollars which I pray you to receive if you can...but...inform you...that you will never get a copper out of it if it depends on him alone...[T]he money borrowed, was punctually, to be returned in a month. After waiting a year...he was applied to, and then, I was, assuredly, to have it in two or three days; after as many months waiting, without hearing a tittle from him applications were again made and the same answers have been received and so it went on until...he was informed that I was desirous of adjusting all my pecuniary matters in Philadelphia before I left it when the most solemn assurances (without any intention I am persuaded to fulfill it) were given that the money should be paid.

Washington then added, rather sheepishly it seems, that “[i]t is necessary for me to observe here that Doctr. Barton is an entire stranger to me.” Unfortunately for both the former President and his agent, the debt had not been collected by that August when Washington once again wrote to Biddle, emphasizing that he was not concerned about “the value of the money...but to be imposed upon in such a way by a man who was an utter stranger to me is somewhat vexatious.”

This example of Benjamin Smith Barton’s conduct regarding money during his years in Philadelphia is only the most striking of a long string of unpaid debts and angry lenders that Barton would leave behind from the moment he returned to Philadelphia from Edinburgh (where he had pursued his education) in 1789 until his death in 1815. In fact, by the time of his death, Barton had become a notorious debtor and his wife, Mary,


2 Letters regarding this debt do not seem to be extant in Barton’s papers. Letter copied in George Washington Household Account Book, Massachusetts Historical Society. For more on Biddle and his friendship with Washington, see *Dictionary of American Biography*, s.v. Clement Biddle.

3 Ibid.
was left with debts of eighteen thousand dollars. Unfortunately for Mary, the total value of "goods, chattels, and credits" left by her husband was not more than nine thousand dollars. Even worse, Barton's accounts at the Bank of Pennsylvania totaled nine hundred dollars and eighty four cents and Barton had borrowed nine hundred from the bank shortly before his death, which would come due in April of 1816 and effectively cancel any savings the family had.4

Despite a career marred by crippling debts, broken promises and a spurious medical degree, Barton was able to become, as the famous historian of American science Whitfield J. Bell indicated, "one of Philadelphia's best-known citizens" who held professorships in natural history, botany, materia medica, and medicine at the University of Pennsylvania as well as the presidency of the Philadelphia Linnaean Society and the vice-presidency of the American Philosophical Society.5 Barton's wide-ranging ambitions were never realized, but the many positions he held and myriad topics that commanded his attention offer a fascinating window into the scientific world of early Republican America. Yet, historians have not known what to make of the man and, unfortunately for the student of history, Barton often remains inscrutable. Inquiries into his life seem to yield more silence than clear answers. Particularly frustrating is the absence of certain items of interest from Barton's extant papers. When Barton died, his nephew, W.P.C. Barton, famous in his own right as a naturalist, delivered an obituary before the Philadelphia Medical Society. At the outset, he apologized to his audience that his notes on his uncle, and particularly his publications, were incomplete because he had

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5 Bell provides an excellent, brief account of Barton's various honors and his notoriety in "Benjamin Smith Barton," 197.
not yet been granted access to the dead man’s papers. The executors of Barton’s estate were still sorting his papers in February of 1816, two months after Barton died. The question of whether or not some papers that were determined to be embarrassing to Barton were removed during this period remains open.

His own contemporaries did not know what to make of Barton, and his actions often appeared irrational to them. He had proposed far more projects than he ever finished and collected many subscriptions that went unfulfilled. His debts were numerous and well known, but so were his friends. By the last few years of his life, this made Barton a polarizing figure. Some saw his life as a story of tragedy, a promising career cut short by the crippling gout and general ill health that marred his entire adult life. Others, chief among them Benjamin Rush, thought of Barton as disingenuous and perhaps even found his positions at the University of Pennsylvania to be an embarrassment. Historians have been no less divided about Barton. In the 1960’s, Jeanette Graustein portrayed Barton as a man who “lacked generosity of spirit” and argued that “most of what he published was of a trivial nature.” Graustein almost entirely dismissed Barton by suggesting that his “greatest contribution to science was probably his sponsorship and encouragement of young Thomas Nuttall.” More recently, Barton’s biographers, Joseph and Nesta Dunn Ewan, have called Barton “the first professional naturalist in our young nation” and complain that “history has [not] treated

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7 Ewans, *Barton*, xv.
9 Ibid, 437.
According to their story, Barton’s “work often remained in manuscript form, due to the frustration of lack of financial backing in a country recovering from war and interested more in history and religion than in the sciences.”

All in all, then, the Ewans have been rather generous in their reading of Barton. In this way, Barton’s story has been told by historians much as it was understood by his contemporaries.

To understand Barton simply either as a con-man who offered little to the scientific community of his time or as a forgotten, tragic pathbreaker is to miss what Barton can tell historians about the scientific world that American practitioners of science in this period inhabited. If Barton is, instead, a man who hoped to transform his scientific enterprises into the “profession” that the Ewans describe, he reveals a great deal about the uncertain position of scientists in the young American nation. Throughout his life, Barton was not satisfied with the prospect of earning his way either as a doctor or by teaching. He imagined a position for himself as a kind of impresario of science who would filter his own work and that of his colleagues for an interested public. Again and again, he sought to monetize science. As an American living in a new country which had no official, national system for promoting scientific inquiry and lacked a true aristocracy interested in funding it, Barton often grasped at straws in an attempt to transform his circumstances. Yet, he was ultimately successful in maintaining a position among Philadelphia’s learned elite despite his outrageous debts and the fact that he pretended to a medical degree which he did not actually possess.

10 Ewans, _Barton_, vii.
11 Ibid.
Barton's success in this was largely due to his ability to muster what the sociologist Pierre Bourdieu has called "social capital." According to James Coleman, one of the preeminent students of Bourdieu's ideas, social capital "inheres in the structure of relations between actors and among actors."\(^{12}\) In other words, social capital is generated by interpersonal relationships and, as the word capital implies, it has a certain exchange value. According to Coleman, "social capital is productive, making possible the achievement of certain ends that in its absence would not be possible."\(^{13}\) Bourdieu indicates that social capital is tied directly to "the...possession of a durable network of more or less institutionalized relationships of mutual acquaintance and recognition—or in other words, to membership in a group."\(^{14}\) Thus, Barton acquired social capital which could be "cashed in" for protection in particular moments and for personal advancement in others both through his personal relationships with others and through his membership more generally in the elite circles of Philadelphia society.

It was the social capital that Barton amassed in this way, including his family connections (especially to his uncle, the famed astronomer, David Rittenhouse), his friendships with important intellectuals, his appointments at the University of Pennsylvania, and his memberships in learned societies among other factors, that allowed him to survive at his place in society despite a sometimes flagrant disregard for the rules of that society. Yet, this amazing success, achieved partially on sheer bravado, was not enough for Barton. By the measure of his own dreams, Barton's career was strewn mostly with embarrassing failures. Barton confronted the same environment that many

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\(^{13}\) Ibid.

of his contemporaries did and his attempts to professionalize and monetize his passion can give an excellent view of the challenges and opportunities presented by the world in which he lived. Understanding how he reacted to this world comes down to a simple question posed decades ago by Whitfield Bell: "[W]hat sort of man was Benjamin Smith Barton?"15

“NO PLACE IN THE WORLD CAN PRETEND A COMPETITION”: EDINBURGH

When the twenty-year-old Benjamin Smith Barton set sail for Edinburgh from Philadelphia in June of 1786 to study medicine at the University of Edinburgh, he was certainly not the first American student to have done so.16 Barton’s circumstances, however, were somewhat unusual. He had been orphaned six years earlier and was left no family resources to draw upon. Instead, he sought patronage and was eventually aided in his studies by loans from Edinburgh graduates and well-known Philadelphia physicians: Benjamin Rush and John Morgan, among others.17 In fact, Benjamin Franklin, holding the University of Edinburgh in high esteem, had funded the education of Rush and Morgan themselves who paid the debt forward in their support of Barton.18 The association between Edinburgh and Philadelphia had been long and degrees from the University carried a special currency in early Federal Philadelphia. Long before aspiring American physicians and intellectuals flocked to France and Germany, they centered their ambitions and attention on this chilly city on the edge of the North Sea.

15 Bell, Barton, 203.
17 The Ewans include Shippen, Wistar, and Physick in this list. David Rittenhouse, Barton’s uncle, might also have contributed. See Ewans, Barton, 79.
While much attention has been paid to the University of Edinburgh and medical/scientific education there by European and English historians and, most especially, by Scottish scholars, American historians of culture and medicine have devoted comparatively little attention to the North Americans who were drawn to Edinburgh, which Thomas Jefferson characterized as the world's premier seat of scientific inquiry: "No place in the world can pretend to a competition with Edinburgh." In fact, since Whitfield Bell in 1943 directed attention to the large numbers of American students who attended Edinburgh during this period, few historians have taken up an investigation of the general trend. Thus, it will be useful to develop some basic understanding of the American interest in Edinburgh and of the way that a degree from that institution signified in late-eighteenth-century Philadelphia.

