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## **Thomas Jefferson, James Madison, probability and constitutions: at the intersection of the Scottish, American, and French Enlightenments**

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### **Résumé**

L'économie politique ainsi que le calcul des probabilités se développèrent en Ecosse au XVIII<sup>e</sup> siècle indépendamment de leur développement en France. Les penseurs et hommes politiques Thomas Jefferson (ambassadeur des Etats Unis à Paris entre 1784 et 1789) et James Madison, tous deux inspirés par des professeurs écossais, représentent un lien entre les Lumières écossaises et françaises. Cet article examine la façon dont Jefferson et Madison comprenaient la révolution probabiliste de Condorcet, et le rôle que joua Jefferson aux origines de la *Déclaration des droits de l'homme et du citoyen* de 1789.

### **Abstract**

Economics, statistics, and probability were developed independently by thinkers of the Scottish and French Enlightenments. The two traditions were brought together by the close friends Thomas Jefferson and James Madison. Both were educated by professors steeped in Scottish thought; both wrote fundamental American constitutional documents. Jefferson served as American Minister in Paris from 1784 to 1789, where his thought developed through his active contacts with French mathematicians and liberal politicians. Behind the scenes, he helped to draft the 1789 Declaration of the Rights of Man and the Citizen. Based on Jefferson's and Madison's letters, the paper explicates their thinking about probability, constitutionalism, and rights at this period: its Scottish roots, and its consequences for the US and French constitutions.

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*I am among those who think well of the human character generally. I consider man as formed for society, and endowed by nature with those dispositions which fit him for society. I believe also, with Condorcet ... that his mind is perfectible to a degree of which we cannot as yet form any conception*  
TJ to William Green Munford, 18.06.1799<sup>2</sup>

*I could not spare the time [to translate Condorcet's New Haven Letters into English, and]... I did not approve the tendency of it. If your plan of a single Legislature etc. as in Pen[sylvani]a. were adopted, I sincerely [sic] believe that it would prove the most deadly blow ever given to republicanism*  
JM to F. Mazzei, 10.12.1788<sup>3</sup>

## **1. Social science in the Scottish and French Enlightenment**

Modern social science has its roots in the Enlightenment, which saw the birth of economics and the development (and first practical applications) of demography, statistics and probability. Game theory can also be traced to David Hume (1711-1776) and social choice theory to Condorcet (1743-94), but these were not recognised as separate disciplines until the 20<sup>th</sup> century.

The Scottish and French roots of economics are distinct. Adam Smith (1723-90) and the Physiocrats, especially Quesnay and Turgot, developed their free-trade economics separately. Smith visited France between 1764 and 1766, where he met Turgot and Voltaire, but his view of the Physiocrats in the *Wealth of Nations* is quite critical. He devotes a long chapter (*WN*, IV.ix) to his criticism of them. From time to time, writers revive the idea that Smith and the French economists were in active contact in the 1780s. For instance, Elisabeth and Robert Badinter state (Badinter & Badinter 1988: 217) that Smith attended the salon of Sophie de Grouchy (the Marquise de Condorcet) in 1786. She later translated Smith's *Theory of Moral Sentiments* (1759) into French.

If Smith had attended the salon, he would have met not only Sophie and her husband, but also Thomas Jefferson, American Minister in Paris and a key link figure between the Scots and the French. Unfortunately, the story is untrue. Smith never left Britain, and left Scotland only for trips to London, after returning from France in 1766. He, Jefferson, and Condorcet had some acquaintances in common, including the duc de la Rochefoucauld [d'Anville] and P.-S. Dupont de Nemours. A letter from Smith to the abbé Morellet in 1786 recalls the intellectuals whom Smith had met on his visit, including Helvétius, Turgot, Julie de l'Espinasse, d'Alembert, Diderot and especially Holbach (Mossner and Ross 1987 #259). Although Sophie's translation proves that she admired Smith, the Condorcets never met him. Nor did Jefferson.

As with economics, so it was with statistics, demography, and probability. These developed independently in Scotland and in France. In the early 18<sup>th</sup> century, some Scottish scholars, including John Arbuthnot, started to apply the emerging theory of probability to demography. In a paper to the *Philosophical Transactions of the Royal Society* in 1711, Arbuthnot argued that the observed regularity of the excess of male

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<sup>2</sup> Peterson 1984, p. 1064

<sup>3</sup> JMP 11, 388–89; see also JM to Mazzei, Oct. 8, 1788, JMP 11, 278–79.

over female births in London was evidence for divine providence, because the excess is required to keep the populations of the two sexes in balance (Meusnier 1999; Daston 1988: 252). In practice this work led nowhere (because insurers failed to understand probability – Daston 1988: 169) until the middle of the century, when two Scottish ministers, Alexander Webster (1707–1784) and Robert Wallace (1697–1771), collaborated to draw up the first reliable population and actuarial tables. Their fund for the support of widows of ministers was actuarially sound. It survived, unlike contemporary insurance ventures in continental Europe. It is the distant ancestor of the well-known modern life assurance company the Scottish Widows' Fund (sources: lives of Webster and Wallace in the *Oxford Dictionary of National Biography*; Sakamoto and Tanaka 2003, chapters by Nagai and Amoh).

