The computerisation of a manuscript corpus: 
Expressions of compulsion in eighteenth-century sermons

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1 Among the treasures in the Durham Dean and Chapter Library is a collection of approximately fifty manuscript sermons preached over almost fifty years by John Sharp (1723-1792), vicar of Hartburn, prebendary of Durham and archdeacon of Northumberland. These homilies give invaluable evidence about the reality of the eighteenth-century pulpit, arguably more so than printed sources (Deconinck-Brossard 1993), both from a historical and from a literary point of view. Computer-aided analysis has provided radically new insights into an already very long acquaintance with these documents.

2 Although the lengthy text encoding process has not yet been completed, the temporary corpus has now reached over 110,000 words. Such length may be regarded as statistically relevant, by the received standards of literary computation (Kenny 1992: 98-103). Due to the complexity of the manuscript and its several layers of composition, transcription is only lightly tagged, with COCOA-like markup.

3 This paper is part of a larger project focusing on content analysis in order to investigate the preacher’s general outlook and ideology. Unfortunately, no single software package makes it possible to undertake such a multidisciplinary task, aiming as it does to establish a contribution to the history of ideas on the basis of stylo-statistics. Hence the need to resort to a variety of approaches and often empirical methods. The one certainty is that the dream of systematized discourse analysis would not have begun to come true at long last without computer assistance.

4 To start with, the notion of compulsion seemed particularly relevant to pulpit eloquence. As the etymology of the word implies (com-pellere), the speaker tries to exert his influence on the subject. Likewise, preaching is, by definition, an exercise in persuasion. The orator’s semantic and syntactic strategies will not only convey his particular
hermeneutics and worldview, but also invite the congregation to follow suit. One may even wonder whether traces of conscious or unconscious audience manipulation are to be detected in the process, since expressions of modality echo intrasubjective language relationships as a matter of course. This study alludes to such general assumptions of the French theories of enunciation (Cotte passim) as have become widespread even among those anglicists who, like myself, do not specialise in linguistics per se. 2 The working hypothesis implies that it is possible to apply the concepts of synchronic analysis to a diachronic corpus, as the Finnish scholar Matti Rissanen has shown (Rissanen 1983).

Computerisation of the corpus has allowed systematic retrieval of, and statistics about, occurrences of modality, combined with the use of negation and pronouns. The two software packages that have been used so far, namely the well-known Oxford concordance program OCP (in its mainframe version) and TACT, a shareware text analysis system, have proved complementary, all the more so as they work from similarly encoded text. Besides, the version of TACT that has been used (TACT 1.2) does not support SGML encoding yet. Strangely enough, however, TACT and OCP have produced different wordcounts for the same sample, though in an almost constant ratio. The difference will therefore be ignored until further investigation. Possible explanations might be that the two packages either give dissimilar “warnings” about what they consider as unrecognized characters or apply different solutions to such problems.

OCP produces particularly helpful output files in which lists of words with numbers of occurrences may be sorted either alphabetically or by ascending (or descending) frequencies – though the latter word is statistically improper, its use and abuse have become so widespread in computer-aided text analysis studies that it has become convenient terminology. Thus, it appears that the total number of vocabulary items – or types, as they are sometimes called – is well in excess of 8,400 in the current corpus. A quick look at such raw data shows, for instance, that John Sharp preferred to address his congregations in the first person plural, which he used altogether five times as often as the first person singular, with respectively 2,606 and 571 occurrences. Besides, he hardly ever pronounced the feminine pronoun she – a fact that had hitherto remained unnoticed. Of the modal auxiliaries of compulsion, shall occurs much more often than must, which, in turn, is slightly more frequent than should, whereas ought ranks far lower down in the list. It goes without saying that such crude data need refining.