As Lisa Rosner argues, Edinburgh "was one of the most prominent centres [sic] for medical education in the period between 1760" and 1820. It was also appealing to American students because it required no formal admission process, nor was matriculation at the University even "absolutely necessary to attend classes." Instead, all that was absolutely required was that students pay a fee (usually three guineas) to the professor whose class they hoped to take and obtain a ticket. Thus, anyone with the financial means could attend classes in Edinburgh. This informal system also meant that

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22 Ibid, 45.
23 Rosner suggests that most classrooms had "janitors" whose main purpose was to bar admittance to those who did not possess an admission ticket. Ibid.
students taking degrees were a relatively small group of the overall population of the University’s attendees, never amounting to more than twenty percent.24

A larger percentage of American students travelling to Edinburgh probably received degrees than most other groups of students, especially local Scottish students. However, even the vast majority of Americans studying at Edinburgh did not obtain degrees. According to Rosner’s meticulous examination of the available Matriculation Albums from the University, the largest number of American students came from South Carolina, Virginia and Maryland. These students usually studied for two years and returned directly to North America without obtaining the MD, probably because a medical degree was not strictly necessary to practice medicine in this period. Students from Pennsylvania, on the other hand, had usually studied for a time before attending Edinburgh, especially at Philadelphia, and usually took a degree.25 Barton followed the pattern of this later group. Barton had been apprenticed to Doctor William Shippen, professor of anatomy, surgery, and midwifery at the University of Pennsylvania and enrolled there in 1783.26 There was no reason, then, that Barton could not have obtained his degree in Philadelphia. Yet, as a young man who aspired to rise to the top of the American scientific elite, he was eager to make the journey to Scotland.

The letter of introduction Benjamin Rush wrote for Barton to Doctor William Cullen, probably Edinburgh’s most well-known professor, illustrates some of the

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24 Ibid, 62.
25 Rosner indicates that the most complete records for historians who wish to know the make-up of the student body at Edinburgh come from the Matriculation Albums, which students would sign in November at the opening of the winter term if they wished to formally matriculate. Though, as comparisons to the individual rosters faculty kept for some classes, a large number of students did not matriculate. Thus, any characterizations of the student body are necessarily provisional. Ibid, 17. For an extended discussion of the Matriculation Albums, see Lisa Rosner, “Students and Apprentices: Medical Education at Edinburgh University, 1760-1810” (PhD Diss. Johns Hopkins, 1986), 26-30.
26 Ewans, Barton, xxi, 61.
reasons that Barton and others like him sailed halfway across the globe for a degree when one could be had in Philadelphia:

Mr. Benj[ami]n Barton...has studied physic for several years in our University with industry and success. The relish we have given him for your discoveries has determined him to pursue the stream to its fountain in Edinburgh. He wishes moreover to graduate from your University, where (unfortunately for other universities in the world) degrees have a kind of exclusive pre-eminence...His class will be admitted to degrees this year in our University, and nothing but his preference of a diploma from Edinburgh to] one from us prevented his sharing with them in the honors of the University of Pennsylvania.  

To Barton and his contemporaries, the University of Edinburgh was perhaps the most important center of scientific learning in the western world. Teaching from Edinburgh had come to them in the persons of their professors and a general admiration for the Scottish city permeated the elite culture of Philadelphia because of the city’s influence in many of Philadelphia’s cultural and social institutions.

Nowhere was the influence of Scotland on Philadelphia more apparent than in the case of the medical school at the University of Pennsylvania. From the outset, the plan for the medical school had been modeled on Edinburgh. In 1765, John Morgan, an Edinburgh graduate, proposed the foundation of a medical school in Philadelphia in which he “deliberately instituted an organizational structure and curriculum similar to

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In fact, when the proposal reached the trustees of the College of Philadelphia (which would join the University of Pennsylvania in 1779), it included letters of support from Morgan’s “two most eminent [Edinburgh] teachers, William Hunter and William Cullen.”29 In the medical school, just as in Edinburgh, professors made no salary or were paid a very small one by the college and thus were dependent on offering enticing courses whose student fees could support them.30 Fortunately for these new professors, they had some experience in this regard. Ten of the first twelve professors were Edinburgh graduates.31

This tradition was alive in well in Barton’s time and he represented the third generation of the fascination with Edinburgh among Philadelphia’s scientific elite. In John Morgan’s letter of introduction for Barton to William Cullen, one of his own teachers, Morgan made reference to Cullen’s “old friend Dr. Franklin.”32 Morgan had arrived in Britain with a letter of recommendation from Franklin to Doctor John Fothergill, a well-known botanist, and thus both these letters and the loans Barton obtained from his teachers continued this tradition.33 By Barton’s time, then, the men of science who taught at the University of Pennsylvania were well known in Edinburgh and had long-standing relationships with their counterparts there.

29 Ibid, 244. The medical faculties of the University of Pennsylvania continued to be nominally separate into the early 1790s. For a discussion, see George W. Corner, Two Centuries of Medicine: A History of the School of Medicine, University of Pennsylvania (Philadelphia: J.B. Lippincott Company, 1965), 38-40.
31 Ibid.
32 William Cullen, Correspondence, 13 (1796), Royal College of Physicians, Edinburgh reproduced in Ewans, Barton, 81.
33 Ewans, Barton, 79.
Yet, money and recommendations were not Barton’s only inheritance from this tradition. The teaching at the University of Pennsylvania when Barton was a student, especially by the large majority of Edinburgh-trained professors, tended to follow the model and impart the views of Edinburgh’s most prominent scholars. As Deborah C. Brunton has demonstrated, “[a]t Edinburgh, professors dictated their lectures to students, who took detailed notes from which they later reconstructed the text of the lecture as fully as possible... On their return to Philadelphia, the young professors used these notes as a basis for their own courses.”34 Thus, when Morgan wrote to Cullen that Barton ought to enjoy “the Benefit of Your Lectures[,]” it is entirely possible that he had already heard much of the content of those lectures.35 Morgan had almost certainly taken Cullen’s courses on the theory and practice of medicine in Edinburgh and taught the same subject to Barton in Philadelphia. If Morgan’s procedure was anything like that of Benjamin Rush who seems to have reproduced Joseph Black’s Edinburgh chemistry lectures “virtually word for word,” then Barton had almost certainly already benefited from those same lectures, but was now, as Rush put it, “pursuing the stream to its fountain.”

This influence of Scottish education on the University of Pennsylvania was not unique, however. Certainly, the remarkable number of Edinburgh trained faculty meant that the University was directly modeled on Edinburgh in ways that other institutions were not. However, as James McLachlan argues, Scottish educational models were highly influential in determining the practices of many of the earliest American

34 Brunton, “The Transfer of Medical Education,” 247.
35 Cullen, Correspondence.
institutions of higher learning, including both Harvard and Yale. In fact some scholars have argued that the College of William and Mary, for example, was “essentially a Scottish college” during the tenure of the Scotch Episcopalian James Blair as the college’s president. The Ewans, for their part, argue that this trend of American reverence for Scotland had become even more pronounced and more American students had chosen an education there after the American Revolution because Edinburgh, they argue, was seen as “a more friendly place” for students from the newly independent nation than London.

It was not only the similarities in education that made Edinburgh a good fit for men like Barton, but also a general sense that Edinburgh and Philadelphia were somehow broadly similar places. Both Edinburgh and Philadelphia were provincial cities throughout much of the eighteenth century. However, despite their provincial status, as the intellectual cultures of each of these cities emerged (and as Barton grew up), “[n]either provincial city was a centre of ultimate political authority, yet both had developed institutions and assemblies that wielded considerable power.” In this way, both Edinburgh and Philadelphia looked to London as the center of Anglophone intellectual life, even after the revolution (as evidenced, for example, by the enduring interest of scientific elites in both cities in the activities of the Royal Society), but developed their own, significant intellectual and political cultures. In this way, Edinburgh and Philadelphia had a great deal in common. In fact, as Carl Bridenbaugh

37 Ibid.
38 Ewans, Barton, 79. This may be true to a degree, but it must also be noted that Barton and others like him often travelled to London and usually spent some time in that city before going on to Edinburgh. In fact, Barton seems to have been rather successful in London society.
40 Ibid, 230.

Edinburgh was a much larger place (and impressed American students as such when they arrived) than Philadelphia throughout the eighteenth century. By Barton’s time there, Edinburgh had a population of more than eighty thousand while Philadelphia just barely topped half that.\footnote{Hook, “Philadelphia, Edinburgh and the Scottish Enlightenment,” 230.} However, as Andrew Hook points out, “neither city was large enough to sustain a series of separate intellectual groups; the pattern in both was rather for the same range of individuals to be involved in a variety of intellectual and cultural activities.”\footnote{Ibid.} This applied equally in both cities to the activities of “science.” As Steven Shapin indicates, science in Edinburgh was in a “pre-professional” stage in which “men of science do not themselves control a ‘critical mass’ of strategically placed organizational roles and where they do not maintain impermeable social or intellectual boundaries around their activities.”\footnote{Shapin, “Audience for Science,” 96.} The same was true of Philadelphia. In fact, it is telling that the Philosophical Society of Edinburgh (the Royal Society of Edinburgh by Barton’s time) met first in 1737 and the American Philosophic Society (forerunner of the American Philosophical Society) first organized in 1744.\footnote{Ibid, 99; Hook, “Philadelphia, Edinburgh and the Scottish Enlightenment,” 231.} In fact, it was not until the 1760s that both of these groups were meeting regularly. Eventually, the Philosophical Society became the Royal Society in 1783, while the American Philosophical Society
(APS) was recognized by the government of Pennsylvania in 1785. Thus, these primary institutions for the promotion of scientific thought and the exchange of scientific ideas were relatively new in both cities in Barton’s day.