## 2. *Jefferson in Paris*

The recently widowed Thomas Jefferson arrived in Paris in summer 1784 as part of a three-man US mission to France. Jefferson and John Adams joined Benjamin Franklin, who was already in Paris. Franklin had made extensive social - and sexual - contacts with the salons of the Enlightenment and was having an affair with Mme Helvétius at her salon in Auteuil<sup>4</sup>. After a short time Franklin returned to the USA and Adams went to London as American Minister. Jefferson stayed in Paris as American Minister until fall 1789.

His official task was to represent the new Republic of the USA, which France had helped to bring into existence after it decided to give military support to the American revolutionaries. He had several difficult problems on his plate. One was opening European markets to American exports. Another was apologising for the failure of the US to pay the back salaries due to French officers in the American campaign. A third was raising credit for the USA in European capital markets.

But Jefferson's five years were much more of a cultural and intellectual tour than simply a diplomatic mission. His insatiable wide-ranging intellectual curiosity is already evident from his writings before France, including the drafts of the *Notes on Virginia* written before he reached Paris in reply to questions from a French diplomat in Philadelphia, François de Marbois. He also undermined the government of Louis XVI, to which he was accredited.

Jefferson enjoyed the salons of Mme Helvétius and Sophie de Condorcet. Jefferson and the Marquis de Condorcet met regularly in Paris and admired one another. There is enough human interest in the story of Jefferson in Paris to have persuaded Ismail Merchant and James Ivory to film it (pretty accurately). Jefferson arrived with his oldest daughter Martha. On hearing in 1785 that his youngest daughter Lucy had died of 'a most unfortunate Hooping Cough', he arranged for his remaining child Maria ('Polly') to join them. After over a year of obstruction by the cousins who were looking after Polly, she arrived in 1787 in the care of his young slave Sally Hemings (a job she was too immature to do, according to Abigail Adams, the imperious wife of

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<sup>4</sup> When Jefferson and Adams arrived, they both disapproved of Franklin's behaviour. In 1786, the young Sophie de Condorcet held a salon in her husband's apartment at the Hotel des Monnaies (Guillois 1897, pp. 68-76). After the Terror and the death of her husband, Sophie moved into Mme Helvétius' old house at Auteuil and reopened her salon (Guillois 1897, pp. 94, 177). I read this as a defiant statement of her radicalism and feminism.

John Adams<sup>5</sup>). Sally Hemings was TJ's late wife's half-sister. DNA (Y-chromosome) analysis has proved that her last child, born many years after Paris, carried the Jefferson genome (Foster 1998). She bore a child soon after Paris, presumably Jefferson's, but he died in infancy (Gordon-Reed 2008). Before Sally Hemings' arrival, Jefferson had fallen in love with Maria Cosway, the Italian wife of a gay English painter, but in his *Dialogue between my Head and my Heart* (1786) addressed to her, Jefferson's Head suppresses his Heart.

By 1784, Jefferson's intellect had been largely shaped by Scottish thought, which influenced his draft of the US Declaration of Independence in 1776. The Scots also shaped James Madison, with whom Jefferson had worked in Virginia and corresponded from Paris while Madison was a key member of the Convention that wrote the US Constitution in 1787. Jefferson's views were modified by his encounters with the French Enlightenment, especially with Condorcet and Lafayette. A running question is: how much of the new statistics and probability did Jefferson and/or Madison understand? Table 1 gives a chronology of the careers of Jefferson and Madison to 1802.

### **3. Jefferson, Madison, and the Scottish Enlightenment**

Jefferson was a student at Virginia's first university, the College of William & Mary. Madison attended the College of New Jersey (now Princeton) under its austere Scots principal John Witherspoon. They both absorbed the philosophy of the Scottish Enlightenment, but with significantly different slants. When Jefferson went to Paris, he was primed for his enthusiastic encounter with the mathematicians and philosophers of the French Enlightenment. Madison was more sceptical – his only exposure to French came from his Scottish schoolteacher and it is said he spoke French with a Scots accent (Rakove 1990 p. 2).