TACT assists further analysis by retrieving segments of text in a most flexible way. The output can be displayed in different formats, the most useful of which is the now well-known KWIC (keyword-in-context), where the end-user may specify the length of relevant context. Indeed, one-line concordances often prove too short, even though they provide useful surveys of occurrences for any given word. Trial and error with the Sharp corpus has helped define a good rule of thumb whereby two lines on either side of the keyword usually provide adequate contextual information, though the preacher’s long, embedded sentences sometimes make it necessary to broaden the context by one or two lines before the keyword.

This procedure will not only contribute to a better interpretation of the text segments under review, but also help eradicate redundant quotations. Sometimes, indeed, the key conjunctions are repeated in consecutive lines: “Did we but seriously consider this, we should be astonished at his Goodness to us, & at our own Ingratitude, we should humble ourselves before him...” (8, 51). In other instances, the author’s constant re-writing of his sermons and meticulous reference system means that similar phrases are to be found at
several-page intervals. Thus, page 26 of sermon 2 reads almost exactly like page 4, and a little sign at the end of the repeated phrase “... by his glorious Resurrection; without wch ... we shd have been yet in our Sins” refers to the place where it should be inserted in the main text. As a result, the number of occurrences of any given keyword will eventually differ from the raw data provided by OCP. Thus, the figure for ought to slides from 52 to 42.

9 The KWIC display will, in addition, help to differentiate various uses of a given word. The most obvious examples are should and shall. Not all the occurrences of these two modal auxiliaries are expressions of compulsion. Indeed, there are so many other classical uses of should in the corpus, especially in conditional sentences, after lest or after certain impersonal expressions, that only one third of occurrences express obligation. The initial frequency figure therefore needs drastic qualification.

10 Distribution graphs, showing how (un)evenly given words are located through the text, may be of interest. They too can be modified to suit the end-user's needs. It is more convenient for the current research to locate the distribution of interesting phrases among different sermons than through the deciles set by default. One such display (Appendix 1) will show that the few occurrences of third person feminine pronouns in the Sharp corpus are almost exclusively confined to one particular text, namely the charity sermon preached in favour of clergymen's widows, in which the relatively exceptional use of the feminine is understandable (Appendix 2).

11 Besides, TACT allows easy retrieval of word conjunctions. Thus, the ill-documented and unexpected use of | for the Boolean operator AND (Bradley 1990: 51 & 88-93) has allowed, for instance, the breakdown of modal auxiliary occurrences by personal pronoun and the isolation of negative and interrogative forms. Yet, however carefully one may define the “rule,” it is never possible to avoid all “noise”. When trying to locate all occurrences of he OR it AND shd, in order to combine retrieval of subject pronouns with uses of the auxiliary, one may be surprised to find the following phrase displayed in the concordance: “children that were ignorant of it shd be instructed in it” (45,9)! (Appendix 3). Obviously, the computer had based its selection on a criterion of proximity that did not apply in that particular case. Such irrelevant information needs to be erased manually. Whether we like to acknowledge it or not, computer-aided studies cannot be altogether devoid of subjectivity, all the more so as syntactic and semantic tags derive from human interpretations.

12 TACT’s third and most innovative feature is the definition of “categories,” that is to say metatextual collections of word-forms representing themes or concepts, opening the way to semantic analysis. It is therefore possible to compare syntactic and thematic analyses. The limitations of this short paper will only allow investigation into a few instances of the use of negation and personal pronouns.

13 John Sharp’s expressions of compulsion characteristically include only a small proportion of negative forms: 0 out of 15 in phrases with have to and personal pronouns, 1 out of 42 (2.4%) with ought to, 32 out of 617 (5.19%) with shall, 7 out of 107 (6.54%) with should and 19 out of 156 (12.2%) with must. It would be difficult to apply sophisticated statistical methods to samples of such different, and indeed sometimes minute, sizes. However, the figures clearly reveal one of the preacher’s biases. To him, negation is obviously not a useful approach in the art of persuasion.
When he involves his own authority, through the use of must, he prefers to impose positive obligation rather than focus on what he wants to forbid. Moreover, the small number of negative forms with should also underlines the speaker's preference for positive advice.