When Barton arrived in Edinburgh, then, he would have found that the intellectual community and the audience for science were very similar to that which he had left behind in Philadelphia. The impulses of these intellectual groups were also similar. As Shapin argues, in the case of Edinburgh, “the nascent scientific community was indeed reliant on the patronage, approval and support of a non-professional audience...[F]urther...Edinburgh science was exoteric by choice, not solely by the nature of the institutional constraints placed upon it. A scientific enterprise which could show its valuable participation in the general ‘improving’ thrust of Enlightenment culture” was the ultimate goal of Edinburgh’s scientific elite. That the elite in Philadelphia shared this interest in a socially useful “improving” science is evidenced by the full title of the APS alone: the “American Philosophical Society Held at Philadelphia for Promoting Useful Knowledge.” In other words, both of these institutions represent the growth of scientific cultures founded on the Baconian ideas of useful knowledge promoted by the Royal Society in London.

At twenty years old, Barton was already well known within the scientific establishment in Philadelphia, especially because his uncle, Rittenhouse, was president of the American Philosophical Society. Before he even left Philadelphia, Barton was making plans to establish himself in the comparable positions open to him in Edinburgh. Certainly, his connection to Rittenhouse (a man so famous in the broader English-

46 Ibid.
speaking world that Rush’s letter of recommendation for Barton’s arrival in Edinburgh made sure to mention that he was “the nephew of the celebrated Mr. Rittenhouse, our great American astronomer, and possesses such abilities, joined with a thirst for knowledge, as render him worthy of that connection”) was an immediate source of social capital even in Scotland.\(^{48}\) However, Barton understood that this connection alone, while it might help to gain him the ears of important Edinburgh professors would not be enough to achieve the kind of notoriety he hoped for and quickly laid plans to make a name for himself on his own terms. He had been pressing William Bartram to publish his journals for several years and proposed that he could take a copy of the manuscript with him to publish it in Scotland, where he assumed that European audiences were particularly interested in information about American scientific matters. Bartram evidently declined for Barton wrote to him in August of 1787 to once again propose the idea. He was “confident” that “the work…will sell, especially in an enlightened and curious country such as Britain: and the profits of the sail [sic] shall be equally divided between us.”\(^{49}\) Here, Barton indicated some of his ambitions for his time in Edinburgh. He offered to print Bartram’s work “(with additions of my own) entirely at my own expense,” setting himself up as an impresario who would represent American science to European circles as he digested it for publication and offered his own commentary.\(^{50}\) To assure Bartram of his credentials in this regard, he assured that “I have mentioned your Journal to Dr. Lettsom and many other learned and worthy men: they all seem anxious to see it in in

\(^{49}\) Barton to William Bartram, 26 August, 1787 in William Bartram Papers, Historical Society of Pennsylvania.
\(^{50}\) Ibid.
Thus, Barton mobilized his own social capital and claimed a degree of authority by associating his desires with those of famous scientists. It also seems likely that Barton hoped to further his own standing with these same men by effecting the publication.

Yet, this scheme was not to be. Bartram was not interested. More importantly, Barton was not the first who had attempted to print Bartram’s journals. Before Barton had proposed the idea the first time, Enoch Story, a printer in Philadelphia, had drawn up plans with Bartram to print an octavo edition of his journals. The printing had eventually failed because Story could not obtain a critical mass of subscriptions. Yet, Story was still angered when he heard about Barton’s proposition and began spreading word throughout Philadelphia that Barton was attempting to publish Bartram’s work for his own personal gain. In fact, by the time Barton wrote to Bartram in August of 1787, a rumor was circulating in Philadelphia that he had published Bartram’s words without his consent. Hence, Barton’s letter was careful to protect his position and emphasize that he had “not acted unfairly with your work” and that “not being permitted to publish those (your) remarks, I have not even mentioned your name.” He seems to have been able to put out this fire, but had made an enemy in Enoch Story.

After the initial rebuffing he received from Bartram, Barton put that project on the back-burner and turned to other methods to establish himself in Edinburgh, some animated by his belief that American subjects would interest European audiences. Ever the voracious consumer of all types of scientific knowledge and keenly aware of the importance of scientific institutions, he was active in a wide range of the various

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51 Ibid.
52 Ewans, Barton, 104.
53 Ibid, 105.
54 Barton to Bartram, August 1787.
intellectual societies in Edinburgh. He was not alone in this respect. In fact, "[s]ome [Edinburgh] pupils concluded that they had learned more from society meetings than from professorial lectures[.]"\(^{55}\) Barton's association with the societies began early on when he was elected to the Natural History Society in December of 1786.\(^{56}\) A year later, Barton, an American student, became president of the Society, which also counted Americans such as Thomas Mann Randolph, future son-in-law to Barton's eventual friend, Thomas Jefferson.\(^{57}\) Barton also became a president of the Royal Medical Society of Edinburgh, the main student society of Edinburgh's medical school, in December of 1786, a fairly tremendous honor for this newly arrived Philadelphian.\(^{58}\) Before he left Edinburgh, he was also elected to the Society of Antiquaries of Scotland and the Speculative Society of Edinburgh.\(^{59}\)

An announcement in the *Scots Magazine* from April of 1787, indicates that a "prize medal, given annually by the Harveian Society for promoting experimental inquiry among the students of medicine, was delivered to Mr. Benjamin Smith Barton, of Philadelphia, for the best experimental essay on the properties of [black henbane]."\(^{60}\) Presenting the same paper three days later to the Royal Medical Society, Barton won a prize of some sum, but was delayed in receiving it because of a controversy that arose after Barton failed to return a substantial sum that had been entrusted to him as one of the Presidents of the Society.\(^{61}\) As the judges of the Royal Medical Society wrote, Barton's work "demonstrates the truth of what has lately been asserted by an eminent English

\(^{55}\) Ewans, "Barton," 96.
\(^{56}\) Ibid.
\(^{57}\) Ibid, 97.
\(^{58}\) Ibid.
\(^{59}\) Ibid, 107; Hook, "Philadelphia, Edinburgh and the Scottish Enlightenment,":
\(^{60}\) *Scots Magazine* 49 (1787), 203.
\(^{61}\) Ewans, *Barton*, 98.
Thus, Barton was directly engaging European intellectuals in a question about this European plant.

Yet, not much longer after this, Barton returned to read a paper before the Royal Medical Society that turned toward American topics, particularly Native Americans, and these would sustain much of his output during the remainder of his time in Europe. Perhaps Barton had received advice similar to that which Jefferson gave to Randolph in 1785:

_Your own country furnishes the most aliment for Natural History, Botany and Physics, and...you might make it your principal object. In [America] you will find botany offering its charms to you at every step, during summer, and Physics in every season...You are now in a place where the best courses upon earth are within your reach._

Whatever the reason, Barton turned his attention back to American subjects. Unlike his previous attempts to bring Bartram's work to an appreciative audience, Barton would this time generate the work himself. However, he did point out to Bartram that "had I been disposed to have acted unfairly your remarks on those very curious antiquities would have added considerably to the value of my [work]."

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62 _Medical Commentaries_ 11 (1788), 405.
63 Barton's first work on Native Americans seems to be Benjamin Smith Barton, "An Essay towards a Natural History of the North American Indians: Being an attempt to describe and to investigate the Causes of some of the Varieties in Figure, in Complexion, &c. Among Mankind," _Dissertations read to the Royal Medical Society Edinburgh 1751-1968_ 23, 3-17. The item is undated, but it seems reasonable to assume that it was presented sometime later in 1787 or early in 1788 because it seems to have preceded Barton's publication of an Edinburgh edition of Samuel Stanhope Smith's _An Essay on the Causes of the Variety of Complexion and Figure in the Human Species_ which Barton wrote an introduction for and which he had published in 1788.
65 Barton to Bartram, August, 1787.
Barton clearly seems to have believed that European audiences were interested in information about America in general and Native Americans in particular. For example, Barton wrote to Rush from Edinburgh in January of 1787 that Samuel Stanhope Smith's *Essay on the Causes of Variety of Complexion and Figure in the Human Species* had "made its way into Scotland; and a new edition with notes is now in the press of Mr. Elliot;--the work will be a popular one; and consequently it will sell."66 Perhaps it was this faith in the European appetite for American scholarship which led Barton to engage Charles Dilly to print what would be his first published work, *Observations On Some Parts of Natural History*, a short work on the so-called "Indian mounds" in 1787.67 Barton was so confident of the success of this first volume that he advertised it as part one of "four parts relative to Natural History, which will complete the work in one volume, octavo, [and] will be embellished with several elegant plates, and will be put into press in a few months."68 Barton characterized this first part as an "advertisement" for the forthcoming volume.69 The choice to focus on the mounds was certainly influenced by his desire to sell future works and he must, therefore, have assumed that this sort of information was of interest to European audiences. Barton's pilfering of the money of the Royal Medical Society around the time of his publication of *Observations* may also provide evidence of his strong belief that his audience would be compelled by his chosen topic. As has already been noted, sometime around the time that Barton had given his paper to the Royal Medical Society he had absconded with what James Wallace

66 Rush, Letters, 27, HSP.
67 Barton, *Observations*.
69 Ibid.
described as “a considerable sum of Money belonging to the Society.” Wallace, reporting the story of Barton’s conduct to Rush from Edinburgh in 1811 also added that Barton had “left the City of Edinburgh without placing the…money in the Treasure of the Society.” As the Ewans note, this is probably a Reference to Barton’s trip to London in July of 1787, which was the same time that he made arrangements with Dilly for the printing of his “Part 1.”