The thought of the Scottish Enlightenment had a profound influence on US constitutionalism (Adair 1974, 2000; McLean 2006). There were two immediate routes: via William Small, Thomas Jefferson's teacher at William & Mary; and via Witherspoon. Small and Witherspoon stood for the liberal and conservative Scottish traditions, respectively. Witherspoon nevertheless taught the work of the 'infidel' David Hume (Adair 2000, p. 26; cf Witherspoon 1982). Adam Smith held a public discussion with Hume in the pages of *The Wealth of Nations* (WN). Hume had argued for church establishment; Smith argued against. Both TJ and JM sided with Smith.

The Scottish Enlightenment started as a dialogue about church and state. There were three camps: atheist (represented by Hume); deist/Moderate (represented by Smith and Small); and Calvinist/evangelical (represented by Witherspoon). Calvinism involves a set of beliefs about personal responsibility to a God who punishes unrighteousness (especially, it seems, sexual) with eternal punishment, and rewards

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<sup>5</sup> The Girl she [Polly Jefferson] has with her, wants more care than the child, and is wholly incapable of looking properly after her, without some superiour to direct her' (Abigail Adams to TJ, July 6 1787), in Cappon 1959, p. 183.

Date	TJ	JM
1743	Born Shadwell, VA	
1751		Born King George County, VA
1757	death of father	
1762-4	Attends College of William & Mary. Taught by William Small and (later) George Wythe	
1767	Admitted to VA bar	
1768	Elected to VA House of Burgesses	
1769-72		Attends College of NJ, Princeton. Taught by Principal John Witherspoon
1770	Fire at Shadwell destroys his first library. Monticello under construction	
1772	Marriage to Martha Wayles Skelton: soon inherits her share of Wayles family assets (inc. slaves) and liabilities (to British traders). Ultimately, these liabilities are to bankrupt him.	
1774	VA House dissolved by British; reassembles as a convention. Elected to First Continental Congress	
1775	<i>A Summary View of the rights of British America</i>	
1776	Drafts Declaration of Independence, adopted on 4 July	Elected delegate to VA convention, which turns itself into General Assembly. First known meeting with TJ
1777	Drafts VA Statute for Religious Freedom	
1779-81	Governor of VA. Rescued by Lafayette during British raid. British free slaves from Monticello	Elected to Continental Congress till 1783
1782	Death of Martha Wayles Skelton. Plunged into depression; retires to Monticello	
1783	Elected delegate to Congress	
1784-9	Serves as Commissioner, then American Minister, to France	
1785		Re-elected to VA House of Delegates. Writes 'Memorial and Remonstrance against Religious assessments'
1786	Shays' Rebellion	
1787	Publishes <i>Notes on the State of Virginia</i> as propaganda to win British, French hearts and minds. Much drafted before he went to France	Notes on ancient and modern confederacies; 'Vices of the Political System of the US'. Main author of VA Plan. VA delegate to, and records proceedings of, Constitutional Convention. Accepts (as Hamilton's 3 <sup>rd</sup> choice) position as coauthor of <i>Federalist</i> .
1787-8	Sends JM his criticisms of draft Constitution, also sends Abigail Adams response to Shays ('I like a little rebellion now and then. It is like a storm in the atmosphere'.)	His numbers of <i>Federalist</i> appear. Elected to VA ratifying convention
1789		Elected to first House of Representatives; floor manager for Bill of Rights

**Table 1. Jefferson and Madison: early careers to 1789**

those elected to it with eternal life. But it also encompasses a set of beliefs about church and state. It is triply anti-hierarchical. First, there are no grades of clergymen – no bishops, archbishops, deans or cardinals. All ministers are of equal standing. (Thus even a conservative Calvinist like Witherspoon could be a political radical). Secondly, church government is in the hands of ministers and lay elders with equal authority. Thirdly, the doctrine of the two kingdoms states that the civil magistrate has a duty to protect the church but no right to interfere in it.

Seventeenth-century Scotland was an often terrifying Calvinist theocracy. In 1697, an Edinburgh student, Thomas Aitkenhead, was hanged for blasphemy. But the revolution settlement of 1689-1707 had a dramatic effect on state and church in Scotland. It removed the threat of a hostile (i.e., Episcopalian) state church. William III accepted the Presbyterians' Claim of Right as a condition of becoming king of Scotland in 1689. The position of the presbyterian Church of Scotland as the "true Protestant Religion" in Scotland was guaranteed by the Act of Union 1707. But this, paradoxically, removed the state altogether from Scottish public life. Scotland became a weak state remotely governed. The state was unavailable to hang blasphemers.