In the relatively few cases where external authority is invoked through have to, it is never negated. The speaker does not question or reject the teachings of Scripture as handed down to him and his congregation by the doctrine of the Church: “Such is the state [Felicity] wch all Good Christians have to hope for, & for the knowledge of wch we are entirely beholden to Revelation.” (43, 62) Even though he once acknowledges that such authority may sound harsh, he will not withdraw his support or negate approval:

So when all innocent Creatures whether Men or the brute Creation have finished their sufferings by Death, The Ungodly alone have to begin theirs. However unpleasant this Subject may be, yet it is of infinite concern... (36, 63)

This attitude is very much in-keeping with the quiet confidence of a preacher who hardly ever felt the need to mention rival ideologies: atheism is used but once and enthusiasm occurs only three times, while superstition alone may be slightly significant, with a lower-than-average figure of nine references, though not always in the usual sense of “Roman Catholicism.” It could also be argued that the author confined his audience to a limited worldview that simply ignored other standpoints. But one must be wary of anachronistic interpretations of historical corpora.

Likewise, the speaker almost always positively expresses the subject's objective obligations or duties as acknowledged by “every rational Creature” (4,5), “a good Christian” (4,55), “all good Men” (7,47) or even “everyone” (4,54). The almost complete lack of negation with ought to conveys the stereotyped eighteenth-century notion of a moral consensus based on reason and religion, and confirms the very strong sense of duty brought to light by the thematic analysis.

Indeed, duty is a recurrent word in the corpus, one of the few non-grammatical words with what might tentatively be considered as a significant number of occurrences. It ranks 154th in the descending frequency list, with 89 references. Most of the connotations of the words used in association with the notion of “duty,” as shown in the table of collocations, are extremely positive. Duty is equated with “pleasure” (22,29), “delight” (22,53) and “pride” (22,31). As can be expected in an age that extolled Archbishop Tillotson's ideas about the easy yoke of Christianity, John Sharp stressed that it was not difficult (4,54) to practise our “indispensable” duty (27,11). With one possible exception (3,8), this duty is always made definite, usually with personal pronouns, so that “the knowledge” (27,41) of what it consists of never fails (11,15 & 25), even when it is transgressed (4,33; 8,47; 27,33). Once again, the convergence between lexical and syntactic analysis is of particular interest.

An attentive eye will not have failed to notice, in the brief excerpts quoted so far, the speaker's characteristic use of pronoun subjects. The disproportionate frequency of the first person plural is the most striking feature. Out of 156 phrases with must and a personal pronoun, 93 occurrences of we, in an inclusive sense of the word, are to be found, predominantly (84%) when must is used in its radical meaning of compulsion. The speaker skillfully includes himself in the community of subjects on whom he imposes obligations. Not once does he, conversely, metaphorically point his finger at the congregation in the very imperative form of you must, as if he were concealing the position of authority from which he is expressing compulsion. This modest attitude
mirrors not only the very strong sense of duty that has already been noticed but also traditional theology. Since all men are equally sinners, the preacher can boast of no superiority over his congregation. He only acts as a channel of communication, but he himself is bound by such obligations as he imposes on other people. The speaker being also a subject, it is logical that he should identify with the other subjects. Indeed, to this day, preachers are trained to address their audiences in the first person plural.4

20 A similar sense of community, “as we are all of one body wch is Christ” (4,54), could be demonstrated in those uses of should where the preacher gives advice, reminds the congregation of their duty, and indicates a correct course of action. Here too the speaker identifies with the subject. He requires himself to take his own advice and practise what he preaches. This approach is further enhanced in the particular case of charity sermons, in which thematic analyses have already revealed not only a moral but also a social identification with the audience, conveyed by the we/they divide (Deconinck-Brossard 1984 vol. 2: 599).