The Ewans ask the important question: “[h]ad [Barton] publishing schemes in mind—in which he planned to invest the money—with all the conviction of success of a very young entrepreneur?” However, always almost as cagey as Barton himself about the scientist’s misdeeds, his biographers are not willing to speculate much further. Certainly, the timing is right for Barton to have invested the money he took from the Society in the publication of Observations by Dilly. As historians of the British book trade in the eighteenth century have been at pains to point out, printers and booksellers (often these were one and the same as was the case with Charles and Edward Dilly in London) were very conscious of their bottom line. Thus it seems unlikely that Charles Dilly would have taken on the cost of printing what Barton described as a “first effort” and “the production of a very young man.” Barton would have had to put up the money (especially since Dilly seems to have thought it impractical to take up subscriptions for the book) and given that he needed to borrow considerable money for his journey to

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71 Ibid.
72 Ewan, Barton, 99.
73 Ibid.
74 For an excellent treatment of the interest in profit margin of British printers and booksellers of the period as well as some discussion of the relationship between the Dillys and Edinburgh where their books were often pirated, see Warren McDougall, “Charles Elliot and the London Booksellers in the Early Years” in The Human Face of the Book Trade: Print Culture and its Creators, ed. Peter Isaac and Barry McKay (New Castle, DE: Oak Knoll Press, 1999).
75 Barton, Observations, 1.
Edinburgh, it seems unlikely that he had the wherewithal to fund the book out of his own pocket.\textsuperscript{76}

The money that Barton was entrusted by the Royal Medical Society almost certainly did, in fact, go to Charles Dilly for the publication of Observations. Barton was many things and dishonest was certainly one of them. However, he was not stupid by any means. Certainly, he intended to return to Edinburgh (as he eventually did to some disgrace, later in 1787) when he determined to use the money for his publication.\textsuperscript{77} He must have known that he would face questions about the episode. Barton must have hoped that his Observations would be a good seller and make back the money for him along with some tidy profit. He was so confident in this business strategy that Dilly was engaged to immediately print five hundred copies of a second number, but as the bookseller wrote to Barton in Philadelphia in 1790, only "a few copies" of the first had been sold and, without payment, he would not begin to distribute the second.\textsuperscript{78} Because Barton’s publication did not fare as he had hoped, he was forced to return to Edinburgh without anything to show and without the money that he owed the Society. This disastrous misunderstanding of the interests of the reading public of Europe would effectively dash his chance for a degree from Edinburgh and haunt Barton for the rest of his life.

Barton’s confidence in European interest in Native Americans and their history proved somewhat unfounded in this case, but the young man chalked it up to the poor quality and hasty writing of his work. In fact, Barton wrote to his brother just after he returned to Edinburgh that he was "already ashamed of many parts of it" and he

\textsuperscript{76} Ewans, Barton, 99.
\textsuperscript{77} Ibid, 104.
\textsuperscript{78} Reproduced in Ewans, Barton, 104.
eventually directed the executors of his estate that it not be republished upon his death. Yet, this was not Barton’s only attempt to speak to Europeans in Europe about American subjects. The one thing that Barton seemed to appreciate about *Observations* was the fact that he had “directed the attention of the world to a curious and interesting [and] peculiarly so to an American [topic]” and he continued to work toward the publication of Smith’s *Essay* in Edinburgh.

In preparation for the publication of that volume, which he hoped would be a financial success for him, Barton again gave his audience a sort of “taste” of what was to come. This time, he took a more cost effective route by speaking before the Royal Medical Society on the topic of complexion on two separate occasions, by treating first Native Americans and then the question of albino Africans, which was of such interest to the scientific community of his time. These two “dissertations” have often been incorrectly categorized as Barton’s abortive attempts to complete a program toward his degree. Instead, they are better understood as advertisements. His “Essay Toward a Natural History of the North American Indians” began by criticizing the writings of Europeans on American subjects, particularly the *History of America* which had recently been published by the principal of the University, William Robertson. He argued that Robertson had been influenced to report spurious information because of the influence that writers like Buffon had exerted over his work. In the end, Barton argued that Robertson was not equipped to discuss these American subjects because he had never been there. Having established the importance for his audience of getting their

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79 Reproduced in ibid.
80 Ibid.
information about America straight from the horse’s mouth, as it were, Barton advertised that Stanhope Smith’s *Essay* would soon appear in print.

The book did appear with notes and an introduction that Barton had prepared. However, he was not able to enjoy the modest success that it obtained in Edinburgh. After the affair with the treasury of the Royal Medical Society, Barton found Edinburgh an un-friendly place. He was quickly dropped from the rolls of every learned society of which he had become a part and he failed to obtain his degree and the fund of social capital he established in Edinburgh was exhausted. How exactly all this took place is shrouded in some mystery because Barton replied to most of the inquiries of his friends with obfuscations and the records of the Royal Medical Society and the University of Edinburgh do not make clear the nature of the connection. What is clear, however, is that by February of 1788, he wrote to Bartram that he was about to “proceed to Germany, where I shall spend the winter and part of the following season principally at Gottingen, that I may receive every possible advantage in Botany and Natural History.” In the same letter, Barton assured that he was still to “take my degree of M.D. in September next” at Edinburgh, though this must have actually seemed a remote possibility if not impossible to Barton by this time.

Barton never travelled to Gottingen. Instead, he seems to have temporarily given up the prospect of pursuing a degree. However, this did not mean that he gave up the project of advancing his credentials as a naturalist. Barton now began to travel around Europe and, as he described it to Bartram, was “forming a correspondence with some of the first literary characters in Spain, Portugal, &c,—I am also making a collection of

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82 Barton to Bartram, 19 February 1788, Bartram Papers, Historical Society of Pennsylvania.
In other words, Barton was establishing himself within a trans-Atlantic network of naturalists as he situated himself to return to the United States. For instance, Barton called on the eminent amateur naturalist, Sir Joseph Banks, in London. Acquaintance with Banks might have offered Barton a possible *entre* into Royal circles since he had been an advisor to George III, but he was also President of the Royal Society. Thus, Barton saw acquaintance with Banks as an important opportunity to secure additional social capital. More importantly in the short term, Barton was aware that Banks was quite wealthy and had been a patron to many other scientific inquiries. Perhaps, then, he hoped that Banks might fund his own researches. He was not able to gain the type of patronage that he jealously watched European scientists enjoy, but he did obtain a temporary loan of a small sum. It certainly was not nearly enough to cover the massive debts that weighed him down on the journey home.

**"I RECEIVED THE DEGREE OF MEDICINAE DOCTOR": PHILADELPHIA**

Barton never escaped debt after he returned from Edinburgh. Upon his return, he was still heavily in debt to Benjamin Rush, Caspar Wistar, William Shippen and Philip Physick from the monies they had loaned him to pursue his studies at the University of Edinburgh. Barton’s situation was so poor after the flap surrounding his embezzlement in Edinburgh that he was forced to borrow the money for his fare back to the United States and arrived entirely penniless, depending on the support of his brother, William,

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83 Barton to Bartram, 13 December 1788, ibid.
until he could establish a successful medical practice. When Barton took what he described as the “very great liberty” of writing to George Washington to ask him for “the sum of Sixty Dollars,” in May of 1797, it seems to have been in an attempt to cover the sixty-two dollars each he had drawn from the Farmers and Merchants Bank in Philadelphia to pay back Rush, Wistar, Shippen and Physick. This was a common practice for Barton. His papers are full of evidence of debts paid only to immediately be cancelled by new debts taken on. Letters in Barton’s papers from May of 1797 seem to account for his attempts to borrow the full sum he had withdrawn from the bank to pay his school debts from other sources. No evidence exists to suggest that Barton had previously paid any of the money owed to his former professors, even though he had been back in the United States for eight years.

The issue was further compounded by the fact that Barton had not even obtained the degree that these medical luminaries had funded. Perhaps fearing the backlash from this previous generation who had placed so much confidence in the promising young student in the summer of 1786, Barton was cagey on all fronts in relation to his degree when he returned to Philadelphia. His nephew, the famous botanist W.P.C. Barton, reported after his uncle’s death that Barton had written to his brother upon his return from Edinburgh that he had received a “degree” from the Lisbon Academy of Sciences, but

85 Ibid, 847.
86 Barton to George Washington, May 1797 in George Washington, Correspondence, Massachusetts Historical Society. Receipt from the Farmers and Merchants Bank in Benjamin Smith Barton, Miscellaneous Papers, American Philosophical Society.
87 For example, John Morgan described his confidence that Barton’s “attention to the business he goes over upon will be adequate to the warms Wishes and expectations of his friends” in a letter to the famous Edinburgh anatomist, William Cullen. See Morgan to Cullen, 14 June 1786 in William Cullen, Correspondence, Royal College of Physicians, Edinburgh.