This vacuum allowed the liberals Francis Hutcheson (1694-1746) and Adam Smith, and the atheist David Hume, to survive and to write. Hutcheson's philosophy broke free from theology. He, Smith and Hume took religion out of ethics altogether. Hume was open about his scepticism in various writings, including the attack on miracles as a ground of belief in the *Essay on Human Understanding*, and two later works, *The Natural History of Religion* and the posthumous *Dialogues concerning Natural Religion*. Unlike Arbuthnot, he did not interpret demographic history in the light of Divine Providence. Hume had a dose of French scepticism. He may have bolstered his atheism with his reading in Paris, Reims, and la Flèche while writing his fundamental *Treatise of Human Nature* (1734-9) from which his later work derives. But he rejected the rationalism of, e.g., Helvétius or Condorcet. Smith's letters express his admiration for Holbach (especially) and Helvétius; but, if he was an atheist, he was much more cautious than Hume.

Scottish philosophers therefore challenged orthodox Calvinism from both deist (Hutcheson, Smith) and atheist (Hume) standpoints. Two of the three standpoints formed factions of the Scottish church. (Hume was beyond the pale). The 'Moderates' were a group of ministers in Edinburgh who seized control of the General Assembly in 1750 and retained it until the 1830s, when they were overthrown by the majority 'Popular' or 'Evangelical' (i.e., orthodox Calvinist) party. In *WN*, Smith vividly characterizes the Moderates and Evangelicals as 'Loose' and 'Austere' respectively, and offers a Humean natural history of their religions. Austere Calvinists are austere about drink and sex. This appeals to, and benefits, the poor, because they can be ruined by drink and sex, and therefore they have a material interest in binding themselves to the mast of austerity. The rich can afford to be Loose: drink and sex are superior goods (*WN* V.i.g.10-14).

In Aberdeen, there were two universities, one each for the Loose and Austere. Jefferson's teacher William Small, like Arbuthnot a generation earlier, attended the Austere university (Marischal College) but he listened to Loose lecturers from the other one (King's College). When Small was a student, Thomas Reid at King's was developing what became Scottish 'common sense' philosophy, a middle way between

austere Calvinism and Humean scepticism. Small transmitted to Jefferson at William & Mary what Jefferson describes as ‘the first ... ever ... regular lectures in Ethics, Rhetoric & Belles Lettres’ given there (Jefferson, *Autobiography*, in Peterson 1984, p. 2).

I hypothesize that Small’s W&M lectures on ethics, rhetoric, and belles lettres derived from Adam Smith. Smith had started giving such lectures in Edinburgh in the 1740s. Student copies of them circulated around Scotland. The lectures on ethics found their way into Smith’s *Theory of Moral Sentiments (TMS)*. Those on rhetoric and belles-lettres were discovered, in a student copy, in 1958 and have now been published in the collected works of Adam Smith.

How much (if any) statistics and probability did Small teach Jefferson? The only evidence is TJ’s brief statement in his *Autobiography*:

It was my great good fortune, and what probably fixed the destinies of my life that Dr. Wm. Small of Scotland was then professor of Mathematics, a man profound in most of the useful branches of science (in Peterson 1984: 4).

Small helped to mould Jefferson’s scientific cast of mind, which emerges from many of his pre-Paris letters. As an empiricist, Jefferson refutes Buffon’s claim that animals are smaller in the New World by drawing up descriptive statistics to the contrary (*Notes on Virginia*, Query VI, in Peterson 1984)

Madison’s writings, notably his numbers of *The Federalist*, show that he had a Humean interest in (what we might now call) game theory. We do not know whether Witherspoon taught him to understand this aspect of the thought of the infidel Hume. But Hume was a polymath. One of his works was a multi-volume *History of England* which showed that Jefferson’s favourite version of English history was mythical. In the myth beloved by 17<sup>th</sup>-century parliamentarians, at the time of the English Civil War, the Anglo-Saxon peasant before the Norman invasion of 1066 was a free man, oppressed since then by the ‘Norman yoke’ of royalty, feudalism, and the legal code. Jefferson disapproved of Hume for casting doubt on this story. At the material time therefore, Madison was a follower of Hume who became (as we shall see) sceptical of Condorcet; Jefferson resisted Hume but became close to Condorcet.

### 3.1 The French

As a member of the *Académie royale des sciences*, Franklin introduced Jefferson to Condorcet and his circle. To the French, Franklin was a hero of the American Revolution, who had been denounced and insulted by the British after breaking with them. He had negotiated the American-French alliance. He was wrongly assumed to be a Quaker because he did not wear a wig: and to be the main author of the Constitution of Pennsylvania, which was widely studied in Paris.

