Enlightenment and Dissent
Style sheet

1. **SPELLING:** follows the *Oxford English Dictionary*, hence 'organize', 'subsidize', 'signalize', but 'compromise'.

2. **QUOTATIONS:** should be set out within single quotation marks; double quotation marks should be used for quotations within quotations. In footnotes, the titles of articles should be within single quotation marks, and the second quotation mark should come within before the comma, e.g. 'Richard Price: "A sketch of proposals"', *Enlightenment and Dissent*, 1 (1982), 91-106.

All commas and full stops ending quotations should appear *inside* the quotations marks; other punctuation goes *outside* the quotation marks unless it is actually part of the matter quoted. This usually means that the punctuation at the end of short extracts and phrases goes outside the quotation marks.

Thus:

Priestley wrote of the popular tracts which he published in Leeds that they 'had a great effect in establishing my hearers in liberal principles of religion, and in a short time had more extensive influence than I could have imagined.'

and:

Priestley wrote of the popular tracts which he published in Leeds that they 'had a great effect in establishing my hearers in liberal principles of religion,' and believed that they contributed to the growth of his reputation.

But:

It was during his stay in Leeds that Priestley discovered that popular tracts could have 'a great effect in establishing [his] hearers in liberal principle of religion'.

and:

It was at Leeds that Priestley became convinced that his pamphleteering had a ‘great effect’, and was an ideal way of spreading ‘liberal principles of religion’.

Note the authorial interpolation 'his' in the penultimate quotation appears in square brackets. These should be kept to a minimum and only added for purpose of clarification and not comment.

3. **CAPITALS** should be used for the first letter of proper nouns including the titles of newspapers and journals, e.g., Dr. Joseph Priestley, the Society for Constitutional Information, the French Revolution, the Birmingham Riots, *The Times, The Journal of the History of Ideas*, but, the revolution in France, the riots in Birmingham.

4. **TITLES** of books should be in the lower case except for the opening definite or indefinite article, or the first letter of a title, with the exception of proper nouns. Authors initials are not followed by a period:

J Priestley, *An essay on the first principles of government* (London, 1768).
J Priestley, *Letters to Dr. Horsley* (Birmingham, 1783).
J Priestley*, A harmony of the Evangelists, in Greek* (London, 1777).

All titles, foreign words and any words requiring special emphasis should be in italics, or should be underlined. *
The upper case should also be used in quotations if used in the original: e.g.

Bishop Porteus observed sourly that ‘Wilkes's colourful peroration included several arguments drawn from that dangerously radical work, Joseph Priestley's, *An Essay on the First Principles of Government.*’

***Second and subsequent citations*:** it is generally preferable to use short titles rather than **op.cit.** The author's surname only should be used in such citations.

first citation:

J Priestley, *An essay on the first principles of government* (London, 1768).

Second and subsequent citations:

Priestley, *Essay on government*.

In the case of a frequently cited work, it may be useful to abbreviate thus:

J Priestley, *An essay on the first principles of government* (London, 1768), cited as *EFG.*

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* When special attention is drawn to a word as such, the journal follows the modern convention which is to use inverted commas: e.g. ‘automatic’.

5. **DATES:** should be given in the order of day, month and year, and all the longer months of the year should be abbreviated in the footnotes (though not in the text), thus: Jan., Feb., Aug. Sept. Oct., Nov., Dec.. The year and month of journals should be placed in brackets: *Millenarian Life*, 7, no. 3 (Nov., 1666), 7-13. If a work is undated place n.d. in brackets after its details, e.g. William Frend, *What is an album?* (n.d.) Cambridge University Library MS Add.7886.300.

6. **PAGE** numbers in footnotes should be rendered by numbers alone, unless 'p.' or 'pp.' are helpful to avoid possible confusion as for example, J Bentham, *Treatise on civil and penal legislation*, ed. E Dumont (3 vols., Paris, 1802), 1, p.xiv. In giving page reference do not repeat all the digits, as in 317-325, but eliminate those that may be taken for granted: 317-25; 21-4, 30-8, 71-9 etc., **but** 17-18, 12-15, 370-415, etc. Page numbers in parenthesis within a text as for example in a review should use p. and pp. as appropriate.