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this was a willful misrepresentation of a certificate of membership that was merely referred to as a diploma by the society.\footnote{88}

However, Barton could not long maintain this fiction under scrutiny. As late as 1810, Benjamin Rush was writing to Barton to remind the younger scientist of his ill behavior upon his return to Philadelphia. According to Rush, Barton had almost immediately confided in him that he had failed to obtain the MD when Rush pushed him to produce his degree in 1789. However, Rush also noted that Barton had been telling other professors at the University of Pennsylvania, including Shippen, that he \textit{had} attained the degree.\footnote{89} Shippen was not the only victim of the deception. Before Barton even returned, in January of 1789 the entire American Philosophical Society had been similarly duped when they elected “Benjamin Smith Barton, M.D.—(at present in Edinburgh) corresp. Member of the Society of Antiquaries of Scotland—late of the University of Pennsylv[ia]” a member of the society in absentia.\footnote{90} Given that the society had been so ready to accept Barton’s degree before the man had even returned, it is surprising that Rush questioned Barton’s having received the degree in 1789 at all. The probable explanation for Rush’s suspicion at this early date is that he had received some word of Barton’s ill behavior in Scotland. No correspondence to this effect exists, but Rush was often in contact with friends in Edinburgh where Barton’s actions appear to have been notorious, and it is not unreasonable to suppose that Rush might have received such letters.

\footnote{89} Benjamin Rush to Barton, 3 January 1810 in Benjamin Rush Manuscripts 39, Library Company of Philadelphia.
While Rush was immediately suspicious about Barton’s degree and his conduct in Edinburgh, it seems he did not seriously address the problem until 1810 when he and Barton had become enemies. Why Rush waited so long is not immediately clear, but by that time, Barton had purchased a degree from the University of Kiel in Germany and had been teaching at the University of Pennsylvania for some years. Perhaps more surprising, though, is the fact that Rush is the only person whose confrontation with Barton over his degree is obvious in the extant evidence. Yet, within the tightknit circle of Society members and University professors through which Barton moved, Barton himself told several competing stories. Shippen was told that Barton had obtained his degree in Edinburgh. Barton told his brother that he had obtained a diploma in Lisbon while still others were told that Barton had taken a degree at the University of Gottingen in Germany.91 That these conflicting stories did not lead to Barton’s immediate unmasking as a fraud is amazing.

While Barton was a member of many different groups throughout his time in Philadelphia, the overlapping membership in these groups gives a sense of what a small world Barton actually inhabited. For example, when Thomas Jefferson was elected President of the American Philosophical Society in March of 1797, three of the twenty-one attendees were Barton, Wistar and Robert Patterson, all colleagues at the University of Pennsylvania.92 Though not there for Jefferson’s election, Rush was also a Society member and shared membership with Barton in the Philadelphia Medical Society (in fact,

91 Edgar Fahs Smith, “Benjamin Smith Barton,” Lancaster County Historical Society, Historical Papers and Addresses, 1924, 61
the two men were in competition for the Medical Society presidency in 1809 when Barton won it).93 Similarly, Barton was a member of the Board of Visitors for Charles Willson Peale’s famous museum and also served as a co-curator for the Society with Peale from 1790 until 1811.94 Not only was Barton in continuous professional and semi-professional contact with many of the same people, but he also lived and socialized in a relatively circumscribed area in downtown Philadelphia. Within a few blocks, one could find most of the major cultural and political institutions of early federal Philadelphia: the Society, the University, Peale’s Museum, the State House, The Library Company of Philadelphia, the College of Physicians of Philadelphia and the city’s major theatres.95 Barton lived at Eighty-Six North Fifth Street, which was less than three blocks from Carpenter’s Hall and put his home, like those of almost all in his circle, within this area as well.96 In Barton’s time, the few blocks around Chestnut and Market Streets were at the very center of elite and learned culture in Philadelphia. They were also the center of both state and national political power for much of Barton’s Philadelphia life.

One possible explanation for the fact that this close-knit community did not come to question Barton’s conflicting stories earlier might be that the actual degree of Doctor of Medicine was not all that important to Barton’s contemporaries. Scholars have long observed that medical degrees were relatively rare in the Early Republic, especially among those who billed themselves as “doctors.” After all, as Jeanette Graustein has pointed out, Barton “was doubtless as fully equipped for his [medical practice] without

93 Barton recorded that he had received 52 votes while Rush had received only 6 in the midst of his botanical notes. See Barton Papers, “Botanical Notes no. 1,” American Philosophical Society.
95 Brigham, Public Culture, 13-17.
96 James Hardie, The Philadelphia directory and register containing the names, occupations and places of abode of the citizens… (Philadelphia, 1793), 8.
the degree as with it” since he had been ably educated both at Pennsylvania and at Edinburgh. Yet, while the average medical practitioner in early America certainly did have no real, pressing need for a degree, Barton was not this average “doctor.” His mentors had tied up a great deal of money in his pursuit of the MD and it seems to have ruined his relationship with, at least, Benjamin Rush who would be Barton’s antagonist for years to come. Perhaps more importantly, while Barton did not technically require the degree for either his personal practice or his professorships at the University, his University colleagues, almost without exception, possessed the degree and, what’s more, a vast majority of them had obtained their degrees in Edinburgh. This alone meant that Barton’s supposed Edinburgh degree carried a great deal of weight if not for his medical practice then for the position he hoped to occupy both at the University and in elite, Philadelphia society.

Barton was acutely aware of the social capital signified by the MD and appears to have agonized over the possibility that someone, like Rush, might expose the lies in his various stories about phantom degrees and diplomas from all across Europe. In 1796, Barton’s position as an important member of the learned elite in Philadelphia seemed to be in no danger. He had been established as Professor of Natural History and Botany since 1790, was a curator at the Philosophical Society, a fellow of the College of Physicians and had established a reputation as a brilliant doctor during the trying yellow

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fever epidemic in 1793. Yet, seemingly without provocation, Barton began to attempt to solicit a real degree in May of 1796. He wrote the following letter to Professor C.B. Ebeling in Hamburg (who he had become familiar with through correspondence for the Society):

My object in writing to you, at present, is to request that you would endeavor to procure for me, from some one of the German or other universities, the degree of Medicinae Doctor. Perhaps, Professors Zimmerman and Fabricius can assist in this business. Would it not be possible to procure this honour from Gottingen, or from Leyden. Have you a medical University at Hamburgh, or is there one at Brunswick, or at Kiel. Several years since, I received the degree of Medicinae Doctor, from an university which, I confess, I do not much respect. I am, therefore, anxious to obtain the same degree from one which I should much more respect.100

Once again, Barton showed his understanding that degrees from different institutions could provide more social capital than those from others. For this reason, he named Gottingen and Leyden, perhaps the two most important medical schools on the continent, as his first choices. His understanding of the social world in which medical knowledge and authority circulated is further revealed by his attempt to lean on his association with other well-known German scholars.

Barton maintained the fiction, even in this letter, that he had already obtained a degree, though he continued to be evasive about its actual provenance. Of course, there was little reason for Ebeling to be suspicious. Benjamin Rush had not yet begun to give voice to his misgivings about Barton’s education in public, though the two were locked in

99 Rush and Barton clashed repeatedly both over the source of the yellow fever epidemic and over what Barton (along with today’s physicians) regarded as Rush’s excessive bloodletting in the treatment of the disease. Barton’s reputation coming out of the incident was earned both through his curing many patients and through the very fact that he stayed at all when most of the city’s physicians who had not been struck down fled the city. For a good discussion of the epidemic and Rush and Barton’s conflicts see Ewans, Barton, 207-213.