Condorcet and his circle were fascinated by American politics. He wrote about it copiously, and information on what was going on must have come from Jefferson or one of his associates, such as Filippo Mazzei and la Rochefoucauld. The latter had

been Franklin's secretary in Paris, and is a likely source of the following, from Condorcet's *Eloge*<sup>6</sup> de Franklin:

Franklin fut nommé, en 1776, un des représentants de la ville de Philadelphie à la convention de Pensylvanie, qui le choisit pour président. La constitution de cet Etat fut en partie son ouvrage. Elle se distingue de la plupart des autres par une égalité plus grande, et de toutes, en ce que le pouvoir législatif y est confié à une seule chambre de représentants; la voix de Franklin décida seule cette dernière disposition. (OC III 372-423)

That was not how it seemed to John Adams, who had been closer to the event than Condorcet or la Rochefoucauld. On the margin of a copy of a French translation of the Constitution of Pennsylvania, Adams wrote:

The following Constitution of Pa, was well known by such as were in the secret, to have been principally prepared by Timothy Matlock, Jas. Gannon, Thomas Paine and Thomas Young, all ingenious Men, but none of them deeply read in the Science of Legislation. The Bill of Rights is taken almost verbatim from that of Va.... The Form of Government, is the Worst that has been established in America, & will be found so in Experience. It has weakened that state, divided it, and by that Means embarrasses and obstructed the American Cause more than any other thing (JA annotation in Adams Library, Boston Public Library, 233.7.)

This unicameral constitution of Pennsylvania is the target of Madison's attacks in *Federalist* 10, 48, and 51. On this, Jefferson agreed with Madison and Adams. But Turgot, Condorcet, and la Rochefoucauld were attracted by the constitution of unicameral Pennsylvania, backed by the supposed authority of the great Docteur Franklin. Condorcet was wrong to attribute the PA constitution to him: he was rarely there. La Rochefoucauld produced another translation of the US state constitutions in 1783.

Adams and Jefferson - the two Americans to whom French constitution-writers turned for advice<sup>7</sup> - therefore had very mixed feelings about the American state constitutions. Condorcet's endorsement of unicameralism created a barrier between him and the Americans most likely to understand him.

### 3.2 Jefferson and Condorcet

Jefferson and Condorcet both believed that science must banish human misery and superstition. Condorcet coined the term 'sciences morales et politiques'; Jefferson may have been the first to translate the latter as political science. The mainspring of

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<sup>6</sup> It was Condorcet's job as *secrétaire perpétuel* de l'Académie des sciences to write obituaries of deceased academicians. They are masterly. Some criticize the subject gently, while advancing the argument (e.g., Daniel Bernoulli, where Condorcet shows the limitations of Bernoulli's arguments on inoculation). Some are not so gentle under a mask of politesse (e.g., Buffon, whom Condorcet detested). The *Eloge* of Franklin spends only a few pages on lightning-conductors and Franklin's other scientific achievements. It is mostly a celebration of American politics.

<sup>7</sup> Tom Paine was in Paris in 1787 and again in 1789-90. But he spoke no French.



the moral and political sciences, according to Condorcet, was probability. The developing theory of probability drove the new actuarial science and made stable insurance contracts possible. It powered Condorcet's jury theorem. It spurred him to produce the first axiomatic treatment of voting and majority rule. It informed his attitude to justice and human rights.

Condorcet used his position as Perpetual Secretary of the Academy of Sciences to control European science policy. Jefferson was an enthusiastic amateur scientist. The final speech of the Heart to the Head acknowledges the Head's heroes: 'Condorcet, Rittenhouse, Madison, La Cretelle, or any other of those worthy sons of science whom you so justly prize'<sup>8</sup>. In one of the last documents he wrote in hiding before meeting his death in the Terror of 1794, Condorcet consigned his beloved daughter Eliza, should she escape to the USA, to the care of Jefferson, or of Franklin's grandson B. F. Bache. She did not reach the USA, but she and her mother Sophie de Grouchy survived the Terror. After Condorcet's death, if TJ's letter to William Green Munford is to be taken at face value, Jefferson was reconciled to Condorcet's values. In his wonderful post-1812 correspondence with John Adams (Cappon 1959), Jefferson never responded to Adams' fierce and frequent attacks on Condorcet and his fellow thinkers of the French Enlightenment. Adams thought that they were foolishly optimistic about human nature. (So, more quietly, did Madison). Jefferson shared Condorcet's optimism.

How far did TJ and/or JM understand Condorcet's revolutionary, probabilistic, social science? There are several pieces of evidence, and some non-evidence from which it is impossible to prove a negative. Where there is no evidence, we must take a historian's rather than a statistician's approach to probability.

The best evidence that Jefferson understood Condorcet's probabilism is in his letter to Madison of 06.09.1789, anthologized as 'The earth belongs in usufruct to the living'. TJ derives his data from mortality tables; his formulae and modes of reasoning from Condorcet. Following are, first, the probabilistic parts of TJ's argument; second, the parallel passage in Condorcet.