7. **VOLUME NUMBERS:** the number of volumes in a series should be given in Arabic numerals before the place of publication, and placed inside the brackets giving place and date of publication. The precise volume to be referred to should be given after the bracket in Roman numerals in capital or in Arabic prefixed by vol., adopting the usage of the series which is being cited:
thus,
John Bowring ed., *The works of Jeremy Bentham* (11 vols., Edinburgh, 1843), III, 49.

G Claeys ed., *Political Writings of the 1790s* (8 vols., London, 1995), vol.2, 96.

The same rule applies to journals, but if the volume number of a journals is in Roman, it should be in lower case before the year of publication, which should always be bracketed:
Gregory Claeys, 'The French Revolution debate and British political thought', *History of Political Thought*, xi (1990), 59-80.

8. **NAMES OF EDITORS:** generally should appear first: N Curnock ed., *The journal of John Wesley* ... but several exceptions should appear first for the sake of clarity.

a) The author's name may need to go first if it is not included in the title , as in the case of: E Gibbon, *Memoirs of my life and writing*, ed. J B Bury... Note that in this case, as in all others where the editors name comes after a title, 'ed.' appears before the name of the editor.
b) If a set of complete works have different authors, then their name or names, preceded by the volume in question, should come after the title: *The correspondence of Jeremy Bentham,* IV, ed. A T Milne (London, 1981).
c) If one wishes to identify a particular work within an edited work, this can be rendered as follows: 'De arte inveniendi in genere', *Opuscules et fragments inédits de Leibniz*, ed. Louis Couturat (Paris, 1903), 161-66.

9. **INDENTATION:** first lines of articles and sections within articles should not be indented. All other paragraphs should be indented

10. **ELLIPSIS:** within a sentence should be indicated by three periods with a space on either side. Ellipsis at the end of a sentence should be marked by four periods followed by a space. If the ellipsis occurs between sentences, but does not begin at the end of the sentence, then it should be indicated by four periods with a space on either side. If the ellipsis ends at the beginning of a sentence then there should be no space between that and the end of the last period.

Text:

The *habits* of the clergy could not, originally, have been anything but the usual dress of their respective countries. But it not being thought decent for persons of such grave characters as the clergy to follow new customs and fashions, they retained their old flowing garments, after the Northern nations had introduced the use of short ones. But besides this, the habits of the Pagan priests, which had always been different from those of other persons, at the time of their officiating, were probably imitated by the Christian clergy, though I cannot say that I have met with any particular account of it.

Quoted:

The *habits* of the clergy could not, originally, have been anything but the usual dress of their respective countries. But it not being thought decent for persons of such grave characters as the clergy to follow new customs and fashions, they retained their old flowing garments, after the Northern nations had introduced the use of short ones.... the habits of the Pagan priests, which had always been different from those of other persons, ... were probably imitated by the Christian clergy, though I cannot say that I have met with any particular account of it.

or,

The *habits* of the clergy could not, originally, have been anything but the usual dress of their respective countries. But it not being thought decent for persons of such grave characters as the clergy to follow new customs and fashions, they retained their old flowing garments ....But besides this, the habits of the Pagan priests, which had always been different from those of other persons, at the time of their officiating, were probably imitated by the Christian clergy, though I cannot say that I have met with any particular account of it ...(*History of the corruptions of Christianity*).

Although it is preferable to give full title on first citation, it is sometimes useful to make an ellipsis, especially if the title is being cited in the text. In such cases, ellipsis within titles should be marked by three periods with a space between the first and second and second and third.
Thus:
J Priestley, *Forms of prayer. . .for the use of Unitarian Societies* (Birmingham, 1783).

But thereafter:
Priestley, *Forms of prayer for the use of Unitarian Societies.*

or,
Priestley, *Forms of prayer*.