100 Barton to C. D. Ebeling, May 1796, Benjamin Smith Barton Correspondence 26, Historical Society of Pennsylvania.
several battles, both philosophical and social by this time. As far as Ebeling knew, Barton was a senior member of the American Philosophical Society in good standing and an important professor at the University of Pennsylvania. Further, the practice of purchasing degrees was not uncommon in Barton’s time. In fact, many schools in Europe without medical faculties awarded medical degrees in order to keep alive long forgotten royal grants. The University of Glasgow was one such institution from which Barton could have no doubt obtained a degree if he had been financially able before returning to the United States.¹⁰¹ That no evidence exists to suggest Barton attempted to do this indicates that he understood such a degree would not carry the same social prestige back in Philadelphia. Instead, Fabricius eventually procured Barton a degree from the University of Kiel “on the basis of reputation, publications, and a fee.”¹⁰² Thus, it was the reputation that he was afraid of losing in Philadelphia that secured him the degree that would bolster that same reputation. Similar degrees often required the candidate to be examined by a member of the school’s faculty, but Barton was also able to avoid this requirement through the connections that his wide-ranging correspondence had established.¹⁰³

Obviously, Barton felt that he needed the MD and, more than that, the prestige that it conveyed. Yet his concern over his lack of any real degree, though it had apparently caused him to out himself as a fraud to Rush, didn’t stop Barton from claiming the degree both within his own circles and to the general public. Of course, there were his bold-faced lies to his colleagues like Shippen and even to his own family. He also

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misrepresented himself in print. Barton’s pamphlet *Memoir concerning the FascinatingFaculty which has been ascribed to the Rattle-Snake, and other American Serpents* appeared in February of 1796, a full three months before Barton even composed his letter to Ebeling, and listed the author as Benjamin Smith Barton, MD.\(^{104}\) Even earlier, Barton’s degree was listed in the Philadelphia City Directory. In 1791, Barton was listed as “Barton, Benjamin Smith, doctor of physic and professor of botany in the college of Philadelphia.”\(^{105}\) By 1793, the listing had changed to “Barton Benjamin Smith, M. D.”\(^{106}\) One might of course point out that Barton did not have direct control over the listings in these directories. Whitfield Bell, librarian of the American Philosophical Society Library and the first scholar to identify Barton’s real degree with any certainty, in an attempt to exonerate Barton suggested that “in the absence of contrary evidence, Barton should not be held personally responsible for the entries in the City Directories” for just this reason.\(^{107}\)

One might be persuaded that these printings were simply honest mistakes on the part of the printers and that Barton was largely unaware of them, if it weren’t for the string of events which seem to amount to a pattern of deception on Barton’s part regarding his degree. After all, not only did Barton claim the title of MD and accept it when it was given, there is no evidence he made any attempt to correct the error. Furthermore, one might trace the erroneous listings back to Barton himself in a less direct way. The editors of both the 1791 and 1794 directories, Clement Biddle and James

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\(^{104}\) Benjamin Smith Barton, *Memoir concerning the Fascinating Faculty which has been ascribed to the Rattle-Snake, and other American Serpents* (Philadelphia: 1796).

\(^{105}\) Biddle, *Directory* (1791), ibid.

\(^{106}\) Hardie, *Directory* (1793), 8.

Hardie, lived at the corner of Walnut and Front and on nearby Spruce Street respectively. If nothing else, this proximity should have made it easy for Barton to correct the mistakes if he had been so inclined. Barton must almost certainly have been socially acquainted with the two men apart from their living near each other. Biddle, of course would become a thorn in Barton’s side at the behest of his close friend, Washington. Before this, however, Biddle was a subscriber to Peale’s museum in 1794 where Barton almost certainly would have introduced himself to a person of such prestige. Hardie was not a subscriber to the museum, but he listed himself as “James Hardie, A[r]tium M[agister]” on the title page of his directory (the degree was most likely earned at the University of Pennsylvania, but confirming the award is difficult) and gave his occupation as a “teacher of classics.” Thus, it seems likely that Hardie was also a member of the same circles as Barton and Biddle. Whether or not the men knew Barton directly, they almost certainly knew him through friends and acquaintances as the professor and doctor had achieved a not modest degree of fame within a certain section of the Philadelphia population. In this way, they would not have merely had to assume or mistake Barton’s degree, but would have likely had some contact with his own pretentions to the title.

A picture emerges of Barton as perpetrating a coordinated con, for lack of a better word. While Barton felt the pressure of the possibility that he would be found out, things actually turned out rather well for him, against all odds. He became a respected member

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108 Hardie, Directory (1794), 11, 64.
109 For Biddle’s subscription and the very illuminating longer list which includes Barton’s brother William as well as their uncle David Rittenhouse and such public figures as George Washington, John Adams and Alexander Hamilton among a diverse cross-section of elite Philadelphia, see “Subscribers to Peale’s Museum in 1794, Grouped by Occupation and Ranked by Wealth” in Brigham, Public Culture, 152-167.
110 Hardie, Directory (1793), front matter, 64.
of the scientific and medical establishment in Philadelphia, he cultivated relationships with foreign scientists both in Europe and elsewhere in the Americas and he became a key member of the teaching staff at the University of Pennsylvania. Barton’s classes were well-respected and his lectures were in high demand. “His course in materia medica was taken by all who were candidates for medical degrees; a fair number took his course in natural history; and his botany course was elected each year by a few from whom ‘the emoluments were small but the satisfaction great.’”¹¹¹ In Barton’s day, success as a professor at the University of Pennsylvania, whose class system had been modeled on Edinburgh, depended on being able to attract a large number of students with exciting lectures. Generally, students bought tickets to an individual class, frequently on the basis of what entertainment was to be had in the course. Barton had the advantage that his materia medica course was essentially required for those students seeking degrees, but most students were not and Barton had to appeal to them to earn money from his teaching. Fortunately, students were an audience to which he could easily appeal. Barton’s students were thrilled by the many trips to collect specimens and visits to William Bartram’s Garden to view exotic plants that broke up his regular lectures.¹¹²

Barton’s reputation and his friendship with other Philadelphia elites also helped him draw in students. For example, his close friend Bartram both allowed him to use his horticultural collection for lectures and recommended many pupils to Barton’s classes. In recommending his nephew James to become one of Barton’s medical apprentices, Bartram wrote that “[t]here is no other Man that I should chuse [sic] or trust to for his

¹¹² Ibid, 425.
Preceptor." His friend and sometime scientific combatant Thomas Jefferson, when he
was not recommending students to Edinburgh often sent those who asked America's most
famous "natural historian" for advice to Barton as pupils. Thus it was that Jefferson
wrote to Barton from Washington in October of 1808 that Thomas Jefferson Randolph
would be joining his class on botany in the spring and requested Barton to watch over the
young man until then as he attended other classes.114

Through both his reputation as a lecturer and the many recommendations of
influential friends, Barton was able to assemble an impressive roster of students.
According to the careful research of the Ewans, at least eighty-four students for whom
Barton was the preceptor (akin to what today's Universities call advisors) graduated with
the MD.115 When one considers that this only includes a fraction of the medical students
that would have attended Barton's classes and further notes that less than twenty-five
percent of students who attended classes actually received the degree, it becomes clear
that Barton taught a very large number of students in his years at the University. The
prices for Barton's classes (Botany was twelve dollars, for instance) were right around
the median for similar classes, but by no means as high as some, such as Wistar's
anatomy lectures, which commanded twenty dollars.116 Combine this income with the
tidy profit that Barton made off his reputation as a physician following the epidemic in
1793 and the modest income from his *Elements of Botany* (which was adopted at the
University of Pennsylvania and used elsewhere, but never was able to unseat cheaper and

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113 William Bartram to Barton, 13 July 1801 in Barton Papers, Correspondence, American Philosophical
Society.
114 Thomas Jefferson to Barton, 12 October 1808 in Barton Papers Correspondence, American
Philosophical Society.
115 For a list of Barton's pupils see Ewans, *Barton*, 919-934.
116 Ibid, 787.
more well-known European botanical manuals) and it seems strange that Barton was constantly in such a sorry financial state.\textsuperscript{117}

The reasons for Barton’s financial troubles are not hard to uncover. Immediately obvious is the fact that Barton’s publishing ventures were rarely successful and Barton usually had to borrow money in order to finance them. Publishing debts, after all, had been the reason that Barton had stolen the funds from the Royal Medical Society in Edinburgh and had been denied his degree. What is perhaps less apparent, but contributed to a much greater degree to Barton’s financial woes, was the amazing expense of his bibliophilic tendencies. Based on the extant books, Barton’s library on natural history and medicine constituted at least three hundred and seventy-two volumes.\textsuperscript{118} By way of comparison, Thomas Jefferson’s library, one of the largest of the period with almost five thousand books, contained only thirty-eight titles strictly about natural history.\textsuperscript{119} Barton maintained a number of bibliophile contacts throughout Europe and often sent lists of books he was looking for to booksellers all over Britain and the continent.\textsuperscript{120} One receipt for a shipment of books that Barton ordered in preparation for his final trip to Europe in 1815 totaled four hundred dollars.\textsuperscript{121} In fact, when parts of Barton’s library were purchased after his death by the Pennsylvania Hospital Library, the

\textsuperscript{117} Barton’s \textit{Elements of Botany} was the first textbook of botany published in America. It was largely based on British texts, but substituted some of Barton’s own observations and referred often to American flora. See Benjamin Smith Barton, \textit{Elements of Botany} (Philadelphia, 1803).


\textsuperscript{119} Ibid, 311.

\textsuperscript{120} See “List of wanted books” in Benjamin Smith Barton, Miscellaneous Papers, American Philosophical Society.

\textsuperscript{121} Ewan, “One Professor’s,” 313.
total cost amounted to $2,770 and the new books more than doubled the hospital’s collection.\textsuperscript{122}

All social etiquette of Barton’s time and place would suggest that he should have been generous in loaning his library to his friends and colleagues. William Bentley, one of the most famous scholars of Barton’s time and a great polymath, was highly regarded precisely because of his “generous disposition” with regard to his own work and his impressive, four thousand volume library.\textsuperscript{123} An Enlightenment commitment to the universal project of knowledge accretion and a republican fantasy of a universally informed citizenship led men of letters in this period to share freely in information.\textsuperscript{124} In this climate, Barton was an anomaly. He did show off his library to friends, but this seems to have been merely another of Barton’s attempts at self-aggrandizement as he rarely leant any books to anyone. For instance, Jefferson and Barton were locked in a heated debate during the late seventeen-nineties over Native American origins and languages and Barton possessed a number of books on linguistics that Jefferson professed interest in reading. Jefferson does not seem to have been aware that the books were in his friend’s collection, but Barton was certainly aware that Jefferson was looking for them. Barton never offered to show them to his colleague.\textsuperscript{125} Barton might have gained a great deal of prestige by being generous with his impressive library, but he largely refused.