I set out on this ground which I suppose to be self evident, "*that the earth belongs in usufruct to the living;*" that the dead have neither powers nor rights over it.... [L]et us suppose a whole generation of men to be born on the same day, to attain mature age on the same day, and to die on the same day.... Let the ripe age be supposed of 21. years, and their period of life 34. years more, that being the average term given by the bills of mortality to persons who have already attained 21. years of age.... A generation coming in and going out entire ... would have a right in the 1<sup>st</sup> year of their self dominion to contract a debt for 33. years, in the 10<sup>th</sup> for 24. in the 20<sup>th</sup> for 14. in the 30<sup>th</sup> for 4. whereas generations changing daily, by daily deaths and births, have one constant term beginning at the date of their contract, and ending when a majority of those of full age at that date shall be dead. The length of that term may be estimated from the tables of mortality.... Take, for instance, the tables of M. de Buffon.... [O]f those living at any one instant of time, one half will be dead in 24. years 8. months... and the half of those of 21. years

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<sup>8</sup> By Madison, Jefferson probably meant not the politician but his cousin Rev. James Madison, president of William & Mary College. Jefferson called the Philadelphia scientist David Rittenhouse 'second to no astronomer living; ... in genius he must be the first, because he is self-taught'.

and upwards living at any one instant of time will be dead in 18. years 8. Months, or say 19. years as the nearest integral number (Peterson 1984, pp. 959-64, retaining TJ's eccentric punctuation).

Les bornes de la durée des lois constitutionnelles ne doivent pas s'étendre au delà d'une génération. En effet, on peut regarder comme unanimement reçue toute loi acceptée par la pluralité de la nation, parce qu'on peut supposer que, vu la nécessité de recevoir la loi ou de la rejeter, et celle de préférer l'opinion du plus grand nombre, ceux qui rejetaient une loi proposée ont cependant formé le vœu de s'y soumettre, si elle était conforme à l'opinion de la pluralité. Ainsi, l'approbation donnée à une loi, par cette espèce d'unanimité, peut s'étendre à tout le temps où ceux qui existaient à cette époque continuent de former la pluralité.... Mais cette approbation cesse d'avoir la même valeur lorsque ces individus ne forment plus la pluralité de la nation. *La durée de toute loi constitutionnelle a donc pour véritable limite le temps nécessaire pour que la moitié des citoyens existants au moment de l'acceptation de la loi ait été remplacée par de nouveaux citoyens*; espace facile à déterminer, et qui est de 20 ans environ, si la majorité est fixée à 21 ans; de 18, si elle est fixée à 25. (Condorcet, *Sur la nécessité de faire ratifier la constitution par les citoyens*, 1789, in OC IX 413-30, quoted at p. 415. My italics. Condorcet spells out the numbers in this passage).

The passages are so close that it is hard to avoid the conclusion that they were written in collaboration. Following is another example. Jefferson in Paris took a very cheerful view of Shays' Rebellion against the government of Massachusetts in 1786-7. Whereas Shays scared Madison sufficiently to give momentum to the Constitutional Convention<sup>9</sup>, Jefferson insouciantly pointed out that

We have had 13. states independent 11. years. There has been one rebellion. That comes to one rebellion in a century & a half for each state. What country before ever existed a century & half without rebellion? ... What signify a few lives lost in a century or two? The tree of liberty must be refreshed from time to time with the blood of patriots & tyrants. It is its natural manure (TJ to William Stephens Smith (Adams' son-in-law), Nov. 13, 1787; Peterson 1984, 910-912; TJ's punctuation; cf also TJ to Abigail Adams, Feb. 22 1787, *ibid.*, 889-90).

Jefferson's dubious statistical inference comes direct from Condorcet, who had written,

Depuis onze ans que les treize gouvernements américains subsistent, un seul a vu naître un soulèvement, et c'est celui dont je viens de parler. Supposons que la même chose arrivât successivement dans les autres Etats après un même espace de temps, il faudrait pour qu'il en arrivât un dans chacun, un laps de cent quarante-trois années. Dans quels autres gouvernements les soulèvements ont-ils été aussi rares? (OC VIII:44).

The only difference is that Condorcet's arithmetic is more exact than Jefferson's.

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<sup>9</sup> 'The expedition under General Lincoln agst. the insurgents has effectually succeeded in dispersing them. Whether the calm which he has restored will be durable or not is uncertain'. JM to TJ, Mar.19 1787, in Rakove 1999, p. 67.