It is generally unnecessary to make an ellipsis at the end of title, even when it is excessively long. Thus it is permissible to shorten *on first citation* the following title:

J Priestley, *Free address to Protestant Dissenters on the subject of church discipline: with a preliminary discourse, concerning the spirit of Christianity, and the corruptions of it by false notions of religion* (London, 1773*)*

to
J Priestley, *Free address to Protestant Dissenters on the subject of church discipline* (London, 1773*)*

11. **NAMES OF AUTHORS:** the names of authors should be given as they appear on the title page. Christian names should not be abbreviated or initials used, unless authors have chosen to style themselves in that way. For authors who use initials for their Christian names, the initials should be given without a period after each: hence D O Thomas, *not* D.O. Thomas. Initials and Christian names should be omitted on second and subsequent citations.

12. **EDITIONS:** edition numbers should be immediately inside brackets after the title:

Fowler, *A dictionary of modern English usage* (2nd. edn., Oxford, 1965).

13. **SUBHEADINGS AND SECTIONS**

Where subheadings are used within an article they should stand alone without any numeration, eg.

> **Science and scripture criticism**
> After nearly two years at the Whiggish Trinity College Dublin, Jebb completed his degree at Cambridge University in January 1757….

And ***not*:**

> **(i) Science and scripture criticism**
> After nearly two years at the Whiggish Trinity College Dublin, Jebb completed his degree at Cambridge University in January 1757….

If an author wishes to have a break between sections within an article, this can be done by double spacing at the end of a paragraph and beginning the next paragraph without indentation; if there is a need to make a major break between sections it can be done by using five centred asterisks, as, e.g.:

> In this paper, I shall offer some suggestions about what seem to me neglected characteristics of the work itself and relate them reciprocally to its reception.
>
> * * * * *
>
> There is a singular identity between the man and the book. David Hartley was baptized on 21 June 1705, the eldest son and second child of a poor Yorkshire

> clergyman, also David, and his first wife, Evereld, who died shortly after her son's birth.

An alternative way is to number sections, using Roman numerals, but such numeration should be done sparingly, e.g.

> So strong was the weight of this deeply rooted tradition of linking the Good and the True that it can also be found in other notable moralists of the English and Scottish Enlightenment even though they departed significantly from Clarke's attempt to deduce a system of Christian morality by the use of reason.
>
> **II**
>
> Not surprisingly, the problem of how to combine the Newtonian world-view with some conception of a universe that conformed to moral laws was a particular preoccupation of Newton's own university of Cambridge thanks in large part to the theological and scientific influence of Clarke. . . .

14. ABBREVIATIONS:

Volume - vol.
Chapter - ch.
Appendix - app.
Book - bk.
Editor- ed.
Editors - eds.
Edition - edn.
Reprinted - repr.
Introduction - intro.
Preface - pref.

Abbreviations of latin words are not usually italicised (the OED is the guide), e.g.
cf.
ibid.
et. al.
But:
infra
pace
in toto

15. REFERENCES TO ELECTRONIC SOURCES.

These should be as brief as possible either giving the web page initially, with an indication that all subsequent references will be to that site, e.g.

See Simon Mills ed., 'The letters of Joseph Priestley to Theophilus Lindsey, 1769-1794', at: http://www.english.qmul.ac.uk/drwilliams/pubs/ contents.html. All further references to the letters will be to this online edition.

Or, if the web site contains a wide range of sources, notably Early English Books Online [EBBO] and Eighteenth-Century Online [ECCO], the initial reference should give the full information of the site, e.g.

George Dyer, *Memoirs of the life and writings of Robert Robinson* (London, 1796), 121. Based on information from *English Short Title Catalogue*. *Eighteenth Century Collections Online*. Gale Group. http://galenet.gale-group.com/servlet/ECCO, hereafter [ECCO].

And subsequent references, even to different works, should just give the acronym, e.g.