\textsuperscript{122} Pennsylvania Hospital Board of Managers, Minutes, 12 May 1817, Historical Society of Pennsylvania.

\textsuperscript{123} Bentley was a well-recognized figure in his time. He wrote in local Salem, Massachusetts papers and preached as a Unitarian minister there. However, he was also well known throughout both New England and the wider nation for his facility with more than twenty languages and was offered national posts, including Congressional Chaplain and the Presidency of the University of Virginia during the Jefferson Administration. See Richard D. Brown, \textit{Knowledge is Power: The Diffusion of Information in Early America, 1700-1865} (New York: Oxford University Press, 1989), 199, 197.

\textsuperscript{124} Ibid, 217.

Still, Barton was not \textit{entirely} without generosity. He did lend some books, particularly to William Bartram and Jefferson, who usually loaned him books in return. Most famously, one of Barton’s books was carried all the way to the Pacific by Meriwether Lewis.\footnote{Ewans, \textit{Barton}, 810.} But, for every answered request for a book, there seems to have been three more that were ignored or rebuffed. Barton also guarded his botanical specimens with equal jealousy. Henry Muhlenberg wrote to William Peck at Harvard about Barton’s behavior: “With D. Barton I correspond but seldom except when he puts some queries to me. I could never persuade him to let me see his Herbarium although he has seen mine twice. His Principle seems to be ‘it is more blessed to receive than Give.’”\footnote{Henry Muhlenberg to William Peck, 19 May 1812 in William Peck Papers, Harvard University Archives.} Similar reports piled up, and Barton developed a bad reputation, which led one observer to describe him as possessing “an irritable and even cholerick nature.”\footnote{Quoted in Charles Coleman Sellers, \textit{Charles Willson Peale} (Philadelphia, 1947), II, 48.}

Why Barton behaved in this manner was something of a mystery to his contemporaries, who could not imagine why he wanted to keep natural knowledge locked away. However, Alexander Wilson seems to have gotten rather close to the mark in diagnosing Barton’s behavior, albeit in a different context, as he complained about the fact that there was “not even the slightest allusion [to William Bartram’s work in Barton’s section on America for John Pinkerton’s 1804 \textit{Modern Geography}], lest posterity might discover that there existed, at this time, in the United States, a naturalist of information superior to his own.”\footnote{Alexander Wilson to William Bartram, 17 September 1804 quoted in George Ord, “Sketch of Alexander Wilson” in Wilson, \textit{American Ornithology} (New York: 1828), xli.} While the egoism implied by Wilson’s critique was certainly an aspect of Barton’s character, Wilson seems more accurate in simply
identifying Barton's desire to be the premier naturalist of the United States in his day. This appears to have been Barton's driving motive, partially out of the intellectual overweening that his contemporary critics noted, but more importantly because Barton imagined a market for scientific knowledge, and he hoped to profit from it. After all, Barton's publication of *Elements of Botany* did not meet a necessary demand. Perfectly good botany textbooks could be imported from Europe and, in fact, Barton's text was largely copied from some of these texts. Rather than a compelling intellectual need, Barton saw a possible market. By representing himself and his text as uniquely American (much as he had to European audiences in Edinburgh), Barton hoped to capitalize on the nationalism of the new nation and had visions of his textbook becoming the standard work on botany in the United States.

Where his colleagues saw information and their minds turned to the Enlightenment ideal of universal knowledge, Barton's turned immediately to monopoly. Barton saw information as a commodity. Thus, he was willing to lend his books to those from whom he could either obtain information or enhanced social capital and not to those who had nothing to offer him. *Elements of Botany* was, in the same vein, Barton's first endeavor as a kind of gatekeeper who would collect, organize, and dispense valuable scientific knowledge to his countrymen. While his short life did not permit additional publications, Barton's continued practice of jealously guarding his collection of books as well as his botanical specimens affords no reason to doubt that he would have continued in this vein in the future.

Unfortunately for Barton, there was little cash market for scientific ideas in the Early Republic. His *Elements of Botany*, for example, was modestly successful in
Universities (particularly at the University of Pennsylvania while Barton was teaching there), but was often sold at a discount of more than thirty percent to influence flagging sales, even in Philadelphia.\textsuperscript{130} Commenting in 1821, the Bostonian Caleb Cushing noted that while Barton’s book was used in Universities, it yielded primacy to better and cheaper textbooks from Europe.\textsuperscript{131} His more particular works, such as those about Native Americans, sold even fewer copies and did not gain footholds in the academy. For Barton, then, the best hope for earning actual income from his publications was in the textbook market. However, Barton’s more expensive American efforts could not compete with their European counterparts. Thus, he could make money, but not enough to support himself as only an author or collector of rare books.

What if Barton had directed his efforts toward a more popular audience? Outside of the relatively small world of elite Philadelphia and other urban centers, the number of scientific texts in personal libraries was rather paltry. If one generalizes William J. Gilmore’s research into New England libraries, of the one hundred and fourteen most common titles found in American libraries, only three could properly be said to be about medicine or science.\textsuperscript{132} Not only were scientific books largely absent from the libraries of most Americans, even the expanding middle class, but the chances of writing a bestseller on any subject were also quite poor. (the most common book in these libraries next to the Bible was Noah Webster’s \textit{American Spelling Book}, which appeared in only 12.6 percent of the libraries surveyed).\textsuperscript{133} Had he been active twenty years later, Barton

\textsuperscript{130} See Anthony Finley to Barton, 13 November 1811 in Barton Papers, APS.
\textsuperscript{133} Ibid.
might have supported himself well on the lyceum circuit, but in his day, a popular market in publishing for Barton’s work simply didn’t exist. Doubtless science was professionalizing in Barton’s time (his obsession with the MD degree attests to this), but, outside of the academy, there was no real market for its practitioners to tap yet.

While Barton attempted throughout his life—from his time in Edinburgh to his work in Philadelphia—to corner a market on scientific inquiry and turn his passion into money, he was also not averse to an older, European model of scientific inquiry. He was always seeking patrons and frequently called on royal personages from Sweden to Britain to look for support. In the United States, Barton was part of a group of intellectuals who attempted at various times and with various arguments to make both the American Philosophical Society and Peale’s Museum national institutions in order to secure government funding for their researches. This group was ultimately heartened by Thomas Jefferson’s election in 1800, believing that, since Jefferson was the president of the Society, he would be amenable to this scheme of the nationalization of the pursuit of knowledge, but they would be disappointed.\textsuperscript{134} After these attempts failed, seeking patronage from the federal government seemed a lost cause to Barton. Having been disappointed by the fact that the nation would not fulfill what he imagined was its obligation to science, Barton sought the patronage of its chief citizens. For example, Barton solicited money from John Nicholson, who was one of the wealthiest men in America, having made huge gains in land speculation with Robert Morris.\textsuperscript{135} Fortunately for Barton, he was saved from having to repay the debt by the fact that Nicholson was sent to debtor’s prison where he died in 1800, in debt for the then fantastic sum of four

\textsuperscript{134} Brigham, \textit{Public Culture}, 18.

\textsuperscript{135} Barton to John Nicholson, 24 September 1795 in Barton Manuscripts, Historical Society of Pennsylvania.
It was also around this time that Barton borrowed the sum from the surpassingly famous George Washington and, this time, he was not saved from the indignity of debt by the imprisonment of the lender.

Also around this time, Barton’s smoldering fights with Benjamin Rush were flaring up. Rush stopped speaking to Barton after the yellow fever outbreak since he felt that his practice had been hurt by his critics during the epidemic, and he, either rightly or wrongly, was absolutely convinced that Barton was one of the ringleaders of these enemies. Each seems to have said unkind words about the other to friends during this time, but in late 1809, Barton wrote a scathing letter to Rush after he learned that his former teacher had been steering pupils away from his classes. The exchange of letters that followed finally led to Rush’s letter of January 1810 that reminded Barton, who was still in debt to Rush for his schooling, of the debacle over his degree. Barton’s response does not remain, but Rush seems to have given up the problem until late in the year when he wrote to James Wallace, who had studied in Edinburgh after Barton, to get to the bottom of what had happened to Barton in Edinburgh. Wallace replied in March of 1811:

When at Edinburgh I became a member of the Royal Medical Society of Edinburgh. That society chooses four Annual Presidents out of their own body. I was informed by the Members that Dr Benjamin Smith Barton of Philadelphia had been one of the four Annual Presidents, that he had received during the season or seasons he presided . . . a considerable sum of Money belonging to [the] Society, that he left the City of Edinburgh without placing the above mentioned money in the Treasury of

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137 Smith, “Barton.”
the Society—that he had been repeatedly written to on the subject—that he had promised to reimburse the money, but in 1791 some years after his delinquency die money was not reimbursed. In 1792 the members of the Society feeling indignant at so foul a transaction & at his indifference on the occasion, thought he ought to be advertised Per totem Orbem Terrarum [throughout the world]. Mr Thomson one of the Annual Presidents in January 1792 . . . rose with a view to make a Motion to advertise Barton, & [he] having made some exordium I went to him & used some arguments against the procedure lest the American Students might suffer by [the] advertisement. Mr Thomson kindly declined the Motion & resumed his seat. A general conversation then took place & I heard no more of the affair.\textsuperscript{138}

Despite his evident dislike of Barton, Rush does not seem to have expended the ammunition in hand. Although it is not clear who exactly Rush told, the incident does seem to have become common knowledge. Yet, it did not really seem to affect Barton’s standing despite the fact that, as even W.P.C. Barton’s defense in the eulogy for his uncle indicates, his degree was generally doubted.\textsuperscript{139} Somehow, Barton was now both a rather well known dissembler and a constant debtor, but continued to support himself in Philadelphia society and, indeed, accrue further honors until the end of his life. How was it that Barton was able to avoid the consequences of his many disreputable actions? Why did people continue to trust Benjamin Smith Barton after everything they almost certainly knew about him?