21 A comparison with other corpora may allow one to wonder whether such a disproportionate use of the first person plural might be a significant feature of the genre. Unfortunately, one does not have easy access to as many textual databases as one would like. Data capture of eighteenth-century texts will be very costly in time and money as long as optical character recognition cannot yield satisfactory results.7 In spite of rapid improvement, even printed books raise many problems, due to the long S, ligatures and broken characters. One of the pioneers of machine-readable texts, the Augustan prose sample, comprising 52 selections published by 51 authors between 1675 and 1725, is available in the Oxford text archive. Moreover, our German colleague Professor Neumann from Göttingen has been generous enough to pass on to me a transcription of fourteen political sermons preached in the first two decades of the century. My debt of gratitude to him is beyond words! I am now in a position to run parallel tests on my corpus and on samples of almost contemporary prose. A crude preliminary comparison seems to confirm the widespread use of the third person plural in pulpit literature, whereas we ranks far lower than I in the broader sample.

22 One should resist the temptation of inferring quick conclusions from fragmented data. In the Sharp corpus itself, the situation becomes completely different as soon as must is to be interpreted in its second sense, that of logical necessity, rather than in its root meaning of obligation. It is probably no coincidence that the former should be a minority use of the word in this corpus, with only 25 occurrences out of 156 (16%). When the preacher emphasizes his very strong convictions about how he and his hearers are bound, in duty, to behave, his statements carry more direct weight than if he expresses a deduction, even though the adverb necessarily repeatedly confirms his assurance (4,23; 43,62). Unlike obligation, logical necessity, implicitly resulting from rational argumentation, is mostly expressed in the third person singular. In this demonstrative approach, the line of reasoning is more impersonal. Pronouns either replace generic nouns, such as “a good Man” (36,63), abstract notions like “a propensity to Drunkenness” (4,29), the preceding clause (as in 36, 7) or represent infinitive nominalization (12,23). The lack of feminine pronouns in this context is thus partly explained.

23 Some would possibly argue that this phenomenon only mirrors a general bias of the English language, in which, until the recent introduction of “inclusiveness,” generic reference was naturally assumed to be masculine. Moreover, noun phrases used by John Sharp in expressions of compulsion including must not only denote generic terms like
any man, every man, mankind, every wretch, but also refer to trades and professions then held by men (the burial officer, the preachers of the Gospel), to animals and inanimate things (very many birds, great numbers of creatures), and to many concepts (Justice, Honesty, Detraction, Gratitude). Subjects in clauses with shall mention God, Christ, a Supreme Being, and Death, as well as generic references to human categories like the righteous, the just, the poor, the ungodly, abstract concepts, and inanimate creatures like the sun or the moon. This indeed leaves little scope for the use of the feminine pronoun!

Yet, the issue cannot be oversimplified, of course. Comparison with other corpora does indeed corroborate very low frequencies for feminine pronouns in political sermons, though proportionately not as low as in John Sharp’s manuscripts. Besides, there is evidence that a famous contemporary preacher, who was to become one of the best-known writers of the century, namely Laurence Sterne, did not ignore women in his sermons. The instance that comes to mind immediately is The Case of Elijah, the charity sermon preached on the text recalling the widow of Zerepath’s plight. One may therefore wonder whether some preachers expressed greater sensitivity to femininity than others and where the borderline stands. Perhaps the need to define new sub-genres within pulpit literature will arise, and distinguish narrative and abstract discourses for instance, or manuscript and printed sources, rather than charity and assize sermons, to quote but an example.

One would need to start with an assessment of correlations between different sets of texts, in this essentially comparative approach, but statistical methods have their limitations. The chi square test, for instance, cannot apply to items representing less than 5% of a given sample (Moroney 1970: 247). Now, the only word in our corpora that would meet this criterion is the definite article; although it is, by far, the most common word, its frequency does not exceed 7%, which statisticians would regard as rather low. Hence the need to apply alternative methods such as the Bravais-Pearson test, which can be written as a simple BASIC program. Furthermore, one may wonder whether differentials might not be a better criterion than frequencies (Holmes 1988: 67-76). If so, one would have to use relevant statistical packages, like SPSS or SAS. Besides, there is a crying need for the development of quantitative methods that would allow one to assess the significance of frequency figures for any given word in various corpora.