Robert Robinson, *A political catechism* (London, 1782[ECCO]), 35.

16. REFERENCES WITHIN FOOTNOTES:

As far as possible references in the footnotes should be consolidated, and the long commentary style footnote with references within the footnote itself should be avoided. If they cannot be avoided, the brackets should be rounded, or, if more than one set of brackets is involved, the inner brackets should be square:

Review, 21; the phrase in italics is a transliteration of Price's Greek. Price may have had *Theaetetus* 187a in mind. Cudworth attributed the phrase to Aristotle (*Eternal and immutable morality*, 4.4.6, n.'r'). Cudworth's most recent editor seems to attribute the phrase to Cudworth himself, and notes that he often used Greek philosophical terminology that does not have a precise textual source (Cudworth, *A treatise concerning eternal and immutable morality*, ed. Sarah Hutton [Cambridge, 1996], 4.4.5). Note that 4.4.6 in the 1731 ed. of Cudworth, which Price used, corresponds to 4.4.5 in the Hutton ed. See also Aristotle, *Nicomachean ethics*, VI.3; VI.6.

APPLICATION OF CONVENTIONS: AN EXAMPLE:

PAINE AND SCIENCE

Mark Philp

I

In the last ten or twenty years Thomas Paine has been the subject of several biographies and many studies of his political, social and, less commonly, his religious thought. These works, my own contributions included, tend to treat Paine's more scientific writings as of little intrinsic interest and as symptomatic of his ability to see the world as an easily legible text, open to one's common sense, the reading of which could only be obscured by the fraudulent doctrines of organised religion and the hereditary system. For Paine, men established society to furnish their wants and harmonize their interests, but these benign origins were lost through the corruptions of hereditary government and the attempt to establish authority over individual beliefs. The example of the America Revolution, and the shock it sent through the states of

Europe, demonstrated, he believed, that it was only a matter of time before this system of imposture would be unmasked and the order overthrown, to be replaced by a system of open, democratic government. Once freed from the interference and predations of kings and courtly politics, commerce would meditate between nations to harmonize their interests and produce a global order of enlightenment and reason.[1] Science and its progress is clearly symptomatic of this process of enlightenment, but there is nothing in Paine's political writings to suggest that it has a special role.

This view is often associated with a tendency to treat Paine's comments on scientific matters with a certain amount of condescension. The man was an autodidact, he had little formal training, and was largely ignorant of scientific method and mathematics; his scientific interests were superficial, and he adopted scientific terms and models as metaphors - not because he wanted to convey the conceptual content of their original use, but because he wanted to reap the cachet of their scientific status with an audience whom he sought to persuade, by appeals variously to science, reason and common sense, to sweep aside the old orders of superstition and imposition.

Indeed, his interests in science might easily be dismissed as driven by more deeply held theological commitments - not least because his most extended treatment of the central concerns of eighteenth century science comes in Part One of his *Age of reason* where it provides a deist text of nature as an alternative to the biblical tradition of Christianity, against which Paine inveighs. For Paine, 'God speaketh universally to man' - not in a particular natural language, but in a universal language of nature:

> The Creation speaks a universal language, independently of human speech or human language, multiplied and various as they be. It is an ever existing original, which every man can read. It cannot be forged; it cannot be counterfeited; it cannot be lost; it cannot be altered; it cannot be suppressed. It does not depend upon the will of man whether it is published or not; it publishes itself from one end of earth to the other. It preaches to all nations and to all worlds; and this *Word of God* reveals to man all that is necessary for man to know of God.[2]

He goes on to appeal to the eternal principles of the world which we have come to recognise through geometry, trigonometry and astronomy as the true 'soul of science': 'It is the structure of the universe that has taught this knowledge to man. That structure is an ever-existing exhibition of every principle upon which every part of mathematical science is founded.'[3]