At the same time, TJ was helping the Marquis de Lafayette to draft a declaration of rights which he hoped would be adopted in France. TJ chose Lafayette, not Condorcet, because the former was more influential and less radical, therefore his ideas were more likely to be adopted. Many of them were, in the *Déclaration des droits de l'homme et du citoyen* adopted by the National Assembly in 1789 and still in the preamble to the French constitution. (A fuller discussion is in my complementary paper McLean 2009, which deals with the non-statistical sides of the relationship between Jefferson and the French intellectuals he met). However, the following clause of Lafayette's was not adopted. Its lineage from Condorcet via Jefferson is unmistakable.

Et comme le progrès des lumières l'introduction des abus et le droit des générations qui se succèdent nécessitent la révision de tout établissement humain, il doit être indiqué des moyens constitutionnels qui assurent ... une convocation extraordinaire des représentants dont le seul objet soit d'examiner et modifier, s'il le faut, la forme du Gouvernement. (Boyd 1950-,15: 230-3.)

However, Jefferson admired Condorcet's mathematics much more than his politics. Condorcet's influence on Jefferson was limited, and on Madison, it was non-existent: in both cases, because Condorcet endorsed unicameralism. Jefferson had made his feelings known in his *Notes on Virginia*. He had brought the *Notes*, originally drafted as replies to Marbois' queries, with him to Paris, and published them there as part of the campaign to recruit French intellectuals to the American revolutionary ideology. Jefferson denounces the '173 despots' who had replaced the solitary despot George III in Virginia. Although bicameral, 'the [VA] senate is, by its constitution, too homogeneous with the house of delegates. Being chosen by the same electors, at the same time, and out of the same subjects, the choice falls of course on men of the same description.... An *elective despotism* was not the government we fought for' (Peterson 1984, pp. 244-5).

Another member of the Jefferson-Condorcet circle in Paris was Philip (Filippo) Mazzei, an Italian-Virginian who wrote frequent begging letters to Madison and Jefferson. Jefferson commissioned Mazzei to write a four volume *Recherches Historiques ... sur les Etats-Unis* in order to counter anti-American propaganda in Paris (much the same motive as for publishing his own *Notes on Virginia*). Mazzei (or Jefferson) inserted four chapters by Condorcet into this book, which Mazzei sent to Madison, unsuccessfully asking Madison to arrange a translation. Condorcet's four chapters were called *Lettres d'un bourgeois de New H[e]aven à un citoyen de Virginie*. Condorcet was one of ten distinguished Frenchmen made a Freeman of New Haven at a town meeting in 1785. The *citoyen de Virginie* was Mazzei. These New Haven Letters argue for a unicameral national legislature, with representatives selected by a very complicated procedure. Madison refused Mazzei's request to get them translated, in the terms quoted at the head of this paper.

We checked Jefferson's library catalog for his copies of Condorcet's works (Gilreath and Wilson 1989). We examined all that are known to survive in the Library of Congress (some were lost in a fire in 1851). Jefferson had a copy of the 1795 edition of the *Esquisse d'un tableau des progrès de l'esprit humain*. He objects to Condorcet's claim that France was the first country to achieve religious freedom. No, says TJ: Virginia was first. But he wrote nothing apart from his characteristic

countersigning of the signatures<sup>10</sup> on his copies of Condorcet's work on voting theory. I conclude that Condorcetian probability did not make a long-lasting impact on Jefferson. For more evidence, relating to Jefferson's career after he returned from Paris, see McLean and Urken 1992; McLean and Hewitt 1994.

### 3.3 Jefferson and the US Constitution

Madison and Jefferson had worked together in Virginia on the Virginia Declaration of Religious Freedom (Rakove 1990, pp. 6-14). Jefferson's pride in it equalled Madison's. As noted, he complained that Condorcet's *Esquisse* wrongly credited France, not Virginia, for pioneering religious freedom. Adams' 1780 Constitution of Massachusetts still recognised the role of the town church as guardian of public order and social control. Virginia had disestablished the churches.

When Jefferson saw the Constitution as reported out of the convention at Philadelphia, he objected:

I will now add what I do not like. First the omission of a bill of rights providing clearly & without the aid of sophisms for freedom of religion, freedom of the press, protection against standing armies, restriction against monopolies, the eternal & unremitting force of the habeas corpus laws, and trials by jury in all matters of fact.... Let me add that a bill of rights is what the people are entitled to against every government on earth, general or particular, & what no just government should refuse, or rest on inferences. The second feature I dislike, and greatly dislike, is the abandonment in every instance of the necessity of rotation in office, and most particularly in the case of the President. Experience concurs with reason in concluding that the first magistrate will always be re-elected if the Constitution permits it. He is then an officer for life. (TJ to Madison, 12.20.1787, in Peterson 1984, p. 916).