To conclude, one may say that syntactic and thematic analyses of John Sharp’s discourse combine to reveal his theology, his psychological acumen and clever rhetoric, and his unquestioning acceptance of the moral and religious code of obligation on which he elaborates. It was a great relief to realize that computer-aided methods of investigation have confirmed one’s intuitive findings about the corpus. Of much greater moment is the fact that the computer has opened up new avenues of investigation, by bringing to light unexpected features of the author’s style and worldview. Such findings will provide relevant criteria for authorship studies. Indeed, two short manuscripts in John Sharp’s hand still remain unattributed. In spite of their small size, it will be interesting to see whether they bear the same stylistic and ideological fingerprints as the sermons under review. John Sharp’s outlook made him prefer positive expressions of apparently objective compulsion, oriented towards the future, even though he did not deny the existence of evil. Such a liberal attitude may characterize him as a latitudinarian. A combination of several computer-aided research methods may therefore be assumed to contribute to the history of ideas.
My debt of gratitude to the staff of the Durham Chapter Library is such that I cannot thank them enough for their unfailing assistance over many years.

I wish to thank the IBM Almaden Research Center (San Jose, CA) for their generous hospitality and assistance with the question of data capture and OCR when I visited them on research leave in the early months of 1992.

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APPENDIXES

Appendix 1

she

<p>| | |</p>
<table>
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<th></th>
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</table>
| 4 | 2|**
| 27 | 20|***************
| 31 | 5|*****
| 38 | 3|***

Total: 30

Appendix 2

she (30)

(4, 55) Saviour told her All that ever >she did, That is to say, The
(4, 39) not so common. No Woman except >she was very much abandoned
(31, 39) | Lights. All agree that >she was Devoted to the Lord,
(31, 49) least (for it is no more) that >she cd be _ | said to be
(31, 49) this excellent character,? that >she departed not from the
(31, 51) business of her life. _ | Thus >she lived to a good old Age
(31, 51) with God & Man, and before >she _ | departed saw the
(27, 27) for herself, & how little able >she is to _ do | it. And
(27, 29) the widow we are speaking of. >She has | suffer’d not
(27, 31) | inheritance | in the land. If >she has children they are so
(27, 33) than her own. | <p 33> | Thus is >she brought upon a level
(27, 35) >all before her, nor does >she know where to seek a
(27, 35) where to seek a place of Rest. >She is | reduced to the sad
(27, 35) of bustling in a sphere >she is utterly |
(27, 35) those whom perhaps formerly >she used to relieve. What
(27, 35) she used to relieve. What can >she _ | do? | she has not
(27, 35) relieve. What can she _ | do? | >she has not been bred up to
(27, 35) not been bred up to hard labour, >She cannot work, To beg she
(27, 35) labour, She cannot work, To beg >she is | ashamed. | But
(27, 35) It must be enquired whether _ | >she | be well reported of
(27, 35) reported of for Good works, if >she hath brought up Children
(27, 35) in the _ | fear | of God, if >she hath been given to
(27, 35) to Almsdeeds & Hospitality, if >she hath _ | relived | the
(27, 35) _ | relived | the afflicted if >she hath had a firm trust in
(27, 35) | Supplications & Prayers, & if >she hath diligently | <p 34>
(27, 37) | followed every Goodwork; if >she hath done these things,
(27, 37) hath done these things, then is >she such an _ | one | as St
(38, 47) _ | Church, | and (whatever >she may pretend to lay to
(38, 47) to lay to Our Charge, yet) it is >she herself _ | that | is
(38, 49) or | safely comply with. Yet >she is still a Member of the