> The Almighty Lecturer, by displaying the principles of science in the structure of the universe, has invited man to study and imitation. It is as if He had said to the inhabitants of this globe that we call ours, "I have made an earth for man to dwell upon, and I have rendered the starry heavens visible, to teach him science and the arts. He can now provide for his own comfort, AND LEARN FROM MY MUNIFICENCE TO ALL, TO BE KIND TO EACH OTHER.[4]

What need, on Paine's account, for a text, cobbled together from the mythological scriblings of past pretenders to knowledge, when we have before us the order of the

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[1] See Paine's *Letter to the Abbé Raynal* in volume II of *The life and major writings of Thomas Paine*, ed. Philip S Foner (2 vols., New Jersey, 1948) [Foner's edition is hereafter cited as either CW I or CW II]. Note that this view post-dates Paine's writings on the American Revolution, which are marked by a sense of American exceptionalism. See my *Paine* (Oxford, 1989), chapter 2.

[2] Thomas Paine, 'Age of reason', CW I, 482-3.

[3] CW I, 489.

[4] CW I, 490.

universe which reason and science reveals to us. Seen in this way, Paine's science seems wholly driven by his theological interests - it is an expression of faith rather than expressing the objective detachment of the true scientist.[5]

Paine's deism is also easily linked to his commitment to common sense.[6] He was a man who knew his own mind and had a secure sense of his place in the world, and who applied his common sense to matters of politics, economics, religion and the study of nature, and came up with a coherent, although perhaps not always very subtle, body of belief about the given order of the world. His confidence in his common sense seems unshakeable: as he announced in his *Age of reason*, 'My mind is my own church', and 'it is necessary to the happiness of man that he be mentally faithful to himself ...'[7] But that belief, and his sense of its sacrosanct quality seems to be still more deeply grounded in a faith in God's beneficent construction of the world. Drawing on a loose understanding of the Newtonian system as evidence of a benificent order, he appropriated scientific evidence and argument, and, more generally, the study of nature, as confirming instances of this faith. Moreover, this sense of the naturalness and givenness of the order of the universe allowed him to interpret deviations from this order as a function of ignorance and superstitition - results of the imposture of established religion and the hereditary system. In such a system there is little room for refutation, since every deviation at the level of politics and society has an explanation, and every feature of creation is treated as evidence of a first cause and His design.

> The only idea man can affix to the name of God is that of a *first cause*, the cause of all things. And, incomprehensible and difficult as it is for a man to

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[5] We can recognise this kind of reductionism in I Bernard Cohen's comment, in his recent work on the place of science in the political thought of Jefferson, Franklin, Madison and Adams, that 'Political creeds are always ultimately based on religious beliefs or political or social philosophies, a set of general beliefs or axioms from which particular deductions are derived.' From this premise it would be tempting to jump to the conclusion that, for Paine at least, (a man whose scientific activity is too negligible for Cohen's notice), the basic axioms were religious, and that science had neither a foundational place in Paine's thought, nor even the role of an independent variable - being wholly reducible to the religious motives which drove his creed. Indeed, this is the line that Jack Fruchtman Jr. essentially takes in his *Thomas Paine and the religion of nature*, in which Paine's scientific interests are almost wholly ignored. Paine's deism might explain his interest in and enthusiasm for science (although he was largely out of his depth since he lacked any formal training), and it would also explain his more general understanding of the role of reason and his belief in the progressive enlightenment of mankind and the growing pressure towards rationally ordered political and economic systems which can harmoniously coexist. See I Bernard Cohen, *Science and the founding fathers* (New York, 1995) and Jack Fruchtman Jr., *Thomas Paine and the religion of nature* (Baltimore, 1993).