Jefferson's first objection – the absence of a Bill of Rights – was widely shared. It became clear to the Federalists that they would not get the required nine states to ratify unless they promised to consider adding a bill of rights in the first Congress (Riker 1996, pp. 203-28). Several reluctant ratifiers, including New Hampshire, Massachusetts, and Virginia, attached clauses for the bill that they would like to see added. A committee chaired by Madison in the first House considered the proposed clauses. Madison's committee reported out 12 amendments, of which 10 were ratified and became the US Bill of Rights. The Establishment and Free Exercise clauses of the First Amendment were among those on Jefferson's list that were ratified, and in substantially the words of the Virginia Declaration of Religious Freedom.

Lafayette was the president of the French chapter of the Society of the Cincinnati. This was a veterans' organisation for Revolutionary War officers, whose president was George Washington. Jefferson and other republicans were deeply suspicious of the Society, hence his second objection to the Constitution draft. They saw it as the

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<sup>10</sup> Every 16 or 32 pages, a book had a consecutive letter in the bottom margin to show the binder in which order to bind the pages. These marginal letters are known as 'signatures'. Jefferson marked his ownership of books by writing a 'T' before signature J, and a 'J' after signature T.

nucleus of an American aristocracy, with Washington at its head set to become the first monarch of the United States. They were even more alarmed when it was proposed that membership of the Society should be hereditary (Gottschalk 1950 pp. 54-64). However, Washington settled the issue by retiring voluntarily after his second term in the Presidency.

Jefferson sent numerous batches of books from Paris to Madison in 1785-6, as he was preparing for the Constitutional Convention. Norman Schofield has argued for some years now (latest in Schofield 2006, pp. 120-5) that Madison as well as Jefferson was influenced by Condorcet's probabilism. It is a nice idea, but not, I think, supported by the available documents. For instance, Jefferson sent Madison a copy of Condorcet's *Essai sur l'application de l'analyse* (Condorcet 1785) to pass on to Edmund Randolph, governor of Virginia. Madison had it for nine days before passing it on. It is improbable that Madison can have taken in its lessons (from a book that was not destined for him) in that time. If Madison was a pioneer of game theory, I think he is a Scot rather than a Frenchman – and that he got it from the one Scot whom Jefferson disliked, namely David Hume.

#### **4. Conclusion**

Both Jefferson and Madison were profoundly influenced by the thought of the Scottish Enlightenment. Jefferson was taught a more liberal version of Scottish Enlightenment thought than Madison, because Jefferson's teacher Small came from the Moderate tradition in the Church of Scotland, whereas Madison's teacher Witherspoon came from the Evangelical tradition. But Jefferson, unlike Madison, didn't like Hume, because TJ accepted the opposition Whig view of British history, which Hume's *History of England* did not. Hence Jefferson hailed the French Revolution as a new dawn of freedom and was singularly impervious to its death toll. His insouciant letters about Shays to Abigail Adams and William Smith ('The tree of liberty must be refreshed from time to time with the blood of patriots & tyrants. It is its natural manure') foreshadow a still more alarming letter of January 1793 to William Short, who had been his secretary in Paris. Secretary of State TJ chides US diplomat Short for his hostility to the Jacobins:

In the struggle which was necessary, many guilty persons fell without the forms of trial, and with them some innocent. These I deplore as much as any body, & shall deplore some of them to the day of my death. But I deplore them as I should have done had they fallen in battle... Were there but an Adam & an Eve left in every country, & left free, it would be better than as it now is. (TJ to William Short Jan 3 1793 in Peterson 1984 p. 1004).

Madison would not have written that letter. Jefferson was the more brilliant writer (by far); Madison, the more careful thinker. When they built on their common Scots heritage, they largely agreed. That heritage produced Madison's numbers of *The Federalist* and the First Amendment. But Madison did not follow Jefferson's francophilia. On moving to Paris, TJ eagerly absorbed the latest French Enlightenment thought. Madison probably did not, to judge by his general silence and occasional dismissive remarks when TJ sent him the latest pamphlets from Paris. Despite Madison's use of probabilistic arguments in his numbers of *The Federalist*, I

am not persuaded that Madison had read and understood the probabilistic thought of Condorcet before writing them.

Jefferson's stay in Paris produced American architecture and American wine. It could have led American thinkers to understand the revolutionary probabilism of French Enlightenment thought if anyone had understood Jefferson's transmission of it. We have found no evidence that anybody else in America did (Urken and McLean 2007). Its political legacy lay not in America but in France – with Jefferson's contribution to the Declaration of the Rights of Man & the Citizen. It is ironic that this represents Jefferson at his most Madisonian, not his most Jeffersonian.

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