Appendix 3

(2, 4) the bondage of the _ | Law, until >it shd please God to s | In
(2, 46) Signs and Wonders to _ | confirm >it? shd not be transacted in
(7, 37) understood. Perhaps God design’d >it shd be so, in order to _
(26, 13) difficult matter to satisfy. If it should be asked what kind of
(26, 41) is continually doing, things should not, and continually
(11, 23) from him. If after this he should not repent, we
(11, 23) World to come; and though he should die in a few
(4, 54) years, or that the Guilt of Death die with those who
(4, 27) forms of Devotion; though he should own and confess his
(4, 49) for 'twill be very strange if he should, but it is
(4, 53) that is Law, or Selfish, though he should gain by it
(4, 55) & it is even unlikely that it should. It is remarkable
(39, 25) to a well-disposed mind. But if it should happen that a Man
(45, 7) as long as he lives; he should read it over as often
(45, 9) children that were ignorant of it should be instructed in it,
(45, 9) that all those who did know it should have their memories
(45, 41) not much greater reason that he should refuse to baptize an
(45, 43) worst that can happen, viz. that it should please God to snatch
(27, 17) lastly can we suppose that he should kill or persecute
(38, 27) nor can we imagine that he should go there either to
(38, 61) thief on the Cross that he should be with Him that day
(46, 37) an absolute Occasion that he should be publicly
(12, 53) resolved to lead a new life, if it should please God to
(12, 53) Comfort of serving his Maker; if he should forsake the ways of
(40, 54) (p33) But suppose it should here be objected that
(40, 54) himself, as there is why he should communicate. For
(40, 51) that in his particular case it should strangely change its
(40, 51) & social pleasures for fear he should be more exposed to
(40, 51) all Essential to a Miracle that it should not be effected

NOTES

1. Were it not for the generous help given by the staff of the Data Preparation Department in the
Computer Centre at the University of Durham, the corpus would probably be half its present size.
I owe special thanks to Mrs Joyce Carse for retrieving approximately 100,000 bytes when a data
disc was lost in the cross-Channel post!
2. Even so, one finds it necessary to ask proper linguists for relevant guidelines. I owe special
thanks to my father, Jean Brossard, for invaluable, time-consuming advice on this project when it
had reached an awkward stage, and am grateful to our colleague Claude Delmas, from the
University of Paris 3, for patient support and helpful hints.
3. A much improved version, TACT 2.1 gamma, has been available since January 1st, 1994.
4. From now on, references to the Sharp corpus will quote sermon number first, followed by page
number, and key words or conjunctions will be highlighted in bold type.
5. Percentages can only have relative value here, considering the size of the samples.
6. So I was told by a young Unitarian minister, the Rev. M. Schellenberg.
7. It is worth noting that neither the Thesaurus Linguae Graecae nor the English Poetry Full-Text
Database, for instance, have opted for the use of optical character recognition (The English Poetry
Full-Text Database Newsletter 3, p. 3; Bruner p. 6).
8. A printout of K. Monkman’s concordance of Sterne’s sermons is on deposit at the Cambridge
University Library; the master copy is at Shandy Hall, of course.
9. One bears number 14; I have decided to call the other one “no. 0.”
ABSTRACTS

A computer-aided discourse analysis, focusing on the preacher’s semantic and syntactic strategies, and applying the concepts of synchronic linguistics to a diachronic corpus. Unexpected features of the orator’s style, such as the relatively exceptional use of the third person feminine pronoun and the rare occurrence of negative forms in expressions of compulsion, and a latitudinarian outlook have been brought to light. However, the drawbacks and limitations of the method under review cannot be ignored, even though it opens up new avenues of investigation in the history of ideas.

Analyse de discours assistée par ordinateur, appliquant les concepts de la linguistique synchronique de l’énonciation à un corpus diachronique dont on étudie les stratégies sémantique et syntaxique. L’informatisation de l’étude textuelle a révélé des formes stylistiques inattendues, telle l’absence presque totale de pronoms féminins et de termes négatifs dans les expressions de l’obligation, ainsi qu’une idéologie latitudinaire. Cependant, il faut connaître les limites de la méthode utilisée, même si elle ouvre la voie à de nouvelles recherches textuelles.

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