[6] There are considerable difficulties in grasping quite what Paine meant by 'common sense.' These are well illustrated in Fruchtman's discussion of the concept in his *Philosophy and the religion of nature*. Fruchtman argues that 'Common sense was the means by which the mind understood the way that the heart felt about reality. It had nothing to do with abstract reasoning or metaphysical concepts. It was wholly empirical because it was based on sensory perceptions' (p. 21). Given this account it is not surprising to find that Fruchtman nowhere discusses Paine's scientific interests, the impact of Newtonianism on his thought, or even the lectures of Martin and Ferguson. Another way of construing common sense, following Beattie, would be to see it as signifying 'that power of the mind which perceives truth, or commands belief, not by progressive argumentation, but by an instantaneous, instinctive, and irresistable impulse; derived neither from education, nor from habit, but from nature; acting independently on our will, whenever its object is presented, according to an established law, and therefore not improperly called *Sense*; and acting in a similar manner upon all mankind, and therefore properly called *Common Sense*' (James Beattie, *Essays*, 'On the nature and immutability of truth, in opposition to sophistry and scepticism' [Edinburgh, 1776], 26-7). That is, the intuitive grasp that we have on natural and moral truths, which fit together in a harmonious whole unless distorted by some external force or corruption.

[7] CW I, 464.

> conceive what a first cause is, he arrives at the belief of it from the tenfold greater difficulty of disbelieving it.... everything we behold carries in itself the internal evidence that it did not make itself...and it is the conviction arising from the evidence that carries us on, as it were, by necessity to the belief of a first cause eternally existing, of a nature totally different to any material existence we know of, and by the power of which all things exist; and this first cause man calls God.[8]

This belief can be seen as the unifying theme throughout Paine's work, providing a consistent, simple, and unsophisticated touch- stone for his commitments, and allowing him a clarity of vision which is able to sweep away, mentally, if not practically, the old order of ignorance and superstition, priestcraft and hereditary dogma. His deism, his confidence in an ordered universe, and his insistent appeal to the judgment of the common man, personify a populist version of the rationalism and optimism which it has been traditional to associate with the Enlightenment.

Why buck such trends in the interpretation of Paine's scientific activity? One reason for doing so is that few commentators on Paine have attempted to take Paine's scientific interests seriously.[9] One explanation for this is that the evidence we have of his activity is not extensive; there are a few papers, mainly concerning his bridge, and a number of letters, and there are the comments in his *Age of reason*, but little more. There is also, however, a more general problem in knowing how seriously to take his scientific pretensions since we need to have both some understanding of what he was trying to do and some sense of how what he was trying to do relates to the standards of thinking and experimentation practised by his contemporaries. Only once we have reached that point can we really make much estimate of the weight of his activity, and, more centrally, of its relationship to his political (and religious) thought). Since those writing about Paine have often been most attracted by the democratic and egalitarian thrust of his writing, it is easy to see why these more complex contextual judgments might be skirted, and his scientific writing rather ignored. Moreover, there are, I will argue, a number of more subtle methodological problems concerning the nature of belief and the relationship between experience, experiment, axioms, and foundational commitments, which complicate inquiry into Paine's scientific understanding and its relationship to his other beliefs.

I have no wish entirely to overturn the picture I have sketched of Paine's beliefs. But I want to suggest that we might profitably seek to refine and complicate it, and I will also indicate why we might be advised to pay more attention to Paine's scientific interests than has been customary. In doing so, I hope I can claim to be following the recommendation of at least one of Paine's friends and contemporaries, Joel Barlow, who issued the injunction that 'The biographers of Paine, should not forget his mathematical acquirements and his mechanical genius.' [10]

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[8] CW I, 484.

[9] Although this needs moderating for Conway and Aldridge, and especially for Harry Hayden Clark: see, Moncure D Conway, *The life of Thomas Paine* (London, 1909); A O Aldridge, *Man of reason: the life of Thomas Paine* (London, 1959); and Harry Hayden Clark, 'An historical interpretation of Thomas Paine's religion', *University of California Chronicle,* xxxv (1933), 56-87. Among those scientists who have attempted to do so, there has been a conspicuous lack of historical sensitivity, see for example, J G James's 'Thomas Paine's Iron Bridge Work 1785-1803', *Newcomen Society Transactions*, 57 (1987-8), 189-221.

[10] Moncure D Conway, *The life of Thomas Paine* (London, 1909), 99.