\textsuperscript{139} WPC Barton, “A Biographical Sketch.”
At least one reason why Rush himself might have kept relatively silent in regard to Barton’s misconduct is that Barton was deeply entrenched within social groups and institutions that Rush held dear. Barton had been elected to the American Philosophical Society partly on the basis of his presumed possession of a degree from Edinburgh. To reveal that it had countenanced Barton’s duplicity, however unknowingly, would have cast doubt on the Society’s pretension to being the gatekeepers of natural and scientific knowledge in the United States—the Royal Society of Philadelphia, as it were. It also might have cheapened Rush’s membership and that of his friends. Similarly, Barton had attained chairs at the University of Pennsylvania, partially on his degree and partially, at least in the beginning, on the recommendation of Rush, the University’s most highly regarded professor and America’s most famous physician. Thus, painting Barton as a cheat and a liar would have diminished the University where he was regarded by both students and faculty as an important professor and while the two had been engaged in a rather public falling out for more than a decade, perhaps Rush still feared that bringing Barton down might reflect badly on himself because the whole affair cast his own judgment into doubt.

One also must not disregard Barton’s social position. True, Barton was an orphan and his father, Thomas, while a respected man, had not achieved any particular fame, except in his defense of the infamous “Paxton Boys.”\textsuperscript{140} However, Barton’s relationship to his uncle, David Rittenhouse had taken him far. It was Rittenhouse’s reputation with the professors at the University of Pennsylvania that first helped Barton gain admittance as a student there and had certainly helped him establish himself in Edinburgh. Then it was perhaps Rittenhouse’s position as president of the American Philosophical Society

\textsuperscript{140} Thomas Barton, \textit{The Conduct of the Paxton-men, impartially represented} (Philadelphia, 1764).
that made Barton’s election so simple. The rest of the Barton family, including William and, eventually, W.P.C., were also important fixtures both in the Society and in the intellectual life of elite Philadelphia more broadly. Yet, Barton did not rest solely on his family’s position. By marrying Mary Pennington in 1797, Barton also allied himself with the wealthy Pennington family which enhanced both his material and social capital.\footnote{Ewans, Barton, 162.}

The Pennington's were generally loath to loan Barton money, but Mary’s brother Edward did trade debts back and forth with Barton for some years.\footnote{Ibid, 164.} More importantly, though, Edward was also a friend of Thomas Jefferson, which drew Barton further into the circle of wealthy elites who dominated natural history in early Federal Philadelphia. Given all of these associations, Barton was deeply worked into the fabric of Philadelphia society. His many friends were willing to forgive his failings, and his allies, like Charles Willson Peale, while they professed to hate him at some moments, were willing to put up with his many failings in order to secure his support or, at least, to avoid alienating his powerful circle of friends.

Yet, it was not only social capital that protected Barton. He was also protected by the simple fact that he was an anomaly. His contemporaries were ill-equipped to understand him. As Mark Noll has illustrated so brilliantly in the case of Princeton, “the scientific conventions of the moderate Enlightenment made it difficult for [academic intellectuals] to analyze their own situation[s] accurately.”\footnote{Mark A. Noll, Princeton and the Republic, 1768-1822: The Search for a Christian Enlightenment in the Era of Samuel Stanhope Smith (Vancouver, Regent College Publishing, 1989), 10.} The belief “that connections between private belief and public behavior were transparent” led this generation of American intellectuals to search for ideological reasons behind their
contemporaries' activities.\textsuperscript{144} In other words, this way of conceiving of the way that people behave in the world did not have room for a man of Barton's contradictions since it presumed a coherence of character and a moral fiber that he decidedly lacked. He was both a brilliant scientist and a con artist. He truly suffered from debilitating gout, but he also malingered to avoid his responsibilities. He was rarely one thing or the other. More importantly, Barton looked at the world and saw a landscape that would have been totally alien to his contemporaries. His desire to monetize science and protect and control the knowledge he created flew in the face of the lessons of the Enlightenment science on which his contemporaries had been raised. A Michael Warner notes, "the social diffusion of printed artifacts took on the investment of the disinterested virtue of...public orientation" in Early America.\textsuperscript{145} In other words, the notion of the republic of letters in this period encouraged the spread of knowledge for the public good and understood printed works, in particular, in this light. Unable to understand his motivations, then, Barton's contemporaries could not understand his conflicting behavior. While some, like Rush, developed a deep disdain for the man, most others don't seem to have known what to make of him.

Charles Caldwell wrote of Barton in his \textit{Autobiography} that "[t]he character of that gentleman was so extraordinary a compound of incoherent and jarring, not to say contradictory elements, that to delineate it correctly is no easy task; and, to augment the difficulty of the tasks, his character was as fluctuating as it was self-inconsistent."\textsuperscript{146} No less difficult is the task of the historian in trying to explore Barton's behavior and to

\begin{footnotesize}
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\item Ibid, 11.
\item Charles Caldwell, \textit{Autobiography} (New York: Da Capo, 1968), 160.
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separate fact from speculation. One returns to Whitfield Bell’s question: “what sort of man was Benjamin Smith Barton?” The answer is perhaps that Barton was a man conditioned by but otherwise unfit to inhabit the time in which he lived, because he lacked a certain centeredness. Just as the scientific world was in flux during his life, so was his self-conception as a naturalist and as a professor, and his character was not altogether strong enough to provide the moral compass necessary to navigate these treacherous waters. He saw the world very differently from his contemporaries. Orphaned at a young age and constantly wanting for money, Barton looked to the thing he was passionate about and wondered how he could turn it into a real income. In the end, his life is the story of a man who pursued every opportunity that might serve this end. Most ended in failure, so Barton time and again found himself trying to avoid or control the consequences of his feckless pursuit of wealth in the marketplace of ideas that did not yet value such things in economic terms. Perhaps there was never a real chance that Barton would succeed. There was little market for what he wanted to produce and he broke too many promises and offended too many powerful men to rise to the same level of fame as the likes of Rush. Yet, the simple fact remains that a man like Barton could live in the Early Republic and see possibilities that his contemporaries and later scholars have tended to dismiss. Barton had some success in working within the system, but he also imagined that he could transform it.

This transformation would not come during Barton’s lifetime. In the Early Republic, ideas could not be easily monetized and, indeed, the enforcement of new federal law demonstrated that fact. Under Barton’s friend, Thomas Jefferson, the United States Patent Office in the Washington administration held that only particular inventions
could be patented and made sure that “science itself was rigidly excluded from patents.”

In other words, there was no legal apparatus to support the monetization of ideas. The notion of intellectual property did not exist as such. Devices could be patented, but Jefferson assumed that patenting the principles on which they were based would only stifle further intellectual growth and would go directly against the stated Constitutional aim of patents and copyrights to “promote the progress of science.”

Certainly, the literal text of Barton’s work was protected by the Copyright Act of 1790, but this valorized the object of a book, or at least the text it contained and not necessarily the ideas therein. Thus, Barton’s impulse to control knowledge itself seems out of place in his own time. It was not until the 1830’s that the patent office began to take the view that such principles might be patentable.

Had Barton been an inventor, he could have easily earned an income, but his dream of supporting himself from his intellectual labor was largely alien to his time and place. Instead, he could only support himself by instrumentally doing something: teaching, practicing medicine, etcetera. Barton lamented the fact that “the principle cultivators of natural science, in the United States, are professional characters, who cannot, without essentially injuring their best interests, devote to these subjects the sedulous attention which they demand.” Barton’s resistance to this fact was his downfall. Rather than embrace his position as a working professional, he sought to support himself as an intellectual, no matter how fatally flawed his character. The debts

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148 Ibid.
149 Ibid, 46.
150 Benjamin Smith Barton, “Miscellaneous Facts and Observations” in Philadelphia Medical and Physical Journal, no. 1 (1805), 158-159
that he incurred in the process could only be held off by mobilizing all the social capital
at his disposal. Yet, while he was an anomaly in his own time, his impulse to monetize
knowledge in many ways prefigured the marketplace of ideas that would later come to
obtain in American society. Had his contemporaries possessed any prescience, they
might have looked at Benjamin Smith Barton only to find the frightening, alien face of
the modern looking back at them.